South Oxnard Stormwater Flood Management Project
Attachment 1 of Proposition 1E Grant Proposal Attachment 3 (Work Plan)
Table of Contents

1. California Environmental Quality Act Findings of Fact (Public Resources Code §21081, CEQA Guidelines §15091) Regarding the Final Environmental Impact Report for the J Street Drain Project, State Clearinghouse Number 2008041057 – pages 3 through 52

2. Final Environmental Impact Report (FEIR), J Street Drain Project, Ventura County, California SCH#2008041057 – pages 53 through 690

3. FEIR Appendix A: Notice of Preparation and Initial Study – pages 691 through 710

4. FEIR Appendix B: Notice of Preparation Public Comment Letters – pages 711 through 756

5. FEIR Appendix C1: J Street Drain/Ormond Beach Lagoon Coastal Engineering Report – pages 757 through 843

6. FEIR Appendix C2: Coastal Engineering Report Addendum – pages 844 through 846

7. FEIR Appendix C3: Sedimentation Study for the J Street Drain and Oxnard Industrial Drain – pages 847 through 865

8. FEIR Appendix C4: Technical Memo, Coastal Processes Assessment at Ormond Lagoon and Beach – pages 866 through 891

9. FEIR Appendix C5: J Street Drain Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon – pages 892 through 908

10. FEIR Appendix C6: Technical Memo, J Street/Oxnard Drains Numerical Hydraulic Model – pages 909 through 914

11. FEIR Appendix D: Biological Technical Report, J Street Drain Project, Ventura County, California – pages 915 through 1206

12. FEIR Appendix E: Cultural Resource Constraint Analysis for the J Street Drain Initial Study, Ventura County, California – pages 1207 through 1241

13. FEIR Appendix F: Draft Geotechnical Study, J Street Drainage Improvements, Ventura County Watershed Protection District Project No. 82322, Oxnard California – pages 1242 through 1310

14. FEIR Appendix G: EDR DataMap® Corridor Study (Hazardous Sites Assessment) – pages 1311 through 1626

15. FEIR Appendix H: Global Climate Change Evaluation for the J Street Drain Project, Ventura County, California – pages 1627 through 1677

16. FEIR Appendix I: J Street Drain Project Mosquito Technical Study – pages 1678 through 1716

17. FEIR Appendix J: Air Quality Technical Report for the J Street Drain Project, Ventura County, California – pages 1717 through 1768

18. FEIR Appendix K: Hydrogeology Study Summary, J Street Drainage Improvement Project, Oxnard, California – pages 1769 through 1773

CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS OF FACT (PUBLIC RESOURCES CODE §21081, CEQA GUIDELINES §15091) REGARDING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE J STREET DRAIN PROJECT State Clearinghouse Number 2008041057

INTRODUCTION

The Final Environmental Impact Report (FEIR) prepared for the J Street Drain Project ("Project") analyzes the potential environmental effects associated with the increase in the flow capacity of the existing J Street Drain within the existing facility right-of-way to accommodate runoff from a 100-year storm event, and the reduction of potential flooding in residential, industrial, and commercial areas of the Cities of Oxnard and Port Hueneme.

These findings have been prepared to comply with requirements of the California Environmental Quality Act ("CEQA," Public Resources Code Section 21000 et seq.) and the *CEQA Guidelines* (Cal. Code Regs., Title 14, §15000 et seq.). Pursuant to CEQA Section 21081 and *CEQA Guidelines* Section 15091, no public agency shall approve or carry out a Project where an EIR has been certified, which identifies one or more significant impacts on the environment that would occur if the Project is approved or carried out, unless the public agency makes one or more findings for each of those significant impacts, accompanied by a brief explanation of the rationale of each finding. The possible findings, which must be supported by substantial evidence in the record, are:

1. Changes or alterations have been required in, or incorporated into, the Project that mitigate or avoid the significant impact on the environment.
2. Changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.
3. Specific economic, legal, social, technological or other considerations make infeasible the mitigation measures or Project alternatives identified in the EIR.

PROJECT DESCRIPTION

Project Location

The proposed project is located in the City of Oxnard, adjacent to the border of the City of Port Hueneme in the County of Ventura (Figure 2.0-1 of the FEIR). The County of Ventura is located in southern California and is bordered by the County of Santa Barbara to the north and the County of Los Angeles to the south and east. Regional access to the area is provided by the Ventura Freeway (US-101), which is the principal east-west route through the County of Ventura. The Santa Paula Freeway (SR-126) runs from US-101 in Ventura to Interstate 5 (I-5) in Santa Clarita, which is also an east-west route. These freeways are located north and northeast of the project site. Pacific Coast Highway, or State Route 1 (SR-1), is known locally as Oxnard Boulevard in the City of Oxnard, and extends in a northwesterly fashion from the County of Los Angeles. At Wooley Road, the direction of SR-1 changes from northwest to north and joins US-101 in Oxnard approximately five miles inland from the coast.

The J Street Drain is an existing stormwater drain that extends approximately 2.2 miles from north of Redwood Street, southward into the Ormond Beach Lagoon. The existing J Street Drain is a trapezoidal concrete-lined channel for the entire length. From approximately Redwood Street downstream to Hueneme Road, the drain lies between the north- and southbound lanes of J Street. The downstream end of the concrete channel is approximately 50 feet south of the Hueneme Drain Pump Station.

Project Characteristics

The proposed project involves converting the existing trapezoidal concrete channel into an open rectangular channel with a bottom approximately four feet deeper than the existing channel bottom. The existing trapezoidal channel would be widened and deepened to increase the capacity; the channel walls would be vertical with the top being an open channel (Figure 3.0-4 of the FEIR). The existing box culverts under the street crossings and railroad crossing would be replaced by larger structures to improve flow conveyance. The existing concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station. Because the concrete lined portion of the channel invert would be lowered about four feet to create the required capacity, excavation would continue downstream towards the ocean. The finished invert would be daylighted via an earthen ramp to the lagoon at a 10:1 slope over a distance of up to 40 feet from the end of the existing concrete. A ten-foot-thick layer of four-ton rock riprap would be placed horizontally beneath the earthen ramp at the end of and at the same elevation as the concrete drain bottom to dissipate flow energy. It is anticipated that during the first few natural lagoon breaching events following Phase 1 construction, the movement of water (tidal and drain flow) and sediment would result in an equilibrium elevation within the channel transition area, between the end of the concrete channel and the Ormond Beach Lagoon annual breach location.

The project includes a Beach Elevation Management Plan (BEMP) for grooming the beach adjacent to the Lagoon when three threshold conditions are met. This action would ensure that the Ormond Beach Lagoon could naturally breach during rainfall events, permitting the J Street Drain to discharge storm runoff to the Pacific Ocean and protecting adjacent developed properties, including the Oxnard Waste Water Treatment Plant (OWWTP), from channel overflows. BEMP implementation would be overseen by a qualified biological monitor to avoid impacts to sensitive habitats, fish, and wildlife. The BEMP threshold conditions are:

1. The Ormond Beach Lagoon is fully enclosed by the Ormond Beach sand berm (i.e., the berm has not breached, and the lagoon is full), and
2. The Ormond Beach sand berm elevation adjacent to the lagoon is observed to be above 6.5 NGVD (8.9 feet NAVD) , and
3. A 72-hour prediction of a storm event of any magnitude affecting the watershed is received, which would likely cause the designed capacity of the J Street Drain to be exceeded if the lagoon water surface elevation cannot overtop the observed adjacent beach sand elevation.

PROJECT OBJECTIVES

The Ventura County Watershed Protection District's (District) primary project objectives include:

- Provide flood control protection by increasing the drain size to provide capacity for 100-year flood flow;
- Maintain the existing functional characteristics of the Ormond Beach Lagoon;
- Ensure project compatibility with future Ormond Beach Lagoon restoration plans;
- Minimize the disturbance to tidewater goby habitat downstream of the J Street Drain lined channel, as well as snowy plover and California least tern nesting areas on Ormond Beach;
- Minimize operation and maintenance requirements, especially during storms; and
- Minimize effects on water quality of the lagoon.

DISCRETIONARY APPROVALS

Agency	Discretionary Approval	Description
United States Army Corps of Engineers (USACE)	Section 404 Clean Water Act (CWA) Individual Permit and/or qualification under Nationwide Permit	Projects that include potential discharge of dredge or fill impacts to the "waters of the U.S." (including wetlands) are subject to Section 404 of the CWA, requiring a permit.
United States Fish & Wildlife Service (USFWS)	Section 7 Consultation	Required for any activity that may affect federally listed species. Section 7 consultation will address entire project and incidental take as part of the project.
California Department of Fish and Game (CDFG)	Section 1600-Series Streambed Alteration Agreement (SAA)	Required for any activity that will: • Substantially divert or obstruct the natural flow of any river, stream, or lake; • Substantially change or use any material for the bed, channel, or bank, of any river, stream or lake; or • Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.
	Section 2081 Take Permit	CDFG will issue a Section 2081 permit for the incidental take of State listed threatened and endangered species only if specific criteria are met. These criteria are reiterated in Title 14 CCR, Sections 783.4(a) and (b).
California Coastal Commission (CCC)	Coastal Development Permit (CDP)	Development activities, which are broadly defined by the Coastal Act to include construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the CCC or the local government.
Regional Water Quality Control Board (RWQCB)	Section 401 Water Quality Certification	Projects discharging fill and dredged materials to wetlands, riparian areas, and headwaters.
City of Port Hueneme	Coastal Development Permit	Development activities, which are broadly defined by the Coastal Act to include construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the CCC or the local government.
	Road Encroachment Permits	Required for work within the City's right-of-way.
City of Oxnard	Coastal Development Permit	Development activities which include construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the CCC or the local government.
	Road Encroachment Permit	Required for work within the City's right-of-way.

RECORD OF PROCEEDINGS

For purposes of CEQA and these Findings, the record of the administrative proceedings for the project includes, but is not limited to, the following documents:

- The April 9, 2008, Notice of Preparation (NOP) and Initial Study issued by the District in conjunction with the project;
- The November 2009 Draft EIR and the subsequent September 2011 Recirculated Draft EIR, including appendices and technical studies included or referenced in the Draft EIR and Recirculated Draft EIR (SCH No. 2008041057);
- The January 2012 Final EIR;
- All comments submitted by agencies or members of the public during the minimum 45-day public comment periods on the DEIR and RDEIR, and the District's responses to the comments;
- All other comments and correspondence submitted to the District with respect to the project;
- The Mitigation Monitoring and Reporting Program ("MMRP") for the project;
- All findings and resolutions adopted by the District in connection with the project, and all documents cited or referred to therein;
- All reports, studies, memoranda, maps, staff reports, or other planning documents relating to the project and/or cited in the EIR;
- All documents and information submitted to the District by responsible, trustee, or other public agencies, or by individuals or organizations, in connection with the project, up through the date the Board of Supervisors approves the project;
- Matters of common knowledge to the District, including, but not limited to federal, state, and local laws and regulations;
- Any documents expressly cited in these findings; and
- Any other materials required to be in the record of administrative proceedings pursuant to Public Resources Code Section 21167.6, subdivision (e).

The custodian of the documents comprising the record of administrative proceedings is the District, whose office is located at 800 South Victoria Avenue Ventura, California 93009-1610. The District has considered and relied on all of the documents listed above in reaching its decision on the Project.

FINDINGS REQUIRED UNDER CEQA

CEQA Section 21002 provides that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects." The same statute states that the procedures required by CEQA "are intended to assist public agencies in systematically identifying both the significant effects of projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects." Section 21002 goes on to state that "in the event [that] specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects."

To the extent that these Findings of Fact conclude that various proposed mitigation measures outlined in the FEIR are feasible and have not been modified, superseded, or withdrawn, the District hereby binds itself to implement these measures. These findings, in other words, are not merely informational, but rather constitute a binding set of obligations that have come into effect with the District's Board of Supervisors formal approval of the Project.

The mitigation measures and/or the design features and construction measures are referenced in the MMRP adopted concurrently with these findings, and will be implemented through the final design, construction and post construction periods.

MITIGATION MONITORING AND REPORTING PROGRAM

An MMRP has been prepared for the Project and has been adopted concurrently with these Findings as required by CEQA Section 21081.6(a)(1). The District will use the MMRP to ensure compliance with Project mitigation measures.

SIGNIFICANT EFFECTS AND MITIGATION MEASURES

The *CEQA Guidelines* define a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project, including land, air, water, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (Section 15382). The FEIR identified several significant environmental effects resulting from implementation of the project. However, these significant effects can be fully mitigated through the adoption of feasible mitigation measures. Additionally, the FEIR determined that the project would not result in unavoidable significant impacts. The environmental effects of the project are described below along with the District's findings with respect to each of the significant environmental effects of the project.

A. VISUAL RESOURCES

Adverse Effects on Scenic Vistas or Degradation of Existing Visual Character

1. **Construction Impact:** The proposed project would include the removal of existing fencing and oleander bushes (a visual buffer for the fence and the drain itself) between Hueneme Road and Redwood Street during construction. The fencing would be replaced; however, the oleander bushes would not be replaced by the District. This replacement is pending an agreement with the City of Oxnard. As a result, this would result in significant construction and operational impacts to the existing visual character or quality of the site and its surroundings. Additionally, vertical shoring would occur near the Surfside III property, resulting in the removal of large shrubs and overhanging tree limbs within the District right-of-way. However, vegetation on Surfside III property would remain in place except for plants whose root systems would be compromised during the process. Trees and shrubs along the east boundary of the J Street Drain property would remain in place, as construction would affect an existing maintenance road that is devoid of vegetation. Removal of trees and shrubs would expose views of the OWWTP and the J Street Drain to residents along the east side of Buildings 15, 16, and 17 and people visiting the adjacent park (see Figure 4.1-2 in the EIR). The J Street Drain would become more visible to residents in Buildings 6 and 7, however this would not create a substantial change as the drain is currently visible due to sparser vegetation along the eastern property boundary in these areas. Mitigation measure VIS-3 requires temporary visual screening to shield Surfside III residents from views of the construction site and would reduce construction phase impacts below a level of significance. Mitigation measure VIS-4 would require installation of a permanent 10- to 12-foot-tall fence with vinyl screening along the OWWTP and District property boundary to shield Surfside III residents from views of the OWWTP. Mitigation measure NOISE-2 requires a temporary noise control barrier be installed and maintained between the temporary work area and adjacent land uses during all phases of project construction. This noise control barrier will also provide visual screening during construction. With these mitigation measures, this impact would be less than significant (EIR page 4.1-16).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Visual Resources identified in the EIR.

Mitigation Measure

VIS-3 During construction, temporary privacy screening would be placed along the northeast boundary of the Surfside III property to shield residents from views of the construction site and of the OWWTP.

VIS-4 Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.

NOISE-2 A temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain. Additionally, temporary noise control barriers shall be installed and maintained in residential and commercial areas along Phases 2 - 4 to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-25. In addition to placement of noise control blankets along the construction area adjacent to the Shoreline Care Facility, located at 5225 South J Street, and if needed, Our Saviour's Evangelical Lutheran Church at 905 Redwood Street, to further reduce noise levels below 68 dB(A) L_{eq}, additional noise control barriers shall be installed. To ensure sufficient noise barriers are deployed, construction noise levels shall be monitored ten feet from the exterior of the nursing home and church at the start of work activities within 500 feet of these two locations. Barriers would be installed to reduce noise levels generated by the loudest equipment when construction activities are closest to the nursing home and church. Monitoring would occur at the nursing home during construction Phases 2 and 3 and at the church during construction Phase 4. Construction noise levels would be monitored weekly thereafter to ensure proper function of the barriers throughout work and that the desired noise attenuation at these locations is achieved.

This noise control barrier will also provide visual screening for all residents along the work area, including the Surfside III property, to shield residents from views of the J Street Drain during construction. If the Surfside III Condominium Owners' Association does not grant a temporary work area to enable installation of temporary noise barriers at Buildings 6 and 7, the District will provide funds for the Association to arrange the barrier installation on their property. Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J St Drain in Phase 1).

Facts in Support of Finding: Mitigation measure VIS-3 requires temporary visual screening and would reduce construction phase impacts below a level of significance. Mitigation measure VIS-4 requires installation of a permanent 10-to 12-foot-tall fence with vinyl screening along the OWWTP and District property boundary prior to construction to shield Surfside III residents from views of the OWWTP. Mitigation measure NOISE-2 requires installation of a temporary noise control barrier along all project phases, providing visual screening during construction. With these mitigation measures, this impact would be less than significant.

2. **Operations Impact.** The proposed project would include the removal of existing fencing and oleander bushes between Hueneme Road and Redwood Street during construction. The fencing would be replaced; however, the oleander bushes would not be replaced by the District. Any replacement of oleander bushes along J Street Drain would be the responsibility of the City of Oxnard. This replacement is pending an agreement with the City. The existing oleander bushes provide screening of the chain linked fence along the drain for the residences on both sides of J Street. Additionally, for the pedestrians, cyclists and motorists along this portion of J Street, the oleander bushes provide a visual buffer for the fence and the drain itself. Without replanting the bushes, existing visual character and quality along the drain would be degraded. Loss of vegetation along the Surfside III property during construction would also cause continued visual impacts during operations. Therefore, implementation of the J Street Drain project would result in degradation of the existing visual character and quality at the project area. This impact is significant. Implementation of mitigation measures VIS-1 through VIS-4 would reduce the impact to a less than significant level (EIR page 4.1-16).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Visual Resources identified in the EIR.

   Mitigation Measures

   VIS-1 The District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard. Landscaping shall be replaced incrementally, within six months of completion of each project phase.

   VIS-2 Any tree or large shrub removed from the Surfside III property during construction would be replaced at a 1:1 ratio.

   VIS-4 Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.

   Facts in Support of Finding: Mitigation measure VIS-1 requires replacement of the removed oleander bushes with suitable replacement landscaping. As this landscaping matures, it will replace the existing visual buffer that the oleander bushes provide and would reduce the operational impact to below a level of significance. Mitigation measure VIS-2 requires the replacement of the removed trees and large shrubs within the Surfside III property at 1:1 ratio and would reduce the operational impact to below a level of significance as the landscaping matures. Mitigation measure VIS-4 requires permanent visual screening and would further reduce impacts below a level of significance.

Consistency with Ventura County General Plan Goals, Policies and Programs

1. **Construction Impact:** Construction of the project would be inconsistent with the scenic resources' goals, polices and programs in the Ventura County General Plan. However, construction impacts would be temporary and mitigation measure NOISE-2 requires a temporary noise control barrier to be installed and maintained between the temporary work areas during construction of all project phases. This noise control barrier will also provide visual screening for all residents along the work area, including the Surfside III property, to shield residents from views of the J Street Drain during construction. Mitigation measure VIS-3 requires temporary visual screening to shield Surfside III residents from views of the construction site and would reduce construction phase impacts below a level of significance. In addition, mitigation measure VIS-4 would require installation of a permanent 10- to 12-foot-tall fence with vinyl screening along the OWWTP and District property boundary to shield Surfside III residents from views of

the OWWTP. With these mitigation measures, this impact would be less than significant (EIR page 4.1-17).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Visual Resources identified in the EIR.

Mitigation Measures

VIS-3 During construction, temporary privacy screening would be placed along the northeast boundary of the Surfside III property to shield residents from views of the construction site and of the OWWTP.

VIS-4 Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.

NOISE-2 A temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain. Additionally, temporary noise control barriers shall be installed and maintained in residential and commercial areas along Phases 2 - 4 to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-25. <u>In addition to placement of noise control blankets along the construction area adjacent to the Shoreline Care Facility, located at 5225 South J Street, and if needed, Our Saviour's Evangelical Lutheran Church at 905 Redwood Street, to further reduce noise levels below</u> 68 dB(A) L_{eq}<u>, additional noise control barriers shall be installed. To ensure sufficient noise barriers are deployed, construction noise levels shall be monitored ten feet from the exterior of the nursing home and church at the start of work activities within 500 feet of these two locations. Barriers would be installed to reduce noise levels generated by the loudest equipment when construction activities are closest to the nursing home and church. Monitoring would occur at the nursing home during construction Phases 2 and 3 and at the church during construction Phase 4. Construction noise levels would be monitored weekly thereafter to ensure proper function of the barriers throughout work and that the desired noise attenuation at these locations is achieved.</u>

This noise control barrier will also provide visual screening for all residents along the work area, including the Surfside III property, to shield residents from views of the J Street Drain during construction. If the Surfside III Condominium Owners' Association does not grant a temporary work area to enable installation of temporary noise barriers at Buildings 6 and 7, the District will provide funds for the Association to arrange the barrier installation on their property. Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J St Drain in Phase 1).

Facts in Support of Finding: Mitigation measure VIS-4 requires installation of a permanent 10- to 12-foot-tall fence with vinyl screening prior to construction along the OWWTP and District property boundary to shield Surfside III residents from views of the OWWTP. Mitigation measure VIS-3 requires temporary visual screening to shield Surfside III residents from views of the construction site and would reduce construction phase impacts below a level of significance. Mitigation measure NOISE-2 requires the installation of a temporary noise barrier between the

work area and residential areas during all phases of construction. This noise barrier also serves as a temporary visual barrier. Impacts are less than significant with implementation of these mitigation measures.

2. **Operations Impact:** The proposed project would include the removal of existing fencing and oleander bushes between Hueneme Road and Redwood Street during construction. The fencing would be replaced; however, the oleander bushes would not be replaced by the District. Any replacement of oleander bushes along J Street Drain would be the responsibility of the City of Oxnard. This replacement is pending an agreement with the City. The existing oleander bushes provide screening of the chain linked fence along the drain for the residences on both sides of J Street. Additionally, for the pedestrians, cyclists and motorists along this portion of J Street, the oleander bushes provide a visual buffer for the fence and the drain itself. Without replanting the bushes, existing visual character and quality along the drain would be degraded. Loss of vegetation along the Surfside III property during construction would also cause continued visual impacts during operations. Therefore, implementation of the J Street Drain project would result in degradation of the existing visual character and quality at the project area. The project would be inconsistent with the scenic resources' goals, polices and programs in the Ventura County General Plan; therefore; this impact is significant (EIR page 4.1-17). Implementation of mitigation measures VIS-1, VIS-2 and VIS-4 would reduce the impact to a less than significant level.

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Visual Resources identified in the EIR.

   Mitigation Measures

   VIS-1 The District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard. Landscaping shall be replaced incrementally, within six months of completion of each project phase.

   VIS-2 Any tree or large shrub removed from the Surfside III property during construction would be replaced at a 1:1 ratio.

   VIS-4 Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.

   Facts in Support of Finding: Mitigation measure VIS-1 requires replacement of the removed oleander bushes with suitable replacement landscaping. As this landscaping matures, it will replace the existing visual buffer that the oleander bushes provide and would reduce the operational impact to below a level of significance. Mitigation measure VIS-2 requires the replacement of the removed trees and large shrubs within the Surfside III property at 1:1 ratio and would reduce the operational impact to below a level of significance as the vegetation matures. Mitigation measure VIS-4 requires permanent visual screening and would further reduce impacts below a level of significance.

B. BIOLOGICAL RESOURCES

Sensitive Vegetation Communities/Habitats

1. **Construction Impact:** The majority of the proposed J Street Drain project consists of urban developed land (UD). Within the northern survey area, the J Street Drain is a concrete lined channel with surrounding residential and commercial development. Project construction within the northern survey area would occur entirely within the concrete-lined channel, which is

developed (Figure 4.2-8). Therefore, no impacts to sensitive vegetation communities within the northern survey area would occur during construction. One sensitive vegetation community, open water (OW), would be temporarily, directly impacted by project construction (1.80 acres). Additionally, Eucalyptus Woodland (EW) habitat would be impacted, however, impacts to EW are not considered significant since the habitat is nonnative and is not considered sensitive, threatened, or endangered by the CDFG or the USFWS. Further, indirect impacts (disturbance associated with significant noise levels and increased intrusion of workers/equipment) to OW, coastal brackish marsh (CBM), southern foredune (SFD), and southern coastal salt marsh (SCSM) would occur and this is considered a significant impact requiring mitigation (EIR page 4.2-32).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Biological Resources identified in the EIR.

Mitigation Measure

BIO-1 During construction, the sensitive vegetation communities adjacent to the project alignment shall be flagged as Environmentally Sensitive Areas (ESA) and construction fencing shall be installed to avoid indirect impacts to these areas. Staging areas shall be identified during construction for lay down areas, equipment storage, etc., to avoid indirect impacts to the ESA. Biological monitoring shall occur during construction activities to prevent indirect impacts. Temporarily disturbed OW habitat, which falls under CDFG, USACE, and RWQCB jurisdiction, would be restored at a 1:1 ratio upon completion of construction. OW habitat restoration shall include replacement on the lagoon bottom of the top 12 inches of original soil to ensure suitable conditions for tidewater gobies and benthic fauna.

Facts in Support of Finding: Mitigation measure BIO-1 would ensure that construction fencing is installed and sensitive vegetation communities are flagged to avoid direct and indirect impacts. By delineating sensitive areas, construction activities would be located and staged to avoid potential impacts. In addition, BIO-1 would require restoration of temporary direct impacts to OW habitat.

Sensitive Wildlife Species

1. **Construction Impacts:** Project construction would directly and indirectly impact sensitive zoological species, including the California least tern, western snowy plover, and Tidewater Goby. Construction effects on the California Least tern and tidewater goby would consist of direct impacts to these species' foraging habitat when the J Street Drain and a 0.31-acre portion of the Ormond Beach Lagoon are dewatered, and as a result of potential siltation of the adjacent lagoon. Construction activities may temporarily indirectly impact western snowy plovers that nest near the work area on Ormond Beach. Finally, potential direct impacts to tidewater goby and its burrows and eggs would result from construction at the southern end of the J Street Drain and its transition to the Lagoon, where this fish occurs. These impacts are considered significant and require mitigation (EIR pages 4.2-39 through 4.2-41).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Biological Resources identified in the EIR.

Mitigation Measures

BIO-2 To prevent a decrease in the foraging success of California least terns, temporary construction fencing ("snow fencing") shall be installed surrounding the project site to delineate the construction footprint.

BIO-3 To prevent a decrease in the nesting and foraging success of the California least tern and western snowy plover, phase 1 construction activities adjacent to California least tern and western snowy plover habitat shall occur outside of the breeding season (March to September) to the extent feasible. If construction activities must occur during the breeding season, phase 1 project initiation through coffer dam installation shall be completed before May 1 to avoid direct impacts to foraging terns. In addition, a preemptive nesting bird survey shall be conducted by a qualified biologist to determine if any nesting terns or plovers are located near proposed activities. If nesting birds are found, all construction activities shall be prohibited within a 300-foot buffer area surrounding the nest location during the breeding season until the young have fledged. The qualified biologist shall ensure that the buffer area is appropriately defined with flagging and/or other means of suitable identification. The District shall consult with USFWS and CDFG in the event that nesting California least terns or western snowy plover are observed within 500 feet of the project area. If no nesting birds are found, construction activities could be conducted during the breeding season without restriction.

BIO-4 To prevent a decrease in the foraging success of California least terns and tidewater goby, silt fencing shall be installed prior to project construction between the project area and waters of Ormond Lagoon. For project activities within waters of Ormond Lagoon, dual silt fencing shall be installed around each work area to prevent/decrease the clouding of water within the lagoon as a result of potential runoff.

BIO-5 To avoid impacts to tidewater goby eggs, Phase 1 project initiation through coffer dam installation shall be completed before May 1, as the peak breeding season for this species extends from late spring through early summer, and again in late summer through early fall. Prior to the installation of the temporary cofferdam, a Section 10 (a)(1) (a) permitted tidewater goby biologist shall capture and relocate gobies to appropriate habitat located outside of the project area. The temporary cofferdam shall remain in place throughout construction activities south of Hueneme Road to prevent tidewater goby from entering the construction area from the lagoon. The biologist shall also be present during and after dewatering to ensure all gobies and other native fish are relocated to the lagoon prior to construction. A suitable number of biologists working under the supervision of the permitted biologist shall be present during and immediately after the dewatering phase to ensure that all gobies are detected. In addition, the surface water pumps installed for the dewatering of the work area shall be screened (less than five mm mesh size). A permitted tidewater goby biologist shall also be required to relocate any tidewater goby that may enter the work area from upstream.

BIO-6 Although night construction is not anticipated, in the event that it becomes necessary, all lighting will be shielded to prevent illumination of the beach.

Facts in Support of Finding: Implementation of mitigation measure BIO-2 would delineate adjacent California least tern foraging habitat to ensure it is not impacted by construction activities. Additionally, by implementing mitigation measure BIO-3, California least terns and western snowy plovers that may be foraging or nesting on or near the project site during the breeding season would be avoided during construction and maintenance activities. This would

prevent any decline in foraging or nesting success for these species. Further, implementation of BIO-4 would result in the installation of silt fencing to prevent sediment and silt from degrading California least tern and tidewater goby habitat and impairing foraging success. To further avoid impacts to tidewater goby, implementation of BIO-5 would install a temporary cofferdam and relocate any gobies that may be within the construction area. By constructing a coffer dam and relocating individuals, the tidewater goby population would be maintained to the greatest extent feasible. Although night construction is not anticipated, in the event that it becomes necessary, mitigation measure BIO-6 would ensure that all lighting will be shielded to prevent illumination of the beach.

Nesting Migratory Birds or Raptors

1. **Construction Impacts:** Implementation of the project would result in significant construction related indirect impacts to migratory birds, including raptors, through the loss of nesting and foraging eucalyptus woodland habitat. These impacts are considered significant and, therefore, mitigation is required (EIR page 4.2-41).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Visual Resources identified in the EIR.

   Mitigation Measures

   BIO-7 In order to avoid conflicts with the federal MBTA, if construction is proposed during the migratory bird nesting season, a preconstruction survey shall be conducted by a qualified biologist for the eucalyptus woodland located within the project footprint. The breeding season is defined as February 15 to September 15. If nesting birds/raptors are found, all construction activities shall be prohibited within a 300-foot impact avoidance buffer area surrounding the nest location during the breeding season. In consultation with CDFG and/or USFWS, the buffer area may be reduced in the case of bird species/individuals accustomed to urban disturbance. The qualified biologist shall ensure that the avoidance buffer area is appropriately defined with flagging and/or other means of suitable identification. If no nesting birds/raptors are found, construction could be conducted during the breeding season. Trees may be removed outside of the breeding season without restriction.

   VIS-2 Any tree or large shrub removed from the Surfside III property during construction would be replaced at a 1:1 ratio.

   Facts in Support of Finding: Impacts to raptor and migratory bird nesting habitat would be avoided by implementing mitigation measure BIO-7 and conducting preconstruction surveys within EW habitat. By determining the presence/absence of migratory birds prior to construction activities, active nests can be avoided during construction and the nesting success of migratory birds would not be impacted. VIS-2 also ensures replacement of nesting trees removed during construction.

Jurisdictional Waters and Wetlands

1. **Construction Impacts:** Reconstruction of the existing concrete channel would impact 7.90 acres of federal and state jurisdictional areas; however, because the channel is concrete-lined under existing conditions, impacts within the existing channel are considered less than significant. Additionally, construction activities would temporarily impact the natural substrate of the lagoon (0.29 acre) through the installation of a cofferdam within the lagoon and the subsequent pumping/draining of ground and lagoon water from the construction/work area. Impacts to the natural substrate of the lagoon are considered significant and require mitigation. Maintenance

activities would occur as they do under existing conditions and would not result in new impacts. Impacts to federal wetlands and/or waters of the U.S. would require consultation with USACE to obtain a Section 404 Permit and associated Section 401 Water Quality Certification via the RWQCB. Impacts to state jurisdictional areas would also trigger the need for a 1600-series SAA with CDFG and Clean Water Certification pursuant to the Porter-Cologne Act or CWA. Similarly, any impacts to CCC jurisdictional areas would require a Coastal Zone Development Permit from the CCC under the Local Coastal Program (EIR 4.2-47).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Biological Resources identified in the EIR.

Mitigation Measures

BIO-1 During construction, the sensitive vegetation communities adjacent to the project alignment shall be flagged as Environmentally Sensitive Areas (ESA) and construction fencing shall be installed to avoid indirect impacts to these areas. Staging areas shall be identified during construction for lay down areas, equipment storage, etc., to avoid indirect impacts to the ESA. Biological monitoring shall occur during construction activities to prevent indirect impacts. Temporarily disturbed OW habitat, which falls under CDFG, USACE, and RWQCB jurisdiction, would be restored at a 1:1 ratio upon completion of construction. OW habitat restoration shall include replacement on the lagoon bottom of the top 12 inches of original soil to ensure suitable conditions for tidewater gobies and benthic fauna.

BIO-4 To prevent a decrease in the foraging success of California least terns and tidewater goby, silt fencing shall be installed prior to project construction between the project area and waters of Ormond Lagoon. For project activities within waters of Ormond Lagoon, dual silt fencing shall be installed around each work area to prevent/decrease the clouding of water within the lagoon as a result of potential runoff.

WQ-1 Construction Site Planning Best Management Practices (BMPs), including but not limited to:

- The amount of cuts and fills shall be minimized; and
- Temporary and permanent roads and driveways shall be aligned along slope contours. Grading operations shall be phased to reduce the extent of disturbed areas and length of exposure.

WQ -2 BMPs to Minimize Soil Movement including but not limited to:

- Soil stockpiles shall be contained;
- Stabilized access roads and entrances shall be constructed in the initial phase of construction;
- Tire wash stations, gravel beds, and/or rumble plates shall be installed at site entrance and exit points to prevent sediment from being tracked onto adjacent roadways;
- Sediments and construction materials shall be dry-swept from finished streets the same day they are deposited; and
- Site runoff control structures, such as earth berms, drainage swales, and ditches that convey surface runoff during construction into temporary or

permanent sediment detention basins shall be installed and made operational in the initial phase of construction, as necessary.

WQ -3 BMPs to capture sediment including but not limited to:

- Storm drain inlets shall be protected from sediment-laden runoff with inlet protection devices such as gravel bag barriers, filter fabric fences, block and gravel filters, excavated inlet sediment traps, sand bag barriers, and/or other devices; and
- Sediment shall be removed from dewatering discharge with portable settling and filtration methods, such as Baker tanks or other devices.

WQ -4 Good housekeeping BMPs, including but not limited to the following requirements:

- All storm drains, drainage patterns, and creeks located near the construction site prior to construction shall be identified to ensure that all subcontractors know their location to prevent pollutants from entering them;
- Washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site; wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands; areas designated for washing functions shall be at least 100 feet from any storm drain, waterbody or sensitive biological resources to the extent feasible; the location(s) of the washout area(s) shall be clearly noted at the construction site with signs; the applicant shall designate a washout area; the wash-out areas shall be shown on the construction and/or grading and building plans and shall be in place and maintained throughout construction;
- All leaks, spills, and drips shall be immediately cleaned up and disposed of properly;
- Vehicles and heavy equipment that are leaking fuel, oil, hydraulic fluid or other pollutants shall be immediately contained and either repaired immediately or removed from the site;
- One or more emergency spill containment kits shall be placed onsite in easily visible locations. Personnel will be trained in proper use and disposal methods;
- Vehicles and heavy equipment shall be refueled and serviced in one designated site located at least 100 feet from the drain to the extent feasible;
- Temporary storage of construction equipment shall be limited to an area approved by the City of Oxnard, and shall be located at least 100 feet from any water bodies to the extent feasible;
- Dry clean-up methods shall be used whenever possible;
- Exposed stockpiles of soil and other erosive materials shall be covered or contained during the rainy season;
- Trash cans shall be placed liberally around the site and properly maintained;
- All subcontractors and laborers shall be educated about proper site maintenance and stormwater pollution control measures through periodic “tailgate” meetings;

- Roadwork or pavement construction, concrete, asphalt, and seal coat shall be applied during dry weather only; and
- Storm drains and manholes within the construction area shall be covered when paving or applying seal coat, slurry, fog seal, etc.

Facts in Support of Finding: Impacts to the natural substrate within federal and state jurisdictional areas would be reduced through implementation of mitigation measure BIO-1. Mitigation measure BIO-1 requires restoration of OW habitat upon completion of construction. Mitigation measure WQ-1 requires development and implementation of construction site planning BMPs. Mitigation measure WQ-2 requires implementation of BMPs to minimize soil movement. Mitigation measure WQ-3 requires BMPs to capture sediment during construction. Mitigation measure WQ-4 requires good housekeeping BMPs during construction and operations. Mitigation measure BIO-4 requires installation of silt fencing to prevent sediment and silt from degrading California least tern and tidewater goby habitat and impairing foraging success. BIO-4 in combination with WQ-1 through WQ-4 would also prevent indirect impacts to wetlands downstream of the project site by preventing degradation of their water quality.

Coastal Habitat

1. **Construction Impacts:** Construction of the proposed project would result in temporary impacts to federal waters of the U.S. and state jurisdictional areas within the Coastal Zone. However, neither reconstruction of the existing concrete-lined channel nor the creation of a temporary transition ramp and replacement of 0.05 acres of rock riprap would permanently reduce the extent of existing coastal riparian habitat. Indirect impacts to adjacent coastal habitats may occur during construction through degradation of water quality (e.g., erosion leading to increased turbidity).This impact is considered significant and mitigation is required (EIR page 4.2-51).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Biological Resources identified in the EIR.

   Mitigation Measures

   BIO-1 During construction, the sensitive vegetation communities adjacent to the project alignment shall be flagged as Environmentally Sensitive Areas (ESA) and construction fencing shall be installed to avoid indirect impacts to these areas. Staging areas shall be identified during construction for lay down areas, equipment storage, etc., to avoid indirect impacts to the ESA. Biological monitoring shall occur during construction activities to prevent indirect impacts. Temporarily disturbed OW habitat, which falls under CDFG, USACE, and RWQCB jurisdiction, would be restored at a 1:1 ratio upon completion of construction. OW habitat restoration shall include replacement on the lagoon bottom of the top 12 inches of original soil to ensure suitable conditions for tidewater gobies and benthic fauna.

   BIO-4 To prevent a decrease in the foraging success of California least terns and tidewater goby, silt fencing shall be installed prior to project construction between the project area and waters of Ormond Lagoon. For project activities within waters of Ormond Lagoon, dual silt fencing shall be installed around each work area to prevent/decrease the clouding of water within the lagoon as a result of potential runoff.

   WQ-1 Construction Site Planning BMPs, including but not limited to:

   - The amount of cuts and fills shall be minimized; and

- Temporary and permanent roads and driveways shall be aligned along slope contours. Grading operations shall be phased to reduce the extent of disturbed areas and length of exposure.

WQ -2 BMPs to Minimize Soil Movement including but not limited to:

- Soil stockpiles shall be contained;
- Stabilized access roads and entrances shall be constructed in the initial phase of construction;
- Tire wash stations, gravel beds, and/or rumble plates shall be installed at site entrance and exit points to prevent sediment from being tracked onto adjacent roadways;
- Sediments and construction materials shall be dry-swept from finished streets the same day they are deposited; and
- Site runoff control structures, such as earth berms, drainage swales, and ditches that convey surface runoff during construction into temporary or permanent sediment detention basins shall be installed and made operational in the initial phase of construction, as necessary.

WQ -3 BMPs to capture sediment including but not limited to:

- Storm drain inlets shall be protected from sediment-laden runoff with inlet protection devices such as gravel bag barriers, filter fabric fences, block and gravel filters, excavated inlet sediment traps, sand bag barriers, and/or other devices; and
- Sediment shall be removed from dewatering discharge with portable settling and filtration methods, such as Baker tanks or other devices.

WQ -4 Good housekeeping BMPs, including but not limited to the following requirements:

- All storm drains, drainage patterns, and creeks located near the construction site prior to construction shall be identified to ensure that all subcontractors know their location to prevent pollutants from entering them;
- Washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site; wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands; areas designated for washing functions shall be at least 100 feet from any storm drain, waterbody or sensitive biological resources to the extent feasible; the location(s) of the washout area(s) shall be clearly noted at the construction site with signs; the applicant shall designate a washout area; the wash-out areas shall be shown on the construction and/or grading and building plans and shall be in place and maintained throughout construction;
- All leaks, spills, and drips shall be immediately cleaned up and disposed of properly;
- Vehicles and heavy equipment that are leaking fuel, oil, hydraulic fluid or other pollutants shall be immediately contained and either repaired immediately or removed from the site;

- One or more emergency spill containment kits shall be placed onsite in easily visible locations. Personnel will be trained in proper use and disposal methods;
- Vehicles and heavy equipment shall be refueled and serviced in one designated site located at least 100 feet from the drain to the extent feasible;
- Temporary storage of construction equipment shall be limited to an area approved by the City of Oxnard, and shall be located at least 100 feet from any water bodies to the extent feasible;
- Dry clean-up methods shall be used whenever possible;
- Exposed stockpiles of soil and other erosive materials shall be covered or contained during the rainy season;
- Trash cans shall be placed liberally around the site and properly maintained;
- All subcontractors and laborers shall be educated about proper site maintenance and stormwater pollution control measures through periodic "tailgate" meetings;
- Roadwork or pavement construction, concrete, asphalt, and seal coat shall be applied during dry weather only; and
- Storm drains and manholes within the construction area shall be covered when paving or applying seal coat, slurry, fog seal, etc.

Facts in Support of Finding: Impacts to the natural substrate within coastal riparian habitat would be reduced through implementation of mitigation measure BIO-1. Mitigation measure BIO-1 requires restoration of OW habitat upon completion of construction. Mitigation measure WQ-1 requires development and implementation of construction site planning BMPs. Mitigation measure WQ-2 requires implementation of BMPs to minimize soil movement. Mitigation measure WQ-3 requires BMPs to capture sediment during construction. Mitigation measure WQ-4 requires good housekeeping BMPs during construction and operations. Mitigation measure BIO-4 requires installation of silt fencing to prevent sediment and silt from degrading California least tern and tidewater goby habitat and impairing foraging success. BIO-4 in combination with WQ-1 through WQ-4 would also prevent indirect impacts to coastal wetlands downstream of the project site by preventing degradation of their water quality.

Migration Corridor by Fish or Wildlife

1. **Construction Impacts:** No regional biological corridors or linkages were identified within the project alignment. Therefore, no identified corridors or linkages would be impacted by construction of the proposed project. However, the Ormond Beach Lagoon and adjacent dune/beach area may be a staging area for migratory birds. Additionally, the Lagoon could provide a potential local corridor for tidewater goby. Therefore, construction of the proposed project would potentially impact the movement of these species. Impacts are considered significant and mitigation is required (EIR page 4.2-51).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Biological Resources identified in the EIR.

   Mitigation Measures

   BIO-1 During construction, the sensitive vegetation communities adjacent to the project alignment shall be flagged as Environmentally Sensitive Areas (ESA) and

construction fencing shall be installed to avoid indirect impacts to these areas. Staging areas shall be identified during construction for lay down areas, equipment storage, etc., to avoid indirect impacts to the ESA. Biological monitoring shall occur during construction activities to prevent indirect impacts. Temporarily disturbed OW habitat, which falls under CDFG, USACE, and RWQCB jurisdiction, would be restored at a 1:1 ratio upon completion of construction. OW habitat restoration shall include replacement on the lagoon bottom of the top 12 inches of original soil to ensure suitable conditions for tidewater gobies and benthic fauna.

BIO-5 To avoid impacts to tidewater goby eggs, Phase 1 project initiation through coffer dam installation shall be completed before May 1, as the peak breeding season for this species extends from late spring through early summer, and again in late summer through early fall. Prior to the installation of the temporary cofferdam, a Section 10 (a)(1) (a) permitted tidewater goby biologist shall capture and relocate gobies to appropriate habitat located outside of the project area. The temporary cofferdam shall remain in place throughout construction activities south of Hueneme Road to prevent tidewater goby from entering the construction area from the lagoon. The biologist shall also be present during and after dewatering to ensure all gobies and other native fish are relocated to the lagoon prior to construction. A suitable number of biologists working under the supervision of the permitted biologist shall be present during and immediately after the dewatering phase to ensure that all gobies are detected. In addition, the surface water pumps installed for the dewatering of the work area shall be screened (less than five mm mesh size). A permitted tidewater goby biologist shall also be required to relocate any tidewater goby that may enter the work area from upstream.

Facts in Support of Finding: Mitigation measure BIO-1 requires protection of adjacent sensitive habitats and restoration of on site OW habitat upon completion of construction to reduce below a significant level any potential impacts to areas that may be used by migratory birds for staging. To avoid impacts to the local tidewater goby corridor, implementation of BIO-5 would install a temporary cofferdam and relocate any gobies that may be within the construction area. By constructing a coffer dam and relocating individuals, impacts to the tidewater goby local corridor would be less than significant.

C. WATER RESOURCES AND HYDRAULIC HAZARDS

Groundwater Quality

1. **Construction Impacts:** The construction of the proposed drain would require the installation of dewatering wells, dewatering, and discharge of groundwater back into surface water. This dewatering is necessary to create a relatively dry work area for excavation and construction activities. The pumped groundwater would be tested for contaminants and, if determined to be acceptable, would be discharged into the Perkins Drain, away from the work area. If the pumped groundwater is determined to be contaminated, the water will be collected and either treated or disposed of according to waste discharge requirements of Order No. R4-2008-0032, General NPDES and Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (adopted by the State Board on June 5, 2008). According to the *Hydrogeology Study Summary* for J Street Drain (2011), groundwater pumping could cause the Halaco groundwater plume to move approximately 50 feet toward the project area during construction. This impact would be significant and mitigation is required (EIR page 4.3-22).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Water Resources identified in the EIR.

Mitigation Measure

HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site.

Facts in Support of Finding: Implementation of the HAZ-1 measure would prevent the migration of contaminated groundwater at the Halaco Site to the J Street Drain site as the District will monitor groundwater movement and if necessary, inject water into the shallow aquifer to prevent movement of Halaco contaminants toward the dewatering wells during construction. The impact is reduced to a less than significant level.

2. **Cumulative Impacts:** As analyzed in Section 4.3 of this EIR, cumulative impacts associated with dewatering would result in temporary impacts with regards to the potential migration of heavy metals within the ground water plume from the Halaco site. Therefore, implementation of the project would result in cumulative-level impacts requiring mitigation.

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Water Resources identified in the EIR.

   Mitigation Measure

   HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site.

   Facts in Support of Finding: Implementation of the HAZ-1 measure would prevent the migration of contaminated groundwater at the Halaco Site to the J Street Drain site. The impact is reduced to a less than significant level.

Surface Water Quality

1. **Construction Impacts:** Chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, glues, and other substances could be utilized during construction and could degrade the water quality of the surface water runoff and add pollution into local waterways; however, the threat of the release of these materials is minimal. Dewatering may result in the discharge of potentially contaminated groundwater to surface water and may degrade the water quality of surrounding watercourses and waterbodies. However, pumped groundwater must be tested and if determined to be contaminated, the water must be collected and either treated or disposed of according to waste discharge requirements of Order No. R4-2008-0032, General NPDES and Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (adopted by the

State Water Resources Control Board on June 5, 2008). The installation of dewatering wells may also result in erosion or sedimentation due to exposed soils and sediment removal and dewatering discharges may cause erosion at the discharge point. Construction of the proposed project could result in short-term erosion and sediment impacts to the watercourses and waterbodies within the project area and while the potential for erosion is limited, exposure of soil to wind and water during construction would still occur. The proposed project requires consultation with the USACE to obtain a Section 404 Permit and associated Section 401 Water Quality Certification via the RWQCB. A separate dewatering permit would be obtained from RWQCB under the General NPDES Permit discussed above. The proposed project would need to submit a Notice of Intent (NOI) and comply with the permit requirements including waste discharge requirements (WDR) and implement a monitoring and reporting program. Finally, the RWQCB issues the Construction General Stormwater Permit which addresses the potential pollutants discharged to stormwater by construction activities. To comply with the permit, an NOI must be submitted to the RWQCB and a Stormwater Pollution Prevention Plan must be prepared and kept on site. Impacts to water quality would be significant unless mitigated.

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the project which will avoid or substantially lessen the significant environmental effects to Water Resources identified in the EIR.

Mitigation Measures

HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site.

WQ-1 Construction Site Planning BMPs, including but not limited to:

- The amount of cuts and fills shall be minimized; and
- Temporary and permanent roads and driveways shall be aligned along slope contours. Grading operations shall be phased to reduce the extent of disturbed areas and length of exposure.

WQ -2 BMPs to Minimize Soil Movement including but not limited to:

- Soil stockpiles shall be contained;
- Stabilized access roads and entrances shall be constructed in the initial phase of construction;
- Tire wash stations, gravel beds, and/or rumble plates shall be installed at site entrance and exit points to prevent sediment from being tracked onto adjacent roadways;
- Sediments and construction materials shall be dry-swept from finished streets the same day they are deposited; and
- Site runoff control structures, such as earth berms, drainage swales, and ditches that convey surface runoff during construction into temporary or permanent sediment detention basins shall be installed and made operational in the initial phase of construction, as necessary.

WQ -3 BMPs to capture sediment including but not limited to:

- Storm drain inlets shall be protected from sediment-laden runoff with inlet protection devices such as gravel bag barriers, filter fabric fences, block and gravel filters, excavated inlet sediment traps, sand bag barriers, and/or other devices; and
- Sediment shall be removed from dewatering discharge with portable settling and filtration methods, such as Baker tanks or other devices.

WQ -4 Good housekeeping BMPs, including but not limited to the following requirements:

- All storm drains, drainage patterns, and creeks located near the construction site prior to construction shall be identified to ensure that all subcontractors know their location to prevent pollutants from entering them;
- Washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site; wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands; areas designated for washing functions shall be at least 100 feet from any storm drain, waterbody or sensitive biological resources to the extent feasible; the location(s) of the washout area(s) shall be clearly noted at the construction site with signs; the applicant shall designate a washout area; the wash-out areas shall be shown on the construction and/or grading and building plans and shall be in place and maintained throughout construction;
- All leaks, spills, and drips shall be immediately cleaned up and disposed of properly;
- Vehicles and heavy equipment that are leaking fuel, oil, hydraulic fluid or other pollutants shall be immediately contained and either repaired immediately or removed from the site;
- One or more emergency spill containment kits shall be placed onsite in easily visible locations. Personnel will be trained in proper use and disposal methods;
- Vehicles and heavy equipment shall be refueled and serviced in one designated site located at least 100 feet from the drain to the extent feasible;
- Temporary storage of construction equipment shall be limited to an area approved by the City of Oxnard, and shall be located at least 100 feet from any water bodies to the extent feasible;
- Dry clean-up methods shall be used whenever possible;
- Exposed stockpiles of soil and other erosive materials shall be covered or contained during the rainy season;
- Trash cans shall be placed liberally around the site and properly maintained;
- All subcontractors and laborers shall be educated about proper site maintenance and stormwater pollution control measures through periodic “tailgate” meetings;
- Roadwork or pavement construction, concrete, asphalt, and seal coat shall be applied during dry weather only; and

- Storm drains and manholes within the construction area shall be covered when paving or applying seal coat, slurry, fog seal, etc.

Facts in Support of Finding: Implementation of the HAZ-1 measure would prevent the migration of contaminated groundwater at the Halaco Site to the J Street Drain site and any discharge of associated pollutants to surface water during construction dewatering. Mitigation measure WQ-1 requires development and implementation of construction site planning BMPs to minimize runoff. Mitigation measure WQ-2 requires implementation of BMPs to minimize soil movement. Mitigation measure WQ-3 requires BMPs to capture sediment during construction. Mitigation measure WQ-4 requires good housekeeping BMPs during construction and operations. With implementation of mitigation measures WQ-1 through WQ-4, HAZ-1, and implementation of appropriate BMPs, water quality impacts would be reduced to below a level of significance.

Create/Contribute Runoff Water

1. **Construction Impacts:** During construction earth movement, use of heavy equipment, and placement of concrete within the work area all have the potential to generate polluted runoff. Therefore, this impact is considered significant and would require mitigation.

Mitigation Measures

HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site.

WQ-1 Construction Site Planning BMPs, including but not limited to:

- The amount of cuts and fills shall be minimized; and
- Temporary and permanent roads and driveways shall be aligned along slope contours. Grading operations shall be phased to reduce the extent of disturbed areas and length of exposure.

WQ -2 BMPs to Minimize Soil Movement including but not limited to:

- Soil stockpiles shall be contained;
- Stabilized access roads and entrances shall be constructed in the initial phase of construction;
- Tire wash stations, gravel beds, and/or rumble plates shall be installed at site entrance and exit points to prevent sediment from being tracked onto adjacent roadways;
- Sediments and construction materials shall be dry-swept from finished streets the same day they are deposited; and
- Site runoff control structures, such as earth berms, drainage swales, and ditches that convey surface runoff during construction into temporary or permanent sediment detention basins shall be installed and made operational in the initial phase of construction, as necessary.

WQ -3 BMPs to capture sediment including but not limited to:

- Storm drain inlets shall be protected from sediment-laden runoff with inlet protection devices such as gravel bag barriers, filter fabric fences, block and gravel filters, excavated inlet sediment traps, sand bag barriers, and/or other devices; and
- Sediment shall be removed from dewatering discharge with portable settling and filtration methods, such as Baker tanks or other devices.

WQ -4 Good housekeeping BMPs, including but not limited to the following requirements:

- All storm drains, drainage patterns, and creeks located near the construction site prior to construction shall be identified to ensure that all subcontractors know their location to prevent pollutants from entering them;
- Washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site; wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands; areas designated for washing functions shall be at least 100 feet from any storm drain, waterbody or sensitive biological resources to the extent feasible; the location(s) of the washout area(s) shall be clearly noted at the construction site with signs; the applicant shall designate a washout area; the wash-out areas shall be shown on the construction and/or grading and building plans and shall be in place and maintained throughout construction;
- All leaks, spills, and drips shall be immediately cleaned up and disposed of properly;
- Vehicles and heavy equipment that are leaking fuel, oil, hydraulic fluid or other pollutants shall be immediately contained and either repaired immediately or removed from the site;
- One or more emergency spill containment kits shall be placed onsite in easily visible locations. Personnel will be trained in proper use and disposal methods;
- Vehicles and heavy equipment shall be refueled and serviced in one designated site located at least 100 feet from the drain to the extent feasible;
- Temporary storage of construction equipment shall be limited to an area approved by the City of Oxnard, and shall be located at least 100 feet from any water bodies to the extent feasible;
- Dry clean-up methods shall be used whenever possible;
- Exposed stockpiles of soil and other erosive materials shall be covered or contained during the rainy season;
- Trash cans shall be placed liberally around the site and properly maintained;
- All subcontractors and laborers shall be educated about proper site maintenance and stormwater pollution control measures through periodic “tailgate” meetings;
- Roadwork or pavement construction, concrete, asphalt, and seal coat shall be applied during dry weather only; and

- Storm drains and manholes within the construction area shall be covered when paving or applying seal coat, slurry, fog seal, etc.

Facts in Support of Finding: Mitigation measure WQ-1 requires development and implementation of construction site planning BMPs to minimize runoff. Mitigation measure WQ-2 requires implementation of BMPs to minimize soil movement. Mitigation measure WQ-3 requires BMPs to capture sediment during construction. Mitigation measure WQ-4 requires good housekeeping BMPs during construction and operations. With implementation of mitigation measures WQ-1 through WQ-4, and implementation of appropriate BMPs, water quality impacts would be reduced to below a level of significance.

E. TRANSPORTATION AND CIRCULATION

Roadway Segments Reduce Level of Service to an Unacceptable Level or add Peak Hour Trips where Level of Service is Currently Less than Acceptable

1. **Construction Impact:** The intermittent road closures and haul truck trips during construction may disrupt traffic flow and cause delays, increasing traffic congestion and potentially reducing the level of service (LOS) to an unacceptable level as defined in Tables 4.5-1 and 4.5-2 of the EIR. Additionally, one or more of these trips would likely occur during peak hours, potentially affecting roadway segments along haul routes in the project vicinity that are currently operating at less than acceptable LOS. This would cause a significant impact for this issue area and mitigation is required (EIR pages 4.5-16 and 4.5-17).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Transportation and Circulation identified in the EIR.

Mitigation Measures

TR-1 The District shall prepare a construction worksite traffic control plan and submit it to the County, cities, Gold Coast Transit, Oxnard School District, Oxnard Union High School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan.

TR-2 The Contractor shall coordinate with emergency service providers (police, fire, ambulance and paramedic services) to provide advance notice of any lane closures, construction hours and changes to local access and to identify alternative routes where appropriate.

Facts in Support of Finding: Mitigation measure TR-1requires the District to prepare a traffic control plan for construction activities. The plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls, access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. TR-2 requires the construction contractor to coordinate with emergency service providers on lane closures, construction hours and changes to access and alternative routes. Implementation of these mitigation measures will reduce traffic congestion impacts to roadway segments to a less than significant level.

2. **Cumulative Impact:** Traffic impacts from the construction phase of the proposed project would be relatively short-term and intermittent involving road/lane closures and detours which would temporarily impact motorists (delay and inconvenience), businesses (other uses) along the corridor, and impacts on emergency response operations. J Street, Pleasant Valley Road, and Hueneme Road would remain open during all construction phases with intermittent lane closures. While project construction impacts would be temporary, traffic impacts have the potential to temporarily contribute to the exceedance of the level of service standard established by the City of Oxnard at the project intersections. This represents a significant cumulative traffic impact during construction. (EIR page 4.5-20)

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Transportation and Circulation identified in the EIR.

   Mitigation Measures

   TR-1 The District shall prepare a construction worksite traffic control plan and submit it to the County, cities, Gold Coast Transit, Oxnard School District, Oxnard Union High School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan.

   TR-2 The Contractor shall coordinate with emergency service providers (police, fire, ambulance and paramedic services) to provide advance notice of any lane closures, construction hours and changes to local access and to identify alternative routes where appropriate.

Facts in Support of Finding: Mitigation measure TR-1requires the District to prepare a traffic control plan for construction activities. The plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls, access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. TR-2 requires the construction contractor to coordinate with emergency service providers on lane closures, construction hours and changes to access and alternative routes. Implementation of these mitigation measures will reduce traffic congestion impacts to roadway segments to a less than significant level.

Change in Intersections Volume to Capacity (V/C) Ratio or Add Peak Hour Trips

1. **Construction Impact:** The intersections between J Street and major traffic corridors within the project area were not identified as having deficient LOS. Additionally, J Street is not part of the Regional Road Network (Ventura County General Plan Public Facilities and Services Appendix, Last Amended November 15, 2005, Figure 4.2.1). However, the proposed construction would involve excavation and backfill of soils as well as demolition and recycling of existing concrete. Haul trucks will be used to transport excess soil and concrete to designated local landfills and recycling locations, respectively. During the building of the drain, supplies and construction equipment would also be transported to the work area and construction staging area. It is anticipated that no more than three haul trucks would be on site for loading at one time and approximately 30 to 45 trips per day or five to six trips per hour are expected to occur. Typically, five to six haul trips would not be considered a significant number of trips; however, one or more

of these trips would likely occur during peak hour and may change the existing V/C ratio of intersections within the regional road network, such as those along Hueneme, Pleasant Valley, or Rice Roads. The haul truck trips may result in delays and congestion at the project intersections. The haul truck trips during construction may disrupt traffic flow and cause delays, increasing traffic congestion. A potentially significant impact is identified for this issue and mitigation is required (EIR page 4.5-17).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Transportation and Circulation identified in the EIR.

Mitigation Measures

TR-1 The District shall prepare a construction worksite traffic control plan and submit it to the County, cities, Gold Coast Transit, Oxnard School District, Oxnard Union High School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan.

TR-2 The Contractor shall coordinate with emergency service providers (police, fire, ambulance and paramedic services) to provide advance notice of any lane closures, construction hours and changes to local access and to identify alternative routes where appropriate.

Facts in Support of Finding: Mitigation measure TR-1requires the District to prepare a traffic control plan for construction activities. The plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls, access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. TR-2 requires the construction contractor to coordinate with emergency service providers on lane closures, construction hours and changes to access and alternative routes. Implementation of these mitigation measures will reduce traffic congestion impacts at intersections to a less than significant level.

2. **Cumulative Impacts:** While the construction impacts would be short-term and temporary, they have the potential to temporarily add peak hour trips to intersections within the regional road network (e.g., along Hueneme, Pleasant Valley, or Rice Roads) currently operating or projected to operate at an unacceptable LOS. The haul truck trips may result in delays and congestion at the project intersections. The haul truck trips during construction may disrupt traffic flow and cause delays, increasing traffic congestion. A potentially significant impact is identified for this issue and mitigation is required (EIR page 4.5-20).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Transportation and Circulation identified in the EIR.

   Mitigation Measures

   TR-1 The District shall prepare a construction worksite traffic control plan and submit it to the County, cities, Gold Coast Transit, Oxnard School District, Oxnard Union High

School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan.

TR-2 The Contractor shall coordinate with emergency service providers (police, fire, ambulance and paramedic services) to provide advance notice of any lane closures, construction hours and changes to local access and to identify alternative routes where appropriate.

Facts in Support of Finding: Mitigation measure TR-1requires the District to prepare a traffic control plan for construction activities. The plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls, access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. TR-2 requires the construction contractor to coordinate with emergency service providers on lane closures, construction hours and changes to access and alternative routes. Implementation of these mitigation measures will reduce traffic congestion impacts at intersections to a less than significant level.

Pedestrian/Bicycle Facilities

1. **Construction Impact:** The construction phase of the proposed project would involve road closures and detours along the drain corridor. Both Pleasant Valley and Hueneme Roads would remain open during all construction phases with intermittent lane closures. According to the City of Oxnard Bicycle Facilities Master Plan, bike lanes are designated on J Street between Wooley and Hueneme Roads. Along J Street, bike lanes are designated along both sides of the roadway. During the construction phase of the drain, construction activities would potentially interfere with designated bike lanes as bike lanes would be closed on J Street, although general vehicular access along J Street would be maintained. Cyclists along J Street would experience detours that may not be designated bike lanes. Additionally, pedestrians may also experience detours when sidewalks may not be available. This represents a significant impact and mitigation is required (EIR page 4.5-18).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Transportation and Circulation identified in the EIR.

   Mitigation Measure

   TR-1 The District shall prepare a construction worksite traffic control plan and submit it to the County, cities, Gold Coast Transit, Oxnard School District, Oxnard Union High School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan.

Facts in Support of Finding: Mitigation measure TR-1 requires the District to prepare a traffic control plan for construction activities. The plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls, access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. Implementation of this mitigation measure will reduce impacts to pedestrian and bicycle facilities to a less than significant level.

Off-Street Parking

1. **Construction Impact:** During Phase 1 of construction, approximately 30 off-street parking spaces would fall within the temporary work area due to construction between Buildings six and seven of the Surfside III property involving the trenching technique. As a result, these spaces would be unavailable to Surfside III residents during this phase of project construction. This is considered a significant impact and mitigation is required.

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Transportation and Circulation identified in the EIR.

   Mitigation Measure

   TR-3 To preserve parking for residents during phase 1 construction, the District shall employ vertical shoring techniques along the Surfside III property where open trenching would result in the temporary removal of off-street parking spaces.

   Facts in Support of Finding: Mitigation measure TR-3 requires vertical shoring techniques along the Surfside III property in order to preserve off-street parking for residents during phase 1 construction. Implementation of this mitigation measure will reduce impacts to a less than significant level.

F. NOISE AND VIBRATION

Generate Noises near Noise Sensitive Uses

Construction Impact: Noise levels generated from the proposed off-road equipment that is expected to be used during construction will likely exceed 55 dB(A) (south of Hueneme Road) and 68 dB(A) (north of Hueneme Road) Leq daytime County standards for hospitals, nursing homes, schools, churches, and libraries. There are a nursing home and a church within 500 feet of the proposed project. Therefore, a potentially significant impact is identified and mitigation is required. The proposed project construction would not involve evening or nighttime construction activity. Ventura County standards for residential areas apply to evening and night, but because construction is not proposed for these time periods, the standards would not be exceeded. Construction of the proposed project would result in a significant noise impact for the nursing home and church, but not for other land uses. However, construction noise mitigation measures will be implemented adjacent to all land uses during each phase of the proposed project to comply with the County threshold and City ordinances (EIR page 4.6-15).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects with regards to Noise identified in the EIR.

Mitigation Measures

NOISE-1 Equipment Noise Reduction

1. Minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, use concrete crushers or pavement

saws rather than hoe rams for tasks such as concrete or asphalt demolition and removal.

2. Pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise limitations.
3. Provide impact noise reducing equipment; i.e., jackhammers and pavement breaker(s), with noise attenuating shields, shrouds or portable barriers or enclosures, to reduce operating noise.
4. Provide upgraded mufflers, acoustical lining or acoustical paneling for other noisy equipment, including internal combustion engines.
5. Avoid blasting and impact-type pile driving.
6. Use alternative procedures of construction and select a combination of techniques that generate the least overall noise and vibration. Such alternative procedures could include the following:
    a. Use electric welders powered by remote generators.
    b. Mix concrete at non-sensitive off-site locations, instead of on-site.
    c. Erect prefabricated structures instead of constructing buildings on-site.
7. Use construction equipment manufactured or modified to reduce noise and vibration emissions, such as:
    a. Electric instead of diesel-powered equipment.
    b. Hydraulic tools instead of pneumatic tools.
    c. Electric saws instead of air- or gasoline-driven saws.
8. Turn off idling equipment when not in use for periods longer than 30 minutes.

NOISE-2 A temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain. Additionally, temporary noise control barriers shall be installed and maintained in residential and commercial areas along Phases 2-4 to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-25. <u>In addition to placement of noise control blankets along the construction area adjacent to the Shoreline Care Facility, located at 5225 South J Street, and if needed, Our Saviour's Evangelical Lutheran Church at 905 Redwood Street, to further reduce noise levels below</u> 68 dB(A) L_{eq}<u>, additional noise control barriers shall be installed. To ensure sufficient noise barriers are deployed, construction noise levels shall be monitored ten feet from the exterior of the nursing home and church at the start of work activities within 500 feet of these two locations. Barriers would be installed to reduce noise levels generated by the loudest equipment when construction activities are closest to the nursing home and church. Monitoring would occur at the nursing home during construction Phases 2 and 3 and at the church during construction Phase 4. Construction noise levels would be monitored weekly thereafter to ensure proper function of the barriers throughout work and that the desired noise attenuation at these locations is achieved.</u>

This noise control barrier will also provide visual screening for all residents along the work area, including the Surfside III property, to shield residents from views of the J Street Drain during construction. If the Surfside III Condominium Owners' Association does not grant a temporary work area to enable installation of temporary noise barriers at Buildings 6 and 7, the District will provide funds for the Association to arrange the barrier installation on their property. Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J St Drain in Phase 1).

Facts in Support of Finding: Mitigation measure NOISE-1 requires equipment noise reduction techniques to be implemented during construction. Mitigation measure NOISE-2 will require the installation of a temporary noise control barrier along all phases of project construction. Implementation of the identified mitigation measures will reduce noise impacts to the nursing home and church to a less than significant level. Although not required, construction noise mitigation measures will also be implemented along non-sensitive land uses to further reduce noise levels.

Ground-Borne Vibration or Ground-Borne Noise Levels

1. **Construction Impact:** The proposed project has the potential to expose people to or generate excessive groundborne vibration or groundborne noise levels because pile driving and vertical shoring is required for construction of Phase 1. Off-road equipment expected to be used during construction includes: wheel loaders, track dozers, scrapers, excavator with hydraulic hammer, pile driver, motor grader, concrete pump, concrete trucks, dump trucks, and other miscellaneous small equipment. As analyzed in Section 4.6 of the EIR, any project that either individually or when combined with other recently approved, pending, and probable future projects, including construction activities involving blasting, pile-driving, vibratory compaction, demolition, and drilling or excavation which exceed the threshold criteria provided in Section 12.2 of the FTA *Transit Noise and Vibration Impact Assessment* (2006), is considered to have a potentially significant impact (EIR page 4.6-16).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects with regards to Noise identified in the EIR.

   Mitigation Measure

   NOISE-3 Prior to construction, the District shall request property owner permission to video record the condition of structures adjacent to the J Street Drain in the presence of the property owner. The recording shall be performed and stored by an independent third-party, with a copy given to the property owner. If vibration-induced damages occur as a result of construction, property owners would be invited to submit claims documenting such damages within one year following construction completion. The third-party would again enter the property to video record its post-construction condition, again providing a copy to the property owner. Both recordings would be compared, and the District would provide compensation to repair new damages observed in the post-construction recordings. Once both parties have agreed to the compensation, both pre- and post-construction video recordings stored by the third-party would be given to the property owner.

   GEO-3 a) A Licensed Surveyor shall plan and install a survey monument monitoring system on buildings within 25 feet of proposed vertical shoring to collect monthly baseline data for six months before construction. The monuments shall remain in place and be monitored monthly for one year after construction completion to track any latent changes. During construction, the Licensed

Surveyor shall conduct surveys corresponding to major phases of work such as shoring installation, excavation, and backfill.

b) Before Phase 1 construction may begin, the District shall require the Contractor to prepare a Work Plan, which would take into account all available geotechnical information for the areas where vertical shoring and sheet piles are to be installed. The Plan would specify the contractor's approach to installing vertical shoring and sheet piles in a manner that would avoid and minimize associated potential vibration damage to adjacent structures.

c) The Work Plan shall require the Contractor to take daily measurements of the survey monuments on adjacent structures described in (a) above to track potential changes during construction.

d) Should the surveys or measurements described in (a) and (c) above indicate subsidence or other damage due to construction activities, the Contractor shall modify the Work Plan to address the causes. Property owners within 25 feet of the proposed shoring shall be promptly notified of observed damage, and any Work Plan revisions shall be available to property owners upon request. For multi-unit structures, the District shall identify a single designated representative with whom to communicate.

e) The District shall provide a construction contact telephone number to adjacent residents before work commences so that they may report possible observations of damage immediately to the District.

Facts in Support of Finding: Mitigation measure NOISE-3 requires pre- and post-construction video documentation of the Surfside III property adjacent to the project area in order to document potential damage (if any) caused by construction activities. Mitigation measure GEO-3 would require the contractor to select construction methods that avoid and minimize vibration impacts, and to provide a construction contact telephone number for reporting possible vibration issues. Mitigation measures NOISE-3 and GEO-3 would reduce impacts resulting from vibration to a level less than significant. Vibration impacts after mitigation are less than significant.

Expose People to or Generate Noise Levels Exceeding Standards in an Applicable Plan, Noise Ordinance, or Applicable Standards of Other Agencies

1. **Construction Impact:** The City of Oxnard Noise Ordinance exempts from the provisions of Article XI – Sound Regulation "sound sources associated with or created by construction, repair, remodeling or grading of any real property…provided the activities occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, including Saturday." Project construction would occur between the hours of 7:00 a.m. and 6:00 p.m.; therefore, the project would not exceed the standards of the City of Oxnard ordinance. Although the City of Port Hueneme's Noise Ordinance does not exempt construction activity, its recognition that daytime construction noise should be regulated differently from non-daytime construction noise is consistent with County Construction Noise Threshold Criteria and the City of Oxnard's Noise Ordinance. Construction noise levels will be substantially similar for those portions of the project located in Port Hueneme and Oxnard. Land uses adjacent to the project are also substantially similar for all phases of the project. There is no basis for making a distinction between those phases of the project to be constructed in the City of Oxnard, and those portions of the project to be constructed in or adjacent to the City of Port Hueneme. The County Construction Noise Threshold Criteria and Control Plan takes into account the many factors that contribute to the potential impacts due to construction noise, including the location of sensitive receptors, the type or phase of construction, the combination of equipment used, the site layout, and the construction methods employed.

Given the disparity between City ordinances, the District applies County thresholds for determining noise significance in a uniform manner to all project phases.

The mixed use nature of the area (i.e., residential, commercial and industrial) results in varying noise thresholds within a small area. The County's thresholds of significance for noise provide additional guidance for evaluating noise impacts within a mixed land use area. As shown on Table 4.6-12, noise levels generated from the proposed off-road equipment that is expected to be used during construction will likely exceed 55dB(A) L_{eq} (south of Hueneme Road) and 68 dB(A) L_{eq} (north of Hueneme Road) daytime County standards for hospitals, nursing homes, schools, churches, and libraries. A nursing home and a church are located north of Hueneme Road. Standards for residential areas apply to evening and night, but because construction is not proposed for these time periods, the standards would not be exceeded. Construction of the proposed project would result in a significant noise impact for the nursing home and church. Construction noise mitigation measures will be implemented during each phase of the proposed project to reduce noise and address the County threshold and City ordinances (EIR pages 4.6-16 and 4.6-17).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects with regards to Noise identified in the EIR.

Mitigation Measures

NOISE-1 Equipment Noise Reduction

1. Minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete or asphalt demolition and removal.
2. Pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise limitations.
3. Provide impact noise reducing equipment; i.e., jackhammers and pavement breaker(s), with noise attenuating shields, shrouds or portable barriers or enclosures, to reduce operating noise.
4. Provide upgraded mufflers, acoustical lining or acoustical paneling for other noisy equipment, including internal combustion engines.
5. Avoid blasting and impact-type pile driving.
6. Use alternative procedures of construction and select a combination of techniques that generate the least overall noise and vibration. Such alternative procedures could include the following:
    a. Use electric welders powered by remote generators.
    b. Mix concrete at non-sensitive off-site locations, instead of on-site.
    c. Erect prefabricated structures instead of constructing buildings on-site.
7. Use construction equipment manufactured or modified to reduce noise and vibration emissions, such as:
    a. Electric instead of diesel-powered equipment.
    b. Hydraulic tools instead of pneumatic tools.
    c. Electric saws instead of air- or gasoline-driven saws.

8. Turn off idling equipment when not in use for periods longer than 30 minutes.

NOISE-2 A temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain. Additionally, temporary noise control barriers shall be installed and maintained in residential and commercial areas along Phases 2-4 to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-25. In addition to placement of noise control blankets along the construction area adjacent to the Shoreline Care Facility, located at 5225 South J Street, and if needed, Our Saviour's Evangelical Lutheran Church at 905 Redwood Street, to further reduce noise levels below 68 dB(A) L_{eq}, additional noise control barriers shall be installed. To ensure sufficient noise barriers are deployed, construction noise levels shall be monitored ten feet from the exterior of the nursing home and church at the start of work activities within 500 feet of these two locations. Barriers would be installed to reduce noise levels generated by the loudest equipment when construction activities are closest to the nursing home and church. Monitoring would occur at the nursing home during construction Phases 2 and 3 and at the church during construction Phase 4. Construction noise levels would be monitored weekly thereafter to ensure proper function of the barriers throughout work and that the desired noise attenuation at these locations is achieved.

This noise control barrier will also provide visual screening for all residents along the work area, including the Surfside III property, to shield residents from views of the J Street Drain during construction. If the Surfside III Condominium Owners' Association does not grant a temporary work area to enable installation of temporary noise barriers at Buildings 6 and 7, the District will provide funds for the Association to arrange the barrier installation on their property. Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J St Drain in Phase 1).

Facts in Support of Finding: Mitigation measure NOISE-1 requires equipment noise reduction techniques to be implemented during construction. Mitigation measure NOISE-2 will require the installation of a temporary noise control barrier along all phases of project construction. Implementation of the identified mitigation measures will reduce noise impacts to the nursing home and church to a less than significant level. Although not required, construction noise mitigation measures will also be implemented along non-sensitive land uses to further reduce noise levels.

Cause a Substantial Temporary or Periodic Increase in Ambient Noise Levels in the Project Vicinity Above Levels Existing without the Project

1. **Construction Impact:** The J Street Drain Project is proposed to be constructed in four phases with the first phase scheduled to begin in spring 2013 and lasting for ten months. Temporary noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators have the potential to reach high levels as evident from Table 4.6-12. As previously stated, the District applies County thresholds for determining noise significance in a uniform manner to all project phases.

   Noise levels generated from the proposed off-road equipment that is expected to be used during construction will likely exceed 55 dB(A) L_{eq} (south of Hueneme Road) and 68 dB(A) L_{eq} (north

of Hueneme Road) daytime County standards for hospitals, nursing homes, schools, churches, and libraries. A nursing home and a church are located north of Hueneme Road. Standards for residential areas apply to evening and night, but because construction is not proposed for these time periods, the standards would not be exceeded. Construction of the proposed project would result in a significant noise impact for the nursing home and church. Construction noise mitigation measures will be implemented during each phase of the proposed project to reduce noise and address the County threshold and City ordinances (EIR pages 4.6-19).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects with regards to Noise identified in the EIR.

Mitigation Measures

NOISE-1 Equipment Noise Reduction

1. Minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete or asphalt demolition and removal.
2. Pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise limitations.
3. Provide impact noise reducing equipment; i.e., jackhammers and pavement breaker(s), with noise attenuating shields, shrouds or portable barriers or enclosures, to reduce operating noise.
4. Provide upgraded mufflers, acoustical lining or acoustical paneling for other noisy equipment, including internal combustion engines.
5. Avoid blasting and impact-type pile driving.
6. Use alternative procedures of construction and select a combination of techniques that generate the least overall noise and vibration. Such alternative procedures could include the following:
    a. Use electric welders powered by remote generators.
    b. Mix concrete at non-sensitive off-site locations, instead of on-site.
    c. Erect prefabricated structures instead of constructing buildings on-site.
7. Use construction equipment manufactured or modified to reduce noise and vibration emissions, such as:
    a. Electric instead of diesel-powered equipment.
    b. Hydraulic tools instead of pneumatic tools.
    c. Electric saws instead of air- or gasoline-driven saws.
8. Turn off idling equipment when not in use for periods longer than 30 minutes.

NOISE-2 A temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain. Additionally, temporary noise control barriers shall be installed and maintained in

residential and commercial areas along Phases 2-4 to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-25. In addition to placement of noise control blankets along the construction area adjacent to the Shoreline Care Facility, located at 5225 South J Street, and if needed, Our Saviour's Evangelical Lutheran Church at 905 Redwood Street, to further reduce noise levels below 68 dB(A) L_{eq}, additional noise control barriers shall be installed. To ensure sufficient noise barriers are deployed, construction noise levels shall be monitored ten feet from the exterior of the nursing home and church at the start of work activities within 500 feet of these two locations. Barriers would be installed to reduce noise levels generated by the loudest equipment when construction activities are closest to the nursing home and church. Monitoring would occur at the nursing home during construction Phases 2 and 3 and at the church during construction Phase 4. Construction noise levels would be monitored weekly thereafter to ensure proper function of the barriers throughout work and that the desired noise attenuation at these locations is achieved.

This noise control barrier will also provide visual screening for all residents along the work area, including the Surfside III property, to shield residents from views of the J Street Drain during construction. If the Surfside III Condominium Owners' Association does not grant a temporary work area to enable installation of temporary noise barriers at Buildings 6 and 7, the District will provide funds for the Association to arrange the barrier installation on their property. Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J St Drain in Phase 1).

Facts in Support of Finding: Mitigation measure NOISE-1 requires equipment noise reduction techniques to be implemented during construction. Mitigation measure NOISE-2 will require the installation of a temporary noise control barrier along all phases of project construction. Implementation of the identified mitigation measures will reduce noise impacts to the nursing home and church to a less than significant level. Although not required, construction noise mitigation measures will also be implemented along non-sensitive land uses to further reduce noise levels.

G. GEOLOGIC AND SEISMIC HAZARDS

Seismic Related Ground Failure and Expansive Soils Hazards

1. **Construction Impact:** According to the Ventura County *Initial Study Assessment Guidelines*, the determination of a significant soils expansion effect shall be based on an inquiry of whether a proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving soil expansion if it is located within a soils expansive hazard zone or where soils with an expansion index greater than 20 are present. Soils with moderate shrink-swell (expansive) potential have been identified in the project area by United States Department of Agriculture (USDA) Soil Maps for Ventura County. Soils with expansion potential contain clay minerals. Native soils observed in the borings and encountered in the cone penetrometer tests (CPTs) at the ground surface or below the artificial fill consisted of predominately coarse-grained alluvial deposits with interbedded fine-grained deposits of variable thickness and consistency. The coarse-grained deposits consisted of loose to medium dense sands, silty sands and clayey sands. The fine- grained material consisted of soft to stiff silts and clays. According to the *Geotechnical Study J Street Drainage Improvements* (2009), expansive clays were observed in three locations along the J Street Drain alignment: one along J Street between Yucca Street and Bard Road, one near the intersection of J Street and Clara Street, and a third at the

proposed beach outlet. These clays exhibited relatively high plasticity indices (above 27) which can be used as an indicator of expansive soils. Therefore, a potentially significant impact is identified and mitigation is required (EIR page 4.7-23).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Geologic and Seismic Hazards identified in the EIR.

Mitigation Measures

GEO-2 Seismic Related Ground Failure and Expansive Soils

The proposed project shall comply with all pertinent recommendations set forth in the Preliminary Geologic Geotechnical Investigation (Appendix F) to reduce the risk of hazards associated with seismic-related ground failure and expansive soils along the J Street Drain. These recommendations address the following:

- Site preparation
- Excavation – stabilization measures, dewatering procedure, and shoring
- Fill Material and General Fill Placement
- Channel Foundation Design

GEO-3

a) A Licensed Surveyor shall plan and install a survey monument monitoring system on buildings within 25 feet of proposed vertical shoring to collect monthly baseline data for six months before construction. The monuments shall remain in place and be monitored monthly for one year after construction completion to track any latent changes. During construction, the Licensed Surveyor shall conduct surveys corresponding to major phases of work such as shoring installation, excavation, and backfill.

b) Before Phase 1 construction may begin, the District shall require the Contractor to prepare a Work Plan, which would take into account all available geotechnical information for the areas where vertical shoring and sheet piles are to be installed. The Plan would specify the contractor's approach to installing vertical shoring and sheet piles in a manner that would avoid and minimize associated potential vibration damage to adjacent structures.

c) The Work Plan shall require the Contractor to take daily measurements of the survey monuments on adjacent structures described in (a) above to track potential changes during construction.

d) Should the surveys or measurements described in (a) and (c) above indicate subsidence or other damage due to construction activities, the Contractor shall modify the Work Plan to address the causes. Property owners within 25 feet of the proposed shoring shall be promptly notified of observed damage, and any Work Plan revisions shall be available to property owners upon request. For multi-unit structures, the District shall identify a single designated representative with whom to communicate.

e) The District shall provide a construction contact telephone number to adjacent residents before work commences so that they may report possible observations of damage immediately to the District.

Facts in Support of Finding: Mitigation measure GEO-2 requires implementation of recommendations provided in the geotechnical report prepared for the proposed project. Mitigation measure GEO-3 requires the preparation of a construction work plan that includes a

monitoring system on buildings within 25 feet of proposed vertical shoring to collect monthly baseline data for six months before construction. Property owners within 25 feet of the proposed shoring shall be promptly notified of observed damage, and any Work Plan revisions shall be available to property owners upon request. For multi-unit structures, the District shall identify a single designated representative with whom to communicate. Implementation of these mitigation measures will reduce impacts to a less than significant level.

Substantial Soil Erosion or the Loss of Topsoil

1. **Construction Impact:** Construction of the proposed project would require excavation of the existing drain which would result in disturbance of soils and subsequent exposure to wind and water erosion. Earth-disturbing activities associated with construction would be temporary and would not result in a permanent or significant alteration of significant natural topographic features that could exacerbate erosion. Although the potential for erosion would be limited, exposure of soil to wind and water during construction would still occur. However, during construction, erosion potential would be minimized by following the recommendations regarding erosion potential outlined in the *Geotechnical Study J Street Drainage Improvements* (2009). However, these recommendations would not fully avoid potential impacts associated with erosion. Therefore, impacts associated with short-term exposure of graded soils and sedimentation are considered significant and require mitigation (EIR page 4.7-25).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Geologic and Seismic Hazards identified in the EIR.

   Mitigation Measure

   As discussed in Section 4.3, Water Resources and Hydraulic Hazards, prior to the start of construction, a construction Stormwater Pollution Prevention Plan (SWPPP) will be prepared that describes the site, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-stormwater management controls.

   GEO-1 Erosion and Sediment Control

   In order to mitigate potential soil erosion and loss of topsoil from excavation, the construction SWPPP shall incorporate, but not be limited to, the following measures, as appropriate, to minimize erosion:

   - Excavation and grading shall be restricted to the dry season (April 15 to October 15) unless an erosion control plan is in place and all measures therein are in effect.
   - Best Management Practices (BMPs) will be employed to control erosion, including temporary siltation protection devices such as silt fencing, straw bales, and sand bags. These shall be placed at the base of all cut and fill slopes and soil stockpile areas where potential erosion may occur.
   - Refer to Section 4.3, Water Resources and Hydraulic Hazards, for additional requirements related to stormwater and non-stormwater pollution prevention and control.

   Facts in Support of Finding: Mitigation measure GEO-1 requires the preparation of a SWPPP that will include BMPs to minimize erosion and sedimentation. Implementation of this mitigation will reduce the impact to less than significant.

F) HAZARDOUS MATERIALS AND WASTE

Individual or Cumulative Physical Hazard of Material(s) or Waste

1. **Construction Impact:** The project will require the placement of dewatering wells approximately 15 to 20 feet deep, along the work area of the J Street Drain. The nearby Halaco Superfund Site, located approximately 1,500 feet east of the southern portion of the J Street Drain, overlies a groundwater plume impacted primarily by Halaco metals. Currently, the natural direction of groundwater movement beneath the western portion of the Halaco Site (i.e., closest to the J Street Drain) is toward McWane Boulevard (i.e., northward). The entrainment of metals in groundwater nearest the J Street Drain project area is considered potentially problematic, in that the contaminated plume could be encountered during construction activity, in which case treatment of the extracted groundwater would be required prior to discharge into the Perkins Drain. A groundwater modeling study was performed to address this potential problem. The numerical model of the groundwater system beneath the J Street Channel was used to evaluate potential impacts to groundwater in response to dewatering that will be necessary to construct the drain, particularly with regards to whether metal contaminants in groundwater may migrate toward the channel and possibly enter into the dewatering stream. The numerical model of the groundwater system beneath the J Street Channel area demonstrates that a drain, possibly the sewer line beneath McWane Boulevard and Perkins Road, in combination with elevated surface water in the Ormond Beach Lagoon and the Oxnard Industrial Drain (OID) have significant effects on groundwater elevations and migration in the area with groundwater flow identified in the direction of McWane Boulevard and Perkins Road. The simulations demonstrate that it is unlikely for dewatering to draw groundwater from beneath the Halaco Site toward the J Street Drain under current conditions. However, should the existing northward drain effect on groundwater cease, the dewatering effort may cause migration of potentially impacted groundwater from beneath the Halaco Site up to 50 feet toward the J Street Drain (based on refined hydraulic conductivity determined during field testing in November 2011). A potentially significant impact is identified and mitigation is required (EIR page 4.8-11).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects with regards to Hazardous Materials identified in the EIR.

   Mitigation Measure

   HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site.

   Facts in Support of Finding: Injection of water into the shallow aquifer through five wells located in the beach parking area between the J Street Drain and the Halaco Site can be utilized to mitigate potential migration of groundwater from beneath the Halaco Site. The monitoring of water levels within selected monitoring wells in the vicinity of the Halaco Site can be utilized before and during Phase 1 dewatering to assess whether groundwater continues to move toward a northern "drain," and during dewatering to identify if migration of groundwater from the Halaco Site toward the J Street Drain is occurring. Implementation of mitigation measure HAZ-1 will reduce the potential impact to a less than significant level.

2. **Cumulative Impacts:** Dewatering activities associated with the proposed project and cumulative projects (e.g., Water Pipeline II) would result in temporary impacts with regards to the potential migration of heavy metals within the groundwater plume from the Halaco site. As previously stated, this could be mitigated by injecting water into the shallow aquifer through several wells (EIR page 4.8-16).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects with regards to Hazardous Materials identified in the EIR.

   Mitigation Measure

   HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site.

   Facts in Support of Finding: Injection of water into the shallow aquifer through five wells located in the beach parking area between the J Street Drain and the Halaco Site can be utilized to mitigate potential migration of groundwater from beneath the Halaco Site. The monitoring of water levels within selected monitoring wells in the vicinity of the Halaco Site can be utilized before and during Phase 1 dewatering to assess whether groundwater continues to move toward a northern "drain," and during dewatering to identify if migration of groundwater from the Halaco Site toward the J Street Drain is occurring. Implementation of mitigation measure HAZ-1 will reduce the potential impact to a less than significant level.

Proximity of Hazardous Materials or Waste to Populated Areas

1. **Construction Impact:** The nearby Halaco Superfund Site, located approximately 1,500 feet east of the southern portion of the J Street Drain, overlies a groundwater plume impacted primarily by Halaco metals. The ground water migration modeling simulations demonstrate that it is unlikely for dewatering to draw groundwater from beneath the Halaco Site toward the J Street Drain under current conditions. However, should the existing northward drain effect on groundwater cease, the dewatering effort may cause migration of potentially impacted groundwater from beneath the Halaco Site up to 50 feet toward the J Street Drain (based on refined hydraulic conductivity determined during field testing in November 2011). A potentially significant impact is identified and mitigation is required (EIR page 4.8-14).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects with regards to Hazardous Materials identified in the EIR.

   Mitigation Measure

   HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site.

Facts in Support of Finding: Injection of water into the shallow aquifer through five wells located in the beach parking area between the J Street Drain and the Halaco Site can be utilized to mitigate potential migration of groundwater from beneath the Halaco Site. The monitoring of water levels within selected monitoring wells in the vicinity of the Halaco Site can be utilized before and during Phase 1 dewatering to assess whether groundwater continues to move toward a northern "drain," and during dewatering to identify if migration of groundwater from the Halaco Site toward the J Street Drain is occurring. Implementation of mitigation measure HAZ-1 will reduce the potential impact to a less than significant level.

2. **Cumulative Impact:** Dewatering activities associated with the proposed project and cumulative projects (e.g., Water Pipeline II) may result in temporary impacts with regards to the potential migration of heavy metals within the groundwater plume from the Halaco site. Mitigation measure HAZ-1 requires the use of monitoring wells, and possibly injection wells during dewatering activities to address this impact. Through numerical modeling, the use of injection wells was demonstrated to isolate groundwater from the Halaco Site and prevent migration of groundwater toward the channel. Similar activities associated with cumulative projects near the Halaco site would be subject to similar mitigation to avoid potential impacts. Therefore, by adhering to applicable regulations and mitigation measures, cumulative impacts would be less than significant (EIR page 4.8-17).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects with regards to Hazardous Materials identified in the EIR.

Mitigation Measure

HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site.

Facts in Support of Finding: Injection of water into the shallow aquifer through five wells located in the beach parking area between the J Street Drain and the Halaco Site can be utilized to mitigate potential migration of groundwater from beneath the Halaco Site. The monitoring of water levels within selected monitoring wells in the vicinity of the Halaco Site can be utilized before and during Phase 1 dewatering to assess whether groundwater continues to move toward a northern "drain," and during dewatering to identify if migration of groundwater from the Halaco Site toward the J Street Drain is occurring. Implementation of mitigation measure HAZ-1 will reduce the potential impact to a less than significant level.

G) CULTURAL RESOURCES

Archaeological Resources

1. **Construction Impact:** The Cultural Resources Constraint Analysis Report prepared for the J Street Drain project did not identify any archeological resources located within the project area. However, archaeological resource sites have been identified in proximity to the project alignment and there is the potential for previously unknown subsurface artifacts to be demolished, materially altered, or relocated during ground disturbing activities. Therefore, construction of the proposed project would result in potentially significant impacts and mitigation is required (EIR page 4.9-7).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Cultural and Paleontological Resources identified in the EIR.

Mitigation Measures

CULT-1 In the event that archaeological resources are exposed during project construction, all earth disturbing work within the vicinity of the find shall be temporarily suspended or redirected until a qualified archaeologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume.

CULT-2 If the resource is determined to be potentially significant, a cultural resources treatment plan shall be developed to provide appropriate mitigation measures. These measures may include archaeological testing and data recovery excavation. The treatment plan shall also include a detailed description of associated reporting requirements, curation requirements for any cultural materials collected during treatment, and the qualifications for archaeologists involved in treatment activities.

Facts in Support of Finding: Implementation of mitigation measures CULT-1 and CULT-2 requires that a qualified archaeological monitor be on-site to stop construction activities in the event that ground disturbing activities discover archaeological resources, until the resource can be appropriately treated, if necessary. By obtaining a qualified archaeological monitor and empowering the monitor to stop construction activities, the cultural value of any discovered archaeological resources would be retained.

2. **Cumulative Impacts:** The Water Pipeline 1 and the J Station Elimination projects would intersect the J Street Drain project at Hueneme Road and the Ventura County Railroad, respectively. Therefore, the proposed project could contribute to a significant cumulative impact to archaeological resources if such resources were encountered along those project alignments as well as within the J Street Drain work area. Consequently, the project would result in potentially significant cumulative-level impacts to archaeological resources requiring mitigation (EIR page 4.9-9).

Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Cultural and Paleontological Resources identified in the EIR.

Mitigation Measures

CULT-1 In the event that archaeological resources are exposed during project construction, all earth disturbing work within the vicinity of the find shall be temporarily suspended or redirected until a qualified archaeologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume.

CULT-2 If the resource is determined to be potentially significant, a cultural resources treatment plan shall be developed to provide appropriate mitigation measures. These measures may include archaeological testing and data recovery excavation. The treatment plan shall also include a detailed description of associated reporting requirements, curation requirements for any cultural materials collected during treatment, and the qualifications for archaeologists involved in treatment activities.

Facts in Support of Finding: Implementation of mitigation measures CULT-1 and CULT-2 requires that a qualified archaeological monitor be on-site to stop construction activities in the event that ground disturbing activities discover archaeological resources, until the resource can be

appropriately treated, if necessary. By obtaining a qualified archaeological monitor and empowering the monitor to stop construction activities, the cultural value of any discovered archaeological resources would be retained.

Human Remains

1. **Construction Impact:** No evidence of human remains, including those interred outside of formal cemeteries, was discovered during the records search, literature review, field survey, or site testing and evaluation at the project site. There is no remaining indication that the project site was used by Native Americans for religious, ritual, or other special activities and therefore impacts to Native American burial sites are not expected. However, although no evidence was uncovered during the literature review and field survey, there is still potential that human remains may be disturbed during construction activities. Therefore, a potentially significant impact is identified and mitigation is required (EIR page 4.9-8).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Cultural and Paleontological Resources identified in the EIR.

   Mitigation Measures

   CULT-3 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Ventura County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Ventura County Coroner determines the remains to be Native American, the NAHC shall be contacted within a reasonable timeframe. Subsequently, the NAHC shall identify the "most likely descendant." The most likely descendant shall then make recommendations, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98.

   Facts in Support of Finding: In the event that human remains are uncovered during ground disturbing activities, implementation of mitigation measure CULT-3 would ensure that the appropriate agencies are contacted such that the remains are respectfully treated. By implementing mitigation measure CULT-3, potential impacts to human remains would be reduced to below a level of significance.

2. **Cumulative Impact:** Any impacts to human remains would be site-specific. The Water Pipeline 1 and the J Station Elimination projects would intersect the J Street Drain project at Hueneme Road and the Ventura County Railroad, respectively. Therefore, the proposed project could contribute to a significant cumulative impact to human remains if any were encountered along those project alignments as well as within the J Street Drain work area and thus, a potentially significant cumulative impact is identified for construction activities (EIR page 4.9-11).

   Finding: Pursuant to *CEQA Guidelines* §15091(a)(1), changes or alterations have been required or incorporated in the Project which will avoid or substantially lessen the significant environmental effects to Cultural and Paleontological Resources identified in the EIR.

   Mitigation Measures

   To reduce potential impacts to human remains, the following mitigation measure shall be implemented:

   CULT-3 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Ventura County Coroner has

made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Ventura County Coroner determines the remains to be Native American, the NAHC shall be contacted within a reasonable timeframe. Subsequently, the NAHC shall identify the "most likely descendant." The most likely descendant shall then make recommendations, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98.

Facts in Support of Finding: In the event that human remains are uncovered during ground disturbing activities, implementation of mitigation measure CULT-3 would ensure that the appropriate agencies are contacted such that the remains are respectfully treated. By implementing mitigation measure CULT-3, potential impacts to human remains would be reduced to below a level of significance.

J. PROJECT ALTERNATIVES

The *CEQA Guidelines* require an EIR to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (*CEQA Guidelines* §15126.6(a)). The *CEQA Guidelines* direct that selection of alternatives focus on those alternatives capable of eliminating any significant environmental effects of the project or of reducing them to a less-than significant level, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly. In cases where a project is not expected to result in significant impacts after implementation of recommended mitigation, review of project alternatives is still appropriate.

The range of alternatives required within an EIR is governed by the "rule of reason" which requires an EIR to include only those alternatives necessary to permit a reasoned choice. In addition to specifying that the EIR evaluate "a range of reasonable alternatives" to the project, Section 15126.6(c) of the *CEQA Guidelines* requires that an EIR identify any alternatives that were considered but were rejected as infeasible. The following outlet alternatives, dike system and natural system with the restoration project, were considered for analysis in the Draft EIR, but were not considered for further evaluation. These alternatives are described below, along with a discussion of why they were rejected from further consideration.

Alternatives Eliminated from Further Consideration

Outlet Alternative A: Dike System

Under this alternative, flow from the J-Street Drain is allowed to drain directly into the Pacific Ocean, essentially bypassing the Ormond Beach Lagoon. This alternative would require channeling of the beach including the construction of a berm on the west side of the channel. This berm would prevent flow from traveling though the Ormond Beach Lagoon as it does now. Due to sand deposition from the ocean, this alternative would require yearly maintenance to ensure that the constructed channel remains open.

Project Related Impacts: This alternative could affect two endangered species—the California least tern and tidewater goby. The former species would be affected if the water levels in the Ormond Beach Lagoon were significantly reduced in the spring and summer when this species is foraging in the lagoon. The latter species would be affected by increased salinity in the diverted J Street Drain, particularly if the diked channel were open to the ocean during the dry season, when freshwater input is low. The high salinities in the diked channel would not support tidewater goby over the long term, as this species requires brackish water. Therefore, the extent of this species, which currently occupies the lower J Street Drain, as well as the lagoon, could diminish.

This alternative would not reduce impacts relating to other issue areas including water quality, air quality, traffic, noise, geology and soils, hazardous materials, cultural resources, utilities, and public health compared to the proposed project. However, this alternative would result in greater impacts to biological resources and is therefore eliminated from further consideration.

Project Objectives: This alternative would meet some of the objectives of this project; however, this alternative may not maintain the existing functional characteristics of the Ormond Beach Lagoon, is incompatible with the future Ormond Beach Lagoon restoration plans due to the potential impacts to sensitive species, would not minimize the disturbance to tidewater goby habitat downstream of the J Street Drain lined channel, and would not minimize operation and maintenance requirements.

Conclusion: This alternative is rejected as infeasible because it would result in greater impacts to biological resources.

Outlet Alternative B: Natural System with the Restoration Project (California State Coastal Conservancy)

This alternative would involve leaving the end of the drain as it is, but having a managed lagoon outlet as described in the Beach Elevation Management Plan (BEMP). Under this alternative, flow from the J Street Drain is allowed to drain directly into the Ormond Beach Lagoon and out to the Pacific Ocean at its present location. This alternative would be based on the Coastal Conservancy's development of a wetland just south of the area where the Oxnard Industrial Drain flows into the Ormond Beach Lagoon. This wetland area is to be developed/designed by the Coastal Conservatory. In this alternative, the Ormond Beach Lagoon would require little to no maintenance at the ocean outlet. As part of this alternative, the lagoon area on the east side of the J-Street Drain Channel, just south of the old Hueneme Drain Channel, would be excavated down to improve outlet conditions for the J-Street Drain and to increase the wetland area.

Project Related Impacts: This alternative would not reduce significant impacts that have been identified for the proposed project. After reconstruction of the J Street Drain concrete lining, the channel invert would be about four feet lower than the existing invert in order to create the required channel capacity. This alternative would require excavation of the lagoon downstream of J Street Drain to facilitate the movement of water from the drain into the lagoon, potentially reducing the extent of standing water in upstream portions of the drain and transferring it to the lagoon instead. This would shift available mosquito breeding areas from an easily treated location (the J Street Drain) to one that is less accessible to Ventura County Vector Control Program (VCVCP) staff and more suitable for mosquito breeding by way of its shallow, vegetated margins.

Due to the additional excavation, this alternative would result in greater impacts to air quality, traffic, noise, geologic hazards, hazardous materials, water resources, and cultural resources. Furthermore, extensive excavation within the lagoon would have greater impacts to sensitive biological resources such as tidewater goby, California least tern, and marsh habitats.

Project Objectives: This alternative would meet most of the objectives of this project, but it would not minimize the disturbance to tidewater goby habitat downstream of the J Street Drain lined channel during the short term. This alternative would not reduce potential significant impacts.

Conclusion: Because this alternative would not reduce potential significant impacts, it was eliminated from further consideration.

Alternatives Evaluated in the EIR

Outlet Alternative D: No Project

Under this alternative, the Ormond Beach Lagoon would not be altered in any way. Essentially, this alternative allows the lagoon to function as it does now with periodic natural breaching. J Street Drain would drain directly to the Ormond Beach Lagoon as it does now. In this option, the District would not

modify the Ormond Beach Lagoon, and a BEMP would not be adopted. Flow from J Street Drain would continue to pass through the lagoon and out to the ocean at its present location. This alternative would accommodate future development of a wetland just south of the area where the Oxnard Industrial Drain flows into the Ormond Beach Lagoon. This wetland area may be developed/designed by the Coastal Conservancy. As part of Alternative D, maintenance personnel would need to periodically remove vegetation around the ocean outlet. This maintenance work would prevent root establishment in the ocean outlet area and allow the outlet to open more easily by natural breaching processes.

Project Related Impacts: This alternative would result in no project-related impacts since construction or beach grooming activities would not occur. This alternative would not impact the existing hydrology, circulation pattern, water quality, or biological resources at the Ormond Beach Lagoon.

Additionally, this alternative would not result in impacts relating to other issue areas including land use and planning, air quality, traffic, noise, geology and soils, hazardous materials, cultural resources, and utilities. Compared to the Preferred Outlet Alternative, the No Project Outlet Alternative would result in fewer environmental impacts. However, when the No Project Outlet Alternative is combined with the Preferred Channel Alternative, the lack of a transition from the deepened channel to the lagoon may increase erosion of the lagoon and cause more extensive ponding of flows upstream.

Project Objectives: This alternative would meet most of the objectives of this project including ensuring project compatibility with future Ormond Beach Lagoon restoration plans. However, the No Project Outlet Alternative does not provide an action plan for beach grooming (BEMP) to ensure sufficient flood protection for upstream properties. Furthermore, the lack of a transition between the deepened drain and the adjacent higher elevation lagoon may conflict with the objective of providing 100-year flood protection.

Conclusion: Since the No Project Outlet Alternative does not provide an action plan to ensure sufficient flood protection for upstream properties and the lack of a transition between the deepened drain and the adjacent higher elevation lagoon may conflict with the objective of providing 100-year flood protection, this alternative was eliminated from consideration.

Channel Alternative A: Buried Box Culvert

Alternative A would feature buried box culverts that would allow for landscaping on top. This alternative would require that the box culverts be strengthened to hold the additional weight of the vegetation on top. Having vegetation on top would allow for an aesthetic benefit for the length of J Street. However, the drain would remain an open channel south of Hueneme Road to avoid impacts to listed species.

Project Related Impacts: This alternative would require greater soil excavation than the proposed project and may result in greater excess soil to be hauled off to landfills. Therefore, construction of this alternative would involve additional haul truck trips. With regard to air quality, construction-related oxides of nitrogen (NO_x) emissions would exceed the Ventura County Air Pollution Control District (VCAPCD) and South Coast Air Quality Management District (SCAQMD) daily thresholds of significance. However, these impacts would be less than significant due to their temporary nature and implementation of VCAPCD mitigation measures. With regard to global climate change, impacts would be similar to the proposed project. Construction emissions would add to greenhouse gas emissions in the atmosphere; however, as with the proposed project, the emissions are not anticipated to exceed SCAQMD's annual threshold for industrial projects of 10,000 metric tons of carbon dioxide equivalent (CO_{2e},) and, when amortized, would be below the California Air Pollution Control Officers Association (CAPCOA) recommended annual threshold of 900 metric tons of CO_{2e} emissions. Noise construction impacts associated with this alternative would be similar to those of the proposed project and would be less than significant with incorporation of mitigation. Traffic impacts would be greater due to more haul truck trips to transport excess soil. However, traffic impacts would be less than significant with

mitigation measures. The excess soil would result in a greater solid waste impact as more soil would be required to be accommodated at landfills.

Waste treatment/disposal impacts associated with this alternative would be greater than the proposed project. This alternative would include a covered top for landscaping which would result in long-term visual resources benefits, thus reducing this significant impact. This alternative would not change the amount of ponded water compared to the proposed project. Public health impacts associated with mosquito breeding areas would be greater than the proposed project because the covered channel would be difficult to access and therefore mosquito treatment may be less effective.

Construction-related impacts to cultural resources would be the same as the proposed project as no archeological resources were found within the project area. Mitigation measures would be in place for the potential that previously unknown subsurface artifacts are encountered during ground disturbance activities. The potential for impacts to paleontological resources would be low, as it is for the proposed project. Impacts associated with geology including liquefaction and expansive soil would be similar to the proposed project as well. The construction associated with this alternative would be similar to the proposed project. Water and biological impacts for this alternative would result in similar impacts and mitigation measures as the proposed project because both alternatives would require similar footprints for construction. The operation of this alternative would result in maintenance activities similar to those currently in place and the proposed project. However, the box culvert drain would not be accessible for dumping and trash would not blow into the covered drain; therefore, less maintenance with regards to trash clean up would be necessary for this alternative.

Project Objectives: This alternative would meet all of the project objectives regarding flood control protection, Ormond Beach Lagoon, and tidewater goby. Additionally, Alternative A would provide an aesthetic benefit by adding landscaping on top of the drain for the length of J Street. However, Alternative A would likely cost substantially more than the proposed project due to the increased construction and landscaping costs.

Conclusion: Alternative A was eliminated from consideration since it would cost substantially more than the proposed project due to the increased construction and landscaping costs.

Channel Alternative C: Open Rectangular Channel

This alternative would have a main channel with vertical walls that would be sufficient to carry most stormwater flows, however as flow increased it would reach the step and spread out further. This would still allow for the desired capacity, but would also allow for creation of a narrow landscaping area on the step.

Project Related Impacts: Alternative C would require additional right-of-way. While this alternative would involve design features that differ from the proposed project, construction impacts associated with this alternative would not differ considerably.

This alternative would require similar soil excavation as the proposed project and would result in similar quantities of excess soil to be hauled off to landfills. With regards to air quality, construction-related NO_x emissions would exceed the VCAPCD and SCAQMD daily thresholds of significance, but impacts would be considered less than significant due to their temporary nature. With regard to global climate change, impacts would be similar to the proposed project. Noise construction impacts associated with this alternative would be similar to those of the proposed project and would be less than significant with mitigation. Traffic construction impacts associated with this alternative would be similar to those of the proposed project, which would be less than significant with mitigation measures. The potential for impacts to paleontological resources would be low, as it is for the proposed project.

Other construction impacts relating to cultural resources would be the same as the proposed project as no archeological resources were found within the project area. Mitigation measures would be in place for

the potential that previously unknown subsurface artifacts are encountered during ground disturbance activities. Additionally, impacts associated with geology, including liquefaction and expansive soil, would be similar to the proposed project as well.

Water and biological impacts for this alternative would result in similar impacts and mitigation measures as the proposed project because both alternatives would require similar footprints for construction.

Waste treatment/disposal impacts associated with this alternative would be similar to the proposed project.

The operation of this alternative would require maintenance activities similar to those currently in place. Operational impacts would be the same as the proposed project.

This alternative would include a narrow area on the step for vegetation which would result in long-term visual resources benefits, thus reducing this significant impact. This alternative may increase the area of ponded water compared to the proposed project, with water within the "step" channel sections being shallower and supporting vegetation. This would create more suitable habitat for mosquito breeding than the proposed project. Public health impacts associated with mosquito breeding areas would therefore be greater than the proposed project.

Project Objectives: This alternative would meet the project objectives with regards to flood control protection, Ormond Beach Lagoon, and tidewater goby. Additionally, Alternative C would provide an aesthetic benefit by having a vegetated step for the length of the drain.

Conclusion: This alternative would require additional right-of-way which has the potential to alter the alignment of J Street and increase costs.

Channel Alternative D: Two Separate Buried Box Culverts

Like Alternative A, this alternative would require strengthening the box culverts to allow for vegetation on top. By separating the culverts a vegetated swale would be created between the culverts. This vegetated swale could then be used to treat stormwater runoff before it enters the culverts. Due to the presence of endangered California least tern and tidewater goby south of Hueneme Road (Phase 1), this alternative is only considered for Phases 2-4.

Project Related Impacts: Alternative D would require additional right-of-way and relocation of existing utilities compared to the proposed project. This alternative would result in a significant impact to utilities and would require additional mitigation measures.

Excess soil from excavation would be transported to landfills and concrete debris from demolition would be transported for recycling. This alternative would require greater soil excavation than the proposed project and may result in greater quantities of excess soil to be hauled off to landfills. Construction of this alternative would involve additional haul truck trips. Construction NO_x emissions would exceed the VCAPCD and SCAQMD daily thresholds of significance; however, impacts would be considered less than significant due to their temporary nature. With regard to global climate change, impacts would be similar as with the proposed project. Noise construction impacts associated with this alternative would be similar to those of the proposed project and would be less than significant with mitigation. Traffic impacts would be greater due to more haul truck trips to transport excess soil. However, as with the proposed project, traffic impacts would be less than significant with mitigation measures. The excess soil would result in a greater solid waste impact as more soil would be required to be accommodated at landfills.

The potential for impacts to paleontological resources would be low, as it is for the proposed project.

Other construction impacts relating to cultural resources would be the same as the proposed project as no archeological resources located within the project area were found. Mitigation measures would be in place to address the potential for previously unknown subsurface artifacts to be encountered during

ground disturbance activities. Impacts associated with geology including liquefaction and expansive soil would be similar to the proposed project as well.

Water and biological impacts for this alternative would result in similar impacts and mitigation measures as the proposed project because both alternatives would require similar footprints for construction.

Impacts relating to waste treatment and disposal and water supply demand would be greater than the proposed project due to greater quantities of excess soil the need to maintain new landscaping. This alternative would include a covered top for vegetation which would result in long-term visual resources benefits, thus reducing this significant impact. This alternative would not change the amount of ponded water compared to the proposed project. Public health impacts associated with mosquito breeding areas would be greater than the proposed project because the covered channel would be difficult to access and therefore mosquito treatment may be less effective.

The operation of this alternative would result in maintenance activities similar to those currently in place and the proposed project. However, the buried box culvert drain would not be accessible for dumping and trash would not blow into the covered drain; therefore, less maintenance with regard to trash clean up would be necessary with this alternative

Project Objectives: This alternative would meet the project objectives with regards to flood control protection, Ormond Beach Lagoon, and tidewater goby. Additionally, Alternative D would provide an aesthetic benefit by having a landscaped median for the length of J Street. However, this alternative would likely cost substantially more than the proposed project due to increased landscaping and construction costs and the cost of relocating existing utilities.

Conclusion: This alternative would likely cost substantially more than the proposed project due to increased landscaping and construction costs and the cost of relocating existing utilities; therefore it was eliminated from consideration.

Channel Alternative E: Natural Channel

This alternative would be a completely natural channel with no concrete sides or bottom. This would require a much wider channel than currently exists, and would impact the existing streets and require removal of homes on one side of the street.

Project Related Impacts: Alternative E would require additional right-of-way and relocation of existing utilities and homes compared to the Preferred Alternative. This alternative would result in a significant impact to land use and would require mitigation measures.

This alternative would require excavation and demolition during construction in order to create the natural channel. Excess soil and concrete debris would be transported to landfills and recycling centers, respectively. Regarding air quality, construction-related NO_x emissions would exceed the VCAPCD and SCAQMD daily thresholds of significance. With regard to global climate change, construction emissions would be greater and the greenhouse gas emission would be greater.

Additionally, impacts related to noise and traffic would be of a greater degree than those associated with the Preferred Alternative since the construction footprint would be substantially larger. Further, because one side of J Street would be eliminated under this alternative, traffic impacts would likely be significant and unmitigable. After excavation and demolition, the drain would remain as a natural earthen channel and no additional construction impacts (i.e., concrete placement) would occur. Therefore, air quality, noise, and traffic construction impacts would not be as significant as those of the proposed project.

Construction impacts relating to cultural and paleontological resources would be less than significant because this alternative does not require excavation of previously undisturbed subsurface areas because the natural channel would be shallower than the concrete channel alternatives. Impacts associated with geology, including liquefaction and expansive soil, would be similar to the proposed project.

Biological impacts and mitigation measures for this alternative would be greater than the proposed project because a greater project footprint is required for construction. However, there is potential that the open channel could be used by aquatic species as habitat. Groundwater and surface water quality impacts may be significant as a result of this alternative because the natural channel allows runoff containing pollutants to percolate through the permeable surface into groundwater supply. During storm events, flows passing through the natural channel would be more turbid than flows in a concrete channel due to bed and bank erosion. Additionally, runoff flow would decrease as some runoff may be lost due to groundwater recharge.

Impacts relating to waste treatment and disposal would be greater than the proposed project as a result of the larger volume of soil that would be transported to the landfill.

This alternative would potentially result in long-term benefits to visual resources due to the aesthetic value of an open channel. The impact to visual resources would therefore be less than the proposed project. This alternative might increase the area of ponded water compared to the proposed project. Suitable mosquito breeding habitat would be more extensive because of shallower flow depth and availability of vegetation to shelter larvae from wind, waves, and natural predators. Public health impacts resulting from larger and more suitable mosquito breeding areas would be greater than the proposed project.

The operation of this alternative would require maintenance activities similar to those currently in place and the proposed project; however, maintenance activities would potentially have to occur more frequently. In the natural channel option desired vegetation would be planted within the channel to help maintain slopes and minimize erosion. However, the vegetation would need to be trimmed and maintained by the District to prevent reduction of capacity. Therefore, maintenance for the natural channel alternative may be greater than the proposed project.

Project Objectives: This alternative would meet the project objectives regarding flood control protection. However, this alternative may not meet project objectives regarding Ormond Beach Lagoon and tidewater goby since the greater project footprint and natural channel have the potential to introduce greater quantities of polluted runoff, particularly turbid flows, into tidewater goby habitat and/or groundwater supply. Conversely, converting the existing concrete channel to an earthen channel could increase the area of potential breeding habitat for tidewater goby, as this species burrows into channel or lagoon sediments to deposit eggs.

Conclusion: This alternative would likely cost more than the proposed project due to the increased costs of construction and maintenance associated with removal of homes and maintaining the natural channel. Further, this alternative would eliminate part of an existing housing community, require substantially more rights-of-way, and eliminate a portion of J Street.

Channel Alternative F: No Project

The No Project alternative, required by law to be evaluated in the EIR, considers ”existing conditions as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services” [*CEQA Guidelines* Section 15126.6 (e)(2)].

Project Related Impacts: This alternative would not result in any of the construction- or BEMP-related impacts associated with the Preferred Alternative since no construction would occur and a BEMP would not be established. However, without the increase in flood protection the local area would continue to be susceptible to flooding.

Project Objectives: This alternative would not meet the project objectives with regards to flood control protection. Current conditions for Ormond Beach Lagoon and the tidewater goby would persist.

Conclusion: This alternative would not provide flood protection to the local area, leaving homes and business susceptible to flooding. Additionally, residents and business may be required to purchase flood insurance for properties within an identified flood area if the Federal Emergency Management Agency revises the Digital Flood Insurance Rate Maps (DFIRMs) in the future. Current DFIRMs are based on data and analyses pre-dating 1985, and which therefore do not take into account the trend of increasing rainfall since the 1980s.

Final Environmental Impact Report

J Street Drain Project
Ventura County, California
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Prepared for

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TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS viii

0.1 INTRODUCTION AND SUMMARY 0.1-1

0.2 CORRECTIONS AND ADDITIONS 0.2-1
0.2.1 REVISED AND SUPPLEMENTAL TEXT 0.2-1
0.2.2 REVISED AND SUPPLEMENTAL MITIGATION MEASURES 0.2-1

0.3 RESPONSE TO COMMENTS 0.3-1

0.4 MITIGATION MONITORING AND REPORTING PROGRAM 0.4-1
0.4.1 INTRODUCTION AND SUMMARY 0.4-1
0.4.2 MITIGATION MATRIX 0.4-1
0.4.3 PROJECT DESIGN CONSIDERATIONS 0.4-12

ES.0 EXECUTIVE SUMMARY ES-1
ES.1 THE PROJECT ES-1
ES.2 PROJECT OBJECTIVES ES-1
ES.3 LOCATION AND EXISTING CONDITIONS ES-2
ES.4 ENVIRONMENTAL IMPACTS ES-3
ES.5 UNAVOIDABLE SIGNIFICANT IMPACTS ES-3
ES.6 POTENTIALLY SIGNIFICANT IMPACTS THAT CAN BE MITIGATED ES-3
ES.7 IMPACTS CONSIDERED AND FOUND TO BE LESS THAN SIGNIFICANT ES-4
ES.8 BENEFICIAL EFFECTS ES-4
ES.9 ALTERNATIVES TO THE PROJECT ES-5
ES.9.1 Channel Alternatives ES-5
ES.9.2 Beach Outlet Alternatives ES-5
ES.10 ISSUES IDENTIFIED DURING THE NOP PROCESS ES-5
ES.11 MITIGATION MONITORING PROGRAM ES-5
ES.12 SUMMARY OF IMPACTS ES-5

1.0 INTRODUCTION AND SUMMARY 1-1
1.1 INTRODUCTION 1-1
1.2 PURPOSE OF A DRAFT EIR 1-1
1.3 EIR ADEQUACY 1-1
1.4 ORGANIZATION OF THE EIR DOCUMENT 1-2
1.5 EIR BACKGROUND AND CONTENT 1-3
1.5.1 Environmental Topics Addressed 1-4
1.5.2 Environmental Topics Found to be Less than Significant During the Initial Study Process 1-4
1.5.3 Environmental Topics Found to be Less than Significant During the EIR Process 1-5
1.5.4 Comments to the NOP 1-6
1.5.5 Lead, Responsible and Trustee Agencies 1-6
1.6 PROJECT APPROVALS AND PERMITS 1-17
1.7 DRAFT EIR REVIEW PROCESS 1-17
1.8 SUMMARY OF IMPACTS AND MITIGATION MEASURES 1-18
1.9 SUMMARY OF BEST MANAGEMENT PRACTICES 1-18

2.0 ENVIRONMENTAL SETTING 2-1
2.1 PROJECT LOCATION 2-1
2.2 PROJECT SETTING 2-1
2.3 RELATED PROJECTS FOR CUMULATIVE ANALYSIS 2-7

3.0 PROJECT DESCRIPTION 3-1
3.1 BACKGROUND 3-1
3.2 PURPOSE, NEED AND PROJECT OBJECTIVES 3-2
3.3 PROJECT FUNDING AND SELECTION 3-9
3.4 PROJECT CHARACTERISTICS 3-10
3.5 CONSTRUCTION 3-10
3.6 MAINTENANCE 3-16
3.7 BEACH ELEVATION MANAGEMENT PLAN 3-28

4.0 ENVIRONMENTAL ANALYSIS 4.0-1
4.1 VISUAL RESOURCES 4.1-1
4.1.1 Environmental Setting 4.1-1
4.1.2 Regulatory Setting 4.1-10
4.1.3 Significance Thresholds 4.1-13
4.1.4 Project-Level Impact Analysis 4.1-13
4.1.5 Cumulative-Level Impact Analysis 4.1-18
4.1.6 Mitigation Measures 4.1-20
4.1.7 Significance After Mitigation 4.1-21
4.1.8 Response to Notice of Preparation Comments 4.1-21
4.2 BIOLOGICAL RESOURCES 4.2-1
4.2.1 Environmental Setting 4.2-1
4.2.2 Regulatory Setting 4.2-25
4.2.3 Significance Thresholds 4.2-30
4.2.4 Project-Level Impact Analysis 4.2-31
4.2.5 Cumulative-Level Impact Analysis 4.2-54
4.2.6 Mitigation Measure 4.2-60
4.2.7 Significance After Mitigation 4.2-66
4.2.8 Response to Notice of Preparation Comments 4.2-66
4.3 WATER RESOURCES AND HYDRAULIC HAZARDS 4.3-1
4.3.1 Environmental Setting 4.3-1
4.3.3 Significance Thresholds 4.3-19
4.3.4 Project-Level Impact Analysis 4.3-21
4.3.5 Cumulative Impacts 4.3-29
4.3.6 Mitigation Measures 4.3-33
4.3.7 Significance After Mitigation 4.3-36
4.4 AIR QUALITY 4.4-1
4.4.1 Environmental Setting 4.4-1
4.4.2 Regulatory Setting 4.4-9
4.4.3 Significance Thresholds 4.4-12
4.4.4 Project-Level Impact Analysis 4.4-14
4.4.5 Cumulative-Level Impact Analysis 4.4-19
4.4.6 Mitigation Measures 4.4-22
4.4.7 Significance After Mitigation 4.4-24
4.4.8 Response to Notice of Preparation Comments 4.4-24

4.5 TRANSPORTATION AND CIRCULATION 4.5-1
4.5.1 Environmental Setting 4.5-1
4.5.2 Regulatory Setting 4.5-12
4.5.3 Thresholds of Significance 4.5-13
4.5.4 Project-Level Impact Analysis....4.5-16
4.5.5 Cumulative-Level Impact Analysis 4.5-20
4.5.6 Mitigation Measures 4.5-22
4.5.7 Significance After Mitigation 4.5-23
4.5.8 Response to Notice of Preparation Comments 4.5-23
4.6 NOISE AND VIBRATION 4.6-1
4.6.1 Environmental Setting 4.6-1
4.6.2 Regulatory Setting 4.6-4
4.6.3 Significance Thresholds....4.6-8
4.6.4 Project-Level Impact Analysis....4.6-13
4.6.5 Cumulative-Level Impact Analysis 4.6-20
4.6.6 Mitigation Measures 4.6-24
4.6.7 Significance After Mitigation 4.6-26
4.7 GEOLOGIC AND SEISMIC HAZARDS....4.7-1
4.7.1 Environmental Setting 4.7-1
4.7.2 Regulatory Setting 4.7-9
4.7.3 Significance Thresholds....4.7-17
4.7.4 Project Impacts 4.7-20
4.7.5 Cumulative Impacts 4.7-26
4.7.6 Mitigation Measures 4.7-28
4.7.7 Significance After Mitigation 4.7-30
4.7.8 Response to Notice of Preparation Comments 4.7-31
4.8 HAZARDOUS MATERIALS AND WASTES 4.8-1
4.8.1 Environmental Setting 4.8-1
4.8.2 Regulatory Setting 4.8-6
4.8.3 Significance Thresholds....4.8-9
4.8.4 Project-Level Impact Analysis....4.8-10
4.8.5 Cumulative-Level Impact Analysis 4.8-16
4.8.6 Mitigation Measures 4.8-19
4.8.7 Significance After Mitigation 4.8-19
4.8.8 Response to Notice of Preparation Comments 4.8-19
4.9 CULTURAL AND PALEONTOLOGICAL RESOURCES....4.9-1
4.9.1 Environmental Setting 4.9-1
4.9.2 Regulatory Setting 4.9-3
4.9.3 Significance Thresholds....4.9-6
4.9.4 Project-Level Impact Analysis....4.9-7
4.9.5 Cumulative-Level Impact Analysis 4.9-9
4.9.6 Mitigation Measures 4.9-11
4.9.7 Significance After Mitigation 4.9-12
4.9.8 Response to Notice of Preparation Comments 4.9-12
4.10 WASTE TREATMENT DISPOSAL 4.10-1
4.10.1 Environmental Setting 4.10-1
4.10.2 Regulatory Setting 4.10-1
4.10.3 Significance Thresholds....4.10-3
4.10.4 Project-Level Impact Analysis....4.10-3
4.10.5 Cumulative-Level Impact Analysis 4.10-5

4.10.6 Mitigation Measures 4.10-5
4.10.7 Significance After Mitigation 4.10-5
4.10.8 Response to Notice of Preparation Comments 4.10-5
4.11 PUBLIC HEALTH 4.11-1
4.11.1 Environmental Setting 4.11-1
4.11.2 Regulatory Setting 4.11-12
4.11.3 Significance Thresholds....4.11-12
4.11.4 Project-Level Impact Analysis....4.11-13
4.11.5 Cumulative-Level Impact Analysis 4.11-15
4.11.6 Mitigation Measures 4.11-16
4.11.7 Response to Notice of Preparation Comments 4.11-16
4.12 GREENHOUSE GAS EMISSIONS....4.12-1
4.12.1 Environmental Setting 4.12-1
4.12.2 Regulatory Setting 4.12-2
4.12.3 Significance Thresholds....4.12-3
4.12.4 Project-Level Impact Analysis....4.12-4
4.12.5 Cumulative-Level Impact Analysis 4.12-7
4.12.6 Mitigation Measures 4.12-7
4.12.7 Significance After Mitigation 4.12-7
4.12.8 Response to Notice of Preparation Comments 4.12-7

5.0 ALTERNATIVES....5-1
5.1 CRITERIA FOR ALTERNATIVES ANALYSIS....5-1
5.2 Alternatives eliminated from Further consideration 5-2
5.2.1 Outlet Alternative A: Dike System 5-2
5.2.2 Outlet Alternative B: Natural System with the Restoration Project (California State Coastal Conservancy)....5-2
5.3 EVALUATION OF ALTERNATIVES 5-3
5.3.1 Beach Outlet Alternatives....5-3
5.3.2 Channel Alternatives....5-4

6.0 OTHER ENVIRONMENTAL CONSIDERATIONS 6-1
6.1 GROWTH-INDUCING IMPACTS....6-1
6.2 INVENTORY OF UNAVOIDABLE IMPACTS....6-1
6.3 SIGNIFICANT IRREVERSIBLE CHANGES 6-2

7.0 PERSONS, ORGANIZATIONS, AND AGENCIES CONSULTED 7-1

8.0 REFERENCES....8-1

Appendices (Provided on CD located on back cover)

Appendix A Notice of Preparation/Initial Study
Appendix B Notice of Preparation Comment Letters
Appendix C1 2008 Coastal Engineering Report
Appendix C2 2008 Coastal Engineering Report Addendum
Appendix C3 2008 Sedimentation Study
Appendix C4 2008 Coastal Processes Assessment
Appendix C5 2011 Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon
Appendix C6 2011 J Street/Oxnard Industrial Drain Numerical Hydraulic Model
Appendix D.1 Biological Technical Report
Appendix D.2 Wetland Delineation
Appendix E Cultural Resources Report
Appendix F Geotechnical Report
Appendix G Hazardous Waste Report
Appendix H Global Climate Change Evaluation
Appendix I Mosquito Study
Appendix J Air Quality Report
Appendix K Groundwater Memorandum
Appendix L Comments on November 2009 Draft EIR and District Responses

Figures

Figure 2.0-1. Project Regional & Vicinity Map 2-3
Figure 2.0-2. Land Use Features 2-5
Figure 2.0-3 Related Projects 2-11
Figure 3.0-1. Project Site 3-3
Figure 3.0-2a. 100-Year Flood Inundation (Depth in Feet) 3-5
Figure 3.0-2b. FEMA Special Flood Hazard Areas 3-7
Figure 3.0-3. Ventura County Watershed Protection District Geographic Zones 3-11
Figure 3.0-4. Orthogonal Views of J Street Drain 3-13
Figure 3.0-5. Potential Construction Staging Area 3-17
Figure 3.0-6. Coffer Dam Construction − Phase 1 3-19
Figure 3.0-7. Coffer Dam Construction − Phase 2 3-21
Figure 3.0-8. Coffer Dam Construction − Phase 3 3-23
Figure 3.0-9. Coffer Dam Construction − Phase 4 3-25
Figure 4.1-1. Land Use 4.1-3
Figure 4.1-2. Surfside III Property 4.1-7
Figure 4.2-1. Project Survey Area 4.2-3
Figure 4.2-2. Northern Survey Area – Vegetation 4.2-7
Figure 4.2-3. Southern Survey Area – Vegetation 4.2-9
Figure 4.2-4. Tree Locations 4.2-11
Figure 4.2-5. Critical Habitat and Observed Sensitive Wildlife Species 4.2-17
Figure 4.2-6. Wildlife Movement Areas 4.2-21
Figure 4.2-7. Southern Survey Area − Jurisdictional Wetlands 4.2-23
Figure 4.2-8. Project Impacts − Northern Vegetation Communities 4.2-33
Figure 4.2-9. Project Impacts − Southern Vegetation Communities 4.2-35
Figure 4.2-10. Project Impacts to Critical Habitat and Observed Sensitive Wildlife Species 4.2-37

Figures (Continued)

Figure 4.2-11. Project Impacts - Federal/State Jurisdictional Areas 4.2-49
Figure 4.3-1. Watershed Area Map 4.3-3
Figure 4.3-2. Stream Network/Drainage Facilities 4.3-7
Figure 4.4-1. Land Use Features 4.4-7
Figure 4.5-1. Roadway Map 4.5-3
Figure 4.5-2. 2020 Regional Road Network 4.5-5
Figure 4.7-1. Topography and Soils 4.7-3
Figure 4.7-2. Alquist-Priolo Fault Zone/Fault Map 4.7-5
Figure 4.8-1. Hazardous Materials Sites 4.8-3
Figure 4.11-1. Ponded Water 4.11-5
Figure 4.11-2. Adult Mosquito Trap Locations in the Greater J Street Drain Area 4.11-7
Figure 5.0-1. Alternatives 5-5

Tables

Table ES-1. Summary of Environmental Impacts and Mitigation Measures ES-7
Table ES-2. Summary of Ventura County Watershed Protection District Best Management Practices during Operations and Maintenance Activities ES-21
Table 0.3-1. Comment Letters – J Street Drain 0.3-1
Table 0.4-1. Mitigation Monitoring and Reporting Program Checklist 0.4-2
Table 0.4-2. Project Design Features 0.4-12
Table 1.5-1. Summary of NOP Comment Letters 1-7
Table 1.8-1. Summary of Impacts and Mitigation Measures 1-19
Table 1.9-1. Summary of Ventura County Watershed Protection District Best Management Practices During Operations and Maintenance Activities 1-34
Table 2.0-1. Cumulative Projects 2-8
Table 3.0-1. District Project Ranking Categories and Maximum Point Assignments 3-10
Table 4.2-1. Summary of Vegetation Communities Within the Survey Area 4.2-5
Table 4.2-2. USACE Jurisdictional Areas 4.2-25
Table 4.2-3. CDFG and CCC Jurisdictional Areas 4.2-25
Table 4.2-4. Project Impacts to Vegetation Communities 4.2-32
Table 4.2-5. Project Impacts to Tidewater Goby Critical Habitat 4.2-40
Table 4.2-6. Project Impact to Federal/State Jurisdictional Areas 4.2-48
Table 4.4-1. Air Quality Monitoring Summary at El Rio-Rio Mesa School #2 Air Quality Monitoring Station 4.4-2
Table 4.4-2. Air Pollution Standards 4.4-3
Table 4.4-3. VCAPCD Threshold Criteria for Emissions of Criteria Pollutant 4.4-13
Table 4.4-4. Thresholds of Significance for Air Quality Impacts – SCAQMD 4.4-14
Table 4.4-5. Construction Emissions, Phase I (pounds per day) 4.4-15
Table 4.4-6. Construction Emissions, Phase II (pounds per day) 4.4-16
Table 4.4-7. Construction Emissions, Phase III (pounds per day) 4.4-16
Table 4.4-8. Construction Emissions, Phase IV (pounds per day) 4.4-17
Table 4.5-1. Intersection Level of Service Definitions 4.5-10
Table 4.5-2. Ventura County Minimum Acceptable Level of Service for Roadway Segments 4.5-14
Table 4.5-3. Threshold of Significance for Changes in Level of Service at Intersections 4.5-15

Tables (Continued)

Table 4.6-1. Land Use Noise Compatibility Guidelines 4.6-2
Table 4.6-2. Typical Noise Levels 4.6-3
Table 4.6-3. Exterior Noise Level Standards 4.6-5
Table 4.6-4. Significance of Increases in Cumulative Noise Exposure for Transportation Noise Sources 4.6-6
Table 4.6-5. Daytime Construction Activity Noise Threshold Criteria (NTC)....4.6-9
Table 4.6-6. Noise-Sensitive Receptors 4.6-10
Table 4.6-7. Evening Construction Activity Noise Threshold Criteria....4.6-10
Table 4.6-8. Nighttime Construction Activity Noise Threshold Criteria....4.6-10
Table 4.6-9. Vibration Source Levels for Construction Equipment....4.6-12
Table 4.6-10. Construction Vibration Damage Criteria 4.6-12
Table 4.6-11. Ground-Borne Vibration (GBV) Impact Criteria for General Assessment 4.6-13
Table 4.6-12. Typical Construction Equipment Noise....4.6-15
Table 4.7-1. Regionally Active Faults 4.7-7
Table 4.8-1. Summary of Hazardous Materials Sites Near Proposed Project....4.8-5
Table 4.10-1. Soil and Concrete Volumes 4.10-4
Table 4.11-1. Existing Vector Source within Project Area....4.11-10
Table 4.12-1. Estimated Construction GHG Emissions....4.12-5
Table 5.3-1. Comparison of Proposed Project to Channel Alternatives....5-13
Table 6.0-1. Cumulative Projects....6-3

ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Trips
AEP	Association of Environmental Professionals
ALERT	Automated Local Evaluation in Real Time
AMSL	Above Mean Sea Level
AQMP	Air Quality Management Plan
ARB	Air Resources Board
bgs	Below ground surface
BEMP	Beach Elevation Management Plan
BMP	Best Management Practice
BP	Business Plan
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
Cal-EPA	California Environmental Protection Agency
Cal-OSHA	California Occupational Safety & Health Administration
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CBM	Coastal brackish marsh
Cc	Camarillo loam
CCAA	California Clean Air Act
CCC	California Coastal Commission
CCR	California Code of Regulations
Cd	Camarillo sandy loam
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CDP	Coastal Development Permit
CDPH	California Department of Public Health
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CESA	California Endangered Species Act
CFCs	Chlorofluorocarbons
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CGS	California Geological Survey
CH_4	Methane
CHSC	California Health and Safety Code
CIP	Capital Improvement Project
CMWD	Calleguas Municipal Water District
CnB	Coastal beaches
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO	Carbon monoxide
CO_2	Carbon dioxide

CO_{2e}	Carbon dioxide equivalent
CPT	Cone Penetrometer Test
CUPA	Certified Unified Program Authority
CWA	Clean Water Act
cy	Cubic yards
dB	Decibel
dB(A)	A-weighted decibel
DBH	Diameter at breast height
DEIR	Draft Environmental Impact Report
DFIRM	Digital Flood Insurance Rate Map
DH	Disturbed habitat
District	Ventura County Watershed Protection District
DOGGR	Division of Oil, Gas, and Geothermal Resources
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
EAP	Emergency Action Plan
EDR	Environmental Data Resources
EIR	Environmental Impact Report
EOT	Emergency Operations Team
EP	Emergency Plan
EPA	Environmental Protection Agency
ESA	Endangered Species Act
EW	Eucalyptus woodland
F	Fahrenheit
FCGMA	Fox Canyon Groundwater Management Agency
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIA	Federal Insurance Administration
FICON	Federal Interagency Committee on Noise
FIRM	Flood Insurance Rate Map
FY	Fiscal year
GBV	Ground-Borne Vibration
GHG	Greenhouse gas
GMA	Groundwater Management Agency
GPD	Gallons per Day
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
HSLP	Health, Safety & Loss Prevention
HWCL	Hazardous Waste Control Law
I	Interstate
IPM	Integrated Pest Management
IS	Initial Study
IWMD	Integrated Waste Management Division
IWPP	Integrated Watershed Protection Plan
LARWQCB	Los Angeles Regional Water Quality Control Board
LAS	Lower Aquifer System
LCP	Local Coastal Plan
L_{eq}	Equivalent Sound Level
$L_{eq}H$	Equivalent Sound Level One Hour
LMD	Land Management Division

LOS	Level of Service
MBTA	Migratory Bird Treaty Act
mg/m^3	Milligrams per cubic meter
mgd	Million gallons per day
mm	Millimeter
MM	Mitigation Measure
MMT	Million metric tons
MPH	Miles per hour
MVCAC	Mosquito and Vector Control Association of California
MWDSC	Metropolitan Water District of Southern California
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NAS	Naval Air Station
NAVD	North American Vertical Datum
NBVC	Naval Base Ventura County
NCBC	Naval Construction Battalion Center
NCCP	Natural Communities Conservation Planning
NEPA	National Environmental Policy Act
NFELC	Naval Facilities Expeditionary Logistics Center
NFIP	National Flood Insurance Program
NGVD	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
NIH	National Institute of Health
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
O_3	Ozone
O-H	Oxnard-Hueneme
OHP	Office of Historic Preservation
OHWM	Ordinary high water mark
OID	Oxnard Industrial Drain
OPR	Office of Planning and Research (Governor's)
OSHA	Occupational Safety and Health Administration
OW	Open water
OWWTP	Oxnard Wastewater Treatment Plant
Pb	Lead
PCH	Pacific Coast Highway
PFC	Perfluorocarbons
PEA	Preliminary Endangerment Assessment
PGA	Peak Ground Acceleration
PHWA	Port Hueneme Water Agency
$PM_{2.5}$	Particulate Matter of 2.5 Microns or Less in Diameter
PM_{10}	Particulate Matter of 10 Microns or Less in Diameter

ppm	Parts Per Million
PRC	Public Resources Code
Qal	Quaternary Alluvium
RCRA	Resource Conservation and Recovery Act
RDEIR	Recirculated Draft Environmental Impact Report
RMP	Risk Management Plan
rms	root-mean-square
ROC	Reactive Organic Compounds
SAA	Streambed Alteration Agreement
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAT	South Coast Area Transit
SCCIC	South Central Coastal Information Center
SCS	Soil Conservation Service
SCSM	Southern coastal salt marsh
SF_6	Sulfur hexafluoride
SFD	Southern foredunes
SFHA	Special Flood Hazards Area
SHPO	State Historic Preservation Office
SLC	State Lands Commission
SMARA	Surface Mining and Recovery Act
SO_2	Sulfur Dioxide
SO_X	Sulfur Oxides
SQMP	Stormwater Quality Management Program
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCE	Trichloroethylene
TCP	Traffic Control Plan
TMDL	Total Maximum Daily Loads
UAS	Upper Aquifer System
UBC	Uniform Building Code
UD	Urban developed
UFC	Uniform Fire Code
US-101	Ventura Freeway
USACE	U.S. Army Corp of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USNCBC	U.S. Naval Construction Battalion Center
UST	Underground Storage Tank
UWCD	United Water Conservation District
V/C	Volume to Capacity Ratio
VCAPCD	Ventura County Air Pollution Control District
VCRAT	Ventura County modified rational method
VCRR	Ventura County Railroad
VCSQMP	Ventura County Stormwater Quality Management Program
VCVCP	Ventura County Vector Control Program

VCWPD	Ventura County Watershed Protection District
VOC	Volatile Organic Compound
WDR	Wastewater Discharge Permit
WMP	Water Management Plan
$\mu g/m^3$	Micrograms per cubic meter

0.1 INTRODUCTION AND SUMMARY

This Final Environmental Impact Report (FEIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code Section 21000 et seq.), and *CEQA Guidelines* (California Administrative Code Section 15000 et seq.).

According to *CEQA Guidelines* §15132, the FEIR shall consist of the following:

a) The Draft Environmental Impact Report (DEIR) or a revision of the Draft;

b) Comments and recommendations received on the DEIR, either verbatim or in summary;

c) A list of persons, organizations, and public agencies commenting on the DEIR;

d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process;

e) Any other information added by the Lead Agency.

In accordance with these requirements, the J Street Drain EIR is comprised of the following:

- Recirculated Draft Environmental Impact Report (RDEIR), J Street Drain (September 2011) (SCH No. #2008041057), with revisions resulting from the most recent public comments, corrections, and clarifications shown as underlined or ~~strikethrough~~ text. The RDEIR consists of the Executive Summary and Chapters 1.0 through 8.0 of this FEIR.
- This FEIR document, January 2012, that incorporates the information required by §15132.

Format of the Final EIR

This document is organized as follows:

Section 0.1 Introduction

This section describes CEQA requirements and content of this FEIR.

Section 0.2 Corrections and Additions

This section provides a list of those revisions made to the EIR text and figures as a result of comments received and/or clarifications subsequent to release of the Revised Draft EIR for public review.

Section 0.3 Responses to Comment Letters Received on the Revised Draft EIR

This section provides copies of the comment letters received and individual responses to written comments. In accordance with Public Resources Code 21092.5, copies of the written proposed responses to public agencies will be forwarded to the agencies at least 10 days prior to certifying an EIR. The responses will conform to the legal standards established for response to comments on EIRs.

Section 0.4 Mitigation Monitoring and Reporting Program

This section includes the Mitigation Monitoring and Reporting Program (MMRP) which identifies the mitigation measures, timing and responsibility for implementation of the measures.

0.2 CORRECTIONS AND ADDITIONS

This section of the Final EIR (FEIR) identifies the location of or contains revisions to information included in the Revised Draft EIR (RDEIR) dated September 2011, based upon: (1) additional or revised information required to prepare a response to a specific comment; (2) clarifications; (3) updated information required due to the passage of time; and/or (4) typographical or content errors. The information added to the EIR does not meet the requirements for recirculation pursuant to Section 15088.5 of the State *California Environmental Quality Act* (*CEQA) Guidelines*.

0.2.1 REVISED AND SUPPLEMENTAL TEXT

Changes to the EIR were made in response to comments received on the Revised Draft EIR. Overall, the new information clarifies information and analysis presented in the Revised Draft EIR, or revises mitigation measures that were requested by commenters on the Revised Draft EIR. Text that has been added to the document appears in an underline format. Text that has been deleted appears with strikeout.

The table below identifies the changed Revised Draft EIR sections and accompanying page numbers in the FEIR.

Final EIR Section	Page Number
Table of Contents	v
ES.0 Executive Summary	ES-1, ES-3 – ES-6, Table ES-1, ES-5, and ES-6 (pgs. ES-7, ES 13, ES-14, ES-15, ES-16, ES-17, ES-18, ES-19)
1.0 Introduction and Summary	1-1 – 1-4, 1-6, 1-17, Table 1.5-1 (pgs 1-8 – 1-12), Table 1.8-1 (pgs. 1-19, 1-20, 1-26, 1-27, 1-28,1-29, 1-30, 1-31)
3.0 Project Description	3-1, 3-10, 3-15, 3-29
4.1 Visual Resources	4.1-6, 4.1-14, 4.1-16, 4.1-17, 4.1-20, and 4.1-21
4.3 Water Resources and Hydraulic Hazards	4.3-1 4.3-6, 4.3-10, 4.3-12, 4.3-22, 4.3-27, 4.3-29, and 4.3-35
4.5 Transportation and Circulation	4.5, 20 and 4.5-22
4.6 Noise and Vibration	4.6-1, 4.6-2, 4.6-3, 4.6-6, 4.6-7, 4.6-8, 4.6-13, 4.6-15, 4.6.-16, 4.6-17, 4.6-18, 4.6-19, 4.6-20, 4.6-21, 4.6-22, 4.6-24, 4.6-25, and 4.6-26
4.7 Geologic and Seismic Hazards	4.7-29
4.8 Hazardous Materials and Waste	4.8-1, 4.8-11, 4.8-12, 4.18-14, 4.8-16, 4.8-17, and 4.8-19
5.0 Alternatives	5-4 and 5-12
6.0 Other Environmental Considerations	6-1 and 6-2
8.0 References	8-2 and 8-5

0.2.2 REVISED AND SUPPLEMENTAL MITIGATION MEASURES

Based upon comment letters received on the Revised Draft EIR, new mitigation measures were added in the FEIR, and other mitigation measures were revised or renumbered. Revisions are noted in a strikeout/ underline format.

Visual Resources

VIS-1 The District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard. Landscaping shall be replaced incrementally, within six months of completion of each project phase.

~~Within six months of project completion, the District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard~~.

VIS-4 Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.

VIS-5 Although night construction is not anticipated, in the event that it becomes necessary, all lighting shall be shielded to prevent illumination of residences.

Transportation and Circulation

TR-1 The District shall prepare a construction worksite traffic control plan and submit it to the County ~~and~~, cities, Gold Coast Transit, Oxnard School District, Oxnard Union High School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan.

Noise

NOISE-2 A temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain. Additionally, temporary noise control barriers shall be installed and maintained in residential and commercial areas along Phases 2 - 4 to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-25. In addition to placement of noise control blankets along the construction area adjacent to the Shoreline Care Facility, located at 5225 South J Street, and if needed, Our Saviour's Evangelical Lutheran Church at 905 Redwood Street, to further reduce noise levels below 68 dB(A) L_{eq}, additional noise control barriers shall be installed. To ensure sufficient noise barriers are deployed, construction noise levels shall be monitored ten feet from the exterior of the nursing home and church at the start of work activities within 500 feet of these two locations. Barriers would be installed to reduce noise levels generated by the loudest equipment when construction activities are closest to the nursing home and church. Monitoring would occur at the nursing home during construction Phases 2 and 3 and at the church during construction Phase 4. Construction noise levels

would be monitored weekly thereafter to ensure proper function of the barriers throughout work and that the desired noise attenuation at these locations is achieved.

This noise control barrier will also provide visual screening for all residents along the work area, ~~eastern boundary of~~ including the Surfside III property to shield residents from views of the J Street Drain during construction. If the Surfside III Condominium Owners' Association does not grant a temporary work area to enable installation of temporary noise barriers at Buildings 6 and 7, the District will provide funds for the Association to arrange the barrier installation on their property. Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J St Drain in Phase 1).

Geologic and Seismic Hazards

GEO-3

a) A Licensed Surveyor shall plan and install a survey monument monitoring system on buildings within 25 feet of proposed vertical shoring to collect monthly baseline data for six months before construction. The monuments shall remain in place and be monitored monthly for one year after construction completion to track any latent changes. During construction, the Licensed Surveyor shall conduct surveys corresponding to major phases of work such as shoring installation, excavation, and backfill.

b) Before Phase 1 construction may begin, the District shall require the Contractor to prepare a Work Plan, which would take into account all available geotechnical information for the areas where vertical shoring and sheet piles are to be installed. The Plan would specify the contractor's approach to installing vertical shoring and sheet piles in a manner that would avoid and minimize associated potential vibration damage to adjacent structures.

c) The Work Plan shall require the Contractor to take daily measurements of the survey monuments on adjacent structures described in (a) above to track potential changes during construction.

d) Should the surveys or measurements described in (a) and (c) above indicate subsidence or other damage due to construction activities, the Contractor shall modify the Work Plan to address the causes. Property owners within 25 feet of the proposed shoring shall be promptly notified of observed damage, and any Work Plan revisions shall be available to property owners upon request. For multi-unit structures, the District shall identify a single designated representative with whom to communicate.

e) The District shall provide a construction contact telephone number to adjacent residents before work commences so that they may report possible observations of damage immediately to the District.

Hazardous Materials and Wastes

HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. ~~sheet piling shall be placed~~

~~on the east side of the drain channel in order to prevent the migration of groundwater from the Halaco site.~~ If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site. ~~Note that additional field testing is currently being conducted to provide a more representative value for hydraulic conductivity for the vicinity of the drain. In the event that the results show the need for sheet piling on both the west and east side of the drain, sheet piling will be placed on both sides of the drain.~~

0.3 RESPONSE TO COMMENTS

This section contains responses to all comment letters received on the November 2011 Recirculated Draft Environmental Impact Report (RDEIR). Twenty-four letters were received during the comment period, which closed November 7, 2011. A copy of each letter with bracketed comment numbers on the right margin is followed by the response for each comment as indexed in the letter. The comment letters are listed in Table 0.3-1.

Table 0.3-1. Comment Letters – J Street Drain

Letter No.	Commenter	Letter Date
1	State Clearinghouse	11/8/11
2	California Department of Fish and Game	11/7/11
3	Ventura County Watershed Protection District – Water and Environmental Resources Division, Groundwater Section	10/28/11
4	Ventura County Watershed Protection District - Water and Environmental Resources Division, Water Quality - County of Ventura Stormwater Program	10/31/11
5	Ventura County Watershed Protection District – Planning and Regulatory Division, Permit Division	11/7/11
6	City of Oxnard Development Services Department	11/7/11
7	Central Coast Alliance United for a Sustainable Economy (CAUSE)	11/4/11
8	Louis Perry	11/7/11
9	Lynn Haile	10/2/11
10	Ira Green	10/3/11
11	Roy Prince	10/19/11
12	Surfside III: J Street Drain Project (JSDP) Committee	11/1/11
13	Frances Woolston	11/2/11
14	Michelle Hoffman	11/2/11
15	Al Galluzzo	11/2/11
16	William and Michelle Shanks	11/3/11
17	Patricia Dileski	11/5/11
18	Terry Ann Smith	11/6/11
19	Marion Kelemen	11/7/11
20	Slaughter & Reagan, LLP	11/7/11
21	Robert Banfill	11/7/11
22	Pamela Evans	11/7/11
23	Linda Kodman	11/7/11
24	Loewenthal, Hillshafer & Rosen LLP (resubmittal)	1/15/10

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

November 8, 2011

Angela Bonfiglio Allen
Ventura County Watershed Protection District
800 S. Victoria Avenue
Ventura, CA 93009-1610

Subject: J Street Drain Project
SCH#: 2008041057

Dear Angela Bonfiglio Allen:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on November 7, 2011, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. 1-1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH#	**2008041057**
Project Title	J Street Drain Project
Lead Agency	Ventura County Watershed Protection District

Type	**EIR** Draft EIR
Description	NOTE: Recirculated The VCWPD proposes to increase the flow capacity of the existing J Street Drain to accommodate runoff from a 100 yr storm event, thereby, reducing potential flooding in residential and commercial areas of the cities of Oxnard and Port Hueneme. The Drain would be maintained according to best management practices identified in the adopted Final Program Environmental Impact Report for Environmental Protection Measures for the Ongoing Routing Operations and Maintenance Program (May 2008). The proposed project also includes a Beach Elevation Management Plan (BEMP). The BEMP identifies a set of threshold environmental conditions that together activate the need for reducing the height of a short section of sand berm adjacent to the Ormond Beach Lagoon.

Lead Agency Contact

Name	Angela Bonfiglio Allen		
Agency	Ventura County Watershed Protection District		
Phone	(805) 477-7175	***Fax***	
email			
Address	800 S. Victoria Avenue		
City	Ventura	***State*** CA	***Zip*** 93009-1610

Project Location

County	Ventura			
City	Oxnard, Port Hueneme			
Region				
Lat / Long	34° 9' 22" N / 119° 11' 9.5" W			
Cross Streets	J St and Redwood Avenue to south of Hueneme Road			
Parcel No.	Rio De Santa Clara Land Grant			
Township	***Range***	***Section***	***Base***	

Proximity to:

Highways	
Airports	
Railways	VCRR
Waterways	
Schools	Yes
Land Use	Existing drain is maintained by Ventura County Watershed Protection District.

Project Issues	Biological Resources; Coastal Zone; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Noise; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Cumulative Effects; Aesthetic/Visual; Air Quality; Soil Erosion/Compaction/Grading; Solid Waste; Water Supply; Archaeologic-Historic
Reviewing Agencies	Resources Agency; California Coastal Commission; Department of Fish and Game, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 7; Regional Water Quality Control Board, Region 4; Department of Toxic Substances Control; Native American Heritage Commission

Date Received 09/23/2011 ***Start of Review*** 09/23/2011 ***End of Review*** 11/07/2011

Note: Blanks in data fields result from insufficient information provided by lead agency.

Letter 1
Governor's Office of Planning and Research, State Clearinghouse and Planning Unit
November 8, 2011

1-1 The letter acknowledges that the Ventura County Watershed Protection District (District) has complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act (CEQA). No further response is required.

From: Daniel Blankenship [DSBlankenship@dfg.ca.gov]

Sent: Monday, November 07, 2011 1:10 PM

To: Angela Bonfiglio

Subject: J Street Drain Project Recirculated Draft EIR

Dear Angela Bonfiglio Allen,

Thank you for the opportunity to review and comment on the above referenced Draft EIR related to potential biological impacts. The Department concurs with the proposed biological mitigation measures BIO-1 - BIO-7 and the Watershed Protection District Best Management Practices. Dan Blankenship will be your contact re: any needed ITP issues and Jeff Humble will be your contact on any Streambed Notification Agreement issues. Thank you for incorporating comments from previous versions into the latest re-circulated DEIR. 2-1

Daniel S. Blankenship
Staff Environmental Scientist
CA Department of Fish and Game
P.O. Box 221480
Newhall, CA 91322-1480
phone/fax (661) 259-3750
cell (661)644-8469
dsblankenship@dfg.ca.gov

Letter 2
California Department of Fish and Game
November 7, 2011

2-1 This comment indicates that the California Department of Fish and Game (CDFG) concurs with the proposed biological mitigation measures BIO-1 through BIO-7 and the District's best management practices (BMPs). The comment provides contact information and a closing statement. No further response is required.

Ventura County
Watershed Protection District
Groundwater Section

MEMORANDUM

DATE: October 26, 2011

TO: Angela Bonfiglio-Allen

FROM: Rick Viergutz

SUBJECT: FC 08-2322 – J Street Drain

Project Description

Project proposed to increase the flow capacity of the existing J Street Drain to accommodate runoff to a 100-year storm event. The proposed project also includes a Beach Elevation Management Plan that identifies a set of threshold environmental conditions that activate the need for reducing the height of a short section of sand berm adjacent to the Ormond Beach Lagoon. The project is located in the median between the north and south bound traffic lanes of J Street, primarily in the City of Oxnard. South of Hueneme Rd the Drain forms the boundary between the cities of Oxnard and Port Hueneme. The project extends between Redwood Street on the north and Ormond Lagoon/Pacific Ocean on the south. 3-1

Water and Environmental Resources previously reviewed this project on May 2, 2008. Review of the revised sections does not change our comments regarding the Initial Study Assessment Guidelines. 3-2

Letter 3
Ventura County Watershed Protection District
Water and Environmental Resources Division, Groundwater Section
October 28, 2011

3-1 This comment provides introductory remarks and a summary of the project. This comment does not address the adequacy of the environmental document; therefore, no additional response is required.

3-2 This comment states that the Water and Environmental Resources Division, Groundwater Section, review of the RDEIR (September 2011) does not change their comments provided in May 2008. The previous (May 2008) Water and Environmental Resources Division, Groundwater Section comments are addressed in Section 4.3 of the EIR. No further response is required.

J Street Drain

From: Yugal Lall [Yugal.Lall@ventura.org]
Sent: Monday, October 31, 2011 3:36 PM
To: Angela Bonfiglio
Cc: Ewelina Mutkowska; Karen Martia
Subject: J Street Drain

Angela, Our NPDES concerns has been addressed in the DEIR for J Street Drain. 4-1
Thanks Yugal

Page 1

Letter 4
Ventura County Watershed Protection District
Water and Environmental Resources Division, Water Quality
County of Ventura Stormwater Program
November 7, 2011

4-1 As stated in this comment, the Water and Environmental Resources Division, Water Quality Section's National Pollutant Discharge Elimination System (NPDES) concerns have been addressed in the EIR. No further response is required.

Ventura County
Watershed Protection District
Planning and Regulatory Division
Permit Section

MEMORANDUM

DATE: November 7, 2011

TO: Angela Bonfiglio Allen, Environmental Planner
Water & Environmental Resources Division

FROM: Tom Wolfington, P.E. – Permit Section
(805) 654-2061

SUBJECT: J Street Drain, Downstream End to Redwood Street
Cities of Port Hueneme and Oxnard, Zone 2
Recirculated Draft Environmental Impact Report (RDEIR)

Pursuant to your request, this office has reviewed the submittal of the subject RDEIR dated September 2011.

PROJECT DESCRIPTION

The Ventura County Watershed Protection District (District) proposes the J Street Drain Project to increase the flow capacity of the existing J Street Drain within the existing facility right-of-way to accommodate runoff from a 100-year storm event, and reduce potential flooding in residential and commercial areas of the Cities of Oxnard and Port Hueneme. The proposed project involves converting the existing trapezoidal concrete channel into an open rectangular channel with a bottom up to four feet deeper than the existing channel bottom. The existing box culverts under the street crossings and railroad crossing would be replaced by larger structures to improve flow conveyance. The demolition of the existing drain and construction of the new, higher capacity drain would take place in four independent phases beginning at the downstream end. 5-1

WATERSHED PROTECTION DISTRICT PERMIT SECTION COMMENTS

It is noted that the determination of impacts to flood control and drainage is considered less than significant and beneficial, that the authority of the District to require Encroachment and/or Watercourse Permits including for lateral connections is delineated, and that mitigation measures related to construction and following construction are enumerated. 5-2

A preliminary search of records held by the Permit Section using GIS resources reveals that approximately 75 permits have been obtained by public agency and 5-3

November 7, 2011
J Street Drain RDEIR
Page 2 of 2

private applicants along the route of J Street Drain dating back to the early 1960's. The purposes of the permits include access, facility construction and maintenance, aerial and subterranean utility crossings, parallel sewer trunk lines, lateral drain connections, and a variety of other purposes. While the information contained in these permit records is not likely to directly affect the project environmental analysis, the information could be useful in the detailed design phase of work. A cross reference between the record drawings to be prepared for the completed J Street Drain project construction and the historical permit record could be helpful in responding to future permit inquiries. 5-3 Cont.

END OF TEXT

Letter 5
Ventura County Watershed Protection District
Planning and Regulatory Division, Permit Section
November 7, 2011

5-1 This comment provides introductory remarks and a summary of the project. This comment does not address the adequacy of the environmental document; therefore, no additional response is required.

5-2 This comment summarizes the EIR findings regarding flood control and drainage and acknowledges the authority of the District's Permit Section to require Encroachment and/or Watercourse Permits including permits associated with lateral connections. The District's Permit Section also acknowledges that mitigation measures related to construction activities and post construction are proposed. No further response is required.

5-3 The Permit Section indicates that approximately 75 permits have been obtained by public agency and private applicants along the route of J Street Drain dating back to the early 1960's. The Permit Section notes that the information may be useful in the detailed design phase of work and in responding to future permit inquiries. No further response is required.

MATTHEW G. WINEGAR, AICP
Development Services Director

Development Services Department
214 South E Street • Oxnard, CA 93030 • (805) 385-7896 • Fax (805) 385-7417

November 7, 2011

Ventura County Watershed Protection District
Attention: Angela Bonfiglio Allen
800 South Victoria Avenue
Ventura, CA 93009-1610

RE: Comments on Recirculated Draft Environmental Impact Report (RDEIR) (SCH 200804057) for the Oxnard J Street Drain Reconstruction Project

Dear Ms. Allen:

Thank you for providing the City of Oxnard an opportunity to review the Ventura County Watershed Protection District's (District) Recirculated Draft Environmental Impact Report for the J Street Drain Reconstruction Project (Project). This letter serves as a summary of comments, suggestions, and continuing concerns by all of our City departments. 6-1

General Comments

The City is in agreement that the facility is substandard and in need of the reconstruction to increase its storm water capacity. The City's preference is for Alternative A, the covered box culvert that allows for a variety of recreational uses. However, we realize the cost for capping the drain is significant. We encourage the District to work with the City to identify areas where an expanded street culvert or new drain cap crossing would enhance the community's connectivity, aesthetics, and recreational opportunities. 6-2

The existing culvert design results in traffic congestion during peak hours at Pleasant Valley and J Street, Bard Road and J Street and Ynez and J Street. Consideration should be given to new designs in cooperation with the City that create normal intersections instead of intersections with 40-foot medians. It may be possible to design roundabouts at Bard Road and J and Ynez and J to minimize the cost of improved intersections. 6-3

J Street is a designated bike path between from Wooley Road to Hueneme Road. The Project's temporary and permanent construction impacts on the bike path should be examined. The City supports a thorough analysis of partial or full coverage of a box culvert and the placement of a Class I bike trail with landscaping on the covered drain and/or along the adjacent service road. 6-4

We also encourage the District to consider renaming or referencing the J-Street Drain and the Oxnard Industrial Drain so, at a minimum, not use the word "drain." 6-5

Ventura County Watershed Protection District
November 4, 2011
Page 2 of 3

Regulatory Approvals

Please add to this section that encroachment permits, haul route approvals, staging areas, temporary use permits, and other approvals will be required by the City during the Project. 6-6

Mitigations (Table ES-1)

The following comments address mitigations contained in Table ES-1.

VIS-1 This mitigation would require replacement landscaping six months after Project completion, which is estimated to take four years. That suggests the entire Project area may be devoid of landscaping for up to four years. The City requests that replacement landscaping, selected by agreement with the City, be planted as the Project is incrementally completed to minimize adverse visual impacts. 6-7

BIO-6 This mitigation requires shielded lighting of the beach in the event of night construction. Lighting may be used during the shorter winter days when the sun sets as early as 5:00pm. The City requests shielded lighting be used at any location where homes are exposed to lighting along the length of the Project area. 6-8

BIO-7 The last sentence states that trees may be removed outside of the breeding season without restriction. The City requests that the Project include an arborist report of the mature trees along the length of the Project area with the goal of identifying trees that could be transplanted, in consultation with the City Landscape Architect, and that identified transplant trees be offered for transplanting at the Project's expense for 30 days prior to planned removal. 6-9

TR-1 Please add to this mitigation: 1) coordination with Gold Coast Transit regarding Project impacts on their routes 1A, 1B, and 3, and 2) coordination with impacted school districts regarding Project impacts to school bus routes. 6-10

TR-3 This mitigation refers to the Surfside III property, but resident parking should be mitigated along the entire Project route. 6-11

NOISE-1 Noise standards should be consistent with either the City of Oxnard or the City of Port Hueneme, not based on County noise standards. It is possible there are sensitive noise receptors living in the housing adjacent to the Project. This mitigation should include a method of surveying the surrounding community to identify sensitive receptors and not assume there are none based on the type of housing. 6-12

NOISE-2 The City requests that the pre- and post-video recording be extended to a full block from the Project site and that all streets and other City and utility infrastructure also be videotaped. This mitigation should be extended to all parties, public or private, that have property near the Project area that may be damaged by ground vibration. 6-13

Ventura County Watershed Protection District
November 4, 2011
Page 3 of 3

Geology and Seismic Hazards

BMP 3 Please define a "permanent stockpile." Stockpiling of soil is not a permitted permanent use within the City of Oxnard. 6-14

Again, thank you for the opportunity to comment on the RDEIR. The City looks forward to working closely with the District on this very important project. If you have questions, please contact Christopher Williamson, AICP, Principal Planner, at (805) 385-8156 of by e-mail at chris.williamson@ci.oxnard.ca.us. 6-15

Sincerely,

Matthew Winegar, AICP
Development Services Director

c. City Council
Edmund Sotelo, City Manager
Rob Roshanian, Public Works Director

Letter 6
City of Oxnard
Development Services Department
November 7, 2011

6-1 This comment provides introductory remarks and a summary of the project. This comment does not address the adequacy of the environmental document; therefore, no additional response is required.

6-2 As acknowledged in this comment, the District has evaluated an alternative to the proposed project that would involve constructing box culverts instead of an open channel as is currently proposed. The box culvert alternative is identified as "Alternative A" in EIR Section 5.0 Alternatives. While the District agrees that this alternative could provide some benefit in terms of landscaping and recreational opportunities, as identified in the EIR (see page 5-7), this alternative would be more costly to implement as compared to the Preferred Alternative due to the increased construction and landscaping costs.

The District will continue to coordinate with the City as part of final engineering design in an effort to identify areas and/or opportunities where enhanced community connectivity and landscaping opportunities may be available and incorporated into the project. In partnership with the City of Oxnard and the Ventura County Board of Supervisors, the District will explore supplemental funding sources such as grants, donations, or cost sharing opportunities prior to implementing each project phase. If and where sufficient funding can be generated from all parties and additional sources, the District may consider implementing Alternative A.

6-3 This comment states that the existing culvert design results in traffic congestion during peak hours at Pleasant Valley Road and J Street, Bard Road and J Street and Yucca Road and J Street. This is an existing condition and the congestion is not caused by the proposed project. While the District acknowledges the comment that the District should consider new designs in cooperation with the City that create normal intersections instead of intersections with 40-foot medians, the project, as currently proposed will not create a new significant traffic impact with respect to intersection and roadway segments during operation of the project (see EIR pages 4.5-17 through 4.5-19).

6-4 Section 4.5 of the EIR analyzes the transportation and circulation impacts associated with construction activities, including impacts to bicycle facilities. Specifically, EIR page 4.5-19 addresses the potential construction impact to bikes lanes designated on J Street between Wooley Road and Hueneme Road as identified in this comment. A significant impact to bicycle circulation during construction of the project has been identified. Mitigation measure TR-1 is proposed which would reduce potential impacts associated with disruption of bicycle access and movement during construction to a less than significant level. Specifically, this measure requires that the District prepare a construction worksite traffic control plan and submit it to the County and cities for review and approval prior to soliciting bids for the construction contract. Elements of this plan will address provisions for pedestrians and bicycles (see EIR page 4.5-23).

6-5 The District acknowledges this comment regarding the use of "drain" as part of the project description. However, this comment does not address the adequacy of the environmental document; therefore, no additional response is required.

6-6 EIR Section 1.5.5.1 identifies that encroachment permits would be required from the City of Oxnard as part of project construction. The District acknowledges that haul route approvals, staging areas, temporary use permits, and other approvals may be required by the City during implementation of the project. For example, Mitigation Measure TR-1 requires the District to prepare a construction worksite traffic control plan and submit it to the City for review and approval. In response to this comment, EIR Section 1.5.5.1 has been revised to include these additional approvals (in addition to those already identified for the City of Oxnard).

6-7 As described in EIR Section 3.5 (page 3-10), the project would be constructed in four phases. Each phase would take approximately one year to complete, including landscape replacement. Therefore, vegetation would be devoid from only one project phase at a time. As stated on EIR page 4.1-17, the District is working with the City on an agreement with respect to proposed landscaping replacement. The District will continue to coordinate with City staff regarding the landscaping agreement in order to replace the oleander bushes between Hueneme Road and Redwood Street. To clarify the timing of landscape replacement, Mitigation Measure VIS-1 has been modified.

VIS-1 The District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard. Landscaping shall be replaced incrementally, within six months of completion of each project phase.

To further minimize visual impacts, the District proposes an additional mitigation measure that would involve installing a 10- to 12-foot-tall fence with green vinyl screening along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced. Mitigation Measure VIS-4 has been added to Section 4.1 of the EIR.

VIS-4 Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.

6-8 Nighttime construction is not proposed, or anticipated as part of this project. Mitigation measure BIO-6 was included in the EIR in response to a request from resource agencies to ensure no indirect impacts to sensitive biological species would occur in the event of nighttime work. However, construction would be scheduled during daytime hours only; therefore nighttime lighting would not be required. Nonetheless, in the event of unanticipated emergency work requiring work at night, Mitigation Measure VIS-5 has been added to Section 4.1 of the EIR.

VIS-5 Although night construction is not anticipated, in the event that it becomes necessary, all lighting shall be shielded to prevent illumination of residences.

6-9 Mitigation Measure BIO-7 is proposed as a measure to ensure avoidance of impacts to nesting birds should construction occur during the migratory bird nesting season, in compliance with the Migratory Bird Treaty Act (MBTA). Removing trees outside the breeding season would not result in impacts to nesting birds, therefore additional mitigation (in the form of replacement of trees for this specific issue) is not required. Transplanting trees, as requested in this comment, would not reduce a significant impact associated with the proposed project, and may not be feasible due to removal of most of the trees' feeder roots, shock, increased susceptibility to disease and pest infestation, as well as reduced stability in the face of wind or other physical pressure.

6-10 In response to this comment, Mitigation Measure TR-1 has been revised to include coordination with Gold Coast Transit and potentially impacted school districts as follows:

TR-1 The District shall prepare a construction worksite traffic control plan and submit it to the County, Cities, Gold Coast Transit, Oxnard School District, Oxnard Union High School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan.

6-11 As described in EIR Section 4.5 – Transportation and Circulation, the proposed project would be constructed in phases, consisting of approximately 3,000 to 4,000 linear-foot segments; therefore, road closures would not result in substantial loss of available on-street parking spaces. Private, off-street parking spaces are available to the existing residences, typically in the form of driveways and garages. Given the continued availability of off-street parking throughout construction, the demand for on-street parking during construction from construction workers, equipment materials deliveries, etc. is not expected to result in inadequate off-street parking for the existing residents in the project area north of Hueneme Drain.

The EIR does identify a significant impact associated with the loss of 30 off-street parking spaces associated with the Surfside III residential complex during construction of the project. Mitigation Measure TR-3 requires vertical shoring techniques along the Surfside III property. Employing this construction method would avoid the loss of off-street parking at this location.

6-12 A significant noise impact has been identified associated with the Ventura County noise thresholds (see EIR page 4.6-15). The EIR has been revised to address City ordinances. Section 7-188(D) of the City of Oxnard Municipal Code exempts from the provisions of Article XI – Sound Regulation "sound sources associated with or created by construction, repair, remodeling or grading of any real property…provided the activities occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, including Saturday." Project construction would occur between the hours of 7:00 a.m. and 6:00 p.m.; therefore, the project would not exceed the standards of the City of Oxnard ordinance. Additionally, the mitigation measures presented in Section 4.6.6 (Mitigation Measures NOISE-1 and NOISE-2) would reduce construction noise levels to a less than significant level under the County's threshold. (page 4.6-17).

The City of Port Hueneme Municipal Code does not include an exemption for construction activities; rather, the City's Noise Ordinance regulates the time in which construction activities are prohibited altogether. According to the City's ordinance, no person adjacent to or within any residential zone in the city shall operate power construction equipment or tools or perform any outside construction or repair work on buildings or structures, or operate any pile driver, steam shovel, pneumatic hammer, steam or electric hoist, or other construction device so as to create any noise which exceeds the noise level limits of the Noise Ordinance between the hours of 7 p.m. and 7 a.m. Monday through Saturday, and no earlier than 9 a.m. or later than 6 p.m. on Sunday and federal holidays. Project construction would occur between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday; therefore, the project would comply with the standards of the City of Port Hueneme's ordinance with respect to construction time prohibitions.

Although the City's noise ordinance allows for construction activities to occur between the hours of 7 a.m. and 7 p.m., operational exterior noise levels between the hours of 7:00 a.m. and 6:00 p.m. are defined as 55 dB for noise sensitive and residential, 65 dB for commercial and 75 dB for industrial properties in the City of Port Hueneme (Section 3430 of the Port Hueneme Municipal Code). Section 3431 states that "no person shall operate or cause to be operated any source of sound at any location within the City… when measured on any receiving property to exceed the following Noise Level Limits…:

(a) The Exterior Noise Levels for that land use, as specified in Section 3430 above, for a total period of more than thirty minutes in any consecutive sixty minutes; or

(b) The Exterior Noise Levels plus 5 dB for a total period of more than fifteen minutes in any consecutive sixty minutes; or

(c) The Exterior Noise Levels plus 10 dB for a total period of more than five minutes in any consecutive sixty minutes; or

(d) The Exterior Noise Levels plus 15 dB for a total period of more than one minute in any consecutive sixty minutes; or

(e) The Exterior Noise Levels plus 20 dB for any period of time."

The land uses within the City of Port Hueneme adjacent to the proposed project site include residential, commercial, and industrial uses. As identified in Section 3431 of the City's Noise Ordinance, there are different thresholds for the different land uses. Construction of the proposed project may exceed the threshold for residences and commercial property within the City of Port Hueneme's city limits.

Construction activities will occur in four phases, with construction within or immediately adjacent to the City of Port Hueneme city limits occurring during phase 1 of the project. Phases 2 through 4 would be constructed within the City of Oxnard, but approximately 70 to 130 feet from residences located within the City of Port Hueneme. Although the City of Port Hueneme's Noise Ordinance does not exempt construction activity, its recognition that daytime construction noise should be regulated differently than non-daytime construction noise is consistent with County Construction Noise Threshold Criteria and the City of Oxnard's Noise Ordinance. Construction noise levels will be substantially similar for those portions of the project located in Port Hueneme and Oxnard. Land uses adjacent to the project are also substantially similar for all phases of the project. There is no basis for making a distinction between those phases of the project to be constructed in the City of Oxnard, and those portions of the project to be constructed in the City of Port Hueneme. The County Construction Noise Threshold Criteria and Control Plan takes into account the many factors that contribute to the potential impacts due to construction noise, including the location of sensitive receptors, the type or phase of construction, the combination of equipment used, the site layout, and the construction methods employed. Given the disparity between City ordinances, the District applies County thresholds for determining noise significance in a uniform manner to all project phases.

The mixed use nature of the area (i.e., residential, commercial and industrial) results in varying noise thresholds within a small area. The Ventura County Watershed Projection District's thresholds of significance for noise provide additional guidance for evaluating noise impacts within a mixed land use area. As shown on Table 4.6-12, noise levels generated from the

proposed off-road equipment that is expected to be used during construction will likely exceed 55dB(A) L_{eq} (south of Hueneme Road) and 68 dB(A) L_{eq} (north of Hueneme Road) daytime County standards for hospitals, nursing homes, schools, churches, and libraries. As discussed above, a nursing home and a church are located north of Hueneme Road. Standards for residential areas apply to evening and night, but because construction is not proposed for these time periods, the standards would not be exceeded. Construction of the proposed project would result in a significant noise impact for the nursing home and church. Construction noise mitigation measures will be implemented during each phase of the proposed project to reduce noise and address County threshold and City ordinances.

Mitigation Measures NOISE-1 and NOISE-2 will be required to be implemented in order to ensure noise levels and nuisance noise is minimized as much as possible during construction activities. As previously written, Mitigation Measure NOISE-2 specifically addresses construction noise related to the Surfside III community, including installation of a noise barrier. These measures are common measures employed for construction activities where nearby residential areas may be affected. Furthermore, no nighttime construction activity is proposed.

Mitigation Measure NOISE-2 has been revised to include sound barriers in residential and commercial areas along Phases 2 – 4, including the nursing home and church, to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J St Drain in Phase 1).

6-13 (NOTE: This comment inadvertently refers to Mitigation Measure NOISE-2 as related to potential vibration impacts, rather than NOISE-3). Mitigation Measure NOISE-3 addresses potential property damage associated with vibration during construction. The measure includes provisions for pre- and post-video recording of the properties adjacent to the project area (including private property and City property). This Mitigation Measure is a precautionary measure intended to protect both adjacent properties and the District from property damage and/or disputes regarding such. Video documentation extending one whole block from the site of construction as suggested by this comment is arbitrary, and may be excessive. The specific methodology in determining the extent to which video recording would be required is identified in EIR pages 4.6-11 and 4.6-12, and includes a propagation assessment which would determine the limits of the video recording and pre- and post-construction assessment.

6-14 This comment refers to the District's Best Management Practice (BMP) 3 identified in Table 1.9-1of the EIR, which are general measures applicable to various District operations and maintenance activities at all its facilities and not specifically associated with the construction of the proposed project. These measures were adopted in May 2008 as part of the District's Final Program Environmental Impact Report for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program, Project No. 80030. Permanent or long-term stockpiling is not proposed as part of this project, and so will not occur on properties located in the City of Oxnard. For clarification purposes, this BMP refers to temporary stockpiling during maintenance activities. The excavated material during routine maintenance activities is loaded into dump trucks removed to a disposal/storage site on District property or made available for use by outside contractors at off site locations. If the excavated material is used by an outside contractor, the contract between the District and the contractor specifies restrictions on the placement of the material. Typically, the excavated material is used for agricultural fill or stockpiled at one of the District's maintenance areas for use on County projects.

6-15 This comment includes a closing statement and contact at the City of Oxnard. No additional response is required.

Central Coast Alliance United for a Sustainable Economy

CAUSE

Celebrating 10 years of working for social, economic and environmental justice

Ventura County Watershed Protection District
Attn: Angela Bonfiglio Allen
800 South Victoria Avenue
Ventura, CA 93009-1600

Re: Revised Draft Environmental Impact Report for the J Street Drain Project

November 4, 2011

Dear Ms. Allen

Over the past three years CAUSE had several visioning sessions for a green and healthy South Oxnard in the community. In these conversations, residents didn't like that there is always trash in the J Street drain and that the fence served as a barrier that separated the community. In addition, the residents from South Oxnard expressed their support of making the J St drain a biking and walking path. 7-1

The Ventura County Watershed Protection District Improvements to the J Street Drain will give the County and the City of Oxnard the opportunity to support this vision of South Oxnard as a safer place to bike and walk in. CAUSE strongly supports the Channel A alternative for a Reinforced Box Culvert being chosen to implement. This would allow a biking and walking path on the J Street Drain which we believe many residents in South Oxnard support. In addition to making it safer for residents to bike and walk, the Channel A alternative would also keep trash out of the J Street Drain and thus out of our ocean and beaches. It would also be a wonderful family-friendly alternative to reach the Ormond Beach Wetlands that could attract many people from Oxnard, Ventura County, and beyond. 7-2 7-3

Sincerely,

Cameron Yee
CAUSE Researcher

Letter 7
Central Coast Alliance United for Sustainable Economy (CAUSE)
November 4, 2011

7-1 This comment notes the residents' concern over trash in the J Street Drain and the fencing surrounding the drain.

The proposed project would not result in an increase of trash entering the J Street Drain over the existing condition. As with the existing condition, the reconstructed drain is proposed to be enclosed with chain link fencing. The primary purpose of the fencing is for safety reasons. However, proposed fencing will continue to preclude a large amount of windblown trash from entering the channel, as would otherwise occur without fencing. As part of on-going maintenance required by the Ventura County Municipal Stormwater Permit (NPDES Permit No. CASOO4002, re-issued July 8, 2010), the channel is regularly maintained, which includes trash and sediment removal, and covering graffiti, if present. The NPDES permit also requires installation of trash excluders or similar devices at "catch basins or outfalls to prevent the discharge of trash to the storm drain system or receiving water…in areas defined as Priority A."

Although neither the City of Oxnard nor the City of Port Hueneme have designated J Street Drain as Priority A (catch basins consistently generating the highest volumes of trash), four of its tributary catch basins or outfalls within the City of Oxnard fall into this category. As a result, it is the responsibility of the City of Oxnard to control these sources of trash under the 2010 NPDES permit. The District is working with the Cities of Oxnard and Port Hueneme on another approach to capturing trash and debris before it reaches Ormond Beach Lagoon and the Pacific Ocean. Long term maintenance of any trash capture device would be performed by the cities. This effort is concurrent with but separate from the J Street Drain capacity improvement project, in compliance with the 2010 NPDES permit.

7-2 The District acknowledges this comment supporting a dual use of the J Street Drain as a biking and walking path.

The buried box culverts alternative that would allow for a potential bike/walking path (Alternative A) was analyzed in Section 5.0 of the EIR (see pages 5-7 through 5-8). However, Alternative A is not considered as the Preferred Alternative for several reasons. This alternative would result in substantially higher costs to construct and maintain (roughly double, or approximately $27 million). As described in the EIR, this alternative would require that the box culverts be strengthened to hold the additional weight of vegetation on top for landscaping as well as pedestrian and bicyclist use. Additionally, Phase 2 of this alternative may create an increased opportunity for mosquito breeding. This would result as water may pond due to the lowered bottom elevation, and there would be difficulties in accessing the covered water surface for vector control treatment. The District acknowledges this concern from area residents, and in particular residents of the adjacent Surfside III development (e.g., see comment letters 8 through 24). Furthermore, the District discussed public access to the Ormond Beach Wetlands with the U.S. Fish and Wildlife Service (USFWS) on February 3, 2010. USFWS discouraged public access via J Street Drain because of the proximity of this route to threatened and endangered bird nesting areas. Therefore, Alternative B, without public access, is preferred in the Phase 1 area.

While the District is not opposed to Alternative A, as stated above, it will cost substantially more than the Preferred Alternative (Alternative B). The District has limited funding derived from property tax revenues to solve flood control problems throughout Ventura County. In partnership

with the City of Oxnard and the Ventura County Board of Supervisors, the District will explore supplemental funding sources such as grants, donations, or cost sharing opportunities prior to implementing each project phase. If and where sufficient funding can be generated from all parties and additional sources, the District may consider implementing Alternative A.

7-3 CAUSE notes its strong support for Alternative A. Please see the preceding responses regarding Alternative A. In partnership with the City of Oxnard and the Ventura County Board of Supervisors, the District will explore supplemental funding sources such as grants, donations, or cost sharing opportunities prior to implementing each project phase. If and where sufficient funding can be generated from all parties and additional sources, the District may consider implementing Alternative A.

From: Skip Perry <sperry6257@yahoo.com>
Subject:
To: jstreetdrain.comments@ventura.org
Date: Monday, November 7, 2011, 6:44 AM

Via Registered Mail, fax, hand delivered and or
Email: JStreet Drain.Comments@ventura.org

Ventura County Watershed Protection District

Attn: Angela Bonfiglio Allen

800 South Victoria Avenue

Ventura , CA 93009-1600

Re: ***Re-circulated Draft Environmental Impact Report for J Street Drain project: Comment input during review period.***

As an owner of property in the J Street canal drainage area, a Ventura county tax payer and a resident of Surfside III, L Louis Perry of 974 Lighthouse Way, Port Hueneme, Ca 93041, hereby submit the following public comments to the Recirculated Draft Environmental Impact Report, J Street Drain Project, Ventura County, California, September 2011, prepared for the Ventura County Watershed District ["District"] by HDR Engineering.

Summary of Issues/Problems with the DEIR and R-DEIR for J Street Drain Project

1. Improper consideration of impact on the Ormond Beach and Ormond Beach Lagoon
2. Incomplete due diligence when exploring options to consider for better drainage
3. Premature development of projects while delaying existing flood risks
4. Increase of mosquito breeding areas with new J Street Design
5. Possible impact on SS III buildings, landscaping and potential flooding risks
6. Failure to include Oxnard 2020 Plans re. major housing developments in drainage areas
7. VCWPD good faith community interaction/review issues

8-1

For the above reasons, detailed in the following pages I request VCWPD reassess the priority and design of a J Street canal upgrade at this time and focus funds and assets towards existing higher flood risk areas.

8-2

Expanded detail of summarized items

1. Improper consideration of impact on the Ormond Beach and Ormond Beach Lagoon

   a. The proposed BEMP will increase number of lagoon drainages per year

   b. The lowering of the J Street canal will scour the existing lagoon deeper changing topography, chemistry, possibly vegetation and acquatic life for several years.

   c. No documented co-ordination of planning and approvals with US F&W, Sierra Club, Oxnard City Plan 2020 and other parties of interest.

   d. The BEMP requires 3 simultaneous conditions before action can be taken. As well as a conclusion that the water will not breach the Berm and cause overflow. It is unrealistic to expect that all these conditions will consistently happen and not cause a breakdown in the plan at some point. It could be inadequate warning of a rainfall, (plan calls for 72 hrs), An observer for the water level or rain prediction does not feel that the BERM will not breach, or that the water will not overflow the canal in to the Surfside III property. Or there is a mechanical failure of the required equipment, or delays in arriving at the site..something as simple as traffic, or erosion of the beach not allowing equipment to get to the BERM

8-3

2. Incomplete due diligence when exploring options to consider for better drainage

   a. The VCWPD staff indicated they had never requested waivers in writing from USF&WS before considering plans and options on drainage canal design. Since there was flooding on to Surfside III property, I am requesting that a formal application be submitted to the USF&WS for a direct access alternative drain. Especially since the VCWSP has said that the bulk of fresh water for the lagoon comes from the Oxnard Industrial Drain at several public meetings.

8-4

3. Premature development of projects while delaying existing flood risks.

   a. The VCWPD has stated there is not now a FEMA or other required need for the J Street canal improvement and they are doing the project based on their study.

   b. Existing flood risks in 2010 have been documented from the Oxnard Industrial Drain to

8-5

3

the Oxnard Waste Water Treatment Plant and other industrial sites in the area. Only the BEMP and nothing in the J Street canal design reduces that flooding issue which is of critical interest and potentially high impact to Surfside III and to the city of Oxnard as a whole. The BEMP requires 3 simultaneous conditions to occur and then in addition a decision that impending rainfall will not cause the BERM to breach and cause water to flow over the walls of the proposed project. It is unreasonable to expect that all rainfall will be predicted accurately within 72 hours, it is also unreasonable to expect that a human being can make a prediction of what will happen with the BERM with inaccurately predicted rainfall. Also, the plan has flaws in not allowing for mechanical failures of equipment, whether it be while attempting to breach the BERM or REACH the BERM. 8-5 Cont.

c. There is no guarantee that the beach will not be eroded in such a way that equipment can not reach the BERM or road conditions prevent arrival. Thus the plan is flawed, and there is no back-up plan.

4. Increase of mosquito breeding areas with new J Street Design

a. The new design of the canal will increase the depth of the 'standing water' in the SS III area but will greatly increase the **total square footage of surface water of all depths** up the J Street area thereby increasing standing water much of the year and indirectly increasing mosquito issues. 8-6

b. The new standing water in the J Street project, as it is proposed, between a large number of apartments and condominiums occupied by transient low income families with large numbers of children and possible poor vaccination and limited health care coverage could produce both an economic and health problem for Oxnard and Ventura County.

5. Possible impact on SS III buildings, landscaping and potential flooding risks

a. SS III has two 30+ unit three story condominiums within 10 feet of the proposed project at its maximum depth. These buildings are built over 30 years ago, on filled land, in a 8-7

liquefaction zone, and neighboring a building that has already had a subsidence problem. The project includes ground water pumping, possibly ground water injection which has a potential for damages to the described buildings.

b. The proposed insurance is focused on individual contractors and probably requiring litigation by SS III to recover damages. It should be coverage from the VCWPD and/or Ventura County as the responsible financial risk party to SS III. If problems or faults existed with individual contractors that should **not** be a SS III issue to resolve or seek compensation. 8-7 Cont.

6. Failure to include Oxnard 2020 Plans re: major housing developments in drainage areas

a. Since the original DEIR and the R-DEIR, the city of Oxnard has passed its 2020 plan which includes a major housing area in/near the drainage areas. These new developments should be integrated into the priority of drainage and flooding upgrades before any area projects are started. 8-8

7. VCWPD good faith community interaction/review issues.

a. Withdrawal of Initial DEIR with clearly announcing limitations on future R-DEIR comment areas. After design and flooding issues prompted the early withdrawal of the original DEIR for J Street the VCWPD **did not clearly notify** identified persons of interest of the dis-allowing comments on some DEIR sections and not making those areas public via internet during the R-DEIR review. This should not be allowed to happen. 8-9

b. VCWPD communications and notifications to impacted home owners has been spotty and in many cases stated notification mailings have not been delivered and were routed through San Diego at the last possible notification date or possibly non-existent. A large population on the J Street Canal area is of Hispanic origin and there is a question about the adequate notification and education to those owners/residents.

Conclusion:

A. The J Street Canal project is a premature effort to correct a relatively rare 8-10

5

potential flood.

B. The VCWPD and Ventura County Taxpayers have higher priority usage of the VCWPD skills and funds.

C. The design raises significant issues for Surfside III COA and residents

D. The VCWPD is not currently proposing adequate plans and insurance to fully mitigate and possibly compensate SS III for the impact to SS III.

E. The proposed design impacts Ormond Lagoon and doesn't solve the protection of endangered species, possibly exacerbating those risks. Including adding larger amounts of runoff from streets with oil residue and pesticide/fertilizer tainted agricultural run-off.

F. VCWPD does not appear to have conducted good faith and timely notification and inclusion of all potentially interested parties including Oxnard city planning, USF & WS, Sierra Club, Hispanic residents on J Street and timely/complete notification of documents and meetings to self-identified persons wishing to comment.

8-10 Cont.

Sincerely,

Louis Perry

6

Letter 8
Louis "Skip" Perry
November 7, 2011

8-1 This comment provides introductory remarks and outlines comments on the EIR as provided in the letter. Please refer to responses to comments 8-2 through 8-10 for a detailed response to each of these comments.

8-2 Comment noted. Please refer to responses to comments 8-2 through 8-10 for a detailed response to each of these comments.

8-3 Improper consideration of impact on the Ormond Beach and Ormond Beach Lagoon.

RE: (a) The proposed Beach Elevation Management Plan (BEMP) will increase number of lagoon drainages per year.

Response: The Ormond Beach Lagoon inlet normally remains in a semi-closed condition due to sand accretion on Ormond Beach, but during most winters the lagoon breaches naturally which allows free outflow during storms and some high tides. These events do not drain the lagoon entirely, as urban runoff and high tides contribute fresh and salt water flows. After periods where the lagoon breaches, the natural action of the ocean waves once again builds up a sand berm on the beach. This sand berm periodically blocks the lagoon outlet, preventing J Street drainage from reaching the ocean and preventing tidal flow from entering the lagoon. Under the BEMP, the District will maintain a safe sand berm elevation (elevation 6.5 feet ± NGVD 1929) near the northwest corner of the lagoon, approximately 800 feet southeast of the J Street drain concrete channel outfall. The BEMP is identified to groom the beach sand berm elevation to facilitate natural breaching in response to storm water runoff. During a natural breach condition, surface water from the lagoon would flow into the Pacific Ocean. While the BEMP would facilitate natural breaching in response to storm runoff to avoid flooding impacts, periodic breaching in response to storm runoff is a currently on-going natural event. Thus, the BEMP does not represent a substantial departure from current conditions, and would not result in any significant environmental impact.

RE: (b) The lowering of J Street canal will scour the existing lagoon deeper changing topography, chemistry, possibly vegetation and aquatic life for several years.

Response: The potential impacts associated with scour, sediment transport and coastal processes has been evaluated in detail and the findings are included in the EIR (see Section 4.3 Water Resources and Hydraulic Hazards). Technical studies are provided in EIR Appendix C. No significant impact associated with scour and corresponding issues identified in this comment (altering chemistry and possibly vegetation and aquatic life) have been identified.

As discussed in Section 4.3 of the EIR, the improvements to J Street Drain would lower the channel outlet approximately 2.5 feet below the existing channel bottom. The existing lagoon bottom elevation is approximately at the same elevation as the end of the existing concrete channel. To minimize potential effects to threatened and endangered species, there are no plans to excavate within the lagoon beyond the project limits at the drain outlet. The proposed project would not substantially alter the existing drainage pattern and lagoon topography. The new low-flow channel would effectively lower portions of the lagoon bottom and maintain positive drainage from the J Street Drain outfall to the Pacific Ocean. Vegetation currently exists along the

margins of the lagoon, and would be expected to persist in these areas when the lagoon deepens. The deepened lagoon would also provide more habitat for aquatic species, such as fish and frogs. The project would not change chemical inputs to the lagoon; therefore its existing chemical composition is not expected to change. Additionally, the modification of the bed, bank, and/or vegetation in a natural drainage (and certain man-made drainages) is regulated by the California Department of Fish and Game (CDFG) under Section 1600 et seq. of the Fish and Game Code. Such modifications require a Streambed Alteration Agreement (SAA), which would preclude impacts to vegetation communities without appropriate mitigation.

RE: (c) No documented coordination of planning approvals with U.S. Fish and Wildlife Service (USFWS), Sierra Club, Oxnard City Plan 2020, and other parties of interest.

Response: Section 1.0 of the EIR provides a discussion on regulatory agencies and permitting agencies relative to the proposed project (see pages 1-6 through 1-17). The consultation history with the USFWS and the District is outlined in the revised Biological Technical Report for the proposed project, which is included as Appendix D of the 2011 EIR. The District has actively participated in ongoing consultation with the USFWS in addition to the CDFG, Regional Water Quality Control Board (RWQCB), the U.S. Army Corps of Engineers (USACE) and the Cities of Oxnard and Port Hueneme. The Sierra Club is a non-profit, non-governmental organization with no regulatory or permitting authority, but the District has received and considered Sierra Club comments during the CEQA process.

For clarification, the J Street Drain project would require the following regulatory approvals prior to implementation:

- Consolidated Coastal Development Permit (CDP) from the California Coastal Commission (CCC) (providing for a single CDP to be issued by the Commission rather than separate permits by the two cities and another permit by the CCC for its jurisdictional area) pursuant to the provisions of the California Coastal Act;
- A USACE Individual Permit pursuant to Section 404 of the federal Clean Water Act (CWA) (1990, as amended), and/or qualification under a Nationwide Permit pursuant to Section 404 of the CWA;
- Clean Water Certification in compliance with the California Porter-Cologne Water Quality Control Act as defined by the state RWQCB or CWA Section 401 Certification requirements. Additionally, Waste Discharge Requirements would be required for groundwater discharge activities;
- A Section 1600-Series Streambed Alteration Agreement (SAA) with the CDFG in compliance with the CDFG Code and a Section 2081 Take Permit for potential impacts to state threatened and endangered species in compliance with the California Endangered Species Act (CESA); and
- Section 7 Consultation with the USFWS for potential impacts to federal threatened and endangered species in compliance with the Federal Endangered Species Act (ESA).

RE: (d) Concern that the three criteria to trigger the BEMP will not occur simultaneously, inadequate storm prediction, or mechanical equipment failure resulting in the inability to perform the proper maintenance in time.

Response: Normal Ormond Beach Lagoon conditions result in a natural breaching of the sand berm before the lagoon water elevation reaches its highest recorded elevation of about 7.5 feet NGVD (9.9 feet NAVD). This has resulted in the sand berm naturally breaching each year, typically in the early months of the fall rainy season. The sand berm naturally breaches during this time because increased drainage from seasonal storm water raises the lagoon water level sufficiently above sea level prompting a breach. The breach closes as sand blows and washes in as part of waves and tidal action, and freshwater drainage diminishes. Under the BEMP, the District will maintain a safe sand berm elevation (elevation 6.5 feet ± NGVD 1929) near the northwest corner of the lagoon, approximately 800 feet southeast of the J Street drain concrete channel outfall. If the Ormond Beach Lagoon is fully enclosed by the Ormond Beach sand berm (i.e., the lagoon has not breached), and the Ormond Beach sand berm elevation adjacent to the lagoon is observed to be above 6.5 feet NGVD (8.9 feet NAVD), the berm would be groomed within 3 days (72 hours) prior to a predicted storm event. Grooming would not be necessary during the dry season, as rainfall recorded at the Port Hueneme – Oxnard Sewer Plant (Rainfall Station No. 017C) during this period is negligible (please see "Normal Monthly and Seasonal Precipitation" at http://www.vcwatershed.net/hydrodata/php/getstation.php?siteid=017C#top).

The comment implies that pre-rainfall lagoon water surface must be observed at a particular level before the BEMP will be activated. As described in the next paragraph, the water surface will be monitored only to determine if the lagoon has breached or not. Instead of monitoring water levels, the BEMP requires monitoring of the sand berm elevation. Grooming the sand berm will ensure that even minor flooding, which is observed when the water surface reaches 7.0 feet NGVD, is avoided by providing an outlet for water that exceeds 6.5 feet NGVD in the lagoon (please see the stream gage plot for J Street Drain at Ormond Lagoon - http://www.vcwatershed.net/fws/VCAHPS/php/ahps.php?gage=793).

The lead role of the District in flood emergency avoidance is aided by the County's Flood Warning System and by its Automated Local Evaluation in Real Time (ALERT) system. The Flood Warning System provides advance weather forecasts. ALERT is a hydrologic data collection and recording system for Ventura County developed by the National Weather Service (NWS) of the National Oceanic and Atmospheric Administration (NOAA) that has been in operation since 1979. ALERT provides reliable rainfall and flow information for determination of storm magnitude. ALERT will be used as the primary source for rainfall and storm event data in the BEMP. The District water level gauge(s) in the J Street Drain will be primarily used to monitor water surface elevation to help determine whether the lagoon is currently connected to the ocean (no BEMP action required) or closed off by the beach sand berm (BEMP action required if beach sand elevation exceeds 6.5 feet NGVD). Three days advance warning of a rainfall event allows for ample time for implementation of the BEMP. Delays, such as traffic, would not jeopardize BEMP implementation as ample warning (72 hours) would be provided. The occurrence of a significant unanticipated rainfall event is highly unlikely based on available technologies that track weather systems in the southern California region.

Regular maintenance activities on equipment will ensure that the equipment is functioning properly at the time needed. Furthermore, equipment needed to deploy the BEMP is limited to one bulldozer. The District owns and operates a fleet of vehicles that would be available to perform this operation; therefore, equipment failure would not prevent implementation of the

BEMP. Standard procedures will be incorporated into the maintenance activities to ensure proper implementation of the BEMP.

8-4 Incomplete due diligence when exploring options to consider for better drainage.

RE: (a) This comment notes that the District did not request "waivers" in writing from the USFWS before considering plans and options on drainage canal design. Mr. Perry is requesting that a formal application be submitted to the USFWS for a direct access alternative drain.

Response: Five channel alternatives and three outlet alternatives were considered and analyzed in the EIR (see EIR Section 5.0). The County of Ventura (i.e., the District) is the Lead Agency for the proposed project and has the principal responsibility for carrying out the project. However, the District is required to obtain authorization from the USFWS with respect to potential impacts to endangered species, and as stated in response to comment 8-3, Section 7 Consultation is required; waivers are not an option. Additionally, the project will require an Individual Permit (IP) from the USACE (see response to comment 8-3 above). Section 7 Consultation is carried out by the USACE acting as the federal nexus agency. As part of the IP process, the USACE will also prepare an alternatives analysis and is required under Section 404(b)(1) of the Federal Clean Water Act to select the Least Environmentally Damaging Practicable Alternative (LEDPA). A waiver is not an option in the 404(b)(1) process. For a comparison of the Alternatives analyzed, please refer to Section 5.0 of the EIR.

The District met with the USFWS on February 3, 2010 to discuss the feasibility of pumping water ponded in J Street during breach conditions. This approach would be difficult to authorize under the ESA because of the high potential for "take" of endangered tidewater goby, a fish that resides in the lagoon and the J Street Drain as far north as the Ventura County Railroad. Even if pump intakes are screened, gobies could become impinged on the screens and die. The pumping or continual removal of the backwater in the J Street Drain would not solve the original problem and impetus of the J Street Drain Project, which is the need for 100-year storm flow capacity. The dimensions of the current J Street Drain are not sufficient to contain the flow volume of a 100-year storm. The current J Street Drain would flood during a 100-year storm even if the outlet to the Pacific Ocean was open at the time and the channel was initially empty. Pumping water out of J Street Drain would reduce the size of Ormond Beach Lagoon, resulting in a reduction of foraging habitat for endangered California least terns and critical habitat for endangered tidewater goby. In addition, the act of pumping would cause tidewater gobies to become impinged on the pump screens, resulting in mortality of an endangered species, further violating the ESA.

A "direct access alternative drain" as proposed in the comment would be subject to the same processes that act upon the existing J Street Drain/Lagoon system. A channel directly connected to the ocean (see EIR Section 5.2.1 on page 5-2 – Outlet Alternative A: Dike System) would fill with sand deposited by wind and wave action, just as the lagoon breach does, and would require frequent dredging to avoid backwater in J Street Drain. This level of maintenance would be excessive, and may not be feasible during the summer recreation and spring/summer bird nesting seasons. The BEMP represents a solution that provides flood control with minimal adverse environmental impacts and without the need for excessive new maintenance.

The comment mentions "that the bulk of fresh water for the lagoon comes from the Oxnard Industrial Drain." This is true, as the size of the Oxnard Industrial Drain (OID) watershed is larger than that of the J Street Drain, and therefore produces more runoff. However, the purpose

of the proposed project is to increase the capacity of J Street Drain from a ten-year to a 100-year flood event. Addressing OID flood conveyance deficiencies would not resolve those of J Street Drain, which would still overflow during events larger than the ten-year flood.

8-5 Premature development of projects while delaying existing flood risks.

RE: (a) This comment notes that the District stated that there is currently no FEMA or other required need for the improvement and that the project is based on their study.

Response: The District has clearly stated the need for the proposed project (see EIR pages 3-2 through 3-10). As described in the EIR, the project area is not currently within Federal Emergency Management Agency (FEMA) Flood Zone A, or the one percent annual chance (also known as the 100-year) flood zone. However, the existing flood zone is based on pre-1984 hydrologic data and hydraulic analyses conducted over 25 years ago. The District's modeled 100-year inundation area is based on approximately 20 additional years of more recent data. The updated 100-year inundation area is fairly extensive, affecting many properties in the area (see EIR Figure 3.0-2a). Protection from a 100-year flood is the standard set by FEMA under the National Flood Insurance Program (NFIP). The need for such protection is evidenced by the studies that show the existing drain has the capacity to handle only a ten-year flood event without overtopping the channel. Without the increase in flood protection the local area would continue to be susceptible to flooding, and may become subject to federal requirements to purchase flood insurance for properties within the 100-year flood zone after FEMA remaps the project area in the future. Implementation of the proposed project will not alter the day to day enjoyment of the area. Temporary impacts will result during construction, however, they are temporary in nature and upon completion of construction activities, operation of the drain and access will continue as it currently does. The District is simply taking a proactive approach to compliance with FEMA regulation.

RE: (b) Existing flood risks in 2010 from the Oxnard Industrial Drain (OID) to the Oxnard Wastewater Treatment Plant (OWWTP) and other industrial sites in the area.

Response: The comment is incorrect in stating that only the BEMP is needed to correct the flooding issues. Rather, both the BEMP and the proposed J Street Drain improvements are required. As described in the EIR (see page 3-29), the outlet of J Street Drain is constrained by the sand berm that can reach over seven feet in height surrounding the Ormond Beach Lagoon. The sand berm hinders the direct flow path of the J Street Drain channel to the Pacific Ocean. The berm currently directs the water to the east, toward the OID. If the berm does not open during a storm event, then storm water ponds in the lagoon and can fill the drain to capacity as far as Hueneme Road, posing a flood risk to the OWWTP, residential, and commercial property during even minor storms. To date, there has been one instance of the inlet remaining closed during a minor storm event and causing upstream flooding; this took place on January 18, 2010. Please note the January 18, 2010 event was smaller than a two-year flood. If it had been larger than a ten-year flood, it would have overtopped the J Street Drain even after the District breached the lagoon, flooding adjacent properties regardless of the conditions in Oxnard Industrial Drain. The January 2010 event flooded the OWWTP, which was at risk of releasing untreated sewage effluent into the surrounding waterways, roads, and residential properties due to electrical failure of inundated equipment. The District developed the BEMP to prepare for the reoccurrence of the combination of the outlet being closed, the sand berm elevation being above 6.5 feet NGVD, and a storm being forecast. Please refer to response 8-3(d) above regarding the BEMP.

RE: (c) Beach erosion and other conditions that may prevent the maintenance vehicles from reaching the berm for routine grooming.

Response: Beach grooming would occur well in advance of storms that would cause beach erosion. Further, the area is easily accessible by maintenance equipment. As described in the EIR (see page 3-30), the grooming would be performed by a tracked dozer designated by the Operations and Maintenance (O&M) Deputy Director in coordination with the District Director or his/her designee. Once the O&M Deputy Director determines that the BEMP threshold criteria have been met, the dozer will be pre-positioned at the south side parking lot of Port Hueneme Beach Park. As soon as the BEMP is enacted, the dozer operator accompanied by District environmental staff would move the dozer to the designated beach grooming location, and shave the sand berm down to the maximum safe beach elevation. The dozer access path to the groom location would be the same as the one currently used by lifeguards from Port Hueneme Beach Park. The grooming procedure would be completed within several hours, including removal of equipment from the beach. Regular maintenance activities on equipment will ensure that the equipment is functioning properly at the time needed. Standard procedures will be incorporated into the maintenance activities to ensure proper implementation of the BEMP.

The BEMP is a maintenance activity that is designed to avoid an emergency response. During the grooming operation, the work site would be secured by the District to prevent interruption by or injury of the general public. Members of the Ventura County Sheriff Department or lifeguards, as well as their designees, may assume responsibility for the protective duty.

If the beach erodes to the point that even before storm onset there is no space for equipment to travel to the grooming location, this would signify that the tides are reaching the lagoon and therefore able to breach the lagoon naturally. Grooming would not be required in this case.

Please also see response 8-3(d) above regarding the BEMP.

8-6 Increase of mosquito breeding areas with new J Street Design.

RE: (a) Increase in standing water much of the year and indirectly increasing mosquito issue.

Response: In response to concerns over mosquito breeding expressed as part of the originally circulated Draft EIR (November 2009), a Mosquito Technical Study for the J Street Drain project was prepared. The technical study provides an analysis of the mosquito production potential of the proposed project compared with the existing J Street Drain and the proposed alternatives. The findings of the study indicate that the proposed project is not expected to increase the suitability of the drain habitat for mosquito breeding. In addition, there are a number of areas more suitable for mosquito breeding in South Oxnard and Port Hueneme near the J Street Drain, as discussed in Section 5 of the Mosquito Technical Study. The complete report is included in Appendix I of the 2011 EIR.

Mosquitoes generally require calm, stagnant water for breeding as opposed to open, exposed water. Flowing waters or waters with surface disturbance from wind, waves, or animals are not suitable habitat for mosquito breeding. Similarly, waters deep enough to sustain populations of fish and other aquatic organisms are not suitable habitat. Wetlands and salt marshes, especially those with unmanaged, dense, emergent vegetation are notorious mosquito breeding habitats.

Section 4.11 of the EIR discusses vector control and mosquitoes. As discussed, the proposed project would increase the surface area and amount of standing water in the drain. However, the proposed project would convert the existing trapezoidal concrete channel into an open rectangular channel with a bottom that will be approximately four feet deeper and the resulting channel walls would be vertical. While the proposed project would result in increased water surface area of standing water, the converted channel would provide less suitable habitat for mosquitoes due to deeper water and less shallow edges. In addition, J Street Drain presents an easier vector source to treat compared to shallow vegetated wetlands to the east and southeast due to the fact that mosquitoes prefer shallow water.

RE: (b) New standing water is a new source for mosquito breeding.

Please refer to response to comment 8-6(a) above with regards to project design and mosquito breeding habitat. Mosquitoes are vectors that can carry/transmit numerous illnesses. Mosquito borne diseases of importance in Ventura County are viral encephalitis (West Nile virus) and malaria, which is caused by a parasite. There are currently no vaccines available for either illness. These issues are identified in the EIR, and as discussed above, the project is not expected to increase the suitability of the drain habitat for mosquito breeding. Furthermore, mosquito/vector control would continue to conduct mosquito surveillance and abatement activities within the project area during operation.

8-7 Possible impact on Surfside III buildings, landscaping and potential flooding risks.

RE: (a) Two of the Surfside III buildings are within 10 feet of the project area and located in a liquefaction zone.

The potential impact to existing adjacent properties and structures associated with implementation of the project has been identified, and addressed in the EIR (e.g. see Mitigation Measure NOISE-3). To specifically address concerns regarding potential movement of Surfside III residential structures nearest the J Street Drain, the following mitigation measure has been added to the EIR:

GEO-3: a) A Licensed Surveyor shall plan and install a survey monument monitoring system on buildings within 100 feet of proposed vertical shoring to collect monthly baseline data for six months before construction. The monuments shall remain in place and be monitored monthly for one year after construction completion to track any latent changes. During construction, the Licensed Surveyor shall conduct surveys corresponding to major phases of work such as shoring installation, excavation, and backfill.

b) Before Phase 1 construction may begin, the District shall require the Contractor to prepare a Work Plan, which would take into account all available geotechnical information for the areas where vertical shoring and sheet piles are to be installed. The Plan would specify the contractor's approach to installing vertical shoring and sheet piles in a manner that would avoid and minimize associated potential vibration damage to adjacent structures.

c) The Work Plan shall require the Contractor to take daily measurements of the survey monuments on adjacent structures described in (a) above to track potential changes during construction.

d) Should the surveys or measurements described in (a) and (c) above indicate subsidence or other damage due to construction activities, the Contractor shall modify the Work Plan to address the causes. Property owners within 100 feet of the proposed shoring shall be promptly notified of observed damage, and any Work Plan revisions shall be available to property owners upon request. For multi-unit structures, the District shall identify a single designated representative with whom to communicate.

e) The District shall provide a construction contact telephone number to adjacent residents before work commences so that they may report possible observations of damage immediately to the District.

Additionally, Mitigation Measure NOISE-3 requires video documentation of the pre- and post-construction condition of structures adjacent to the J Street Drain in the presence of the property owner. The recording shall be performed and stored by an independent third-party, with a copy given to the property owner. If vibration-induced damages occur as a result of construction, property owners would be invited to submit claims documenting such damages within one year following construction completion. Please refer to response to comment 6-13.

RE: (b) Insurance regarding damage.

The District will require its contractor to exercise due care during construction, and will further require the contractor to repair or replace any damage to adjacent property resulting from construction activities. If any property owner sustains property damage as a result of the project, they may submit a claim for reimbursement to the District.

8-8 Failure to include Oxnard 2020 Plans, regarding major housing developments in drainage areas.

RE: (a) City of Oxnard 2020 Plan

Response: The flood plain modeling conducted by the District includes existing and planned development within the watershed, including any new development that may be identified in adjacent jurisdictions, such as the City of Oxnard. Land use plans were available to the District at the time modeling was conducted, and therefore any potential development is already considered in the floodplain model. However, all new development is proposed within the OID watershed, and therefore does not affect the J Street Drain watershed. The City of Oxnard will be responsible for ensuring that adequate on site retention of flood water or other suitable flood control is incorporated into new developments.

The City of Oxnard adopted its 2030 General Plan in October 2011. Many goals and policies are continued from the 2020 General Plan. The J Street Drain is under the jurisdiction of the District; therefore, priority projects within the City of Oxnard's jurisdiction do not necessarily apply to the District's priority projects.

Oxnard General Plan Policy ICS-13.1: 100-year Floodplain states "discourage development, major infill, and structural improvements (except for flood control purposes) within the 100-year floodplain as regulated by FEMA. Recreational activities that do not conflict with habitat uses may be permitted within the floodplain." The project would not place new development within a 100-year flood plain. The project is proposed to increase the existing capacity of J Street Drain to meet the capacity of a 100-year flood, which would reduce the amount of development located

within the 100-year floodplain within the project area. The proposed project is consistent with the policy in the City of Oxnard 2030 General Plan regarding development within a 100-year floodplain.

8-9 The District's good faith community interaction/review issues.

RE: (a) Recirculation of the EIR.

The Recirculated Draft EIR was prepared in compliance with the provisions of the CEQA Guidelines for recirculation of a Draft EIR, specifically CEQA Guidelines Section 15088.5(f)(2) which allows the Lead Agency to limit new comments to only those revised chapters or portions of the EIR, all of which were identified in the EIR in a strikeout/underline format. Additionally, the District provided complete and detailed responses to each of the comments received on the November 2009 Draft EIR, as part of the September 2011 EIR document (see EIR Appendix L).

Public participation opportunities regarding this project have been comprehensive and are in full accord with the provisions of CEQA and the CEQA Guidelines. Compliance with the California Environmental Quality Act (CEQA) did not begin until early 2008, with preparation of the Initial Study and Notice of Preparation (NOP). CEQA does not require the lead agency to consult with the public regarding project development before that point. CEQA is a public disclosure tool with regards to environmental impacts of a proposed project. The following information outlines the CEQA review process.

On April 9, 2008, the NOP was prepared and circulated for review and comment by responsible, trustee, and local agencies and the general public. The NOP was circulated beginning April 10, 2008 and ending on May 9, 2008. Three informational meetings (not required by CEQA) were held to present the project and accept input from interested parties prior to a formal scoping meeting. The formal CEQA scoping meeting was held on February 25, 2008 at the City of Oxnard Recycling Center, 111 South Del Norte Boulevard, Oxnard, CA. Table 1.5-1 of the EIR provides a summary of NOP comment letters and scoping meeting comments. The District has records of public notification for Surfside III residents at the NOP stage; however, based on feedback from Surfside III residents, the NOP letters were not delivered. Common District practice for CEQA notifications includes mailings to all parcels within 500 feet of a proposed project. A portion of the Surfside III development falls outside the 500-foot buffer, so these residents were not included in the original mailings. After receiving Surfside III feedback, the District investigated its mailing list and discovered that parcel data did not account for all units within multi-story buildings. The District has since corrected this problem. To ensure public notification in the event residents do not receive mailings, the District also publishes meeting announcements and other CEQA notifications in the Ventura County Star. Notice of the scoping meeting appeared in the February 17 and 24, 2008 editions of the Ventura County Star. Nonetheless, the District provided Surfside III residents an opportunity to comment before its November 2009 release of the EIR by attending a Homeowner's Association meeting on August 8, 2009 and incorporating comments submitted before November 2009 into the DEIR. In addition, it was agreed at the HOA meeting that District staff would provide electronic notification of upcoming meetings and public review periods to the Surfside III HOA for distribution to all residents. This is in addition to direct mailings and newspaper publications.

Recirculated Draft EIR

The original DEIR (SCH 2008041057) was circulated for public review from November 2, 2009 to January 19, 2010. Based on public requests for more time, the original 45-day review period was extended one additional month. Notice of Availability of the DEIR was published in the Daily News and the Ventura County Star on November 1 and 5, 2009. All interested persons and organizations had an opportunity during this time to submit their written comments on the EIR to the District. These comments along with their responses are located in Appendix L of the EIR. The original DEIR addressed increasing the capacity of the J Street Drain channel to reduce potential flooding in residential and commercial areas of the Cities of Oxnard and Port Hueneme.

As the result of comments on the original DEIR along with the District's responses to those comments, the occurrence of a flood emergency north of Ormond Beach Lagoon on January 18, 2010, the release of new information concerning the Halaco Superfund site in 2010 and 2011, and revisions to Ventura County significance thresholds adopted in 2011, the District determined that the EIR for the J Street Drain project should be recirculated for public review and comment.

All new information in the EIR was presented in an underlined format. Removed language was shown in a ~~strikeout~~ format. Pursuant to CEQA Guidelines Section 15088.5(f)(2), the District requested in the Notice of Availability mailed to nearby residents and published in the Daily News and Ventura County Star that reviewers limit their comments to the revised chapters or portions of the EIR, as indicated by underline and strikeout. Responses to comments received during the original circulation period were included in the RDEIR in Appendix L. In addition, the District held a public meeting at the South Oxnard Center on Monday, September 26, 2011 at 7:00 PM. A Notice of Availability of the RDEIR was mailed to residents within 500 feet of the project, including the residents at Surfside III. The RDEIR was made available to the public at seven public libraries within the County of Ventura, and the Cities of Oxnard and Port Hueneme as well as on the Internet at the following websites: www.jstreetdrain.com or www.vcwatershed.org. The Documents referenced in the RDEIR were available by request at the Watershed Protection District. The public review period for the RDEIR extended from September 23, 2011 through November 7, 2011. Besides direct mailings to residents within 500 feet of the project, direct mailings to Surfside III residents more than 500 feet from the project, and email notification of the Surfside III Homeowner's Association Board, Notice of Availability of the RDEIR was published in the Daily News on September 22 and 25, 2011 and the Ventura County Star on September 23 and 25, 2011.

RE: (b) Notification.

The District has satisfied all noticing requirements of CEQA and the CEQA Guidelines. Please see response to comment 8-9(a) above regarding noticing.

8-10 This comment reiterates Mr. Perry's listed issues above.

RE: (a) The J Street Drain project is a premature effort to correct a relatively rare potential flood.

Please refer to responses to comments 8-5(a) and 8-5(b) above.

RE: (b) Taxpayers have a higher priority.

As described on EIR pages 3-9 and 3-10, the J Street Drain Project was subject to the District's rigorous capital improvement project (CIP) ranking and selection process. The process begins with identifying flood threats to residential, commercial, industrial, and agricultural lands throughout Ventura County. Where flood control facilities already exist, their current condition (e.g., concrete deterioration) is evaluated. Potential solutions to known flood threats, or CIPs, are developed through consideration of a range of alternatives. Section 3.0 of the EIR includes a detailed discussion of the District's project selection and funding processes, which addresses the resident's concern about fiscal responsibility. In partnership with the City of Oxnard and the Ventura County Board of Supervisors, the District will explore supplemental funding sources such as grants, donations, or cost sharing opportunities prior to implementing each project phase. Under existing conditions, the District estimated potential damages of $55.7 million to residential, commercial, and industrial properties within the J Street Drain watershed during a 100-year flood.

RE: (c) Design concerns for Surfside III residents.

Please refer to comment 8-4(a) above for response regarding design alternatives. The District has considered all of the alternatives analyzed in Section 5.0 in an effort to explore potential solutions to the flooding problem, while balancing specific economic, environmental and social considerations.

RE: (d) Compensation for damaged property.

Please refer to response to comment 8-7(a).

RE: (e) Proposed design's impacts to Ormond Lagoon and endangered species.

Impacts associated with the proposed project in relation to the Ormond Lagoon and endangered species are analyzed in Section 4.2 of the EIR. Incorporation of the identified mitigation measures would reduce all potentially significant impacts to sensitive habitats, sensitive wildlife species, wetlands, jurisdictional areas, and nesting birds/raptors to below a level of significance. Additionally, the proposed project would not result in land uses or impervious areas that would increase the amount of urban pollutants or agricultural runoff. The proposed project is increasing the drain's capacity to direct the flow of existing runoff during a major storm event.

RE: (f) Notification and consultations.

Please refer to responses to comments 8-3(c), 8-9(a) and 8-9(b) for responses regarding CEQA notification and consultation with regulatory agencies.

From: lynne haile [mailto:lynnehaile@hotmail.com]
Sent: Sunday, October 02, 2011 4:01 PM
To: ira green; ira green
Subject: J st canal expansion and Bldg 5 rehab in 1986

Ira,
Someone asked me to forward the history of the Bldg 5 rehab, bedrock pylon uplift project.
I live at 727 Reef Circle, the second floor of building 5 at the west end.

Please forward this information to the Ventura County Watershed District and our committee. 9-1

The Foundation of Bldg 5 was not built on bedrock but placed on earth that is subject to movement because our property is in a liquid faction zone. In 1986 building 5 was a sinking at the west end.

Repairs required pylons be placed under the west end of Bldg. 5. The building was jacked up. We had (4) 4 x6's horizontal beams and jacks placed in our living area.

Drilling was done under the building and bedrock was hit around 13 feet below the building. Cemet was poured into the plyons, the building attached to the pylons and then the jacking up process began. Our living area floor and the floor of our deck has many cracks as you can imagine from the settling and then the jacking up process. 9-2

There should be plans on file with the City of Huneme regarding this rehab event.

This is relavent to the J St expansion as there will be a "Whole lot of shakin" going on when the expansion of the canal takes place. I doubt Bldg 7 is on bedrock anymore than Bldg 5 was on bedrock. I hope the Environmental Impact Stdy includes a geological survey of the foundation/bedrock issue on bldg. 7.

Respectfully submitted,
Lynne Haile

file:[illegible] J st canal expansion and Bldg 5 rehab in 1986.htm[illegible]

Letter 9
Lynne Haile
October 2, 2011

9-1 This comment forwards a description of the history of the Surfside III building 5 rehabilitation project (pylon uplift project). This comment does not specifically address the adequacy of the EIR. No further response is required.

9-2 This comment relates the building's issues to the proposed construction and the residents' concern regarding damage. Please refer to responses to comments 8-7(a) and 8-7(b) regarding this issue.

From: Ira Green [ira.green1@gmail.com]
Sent: Monday, October 03, 2011 7:44 AM
To: 'Angela Bonfiglio'; 'Kirk Norman'
Cc: 'Bill Slaughter'; 'Bevin Berube'; 'Bill Betts'; 'Bob Banfill'; 'Perry, Louis (Skip) - 974 LHW (149)'; 'Madrigal, Michael J. - 683 RC (176)'; 'Marion Kelemen'; 'Haile, Lynne & Marcus - 727 RC (194)'
Subject: FW: J st canal expansion and Bldg 5 rehab in 1986

Angela, Kirk:

Can you please respond to this issue. Clearly if our buildings are in a liquid faction zone, then we could sustain damage during the construction. 10-1

Thanks

Best regards,
Ira Green
(818)766-8011
Cell: (818) 981-6188
ira.green@surfsideiii.com

Letter 10
Ira Green
October 3, 2011

10-1 This comment states concern regarding the liquefaction zone.

Please refer to response to comment 9-2.

J Street Parkway or J Street Green Space

From: Roy Prince [prince@west.net]
Sent: Wednesday, October 19, 2011 9:31 PM
To: Angela.Bonfiglio@ventura.org
Cc: Frank Nilsen; Cameron Yee
Subject: J Street Parkway or J Street Green Space

Hello Angela,

It was a pleasure meeting you at the Ventura County Watershed Protection District public meeting on September 26th, and hearing about the work in progress regarding the redesign of the channelized waterway, currently called the "J Street Drain." 11-1

Currently this channelized waterway divides the homes and neighborhoods on either side of the channel and fails to properly provide flood control protection to the neighborhood.

I spoke on behalf of creating a public place in the form of a parkway from Redwood Street to Port Hueneme Road. This is a particularly timely way to increase park space in Oxnard and provide a walking and biking path between central South Oxnard and the beach area.

My vision of the J Street Parkway or J Street Green Space is one that contains many medium height street trees, creating shade and social gathering areas demarked with variations in pavers and trellises, along a meandering path from Redwood to Hueneme, places with benches and gardens, pathways and resting spaces, along the way. The landscaping should be designed with local drought-tolerant plants intermixed with pavers and the smooth bike path. 11-2

I measured the width of the streets between the east and west sides of J Street and found about 50' between the current curbs on the drain side of the streets. 50' is more than enough width to create a functional, aesthetically pleasing, meandering social space for the people of the nearby neighborhood along the full length of the current water channel.

Please seriously consider the possibilities of a wonderful public green space over what is now a blighted, poorly functioning, problematic eyesore that effectively cuts this Oxnard neighborhood in half. 11-3

Thank you for your consideration of these ideas.
Please feel free to contact me if you have any questions or comments. 11-4

Sincerely,
Roy Prince

--
Roy Prince Architect
P.O. Box 6838
Oxnard, CA 93031

805.485.1234
roy@royprince.com
www.RoyPrince.com

Page 1

Letter 11
Roy Prince
October 19, 2011

11-1 This comment provides introductory remarks. This comment does not address the adequacy of the environmental document; therefore, no additional response is required.

11-2 This comment summarizes the J Street Drain location and function and notes that the existing drain does not properly provide flood control protection to the neighborhood. Additionally, this comment provides Mr. Prince's vision to create a parkway from Redwood Street to Port Hueneme Road that includes a bike and walking path. The buried box culverts alternative that would allow for a potential bike/walking path (Alternative A) was analyzed in Section 5.0 of the EIR. Please see response to comment 7-2 for the response regarding park space that includes a bike and walking path.

11-3 This comment reiterates Mr. Prince's request for a public green space. This comment does not address the adequacy of the environmental document; therefore, no additional response is required.

11-4 This comment provides a closing statement and contact information. This comment does not address the adequacy of the environmental document; therefore, no additional response is required.

November 1, 2011

TO: ANGELA BONFIGLIO- ALLEN
Ventura County Watershed District

RE: J SDP: TECHNICAL INADEQUACY OF THE RDEIR

Following are a number of concerns and 20 related questions regarding the above-referenced project. Some of the issues may have been submitted during the previous Public Comment period. Those which have been repeated, are questions or concerns that have not been adequately addressed in the recirculated DEIR. Other issues are matters of concern arising from several instances of flooding or near-flooding that neighbors have experienced. 12-1

WE STRONGLY OPPOSE THE APPROVAL OF THE J STREET DRAIN PROJECT RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT ON THE BASIS OF TECHNICAL INADEQUACY.

* Several sections of the material presented, includes inaccurate, incomplete, or factually incorrect information.

* Certain assertions regarding controversial issues, are vague and/or contradictory.

* Conclusions were made that the project would have no significant effect, or would have no significant effect after mitigation, despite considerable evidence to indicate reasonable opposition to these conclusions. 12-2

* Most of the issues and concerns expressed by the residents of Surfside III, have NOT been adequately addressed in the RDEIR.

* CEQA Guidelines require "... adequacy. completeness, and good faith effort at full disclosure. The RDEIR fails to meet these requirements.

Respectfully submitted by the members of the Surfside III JSDP Committee.

J SDP: TECHNICAL INADEQUACY OF THE RDEIR [page one]

RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT INCLUDES INACCURATE, INCOMPLETE, MISLEADING, CONTRADICTORY, INFORMATION

A PURPOSE: REDUCE FLOODING BY INCREASING CAPACITY OF CANAL.

* VCWPD Inundation Map used to indicate flooding from J Street canal and need to increase capacity to 100-year level.
* Inundation Map includes OID overflow, as well as low areas.
* FEMA : J Street area is in 500-year zone – NOT 100-year flood zone.
* Global Climate Change Evaluation [Appendix H] emphasizes temperature increases and decreases in precipitation.

1 VCWPD CLIMATE EVALUATION SUPPORTS FEMA DETERMINATION. 12-3

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* Backwater in JSDP will remain at a constant high [near-capacity] level – reducing actual capacity of JSDP.
* Increasing width and depth of JSDP does not affect actual capacity of drain which is already filled with backwater.

2 INCREASING WIDTH AND DEPTH OF CANAL DOES NOT INCREASE CAPACITY WITH BACKWATER. 12-4

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* RDEIR: 500-600 cfs capacity of canal is inadequate.
* Reduced capacity of JSDP due to BACKWATER ALREADY IN THE CANAL.

3 NEED CALCULATION OF CAPACITY OF JSDP WITH BACKWATER. 12-5

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* OID contributes greatest volume of floodwater to lagoon.
* JSDP will NOT affect flooding. Level of backwater = water level in lagoon.
* Only breach condition will prevent flooding.

4 JSDP IS ENTIRELY DEPENDENT ON NATURAL OR MANUAL BREACHING TO PROVIDE FLOOD PREVENTION. 12-6

J SDP: TECHNICAL INADEQUACY OF THE RDEIR **[page two]**

* **Reduced capacity of JSDP with backwater is inadequate for 100-year flood.**
* **Reduced capacity of JSDP with backwater is inadequate for 10-year flood.**

5 JSDP CANNOT SIGNIFICANTLY REDUCE FLOODING UNDER NORMAL [NON-BREACH] CONDITION. 12-7

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* **New lagoon-outlet design affects water flow <u>only during breach condition.</u>**
* **New low-flow channel plan affects water flow <u>only during breach condition.</u>**
* **No provision to address flood-threat during normal conditions.**

6 JSDP – INCLUDING OUTLET AND LOW-FLOW CHANNEL - WILL NOT REDUCE FLOODING UNDER <u>NORMAL, [NON-BREACH CONDITION.</u> 12-8

7 APPROVAL FROM USFWS AND OTHER ENVIRONMENTAL AGENCIES FOR REGULAR, SCHEDULED, GROOMING OF IMPOUNDING BERM , IS THE ONLY MEANS OF <u>RELIABLE FLOOD PREVENTION</u> [OTHER THAN AN ALTERNATIVE OUTLET]. DID VCWPD APPLY FOR PERMIT TO INITIATE REGULAR, SCHEDULED GROOMING? 12-9

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* **<u>RDEIR: Global Climate Change Evaluation [Appendix H]:</u>**
  WATER RESOURCES: Rising temperatures / <u>decreases in precipitation.</u>
* **VCWPD Public Meeting: October 26, 2011: Main source of flooding in beach areas is Oxnard Industrial Drain run-off. Expansion of OID to increase capacity of OID is precluded by cost of land purchases.**
* **VCWPD verification of <u>flood-water inundation of beach area</u> is from lagoon backwater [downstream] – NOT from rainfall [upstream].**
* **Necessity to address issue of flooding risk to SSIII resulting from OID backwater.**

8 AS NEITHER INCREASE IN WIDTH AND DEPTH OF JSDP; NOR LAGOON OUTLET/ LOW-FLOW CHANNEL PROVIDE FLOOD PROTECTION DURING NORMAL CONDITIONS, THERE IS A NEED TO PREVENT FLOODING IN THE BEACH AREAS DURING NORMAL CONDITIONS. (BEMP PROCEDURES ARE INITIATED ONLY WITH A 72-HOUR STORM PREDICTION.) 12-10

J SDP: TECHNICAL INADEQUACY OF THE RDEIR [page three]

B BEACH ELEVATION MANAGEMENT PLAN: PROVIDES FLOOD PROTECTION

* RDEIR: Large-scale flood event on Jan. 18, 2010 prompts revision of EAP [Emergency Action Plan] to Proactive Grooming Plan [BEMP].
* Three conditions occurring simultaneously are REQUIRED for activation of BEMP – to provide flood protection.
* Possibility of failure to get 72-hour prediction of storm;
* Possibility of failure to get someone on beach in time to "observe" berm elevation [WHO will observe at night; in rainstorm; on Holidays?]
* Possibility of failure in BEMP procedures [mechanical; environmental; human errors]

12-11

9 WHAT WILL HAPPEN IF AN UNEXPECTED RAINFALL OCCURS WITHOUT A 72-HOUR PREDICTION?

12-12

10 WHAT WILL HAPPEN IF NO AUTHORIZED VCWPD STAFF IS ON THE BEACH TO OBSERVE THE BERM ELEVATION INCREASE TO ABOVE 6.5 FEET?

12-13

11 WHAT WILL HAPPEN IF THERE IS A FAILURE IN COMMUNICATION, OR TRAFFIC JAM, OR TRACTOR DOESN'T START, OR ANY OTHER PROBLEM THAT PREVENTS GROOMING TO BE COMPLETED IN TIME FOR NATURAL BREACH TO OCCUR AND PREVENT FLOODING AT SSIII?

12-14

12 THERE IS NO BACK-UP EMERGENCY PLAN IN PLACE. WHAT WILL HAPPEN IN THE EVENT THAT ALL THREE BEMP PROCEDURES DO NOT OCCUR SIMILTANEOUSLY?

12-15

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* RDEIR integrates BEMP grooming procedures into the JSDP maintenance program - but BEMP can fail for many reasons.

13 THE ENTIRE BEMP PROCESS IS AN "AS NEEDED" / PROACTIVE PRE-EMERGENCY PLAN – NOT A ROUTINE MAINTENANCE OPERATION. IF REGULAR GROOMING WON'T BE ALLOWED, THEN ANOTHER EMERGENCY ACTION PLAN NEEDS TO BE APPROVED FOR AN ACTUAL EMERGENCY SITUATION IF BEMP FAILS FOR ANY REASON.

12-16

J SDP: TECHNICAL INADEQUACY OF THE RDEIR **[page four]**

C MOSQUITO STUDY: "NO SIGNIFICANT IMPACT..."

* **Failure to " Fully address mosquito-related potential public health impacts resulting from The JSD Project"**
* THE J STREET DRAIN [and the JSDP] PROVIDE ALL THREE OF THE LISTED ELEMENTS OF SUITABLE HABITAT FOR MOSQUITO-BREEDING.
* **No traps set in the SSIII community directly adjacent to the canal.**
* **Light-traps used – instead of CO2 traps that attract mosquitoes.**
* "Channel Design for Mosquito Control: Flowing water and open areas of water that allow for water surface disturbance from wind, waves, and fish" are all missing elements from the JSDP.
* STEEP SIDES [VERTICAL WALLS] ARE A FEATURE OF ABANDONED SWIMMING POOLS
* FAILURE OF VECTOR CONTROL TO CONTROL MOSQUITOES IN CANAL.
* VECTOR CONTROL PROCEDURES ARE LIMITED BY EPA REGULATIONS – AND CONSTRAINED FROM USING EFFECTIVE MEANS OF MOSQUITO CONTROL..
* **Numerous references in RDEIR to increased mosquito-breeding area.**
* PARLIAMENTATIAN LETTER VERIFYING 130 PETITIONS REGARDING MOSQUITO PROBLEMS.
* SIMILAR MOSQUITO-BREEDING CONDITIONS AND CONSTRAINTS ON VECTOR CONTROL WITH JSD PROJECT, WILL ENSURE CONTINUATION OF PUBLIC HEALTH THREAT FROM MOSQUITO-BORNE ILLNESS AT SSIII.

12-17

14 NOTE: CONCERNS AND QUESTIONS REGARDING THE VCWPD MOSQUITO TECHNICAL STUDY AND THE VCWPD MOSQUITO TECHNICAL STUDY PRESENTATION , ARE ADDRESSED IN *RESPONSE TO MOSQUITO STUDY AND RESPONSE TO MOSQUITO STUDY PRESENTATION*.

12-18

15 VCWPD CONCLUSION THAT JSDP [EXPANDED DRAIN CONTAINING STAGNANT BACKWATER] WILL PROVIDE "POOR MOSQUITO HABITAT", CONTRADICTS SCIENCE, LOGIC, AND DIRECT EXPERIENCE.

12-19

16 VCWPD CONCLUSION THAT JSDP WILL RESULT IN "NO SIGNIFICANT IMPACTS FROM THE PROJECT" IS POSSIBLE ONLY BECAUSE VCWPD FAILS TO ADDRESS ABOVE CONCERNS AND DIRECT EXPERIENCE OF SSIII RESIDENTS, PRESENTED IN "*RESPONSE*" DOCUMENTS.

12-20

J SDP: TECHNICAL INADEQUACY OF THE RDEIR [page five]

* **VCWPD *Global Climate Change Evaluation [Appendix H]* emphasizes increases in average temperature – particularly in warmer climates.**
* ***Evaluation* states: "climate-sensitive diseases may increase , such as those spread by mosquitoes…"**
* ***Evaluation* states "Continued global warming is likely to increase populations and types of pests [mosquitoes].**

12-21

17 VCWPD STUDY CONTRADICTS *GLOBAL CLIMATE CHANGE EVALUATION.* STUDY DETERMINATION THAT PROPOSED ADDITIONAL SURFACE OF BACKWATER WITH ADDITIONAL MOSQUITO-BREEDING AREA - AND INCREASE IN HIGHER AVERAGE TEMPERATURE - WILL NOT RESULT IN MORE MOSQUITOES, CONTRADICTS SCIENTIFIC EVALUATION.

12-22

18 VCWPD STUDY DETERMINATION OF "NO IMPACT" FROM MOSQUITOES DISCOUNTS FAILURE OF CURRENT VECTOR CONTROL - AS WELL AS INCREASED THREAT OF CLIMATE-SENSITIVE DISEASE SPREAD BY MOSQUITOES AS A RESULT OF INCREASED TEMPERATURE DUE TO GLOBAL WARMING.

12-23

D ALTERNATIVES: CONTROLLED ELEVATION OUTLET / BEACH OUTLET

* **RDEIR: VCWPD rejection of all alternative beach outlets which would resolve backwater condition.**
* ***Meeting Notes: VCWPD; USFWS; HDR: Feb. 3, 2010* to discuss flooding event on Jan. 18, 2010: VCWPD rejection of all alternatives.**
* ***CEQA Sec. 15065 (4):* Mandatory Findings of Significance is required when "the Environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly".**
* ***USFWS: Tidewater Goby 5 year Review (Sept. 2007)*: J Street Drain does not meet criteria for Primary Constituent Elements for Critical habitat of Goby.**
* **RDEIR: Nesting Sites: Tern and Plover [2010]: East of Ormond Lagoon**
* ***Evaluation* states "Continued global warming is likely to increase populations and types of pests" [mosquitoes].**
* ***Response to Mosquito Study* and *Response to Study Presentation.***

12-24

J SDP: TECHNICAL INADEQUACY OF THE RDEIR [page six]

VCWPD REJECTION OF ALTERNATIVE OUTLETS IS BASED ON:
- **USFWS designation of Ormond Lagoon as "Critical Habitat";**
- **Meeting Notes: Input of freshwater into lagoon**
- **VCWPD conclusion JSDP will result in "No Impact" [no adverse effects].**

12-25

- **BENEFITS FROM ALTERNATIVE OUTLET:**

  GOBIES: Downlisted from "endangered" to "threatened"

  # number of localities occupied by gobies has more than doubled;

  # goby is more resilient in drought than believed.

  # gene flow and metapopulation dynamics; genetic diversity.

  TERNS and PLOVERS:

  # nests of birds are located east of lagoon.
- **FRESHWATER: OID primary input; JSD input is urban street run-off**

12-26

19 J STREET DRAIN [MAN-MADE STRUCTURE] IS NOT CRITICAL HABITAT.
LAGOON AREA NEEDED FOR ALTERNATIVE OUTLET IS MINIMAL.
ALTERNATIVE OUTLET IMPACT ON CRITICAL HABITAT IS MINIMAL.

12-27

- **Conclusion of "No Impact from project" is NOT defensible. Data in VCWPD Mosquito Study is inaccurate; incomplete; and contradictory:**
- **No CO2 traps; No traps in SSIII area**
- **No mosquito problem [from lagoon] before backwater in canal;**
- **Failure of current Vector Control [130 letters re: mosquito problem]**
- **JSDP: Increase in mosquito-breeding area;**
- **JSDP: Increase in mosquitoes due to temperature increase.**

12-28

20 PUBLIC HEALTH: REASONABLE CONCERN THAT THE ENVIRONMENTAL EFFECTS OF THE JSDP WILL CAUSE SUBSTANTIAL ADVERSE EFFECTS [SEVERE MOSQUITO INFESTATION AND THREAT OF MOSQUITO-BORNE DISEASE] ON HUMAN BEINGS RESIDING IN SSIII COMMUNITY.

12-29

JSDP: VCWPD MOSQUITO STUDY AND PRESENTATION [12-11-10]

RESPONSE OF SSIII : JSDP COMMITTEE [Page 1 of 3]

STUDY DATA

Data obtained by researchers that was obtained during the summer months of 2010 - the coolest summer on record in our area – does not represent normal weather conditions. [We have official USWS records showing record LOW "maximum-high" temperatures nearly every day during summer, 2010.]

If Study data was obtained during June, July, August, and September of 2010, the data collected might indicate that little or no mosquito larvae were found in the canal and few mosquitoes were present at SSIII during this period of unusual weather.

* As mosquito-larvae hatch at warm temperatures, record-cool temperatures would not produce normal mosquito-breeding results.

* In every case, when the local temperature increases to normal summer levels for several days, the mosquitoes return .

* The mosquitoes involved are NOT attracted to light - only to CO2. CO2 traps require electricity – which was not available. CO2 traps were not used for collection of data regarding our particular mosquito situation.

THEREFORE, IF DATA USED IN THE STUDY WAS OBTAINED DURING SUMMER, 2010, THE DATA WOULD BE INVALID – as it would NOT reflect normal weather conditions. Also, appropriate traps were not used for sample-collection. .

12-30

BACKWATER

Wetlands at both Pt. Mugu and Ormond Beach - and their local mosquitoes - did not cause a problem before summer 2008. ONLY AFTER PUMP-STATION EXPANSION AND THE NEW CONDITION OF "PONDED" WATER [BACKWATER] IN THE CANAL, DID THE MOSQUITO PROBLEM OCCUR.

MOSQUITOS BECAME A PROBLEM SIMULTANEOUSLY WITH BACKWATER!.

12-31

JSDP PLANS/CANAL EXPANSION WILL INCREASE BACKWATER AND INCREASE MOSQUITO-BREEDING AREAS. [Vertical walls will not compensate.]

12-32

JSDP: VCWPD MOSQUITO STUDY AND PRESENTATION [12-11-10] [Page 2 of 3]
RESPONSE OF SSIII: JSDP COMMITTEE

MOSQUITOES / MIGRATION

THE PARTICULAR TYPE OF MOSQUITOES CAUSING THE PROBLEM AT SSIII, ARE VERY SMALL, "SHY", AND AVOID ANY MOVING AIR. THEY CONGREGATE ONLY IN STILL, PROTECTED, AREAS – AND AVOID FLYING UNLESS DISTURBED.

* These mosquitoes avoid moving air - which indicates they would NOT migrate from long distances away from our community;
* They would have to fly AGAINST A PREVAILING WESTERLY WIND to get to SSIII from Pt Mugu or the Ormond Wetland.
* They hide in still, protected areas- congregating in corners, under overhangs shelves, furniture. and in any enclosed places.
* The highest concentration of mosquitoes are in the area directly along and adjacent to the J Street Drain - NOT in the areas closest to Pt.Mugu or the Wetlands.
* AREAS AT THE LEAST DISTANCE FROM THE CANAL HAVE THE LARGEST NUMBER OF MOSQUITOES.

MOSQUITOES LIVING IN PT MUGU AND ORMOND BEACH WETLANDS AND THE BUBBLING SPRINGS CHANNEL, DID NOT MIGRATE TO SSIII BEFORE PONDING OF BACKWATER. The mosquito problem originated in summer 2008, after completion of the pump-station - and simultaneously with the stagnant backwater condition. THERE IS NO BASIS TO CONCLUDE THAT MIGRATION IS CAUSING THE PROBLEM. 12-33

SUMMARY:

DATA OBTAINED DURING RECORD COOL SUMMER IS INVALID.

LOGIC, LONG-TERM EXPERIENCE, AND DIRECT OBSERVATION INDICATE THAT THE MOSQUITO PROBLEM AT SSIII IS THE RESULT OF MOSQUITO-BREEDING IN THE CANAL – WHICH IS A CONSEQUENCE OF A CONSTANT CONDITION OF HIGH VOLUME, STAGNANT, PONDED BACKWATER. 12-34

JSDP PLANS INCREASE BACKWATER. From our experience over the past two years, NO permissible mitigation measures by Vector Control will eliminate the mosquitoes. 12-35

ONLY REMOVAL OF THE BACKWATER WILL RESOLVE THE MOSQUITO PROBLEM. (We are aware that federal regulations constrain use of pumps, outfall, ocean outlet, etc. - and request VCWPD cooperation and assistance in filing an Application to obtain a Waiver from Designation of the J Street Drain as Critical Habitat of the Tidewater Goby on the basis of a significant impact on threat to health of adjacent residents.) 12-36

JSDP: VCWPD MOSQUITO STUDY AND PRESENTATION [12-11-10] [Page 3 of 3]
RESPONSE OF SSIII: JSDP COMMITTEE

MOSQUITO STUDY: QUESTIONS:

DATA:

- When and where was data in the Study collected?
- Was any "correction" made for the unusual weather conditions?
- Was any "correction" made for not using CO2 traps?
- What traps for samples were used? Where were they located?
- Were samples obtained / numbers counted. on patios along the canal?
- Were final conclusions regarding local mosquitoes and breeding conditions extrapolated from previous studies or general information?

12-37

MIGRATION:

Explain how it is possible that the bugs that bite us at SSIII are "Federal Mosquitoes" from the Pt.Mugu military base or "Fugitive Mosquitoes" from the Wetlands, when they did NOT migrate here before expansion of the Pump Station and ponding of stagnant backwater in the canal.

"Our" mosquitoes are very small, shy – and avoid moving air

- **How would they fly AGAINST A PREVAILING WESTERLY WIND to get to SSIII from Pt Mugu or the Ormond Wetland?**
- **Why would the highest concentration of mosquitoes be in the area directly along and adjacent to the J Street Drain - NOT in the areas closest to Pt.Mugu or the Wetlands?**
- **Why would they "migrate past" areas closer to the Wetlands and congregate in the areas nearest to the canal?**

12-38

JSDP / MITIGATION:

The original DEIR conceded the canal expansion will increase backwater, which will increase mosquito-breeding areas – but stated that effective Vector Control mitigation would ensure NO Environmental impact. Unfortunately, **Vector Control measures have failed - even before the expansion** -- with **significant** impact on the health and well- being of residents in the SSIII community.

12-39

A MOSQUITO STUDY BASED ON COOL-WEATHER DATA AND NO SAMPLING FROM CO2 TRAPS LOCATED ADJACENT TO THE CANAL IS INVALID. Therefore, we request that this Study be revised to integrate the foregoing information - before the Revised DEIR on the JSDP is issued.

12-40

Thank You for your Presentation.
SURFSIDE III: JSDP COMMITTEE

Letter 12
Surfside III: JSDP Committee
November 2, 2011

12-1 This comment provides introductory remarks. This comment does not address the adequacy of the environmental document; therefore, no additional response is required.

12-2 This comment states the JSDP Committee's opposition to the project, and provides generalized statements regarding the adequacy of the EIR. Specific comments are responded to in the following responses to comments.

12-3 This comment questions the project purpose of reducing flooding by increasing the capacity of J Street Drain. Please see responses 8-5(a) and 8-5(b).

This comment also states that the Global Climate Change Evaluation (Appendix H of the RDEIR) emphasizes temperature increases and decreases in precipitation, and thus supports the existing FEMA 100-year floodplain. Global climate change refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation and storms. These changes may result in extreme conditions. According to the Global Climate Change Evaluation Report, "Rising sea levels, more intense coastal storms, and warmer water temperatures will increase the threat to the State's coastal regions." Although annual precipitation totals may decline, the severity of individual storms and related flooding may increase. One of the purposes of the J Street Drain project is to improve stormwater flow and reduce potential flooding in the cities of Oxnard and Port Hueneme. The project would therefore alleviate potential flooding impacts in the event that global climate change affects the severity of storms and runoff.

12-4 This comment states that backwater will reduce the capacity of the J Street Drain, even in the case of a wider and deeper channel. To ensure that sufficient capacity will be available during storm flows, the District has included a Beach Elevation Management Plan (BEMP) in the project description. Please see responses 8-3(a) and 8-3(d) and Section 3.7 of the RDEIR for further details.

12-5 This comment states that reduced capacity of the J Street Drain is due not to the existing 500 to 600 cubic feet per second (cfs) capacity but to the backwater condition, and that capacity with backwater present should be calculated. The hydrologic modeling that was conducted for the proposed project in 2008 includes the existing hydrologic conditions of the area, which includes existing backwater conditions. The capacity determination of the drain included the existing conditions. The Coastal Engineering Reports are included in Appendix C and discussed in Section 4.3 of the EIR. Please see response to comment 12-4 above for further discussion on backwater.

12-6 This comment states that OID contributes the greatest volume of floodwater to the lagoon, that the J Street Drain project will not alleviate flooding because the level of backwater in the drain is equal to the water level in the lagoon, and that only a breach condition will prevent flooding. The comment is correct to the extent that the J Street Drain project includes the BEMP, which requires beach grooming to facilitate natural breaching and prevent floods. This process will occur in concert with the proposed drain improvements in order to reduce the 100-year flood plain as identified in the EIR project description.

As described on page 4.3-9 and 4.3-10 of the EIR, the existing capacity of the J Street Drain is 500-600 cfs, which is less than the 50- and 100-year frequency flood flows of 1,649 and 2,059 cfs, respectively (URS 2005). This drain flow is composed entirely of urban runoff. The OID channel is currently rated by the District as having an approximate flow capacity of 2,900 cfs. Under current conditions, the lagoon receives inflow throughout the year from the Hueneme Drain (pumped to the J Street Drain), J Street Drain, and OID. The backwater issues in the OID may result in inland flooding near the paper plant during storm events. However, in the absence of a backwater condition (i.e., the lagoon has breached and the J Street Drain is empty), a storm generating more than 500 to 600 cfs of runoff (approximately the 10-year flood event) to the existing J Street Drain would cause flooding in the project area even if runoff to the OID is safely contained within that channel.

In addition to the drain capacity, the outlet of the drain is sometimes constrained by a sand berm that can reach over seven feet in height surrounding the Ormond Beach Lagoon. The sand berm hinders the direct flow path of the J Street Drain channel to the Pacific Ocean. The berm currently directs the water to the east, toward the OID. If the berm does not open during a storm event, then storm water ponds in the Lagoon and can fill the drain to capacity as far as Hueneme Road.

Natural breaching takes place after the lagoon water level exceeds the height of the sand berm. Due to the dynamic nature of the Lagoon and sand berm elevation, surface water elevation for natural breaching will likely vary. Therefore, if the sand berm elevation is very high, natural breaching at the lagoon may not occur during a minor flood event, in which case the project area would flood due to backwater effects. To prevent such flooding, the project includes the BEMP. The BEMP would allow grooming the beach sand elevation to 6.5 feet (NGVD 1929). However, the BEMP alone would not be sufficient in storms greater than the 10-year event (capacity of existing drain), as flows would overtop the existing undersized J Street Drain channel before they could reach the ocean. With implementation of the proposed project, including the BEMP, storms larger than the 10-year and up to the 100-year event would flow through the breach and into the ocean.

12-7 This comment restates that the proposed project cannot significantly reduce flooding under non-breach conditions. Please see response 12-6 above.

12-8 This comment restates that the proposed project provides adequate flood control only during the breach condition. As stated previously, the full project includes not only enlargement of the existing channel, but a BEMP. The channel modifications in combination with the BEMP provide adequate flood control. Please see responses 12-3 through 12-6 above.

12-9 This comment states that approval from regulatory agencies for regular, scheduled grooming of the beach sand berm is the only means of reliable flood prevention aside from an alternative outlet, and asks if the District has applied for a permit to initiate regular, scheduled grooming. The District has conducted ongoing consultation with the USFWS, USACE, and CDFG regarding the proposed project. Please refer to response to comment 8-3(c) for a list of regulatory approvals and permits required for the proposed project. The District is currently preparing the applications for submittal to the USFWS, USACE, CDFG and the CCC for regular beach grooming, and would obtain all necessary approvals from these agencies prior to initiating any construction on the project. Currently, beach grooming is conducted on a case-by-case, emergency basis. Application for routine, non-emergency grooming must be accompanied by a certified EIR or other document complying with the California Environmental Quality Act. If the Ventura County

Board of Supervisors certifies and adopts the J Street Drain EIR, it will be submitted as part of the permit applications. Please also see responses 12-3 through 12-8 regarding the need for both channel modifications and the BEMP to provide complete flood protection in the J Street Drain watershed.

12-10 This comment outlines bullet point areas of disagreement with the EIR as follows:

- Global Climate Change Evaluation indicates a decrease in precipitation.

Please see response 12-3 above.

- The District identified that the OID is the main source of flooding in the beach areas and expansion of OID is precluded by cost of land purchases.

Please see responses 12-3 through 12-6 above.

In addition, project funding and selection is discussed in Section 3.0 of the EIR. All projects with the District are evaluated through a rigorous CIP ranking and selection process. Where flood control facilities already exist, their current condition (e.g., concrete deterioration) is evaluated. Potential solutions to known flood threats, or CIPs, are developed through consideration of a range of alternatives. All proposed CIPs are assigned points out of 100 possible, then ranked and prioritized in relation to one another. The OID improvements would require the acquisition of land resulting in a significant increase in cost for the improvements, so this project is ranked lower than the J Street Drain project, but will nonetheless be addressed in the future.

- The District verified that the flood-water inundation of the beach area is from the backwater, not from rainfall.

The District acknowledges that one of the capacity issues with the J Street Drain that results in flooding is the existence of backwater. Section 4.3 of the EIR discusses the existing setting of the area, including backwater as a cause for the flooding issues. Removal of the backwater is not a feasible alternative due to the presence of endangered species and the potential impacts to those species, which would violate the Endangered Species Act. The proposed project in combination with the BEMP would increase the capacity of the drain and facilitate natural release of the lagoon water in response to storm water inflow before it backs up so far that it overtops the channel and floods adjacent residents and businesses. Please also refer to responses to comments 12-4 through 12-6 for further discussion regarding backwater.

- Surfside III residents request analysis of flooding risk to Surfside III from the OID.

Surfside III is located within the J Street Drain watershed, not the OID watershed, and is therefore vulnerable to flooding of the J Street Drain. Potential flooding caused by OID flows not being able to vacate the lagoon and backing up into the J Street Drain would be addressed by the proposed BEMP. Please also see response to comment 12-6 above.

- Concern that the proposed project, including the BEMP, does not provide flood protection during normal conditions (i.e., breach has not occurred), when a storm has not been predicted.

Under typical conditions, where a breach has not occurred and no rain is falling, there is no risk of flooding, as the water level in neither the J Street Drain nor the lagoon would rise. Please refer to response to comment 8-3(d) for a response to the concern about rain falling without having been predicted.

12-11 This comment outlines bullet point areas of disagreement with the EIR as follows:

BEMP:

- Possibility of failure to get 72-hour prediction of storm

Please see response to comment 8-3(d) above.

- Possibility of failure to get someone on the beach in time to "observe" the berm elevation (night, rainstorm, holidays)

Implementation of the BEMP would constitute a new maintenance activity associated with operation of the proposed project. Berm elevation monitoring will be factored into regularly scheduled maintenance activities to ensure adequate monitoring occurs. Please also see response to comment 8-3(d) above.

- Possibility of failure in BEMP procedures (mechanical, environmental, human error)

Implementation of the BEMP would constitute a new maintenance activity associated with operation of the proposed project. Regularly scheduled maintenance of equipment would occur as part of the routine operation and maintenance of the J Street Drain. Several staff would be trained to track site conditions and implement the BEMP, as this operation cannot be implemented by a single person. In the event action is required during the environmentally sensitive bird nesting season, which occurs toward the end of the rainy season, a procedure involving careful biological monitoring and avoidance of nests would be implemented with prior regulatory agency approval. Please also see response 8-3(d) above.

12-12 This comment asks what would happen if an unexpected rainfall occurs without a 72-hour prediction. Please refer to response to comment 8-3(d).

12-13 This comment asks what would happen if a VCWPD employee is not present to observe the beach elevation rise above 6.5 feet. Implementation of the BEMP would constitute a new maintenance activity associated with operation of the proposed project. Berm elevation monitoring will be factored into regularly scheduled maintenance activities to ensure adequate monitoring occurs.

12-14 This comment asks what will happen if an unforeseen circumstance preventing timely beach grooming? Implementation of the BEMP would constitute a new maintenance activity associated with operation of the proposed project. Regularly scheduled maintenance of equipment would occur as part of the routine operation and maintenance of the J Street Drain. The operations and maintenance Deputy Director in coordination with the District Director or his/her designee will be in charge of monitoring the BEMP procedures. Emergency procedures will be incorporated into the maintenance activities to ensure proper implementation of the BEMP. Please also refer to response to comment 8-3.

12-15 This comment asks what will happen if the three conditions that trigger BEMP implementation do not occur simultaneously. It is unlikely flooding would occur if the three criteria required to implement the BEMP are not met simultaneously since it would mean that the Ormond Beach Lagoon is not fully enclosed by the Ormond Beach sand berm, the Ormond Beach sand berm elevation adjacent to the lagoon is not above 6.5 NGVD (8.9 feet NAVD), or there is no predicted storm event within 72-hours. If the Ormond Beach Lagoon is not fully enclosed by the Ormond Beach sand berm and the Ormond Beach sand berm elevation adjacent to the lagoon is not above 6.5 feet NGVD (8.9 feet NAVD), then the berm is either breached or would breach naturally if storm runoff is sufficient to raise the lagoon water level above the 6.5 feet NGVD sand berm elevation. . Regular maintenance activities on equipment will ensure that the equipment is functioning properly at the time needed. Standard procedures will be incorporated into the maintenance activities to ensure proper implementation of the BEMP. Please also refer to response to comment 8-3(d).

12-16. This comment states that the BEMP is a proactive pre-emergency plan, not a routine maintenance operation, and if regular grooming will not be allowed, an emergency action plan is needed to address potential BEMP failure. Standard procedures would routinely be implemented prior to each storm; therefore, the BEMP would not be a rare emergency procedure. If the lagoon is already breached, no action would be required. If it has not breached, the sand berm elevation would be observed. If it is higher than 6.5 feet NGVD, the berm would be groomed to this elevation. If the berm is lower than 6.5 feet NGVD, no grooming would be required because the lagoon would breach naturally before the flood stage (approximately 7.0 feet NGVD). If no rain is forecast, then storm runoff would not raise the lagoon water elevation, and there would be no risk of flooding. Please also refer to responses to comments 12-11 through 12-15 for responses to implementation procedures to the BEMP.

12-17. This comment outlines bullet point areas of disagreement with the mosquito study as follows:

- Failure to "fully address the mosquito-related potential public health impacts" resulting from the proposed project and notes that the existing drain and proposed project listed all three of the elements of suitable habitat for mosquitoes.

  The J Street Drain Project Mosquito Technical Study (January 24, 2011) is included in Appendix I of the EIR and summarized in Section 4.11 of the EIR. The technical study provides an analysis of the mosquito production potential of the proposed project compared with the current J Street Drain and the proposed alternatives. The public health impacts and mosquito study are analyzed in Section 4.11 of the EIR (pages 4.11-12 through 4.11-16). While the proposed project would result in increased water surface area of standing water, the converted channel would provide less suitable habitat for mosquitoes due to deeper water capable of supporting larger populations of predators and less shallow edges. In addition, J Street Drain is more easily accessed for vector treatment compared to shallow vegetated wetlands to the east and southeast due to the presence of an adjacent access road along its entire length and the lack of dense vegetation that would interfere with larvicide application.

  The mosquito technical study found no evidence to suggest that the current configurations of the J Street Drain, Hueneme Drain Pump Station, or Hueneme Drain provide high-quality habitat for, or produce large numbers of, mosquitoes. However, the evaluation of the greater J Street Drain area revealed that the OWWTP, the undeveloped floodplain of the Oxnard Industrial Drain, and urban areas may produce substantial

numbers of mosquitoes. The evaluation of the proposed J Street Drain project found the proposed channel configuration to have similar or less mosquito breeding potential than the current J Street Drain channel. The proposed changes would likely amplify the channel's negative effects on mosquito breeding and should have no significant impact on public health due to mosquito-transmitted diseases. The alternatives presented in the EIR, as well as the additional proposed alternative, would have similar or greater mosquito breeding potential, and therefore were considered to have similar or negative impact, as compared to the proposed project.

- No traps set in the Surfside III community directly adjacent to the canal.

  As stated in the EIR (pages 4.11-4 through 4.11-9), during 2008-2010, citizen complaints from the Surfside III Condominium Complex, located in the area near the terminal end of the J Street Drain, led the Ventura County Vector Control Program (VCVCP) to increase their surveillance efforts in the immediate vicinity in an attempt to identify both the species present and their potential points of origin. As a result, more data were generated for this area during this two-year period than in previous years. It should also be noted that trap data are collected during the late spring through early fall. Mosquito production is generally low during the late fall and winter months, thus traps are typically not deployed at those times. A map of the locations for which trap data were collected in the J Street Drain area is presented in Figure 4.11-2. As shown on Figure 4.11-2 of the EIR, traps were located adjacent to the J Street Drain and the Surfside III community.

- Light-traps were used instead of CO_2 traps.

  As stated in the EIR (page 4.11-4) the VCVCP uses adult mosquito traps as part of their comprehensive mosquito surveillance and control plan. The traps use carbon dioxide (CO_2) as an attractant and capture only female mosquitoes. However, it should be noted that traps, because they are deployed overnight, represent only a "snap shot" in time of the mosquito population in an area. Attempts are made to deploy traps during representative weather conditions. The VCVCP has limited resources available that must be used to protect the entire County. Adult mosquito traps are deployed in areas of greatest concern, usually triggered by evidence of local disease transmission in birds, humans, or other animals, but also in response to local nuisance complaints. For this reason, the number and location of traps deployed often varies seasonally and yearly.

- Channel design features such as flowing water and open areas of water that allow for water surface disturbance from wind, waves, and fish, are missing elements from the proposed project.

  As stated in the EIR (page 4.11-12), the J Street Drain is currently a trapezoidal, concrete flood control channel approximately 20-30 feet wide with 1.5:1 sloped walls and an average depth near 4 feet. The J Street Drain discharges into Ormond Beach Lagoon, which usually does not have an outlet to the ocean. The effect of Ormond Beach Lagoon having no outlet is that water backs up into the J Street Drain nearly to Hueneme Road. While mosquito control BMPs largely advocate reducing or eliminating standing water in channels and drains as the primary strategy for mosquito control, the endangered species requirements in Ormond Lagoon prevent such practices.

The current J Street Drain has a concrete substrate and relatively steep sides, both of which inhibit emergent vegetation growth along the bottom and margins of the channel. Lack of vegetation can prevent mosquito production as no sheltered areas for mosquito larvae to use as refuge are provided. As described above, the current J Street Drain is 20-30 feet wide. Because of this wide, open surface, the lack of vegetative cover, and the location near the Pacific Ocean, the water surface in the drain experiences wind and wave action, especially near the beach. Even relatively minor wind and wave action on the surface of the water prevent the breathing siphons of mosquito larvae from maintaining a connection to the air, therefore effectively drowning the larvae. This makes the current J Street drain not ideal habitat for mosquito breeding. In addition, the depth of the J Street Drain allows it to support numerous fish of various sizes (Section 4.2, page 4.2-14 of the EIR) that will opportunistically prey on mosquito larvae. Recent inspections of the J Street Drain by California Department of Public Health, Vector-Borne Disease Section staff confirmed that the J Street Drain does not currently provide suitable habitat to support large mosquito populations (Larry Walker Associates 2011). Additionally, the open channel allows for safe and easy maintenance, monitoring, and treatment.

As identified in the EIR (pages 4.11-23 through 4.11-24), after reconstruction of the J Street Drain concrete lining, the channel invert would be about three feet lower than the existing invert in order to create the required channel capacity. As a result, the finished invert would need to be daylighted via an earthen ramp to the sand berm/lagoon at a 10:1 slope over a distance of approximately 40 feet from the end of the existing concrete. A ten-foot thick layer of four-ton rock riprap would be placed horizontally beneath the earthen ramp at the end of and at the same elevation as the concrete drain bottom to dissipate flow energy. It is anticipated that during the first few natural lagoon breaching events following Phase 1 construction, the movement of water (tidal and drain flow) would result in an equilibrium elevation within the channel transition area, between the end of the concrete channel and the Ormond Beach Lagoon annual breach location. When the lagoon has breached, there is a potential for temporary standing water to accumulate upstream of the earthen ramp before the new equilibrium elevation establishes at the end of the reconstructed J Street Drain. The lagoon typically breaches during the late fall and winter, when storm runoff increases the water surface elevation enough to overtop the beach sand berm. As described above, mosquito production decreases substantially in the cooler late fall and winter months. Therefore, temporary accumulation of standing water behind the earthen ramp is not expected to substantially increase mosquito production.

When the lagoon outlet is closed and the water surface elevation in Ormond Beach Lagoon is at 6.5 feet, the additional surface water acreage of the J Street Drain would be one additional acre at the completion of Phase I (north limit at Hueneme Road) and 2.6 additional acres at the completion of Phase II (north limit at Pleasant Valley Road). However, neither the changes in channel configuration nor the resulting additional back-up are expected to increase the suitability of the drain habitat for mosquito breeding.

- Steep sides (i.e. vertical walls) are a feature of abandoned swimming pools.

  Swimming pools do contain steep sides; however, abandoned swimming pools also collect calm stagnant water since there is no outlet to open, exposed waters. Flowing waters or waters with surface disturbance from wind, waves, or animals are not suitable

habitat for mosquito breeding. Stagnant water in abandoned swimming pools lacks surface water disturbance from wind and waves and do not typically contain predators such as fish.

- Failure of vector control.

  As discussed in Section 4.11 of the EIR, the Vector Control Program of the Ventura County Environmental Health Division monitors and controls mosquito breeding in flood control channels, drains, roadside ditches, catch basins, gutters, creeks, marshes, retention and detention basins, pools, and rain water depressions. The VCVCP staff constantly monitors and controls over 2,000 potential mosquito breeding sources, including the J Street Drain and surrounding locations, to prevent and minimize exposure of the public to mosquito borne diseases. The VCVCP staff also responds to reports of mosquitoes or potential mosquito breeding sources from the public. The mission of the program is to suppress the population of mosquitoes to minimize the potential transmission of disease and reduce annoyance caused by these insects. The VCVCP staff conducts continuous encephalitis virus surveillance, including West Nile virus, and monitors the County areas for plague, Lyme disease, and hantavirus to prevent and minimize the exposure of the public to these diseases.

  Mosquito Abatement. Mosquitoes are generally controlled in the larval and pupal stages. Adult stages may also be controlled during periods of possible disease transmission. The type of control will need to be targeted to the stage of the mosquito that is present. The VCVCP consists of using physical, cultural, biological, or chemical measures to control mosquitoes. The VCVCP also stocks and supplies mosquito fish for the control of mosquito larva and pupa, which are generally used in man-made impounded water areas.

  The Vector Control Program currently uses larvicides for mosquito abatement, including VectoLex G and VectoBac G, which are applied according to the manufacturer's label and meet all state and federal regulations. These larvicides contain biological insecticides, such as the microbial larvicides, Bacillus sphaericus and Bacillus thuringiensis israelensis, which are naturally occurring bacteria that produce toxins targeting various species of mosquitoes, fungus gnats, and blackflies. Only these species are susceptible to these bacteria – other aquatic invertebrates and non-target insects are unaffected. In addition, the EPA evaluates and registers (licenses) pesticides to ensure that they can be used safely by vector control programs. To evaluate any pesticide, EPA assesses a wide variety of tests to determine whether a pesticide has the potential to cause adverse effects on humans, wildlife, fish and plants, including endangered species and non-target organisms. Therefore, the larvicides used by the Ventura County Vector Control Program undergo extensive testing prior to registration and are virtually nontoxic to humans and do not pose risks to wildlife, non-target species, or the environment.[1]

- Numerous references in EIR to increased mosquito breeding area.

  The proposed J Street Drain project includes changing the existing open trapezoidal concrete channel into an open rectangular channel with vertical rather than sloped walls. The channel would be approximately four feet deeper and the existing sloped channel walls would be replaced with vertical walls. Conversion to vertical channel walls would

[1] http://www.epa.gov/pesticides/health/mosquitoes/larvicides4mosquitoes.htm

eliminate existing shallow water along the edges of the channel. The wider, deeper channel will increase the overall capacity of the channel and convey greater volumes of flood water to prevent the channel from over-topping and causing damage to property and vital facilities. The change in channel geometry would increase the depth, surface area, and length of backed up water. When the lagoon outlet is closed and the water surface elevation in Ormond Beach Lagoon is at 6.5 feet, the additional surface water acreage of the J Street Drain would be one additional acre at the completion of Phase I and 2.6 additional acres at the completion of Phase II. While the proposed project would result in increased water surface area of standing water, the converted channel would provide less suitable habitat for mosquitoes due to deeper water capable of supporting larger populations of predators and less shallow edges. The proposed changes in the channel geometry will likely amplify the design characteristics' negative effects on mosquito breeding. Vertical channel walls are considered the most desirable design choice to reduce potential for vegetative or other cover along the channel margins and present the best scenario for preventing refuge for immature mosquitoes. Additionally, the deeper channel will provide better habitat for predator fish while the wider channel will increase wind, wave, and animal disturbances of the water surface. The proposed channel geometry will not reduce the ease or safety of access for mosquito monitoring and treatment or channel maintenance.

- Petition letter verifying 130 petitions regarding mosquito problem.

  The District acknowledged the petition letters received during the 2009 EIR public review period. The comments were addressed in the EIR in Appendix L. Please refer to Appendix L of the EIR for response to the comment letters and petitions received during the 2009 EIR public review period.

- Similar mosquito-breeding conditions and constraints on vector control with the proposed project will result in continuation of public health threat from mosquito borne illness at the Surfside III complex.

  Please refer to the responses above for the mosquito discussion. The VCVCP staff conducts continuous encephalitis virus surveillance, including West Nile virus, and monitors the County areas for plague, Lyme disease, and hantavirus to prevent and minimize the exposure of the public to these diseases.

12-18 This comment notes additional concerns and questions regarding the mosquito study and presentation are addressed in the "Response to Mosquito Study and Response to Mosquito Study Presentation" attached to the comment letter. Please refer to responses to comments 30 through 40 below for responses to those concerns and questions.

12-19 This comment states the conclusion that the proposed channel will provide "poor mosquito habitat" contradicts science, logic, and direct experience. The mosquito technical study (EIR Appendix I) found no evidence to suggest that the current configurations of the J Street Drain, Hueneme Drain Pump Station, or Hueneme Drain provide high-quality habitat for, or produce large numbers of, mosquitoes. However, the evaluation of the greater J Street Drain area revealed that the OWWTP, the undeveloped floodplain of the OID, and urban areas may produce substantial numbers of mosquitoes. The mosquito study evaluation of the proposed J Street Drain project found the proposed channel configuration to have similar or less mosquito breeding potential than the current J Street Drain channel. The proposed changes would likely amplify the

channel's negative effects on mosquito breeding and should have no significant impact on public health due to mosquito-transmitted diseases. The alternatives presented in the EIR, as well as the additional proposed alternative, would have similar or greater mosquito breeding potential, and therefore were considered to have similar or negative impact, as compared to the proposed project.

12-20 This comment states that the conclusion of "no significant impacts from the project" fails to address the above concerns and direct experience of Surfside III residents. The EIR was prepared in compliance with CEQA Public Resources Code Section 21000 et seq., the CEQA Guidelines (Section 15000 et seq.) as promulgated by the California Resources Agency and the Governor's Office of Planning and Research, the Ventura County Initial Study Assessment Guidelines, and the County of Ventura Administrative Supplement to the State CEQA Guidelines. Since release of the 2009 EIR, the District conducted additional studies providing further technical background and updated impact analyses based on revisions to the Ventura County Initial Study Assessment Guidelines adopted by the Board of Supervisors on April 26, 2011. These studies and updated impact analyses were incorporated into the EIR. Additionally, all comments received during the 2009 EIR public review period were responded to and included in Appendix L of the EIR. The totality of technical data and impact analyses in Section 4.11, as summarized in responses to comments 12-17 and 12-19 above, support the conclusion of less than significant impact.

12-21 This comment quotes from the Global Climate Change Evaluation in Appendix H of the EIR. The comment does not specifically address the adequacy of the environmental document; therefore, no additional response is required.

12-22 This comment states that the Mosquito Study contradicts the Global Climate Change Evaluation. The Global Climate Change Evaluation summarized in Section 4.12 of the EIR and included in Appendix H of the EIR acknowledges that potential health effects from global climate change may arise from temperature increases, climate-sensitive diseases, extreme events, and air quality. Climate sensitive diseases may increase, such as those spread by mosquitoes and other disease-carrying insects (such as malaria, dengue fever, yellow fever, and encephalitis). This effect could occur in southern California in general and at the project site specifically, with or without implementation of the proposed project. This effect would be the result of cumulative impacts related to cumulative increases in greenhouse gas emission resulting in global climate change. The global climate change evaluation study did not state that additional backwater within the proposed project would result in additional mosquito breeding habitat, nor did the study determine that the proposed project would result in an increase in climate-sensitive diseases. In fact, the study determined that the proposed project would not result in a significant increase in greenhouse gases. The study determined that the project's impacts related to global climate change are less than significant.

12-23 The comment states that the "no impact" determination relating to mosquitoes discounts the failure of the VCVCP to control mosquitoes, as well as the increased threat of climate-sensitive disease as a result of temperature increases caused by global climate change. Please note that the comment is incorrect, as construction and operations impacts were found to have a less than significant impact, whereas BEMP implementation was concluded to have no impact for this issue. The mosquito technical study summarized in Section 4.11 and Appendix I of the EIR found no evidence to suggest that the current configurations of the J Street Drain, Hueneme Drain Pump Station, or Hueneme Drain provide high-quality habitat for, or produce large numbers of, mosquitoes. Additionally, the mosquito study evaluation found the proposed channel configuration to have similar or less mosquito breeding potential than the current J Street Drain

channel. The proposed changes would likely amplify the channel's negative effects on mosquito breeding and should have no significant impact on public health due to mosquito-transmitted diseases. Please refer to response to comment 12-22 regarding the Global Climate Change Evaluation prepared for the proposed project.

As discussed in Section 4.11 of the EIR, the Vector Control Program of the Ventura County Environmental Health Division monitors and controls mosquito breeding in flood control channels, drains, roadside ditches, catch basins, gutters, creeks, marshes, retention and detention basins, pools, and rain water depressions. Vector Control Program staff constantly monitor and control over 2,000 potential mosquito breeding sources to prevent and minimize exposure of the public to mosquito borne diseases. VCVCP staff also responds to reports of mosquitoes or potential mosquito breeding sources from the public. The VCVCP staff conducts continuous encephalitis virus surveillance, including West Nile virus, and monitors the County areas for plague, Lyme disease, and hantavirus to prevent and minimize the exposure of the public to these diseases.

12-24 This comment outlines bullet point areas of disagreement with the alternatives as follows:

- Refutes the District's rejection of all alternative beach outlets that would resolve the backwater condition.

  The District consulted with Chris Dellith, Senior Fish and Wildlife Biologist with the USFWS who administers the ESA and Antal Szijj, Senior Project Manager with the USACE who administers the CWA, regarding the possibility of creating a permanent connection to the ocean or manually breaching the berm during the summer. Those two options would likely result in significant mortality of endangered tidewater gobies that are known to exist in the J Street Drain. If the permanent connection could "jeopardize" an endangered species, the USFWS would require the District to implement a "reasonable and prudent alternative" instead of the permanent connection. The USACE by law may only permit the "least environmentally damaging practicable alternative" (LEDPA), and given the adverse effect to threatened and endangered species, a permanent connection would likely not be considered the LEDPA when compared to the preferred alternative. Given the strong likelihood that the permanent connection may not be authorized under both the ESA and the CWA, the District chose the "reasonable and prudent alternative" and LEDPA.

  Additionally, extending the channel to the ocean would not be an easy solution. The channel would continually be blocked by sand as the lagoon is now. Keeping it "open" would most likely require frequent attention from maintenance personnel with heavy equipment. Continual maintenance in areas occupied by threatened and endangered species using heavy equipment such as bulldozers would not be permitted by the regulatory agencies due to environmental concerns and restrictions.

- This comment references CEQA Guidelines Section 15065 (a)(4): Mandatory Findings of Significance.

  CEQA Guidelines Section 15065 (a)(4) specifically states: "A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur: the environmental effects of a

project will cause substantial adverse effects on human beings, either directly or indirectly."

In compliance with Section 15065 (a)(4), the District prepared an Initial Study and Notice of Preparation to prepare an EIR for public review in 2008. The Initial Study included the Mandatory Findings of Significance determining that an EIR was required. The DEIR was circulated for public comment in November 2009 and subsequently recirculated (RDEIR) in September 2011. Appendix L of the EIR contains responses to all comment letters received on the November 2009 EIR.

The Final Environmental Impact Report (FEIR) will be prepared in accordance with CEQA, Public Resources Code Section 21000 et seq. and CEQA Guidelines (California Administrative Code Section 15000 et seq.)

According to CEQA Guidelines Section15132, the FEIR shall consist of the following:

a) The EIR or a revision of the Draft;
b) Comments and recommendations received on the EIR, either verbatim or in summary;
c) A list of persons, organizations, and public agencies commenting on the EIR;
d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process;
e) Any other information added by the Lead Agency.

The FEIR will also include the Mitigation Monitoring and Reporting Program (MMRP) which identifies the mitigation measures, timing and responsibility for implementation of the measures.

- The J Street Drain does not meet the criteria for "Primary Constituent Elements for Critical Habitat of Goby."

  As stated in Section 4.2, page 4.2-20 of the EIR, the south end of the J Street Drain project area is currently designated as critical habitat for the tidewater goby. On October 19, 2011, the USFWS proposed to revise critical habitat for the tidewater goby under the ESA of 1973, as amended. The proposal includes expansion of critical habitat in J Street Drain – Ormond Lagoon from 45 to 121 acres. According to the Federal Register, "this unit allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. On an intermittent basis, VEN-3 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary, and thereby provides relatively stable conditions."[2]

  Although the channel is not currently critical habitat, the tidewater goby that lives in the channel is protected under the ESA. An act that would result in the mortality or "take" of an endangered or threatened species as identified under the ESA, such as the tidewater

[2] http://www.federalregister.gov/articles/2011/10/19/2011-26301/endangered-and-threatened-wildlife-and-plants-designation-of-revised-critical-habitat-for-the#p-243

goby, would be in violation of the ESA, regardless of whether it occurs within designated critical habitat.

- This bullet point notes nesting sites for the California least tern and plover are located east of the Ormond Lagoon.

  This comment does not address the analysis in the EIR. The comment states that the locations of the nesting sites are east of Ormond Lagoon. However, this is incorrect. Figure 4.2-10 shows three California least tern (2009) and two snowy plover (2008 and 2009) nest sites south of the lagoon.

- This bullet point reiterates comments 12-22 and 12-23 above.

  Please refer to the responses provided for comments 12-22 and 12-23 above.

12-25 This comment outlines bullet points summarizing the District's rejection of the alternative outlets as follows:

- USFWS' designation of Ormond Lagoon as "Critical Habitat."

  Please refer to the first and third bullets in comment 12-24 for responses.

- Input of freshwater into lagoon.

  Input of freshwater to the Ormond Lagoon is the result of both dry weather urban runoff and storm runoff originating from J Street, Hueneme and Oxnard Industrial Drains. Freshwater input is essential to tidewater goby survival in the Ormond Lagoon because this species cannot tolerate high salinity water for extended periods of time. Please refer to the first bullet point in comment 12-24 above for a discussion of an alternative outlet to the beach.

- The proposed project will result in no impact (no adverse effects).

  Please refer to the first bullet in comment 12-24 above for a response to the alternative outlet.

  The EIR was prepared in compliance with CEQA Public Resources Code Section 21000 et seq., the CEQA Guidelines (Section 15000 et seq.) as promulgated by the California Resources Agency and the Governor's Office of Planning and Research, the Ventura County Initial Study Assessment Guidelines, and the County of Ventura Administrative Supplement to the State CEQA Guidelines. Since release of the 2009 EIR, the District conducted additional studies providing further technical background and updated impact analyses based on revisions to the Ventura County Initial Study Assessment Guidelines adopted by the Board of Supervisors on April 26, 2011. These studies and updated impact analyses were incorporated into the EIR. The EIR identifies mitigation measures where required to reduce impacts to a less than significant level. Additional mitigation has been identified to further reduce noise impacts, visual impacts and geotechnical impacts. As stated previously the FEIR will be prepared in accordance with CEQA Guidelines Section 15132, and the FEIR will include an MMRP which identifies the mitigation measures, timing and responsibility for implementation of the measures.

Additionally, five channel and three outlet alternatives were considered and analyzed in the EIR. Alternative E consists of a soft (or earthen) bottom trapezoidal channel configuration. Alternatives A and D include box culverts, with landscaping or a low flow channel above the box culvert. The Alternative D low flow channel above the box culverts would function as a vegetated swale, providing a combination of habitat and boxed underground channel as requested in this comment. Alternatives A and D were determined to cost substantially more than the Preferred Alternative due to the increased construction, landscaping, and right-of-way costs. Alternative E would not meet project objectives regarding Ormond Beach Lagoon and tidewater goby since the greater project footprint and natural channel configuration have the potential to introduce greater quantities of polluted runoff, particularly turbid flows, into tidewater goby habitat and/or groundwater supply. Conversely, converting the existing concrete channel to an earthen channel could increase the area of potential breeding habitat for tidewater goby, as this species burrows into channel or lagoon sediments to deposit eggs. Alternative E would cost more than the Preferred Alternative due to the increased costs of construction and maintenance associated with removal of homes and maintaining the natural channel. Further, Alternative E would require substantially more rights-of-way and would eliminate a portion of J Street. The outlet alternatives included a dike system with permanent connection to the ocean (Alternative A), natural system with restoration project (Alternative B), and the preferred outlet (Alternative C). Outlet Alternatives A and B would have greater impacts to threatened and endangered species, and were thus rejected as infeasible. For a comparison of the Alternatives analyzed, please refer to Section 5.0 of the EIR.

12-26 This comment outlines bullet points describing "benefits from alternative outlet".

- Gobies downlisted from endangered to threatened.

  According to the USFWS, the official status for the tidewater goby is **endangered.** "The tidewater goby is federally listed under the ESA of 1973, as amended in California. Critical Habitat is designated for the species, and a new proposal for critical habitat is undergoing review. A recovery plan is in effect." As stated previously, the USFWS has proposed the existing J Street Drain – Ormond Lagoon critical habitat for the tidewater goby be expanded from 45 to 121 acres. All proposed activities potentially impacting an endangered species such as tidewater goby or its critical habitat must comply with the ESA. Please refer to the first and third bullet points in comment 12-24 for a discussion of the alternative outlet to the beach and the status of the tidewater goby critical habitat.

- Terns and Plovers: nests are located east of the lagoon.

  On October 7, 2010, discussions and a site visit with Reed Smith, the avian consultant to the CDFG, tasked with monitoring California least terns and western snowy plovers, confirmed the findings of the Davenport (2008) study. Least terns are on site during May through September. By October, they have migrated out of the area. They nest south of the project, near the Reliant Energy power plant in a loose colony numbering about 60 pair. They forage in the lagoon and offshore. Occasionally, three to five pair nest between the lagoon and the shore.

  The snowy plovers nest in dune areas that are lightly vegetated. The main breeding area is over one-half mile south of the site near the power plant where about 30 pair regularly

nests. One to four nests are found each year in the dunes between the lagoon and the shoreline. Plovers nest from April to September. Unlike the terns, they also winter in the area. Throughout the year they forage by running along the beach above the waterline in search of insects.

- Freshwater – OID primary input; J Street Drain primary input is urban street runoff.

  Input of freshwater to the Ormond Lagoon is the result of both dry weather urban runoff and storm runoff originating from J Street, Hueneme and Oxnard Industrial Drains. Freshwater input is essential to tidewater goby survival in the Ormond Lagoon because this species cannot tolerate high salinity water for extended periods of time.

12-27 This comment states the J Street Drain is not critical habitat, the amount of lagoon needed to create an ocean outlet is minimal, and the effect of an ocean outlet on critical habitat would be minimal. Although the J Street Drain is a man-made structure, tidewater goby utilize the drain; therefore, it has become a habitat for the goby. On October 19, 2011, the USFWS proposed to revise critical habitat for the tidewater goby under the ESA. Please refer to the first and third bullet points in comment 12-24 for the discussions regarding the alternative outlet and the tidewater goby critical habitat status.

12-28 This comment outlines bullet points refuting the findings of the mosquito study and determination of "no impact."

- The conclusion of "no impact" is not defensible. The data in the mosquito study are "inaccurate, incomplete and contradictory."

The mosquito technical study was prepared by Larry Walker Associates in collaboration with Marco Metzger, Ph.D., Public Health Biologist for the Vector-Borne Disease Section, California Department of Public Health, and the VCVCP. The study utilized data collected by VCVCP to recognize mosquito sources and compare relative abundance in areas surrounding the J Street Drain. The study found no evidence to suggest that the current configurations of the J Street Drain, Hueneme Drain Pump Station, or Hueneme Drain provide high-quality habitat for, or produce large numbers of mosquitoes. The evaluation also found the proposed channel configuration to have similar or less mosquito breeding potential than the current J Street Drain channel. The evaluation of the greater J Street Drain area did reveal that the OWWTP, the undeveloped floodplain of the OID, and urban areas may produce substantial numbers of mosquitoes. The conclusions made in the study are consistent with the data evaluated and VCVCP observations. Furthermore, the comment does not present any evidence to the contrary.

- No CO_2 traps used; no traps in the Surfside III area.

  Please refer to comment 12-17 for response.

- No mosquito problem (from lagoon) before backwater in canal.

  A review of archived aerial photography from October 2002, which pre-dates Hueneme Drain Pump Station reconstruction from April 2004 through April 2007, shows that backwater in J Street Drain extended to approximately Hueneme Road. The backwater condition has existed since the District was ordered to cease and desist maintaining an

open outlet from J Street Drain to the ocean in 1992. The backwater condition was not brought on by reconstruction of the pump station.

The relatively high number of adult mosquitoes captured in traps in September 2009 (Figure 12 of the mosquito study), combined with numerous complaints from residents of the Surfside III Condominium Complex, prompted the VCVCP to investigate the OWWTP as a possible source of increased mosquito production. The VCVCP routinely monitors several areas within the OWWTP, including the pond and inactive treatment cells, which would be likely mosquito breeding sources. In response to the resident complaints and increase in mosquitoes captured in traps, the VCVCP requested authorization to more broadly examine the OWWTP for new mosquito breeding sources and OWWTP staff cooperated with this request. The investigation led to the detection of a large belowground flooded basement that was actively producing mosquitoes. The flooded basement was considered a new mosquito source in the area. The VCVCP has since routinely addressed this source and other newly added smaller potential sources on the OWWTP property, in addition to the sites within the OWWTP previously monitored and treated. Trap data collected in 2010 showed far fewer mosquitoes in the greater J Street Drain area, reflecting the increased control efforts at new source locations by the VCVCP. Overall, these data suggest that mosquito production is widespread within the developed areas surrounding the J Street Drain, with no evidence of sharp rises in mosquito numbers in traps located near the J Street Drain that would implicate this conveyance channel as a major source of mosquitoes.

- Failure of Vector Control (130 petition letters regarding mosquito issue).

  Please refer to response 12-28 bullet point three above regarding the likely reason for the noticeable increase in mosquitoes in the area during 2009. The VCVCP monitors and controls mosquito breeding in flood control channels, drains, roadside ditches, catch basins, gutters, creeks, marshes, retention and detention basins, pools, and rain water depressions. VCVCP Program staff constantly monitors and control over 2,000 potential mosquito breeding sources to prevent and minimize exposure of the public to mosquito borne diseases. Vector control staff also responds to reports of mosquitoes or potential mosquito breeding sources from the public. The mission of the program is to suppress the population of mosquitoes to minimize the potential transmission of disease and reduce annoyance caused by these insects. The Vector Control staff conducts continuous encephalitis virus surveillance, including West Nile virus, and monitors the County areas for plague, Lyme disease, and hantavirus to prevent and minimize the exposure of the public to these diseases.

- Increase in mosquito breeding area due to proposed project.

  Please refer to responses in comment 12-17.

- Increase in mosquitoes due to temperature increase as a result of the proposed project

  Please refer to responses to comments 12-22 and 12-23.

12-29 This comment refers to the residents' concerns regarding public health due to an adverse effect ("severe mosquito infestation") that could result in mosquito-borne disease.

As mentioned previously, while the proposed project would result in increased surface area of standing water, the converted channel would provide less suitable habitat for mosquitoes due to deeper water capable of supporting larger populations of predators and less shallow edges. The proposed changes in the channel geometry will likely amplify the design characteristics' negative effects on mosquito breeding. Please refer to responses to comment 12-17 for further discussion.

12-30 This comment states that data collected during 2010 does not represent normal weather conditions. The comment also states that CO_2 traps were not used for sample collection. Data collection for the mosquito technical study is summarized below per the study. As explained in the study, data collected between 1999 and 2010 were evaluated. The report was prepared in January 2011, therefore data for 2011 were not available at the time the report was prepared.

VCVCP deployed adult mosquito traps in nine locations in the greater J Street Drain area in 2005, 2008, 2009, and 2010 (Figure 5 of the mosquito study). Figure 9 through Figure 13 of the mosquito study illustrates the data collected in 2005, 2008, 2009, and 2010. Summer 2010 data were collected from six traps in the greater J Street Drain area (Figure 13). The data were collected at each of the six traps on June 23, July 29, and August 25, 2010. As shown in the figures, all deployed traps captured mosquitoes. The traps use CO_2 as an attractant and capture only female mosquitoes. However, it should be noted that traps, because they are deployed overnight, represent only a "snap shot" in time of the mosquito population in an area. Attempts are made to deploy traps during representative weather conditions. It is rare for CO_2-baited traps not to capture at least some mosquitoes in developed areas. As explained in the mosquito study, it is impossible to eradicate mosquitoes completely in the urban environment due to the ability of mosquitoes to exploit a multitude of urban water sources for reproduction, many of which are difficult to identify or locate. As identified, data from numerous years were analyzed and evaluated.

12-31 This comment mentions that mosquitoes were not a problem before 2008. Please refer to response 12-28, bullet point 3.

12-32 This comment restates the concern that the project would increase backwater and mosquito breeding, and that vertical channel walls will not compensate for this. Please refer to response in comment 12-17.

12-33 This comment outlines bullet points regarding mosquito migration.

- The type of mosquitoes causing the problems at Surfside III are "very small, shy, and avoid moving air", congregating in still, protected areas. The common types of mosquitoes that occur in the J Street Drain area are discussed in Section 4.11 of the EIR and summarized below.

  For a comparison of mosquito numbers captured in traps around the greater J Street Drain area, please see Figures 9 through 13 of the Mosquito Study. Three main species of biting mosquitoes are commonly found in the J Street Dain area: *Culex tarsalis, Culex quinquefasciatus*[3], and *Culex erythrothorax*. All three species readily bite humans and can become a nuisance, thus they are primary targets of control efforts in Ventura County and throughout the state.

[3] Synonymous with *Culex pipiens* in some locations.

Culex tarsalis are opportunistic and will breed in a variety of habitats including wetlands, birdbaths, neglected swimming pools, and almost any artificial container (Larry Walker Associates, 2010). *Culex tarsalis* larvae are known to occur in brackish marshes as long as the salt content does not exceed one percent. However, *Culex tarsalis* larvae are not tolerant of polluted waters (e.g., nutrient rich waters). Adult *Culex tarsalis* are known to disperse from their origins up to several kilometers (Larry Walker Associates 2011).

C*ulex quinquefasciatus* prefer nutrient-rich waters containing high concentrations of organic matter and also have a strong affinity for underground areas such as storm drains. However, they are also opportunistic and will share many of the habitats used by *Culex tarsalis*, especially urban sources and nutrient-rich treatment wetlands. Adult *Culex quinquefasciatus* can travel up to 1.5 kilometers (0.9 miles) from their origin, but generally travel less than 1 kilometer (0.6 miles) (Larry Walker Associates 2011).

Culex erythrothorax are closely tied to wetlands, preferring swamps and marshes or the margins of water bodies that contain dense, emergent vegetation such as cattails (Larry Walker Associates 2011). This species is almost never found outside these habitats. Adult *Culex erythrothorax* are known to disperse from their origins up to approximately 1 kilometer (Larry Walker Associates 2011), but the majority of adults appear to remain relatively close to their preferred wetland habitats.

The more urban trap sites located to the north and west of Ormond Beach Lagoon, and the trap site located in the undeveloped floodplain of the Oxnard Industrial Drain, captured a substantial percentage of *Culex quinquefasciatus*. This species thrives in disturbed and nutrient-rich habitats, including belowground stormwater infrastructure (Larry Walker Associates 2011). Its opportunistic use of nearly any small source of urban water (e.g. neglected pools, ornamental ponds, clogged rain gutters, flower pots) as well as belowground sources for breeding make it challenging to control. These same traps also captured a large percentage of *Culex tarsalis*, which also thrives in urban areas, but almost never breeds belowground.

Without verification by Ventura County Vector Control Program staff, it is unclear whether the insects observed were mosquitoes. As stated in the mosquito study. "Midges are a diverse group of small, non-biting flies closely related to mosquitoes. Many species have a strong resemblance to mosquitoes in size and appearance…[see Figures 3 and 4 of the study], and they often share the same aquatic habitats. Midges cannot bite and are not vectors for disease. Midge larvae are usually found in wetlands and marshes, as well as wastewaters including wastewater treatment plant lagoons and urban runoff channels (Grodhaus 1975); however, unlike mosquitoes, midge larvae do not breathe atmospheric air and often live attached to surfaces or in sediments. As a result, midges do not have the same restrictions as mosquito larvae and are often very abundant in the bottom sediments of open bodies of water. Midges often hatch simultaneously in blooms during the spring or summer, resulting in large masses of midges grouped together near wetlands and marshes. Many species are strongly attracted to artificial light sources and also use structures as resting sites. Thus, they can become extreme nuisances seasonally by massing in and around residences and other structures. Midges have a shorter life span than mosquitoes that entails finding a mate in order to lay eggs before they die (Grodhaus 1975)."

- The mosquito issue at the Surfside III complex did not begin before the summer of 2008. The issue began after the pump station expansion and the backwater issue in the canal. Please refer to response to comment 12-28, bullet point three for response.

12-34 This comment states that data obtained from the record cool summer of 2010 are invalid, and the mosquitoes observed at Surfside III originate from the J Street Drain. Please refer to responses to comments 12-30 through 12-33 for responses.

12-35 This comment states that the project will increase backwater in J Street Drain, and that VCVCP actions cannot eliminate mosquitoes. Please refer to responses to comments 12-17 and 12-28.

12-36 This comment states that only removal of backwater can resolve mosquito issues, and requests the District to obtain a waiver from designation of the J Street Drain as critical habitat. The District will continue to coordinate with the residents of Surfside III to identify proper mitigation and alternatives in order to reduce impacts; however, the tidewater goby is protected under the ESA whether the channel is designated as critical habitat or not. Adverse impacts to the goby or the areas it occupies require authorization under the ESA. Waivers are not an option under either the ESA or the Clean Water Act. Please also see response 8-4(a).

12-37 This comment lists questions regarding the mosquito technical study as follows:

- When and where was the study data collected?

  VCVCP deployed adult mosquito traps in nine locations in the greater J Street Drain area in 2005, 2008, 2009, and 2010 (Figure 5 of the mosquito study (Appendix I of the EIR) shows the locations of the traps). The locations are also shown in Figure 4.11-2 of the EIR. As shown on Figure 4.11-2 of the EIR, traps were located adjacent to the J Street Drain and the Surfside III community. Figure 9 through Figure 13 of the mosquito study (Appendix I of the EIR) illustrates the data collected in 2005, 2008, 2009, and 2010. Please refer to the mosquito study in Appendix I and the analysis in Section 4.11 of the EIR for detailed discussion regarding the data.

- Was any "correction" made for the unusual weather conditions?

  As stated in the mosquito technical study included in Appendix I of the EIR, adult mosquito traps are deployed in areas of greatest concern, usually triggered by evidence of local disease transmission in birds, humans, or other animals, but also in response to local nuisance complaints. For this reason, the number and location of traps deployed often varies seasonally and yearly. As stated in the mosquito technical study in Appendix I of the EIR and on page 4.11-4 of the EIR, during 2008-2010, citizen complaints from the Surfside III Condominium Complex, located in the area near the terminal end of the J Street Drain, led VCVCP to increase their surveillance efforts in the immediate vicinity in an attempt to identify both the species present and their potential points of origin. As a result, more data were generated for this area during this two-year period than in previous years. It should also be noted that trap data are collected during the late spring through early fall. Mosquito production is generally low during the late fall and winter months, thus traps are typically not deployed at those times. Adult mosquito traps were deployed at two sites in the Ormond Beach Lagoon area: one at the south end of Perkins Road and the other at Hueneme Drain at J Street Drain, which is at the terminus of the J Street Drain. The Perkins Rd. site had been sampled periodically since 2002, whereas the J Street Drain site was a new site added in 2010, specifically in response to the citizen

complaints from the Surfside III Condominium Complex. The 2010 data were collected between June and October. The data were compared to relevant trap data collected between 1999 and 2010.

- Was any "correction" made for not using CO_2 traps?

  As indicated in the mosquito study in Appendix I of the EIR and Section 4.11, page 4.11-4 of the EIR, CO_2 traps were used.

- What traps were used for samples?

  Please see response 12-37 bullets one and three.

- Where were the traps located?

  Figure 5 in Appendix I of the EIR (mosquito technical study) and Figure 4.11-2, page 4.11-7 of the EIR illustrate the locations of the traps deployed.

- Were samples/numbers counted on patios along the canals?

  As stated in the mosquito technical study in Appendix I of the EIR, no data were collected from patios located on private property. Adult mosquito traps were deployed at two sites in the Ormond Beach Lagoon area: one at the south end of Perkins Road and the other at Hueneme Drain at J Street Drain, which is at the terminus of the J Street Drain. Data were collected from the South End of Perkins Road trap in 2002, 2008, 2009, and 2010. Data were collected from the Hueneme Drain at J Street Drain trap in 2010. Data were collected from the Hueneme Drain Section E trap, located at the southwest corner of the Surfside III property, in 2005, 2008, and 2009. Data were collected from the south end of Industrial Avenue trap in 2009 and 2010. Data in 2010 reflected samples collected from six different trap locations on the same three dates during the summer for easier comparison.

- Were final conclusions regarding local mosquitoes and breeding conditions extrapolated from previous studies or general information?

  As stated on page i of the mosquito technical study in Appendix I of the EIR, the mosquito technical study was prepared by Larry Walker Associates in collaboration with Marco Metzger, Ph.D., Public Health Biologist for the Vector-Borne Disease Section, California Department of Public Health, and the VCVCP. The study utilized data between 1999 and 2010 collected by VCVCP to recognize mosquito sources and compare relative abundance in areas surrounding the J Street Drain.

12-38 This comment questions the source location of mosquitoes observed by Surfside III residents. Please refer to responses in comment 12-33.

12-39 This comment refers to the 2009 DEIR conclusion that the project would increase backwater and mosquito breeding areas, and that ongoing treatment by the VCVCP would address mosquitoes. Section 4.11 of the 2009 Draft EIR discussed vector control and mosquitoes. The 2009 Draft EIR noted that the proposed project would increase the surface area and amount of standing water in the drain. A Mosquito Technical Study was subsequently prepared (January 24, 2011) to further

analyze the project impacts related to mosquitoes. The technical study provides an analysis of the mosquito production potential of the proposed project compared with the current J Street Drain and the proposed alternatives. The full analysis is presented in Section 4.11 of the 2011 EIR. The complete report is included in Appendix I of the 2011 EIR. The proposed project would convert the existing trapezoidal concrete channel into an open rectangular channel. The channel would be approximately four feet deeper and the existing sloped channel walls would be replaced with vertical walls. Conversion to vertical channel walls would eliminate existing shallow water along the edges of the channel. While the proposed project would result in increased surface area of standing water, the converted channel would provide less suitable habitat for mosquitoes due to deeper water capable of supporting larger populations of predators and less shallow edges. In addition, J Street Drain is more easily accessed for vector treatment compared to shallow vegetated wetlands to the east and southeast due to the presence of an adjacent access road along its entire length and the lack of dense vegetation that would interfere with larvicide application.

12-40 This comment states that a mosquito study based on cool-weather data and no sampling from CO_2 traps is invalid and should be revised. The mosquito study was finalized in January 2011 and includes data collected between 1999 and 2010. The traps used to collect the data were CO_2 traps as identified on page 4.11-4 of the EIR. The full analysis is presented in Section 4.11 of the EIR. The complete technical study is included in Appendix I of the EIR.

11-02-2011

Ventura County Watershed Protection District Re: J st canal project

Angela Bonfiglio Allen

Frances Woolston
669 Lighthouse Way
Port Hueneme,
Ca 93041

I am sending my concerns regarding the J st canal project. I have lived here for 15 years and do not want to see these issues from this project affect and put at risk the safety, health and quality of life for the homeowners at surfside 3. 13-1

Thank You,

Frances Woolston

RECEIVED

NOV 07 2011

WATERSHED PROTECTION DIST.

PROBLEMS AND SOLUTIONS [10/20/11]

RDEIR: "NO SIGNIFICANT IMPACT" [TO PUBLIC HEALTH AND SAFETY]

PS&R: SSIII Opposition to JSDP RDEIR "Technical Inadequacy of JSDP RDEIR"

	PROBLEM	SOLUTION	
1 BACKWATER			13-2
* Mosquitoes	Increased breeding in canal	Alternative Outlet	
* Reduces capacity of JSDP	Water-level = lagoon level	"	
* Flooding at SSIII	Backwater from DID	"	
2 MOSQUITO STUDY			13-3
* No traps at SSIII	Traps in remote locations	Alternative Outlet	
* Lite Traps – not CO2	Mosquitoes attracted by CO2	"	
* Vector Control mitigation	Failed (130 letters!)	"	
3 BEMP			13-4
* 72-hour prediction	Unpredicted rain	Alternative Outlet	
* observe berm elevation	No reliable observation	Scheduled Breach	
* Failure in procedures	Murphy's Law	Scheduled Grooming	
4 DAMAGE			13-5
* Bldgs 6 and 7	Construction activities/ Wells	(Soil Report AND Damage Int.)	
* Townhouses	Canal overflow	(Flood Damage Agreement)	
5 PUBLIC HEALTH			13-6
* Mosquitoes	Mosquito-borne illness	Alternative Outlet	
* Overflow Contamination	Raw sewage (OWWTP)	"	
* HALACO	Groundwater Plume	Delay: pending EPA report	
6 NO ALTERNATIVE OUTLET			13-7
* Failure to notify of meetings	No opportunity to participate	Meeting: VCWPD/USFWS	
* VCWPD rejects alternative	USFWS Permitting	APPLICATION FOR WAIVER	
* USFWS: endangered species	Gaby, Plover, Tern	Protection of SSIII health/property	

+ OUR CONCERNS HAVE NOT BEEN ADDRESSED IN THE MOSQUITO STUDY OR THE RDEIR. 13-8
+ INCREASED CAPACITY OF JSDP AND LOW-FLOW CHANNEL DO NOT PREVENT FLOODING.
+ BEMP IS SUBJECT TO MECHANICAL, ENVIRONMENTAL, HUMAN FAILURES.
+ REQUEST FOR RE-CONSIDERATION OF BEACH OUTLET ALTERNATIVE. [Waiver Application]

Letter 13
Frances Woolston
November 2, 2011

13.1 This comment states Ms. Woolston's general objections to the proposed project. This comment does not address the adequacy of the environmental document; therefore, no additional response is required.

13.2 This comment lists bullet points regarding backwater as the problem as follows, and requesting an alternative outlet:

RE: Mosquitoes – increased breeding in canal.

Please refer to Letter 8, response to comment 8-6 and Letter 12, response to comment 12-17 for responses regarding this issue.

RE: Reduces capacity of the proposed project – water level equals lagoon level.

Please refer to Letter 12, response to comment 12-6 for response.

RE: Flooding at Surfside III – Backwater from OID

Please refer to Letter 12, response to comments 12-6 and 12-10 for responses.

RE: Alternative Outlet is the solution.

Please refer to Letter 8, response to comment 8-4 and Letter 12, response to comment 12-24 for response.

13-3 This comment lists bullet points regarding the mosquito study as follows:

RE: No traps at Surfside III – traps in remote locations.

Please refer to Letter 12, response to comment 12-17, bullet point two for response.

RE: Light Traps – Not CO_2

Please refer to Letter 12, response to comment 12-17, bullet point three for response. The VCVCP uses adult mosquito traps as part of their comprehensive mosquito surveillance and control plan. The traps use carbon dioxide (CO_2) as an attractant and capture only female mosquitoes.

RE: Vector Control Mitigation – Failed (130 Petition Letters)

Please refer to Letter 12, response to comment 12-17, bullet points six and eight, and response to comment 12-28, bullet point three, for responses.

RE: Alternative Outlet is the solution.

Please refer to Letter 8, response to comment 8-4 and Letter 12, response to comment 12-24 for response.

13-4 This comment lists bullet points regarding the BEMP as follows:

RE: 72-hour prediction – unpredicted rain

Please refer to Letter 8, response to comment 8-3(d) and Letter 12, response to comment 12-11 for responses.

RE: Observe berm elevation – no reliable observation

Please refer to Letter 8, response to comment 8-3(d) and Letter 12, response to comment 12-11 for responses.

RE: Failure in procedures – Murphy's Law

Please refer to Letter 8, response to comment 8-3(d) and Letter 12, response to comment 12-11 for responses.

RE: Solutions – Alternative outlet, scheduled breach, scheduled grooming

Please refer to Letter 8, response to comment 8-4 and Letter 12, response to comment 12-24 for response regarding the alternative outlet.

Prior to 1992, the sand berm at the Ormond Beach Lagoon was periodically breached by the District. Bulldozers were used to create a discharge path directly to the ocean and prevent water and silt buildup in the channel. However, this practice ceased in 1992 due to environmental concerns and restrictions. Section 3.0 of the EIR outlines the grooming procedure for the BEMP. The BEMP would allow grooming the beach sand elevation to 6.5 feet (NGVD 1929). This would ensure that water in the Ormond Beach Lagoon would overtop the sand berm during small storms (less than the 10-year event, which is the current capacity of J Street Drain), as it does currently under typical conditions. Overtopping of the beach would cause the lagoon to breach and release its water into the ocean. However, the BEMP alone would not be sufficient in storms greater than the 10-year event, as flows would overtop the existing undersized J Street Drain channel before they could reach the ocean. With implementation of the proposed project, storms larger than the 10-year and up to the 100-year event would flow through the breach and into the ocean.

Regularly scheduled grooming activities would constitute continual maintenance activities. As was analyzed in the EIR, continual maintenance using heavy equipment such as bulldozers would not be permitted by the regulatory agencies due to environmental concerns and restrictions, and would conflict with recreational use during the summer.

13-5 This comment outlines bullet points with regards to potential damage to Surfside III.

RE: Damage to buildings 6 and 7 – construction activities and wells.

Please refer to Letter 8, response to comment 8-7 regarding potential damage to Surfside III and Letter 6, response to comment 6-13 regarding noise vibration impacts.

RE: Townhouses – canal overflow. Requested solution is a Flood Damage Agreement.

The purpose of the proposed project is to resolve the current problem of overflows from the J Street Drain during floods greater than the 10-year event. The BEMP is included to provide protection from smaller flood events when the lagoon has not yet breached the beach sand berm. Because the project purpose is to prevent flood damage, a Flood Damage Agreement would not be required.

13-6 This comment outlines bullet points regarding public health.

RE: Mosquitoes – mosquito borne illnesses

Please refer to Letter 8, response to comment 8-6(a) and Letter 12, responses to comments 12-17 and 12-23 for responses.

RE: Overflow contamination – OWWTP sewage

This comment addresses an emergency situation unrelated to the proposed project or RDEIR. However, the following is offered for clarification: On January 18, 2010, the District breached the lagoon near its northwest corner under emergency regulatory authorizations from the U.S. Army Corps of Engineers (USACE), LARWQCB, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and California Coastal Commission (CCC). Breaching occurred in response to flooding and imminent electrical failure of the Oxnard Waste Water Treatment Plant (OWWTP). Electrical failure would have resulted in catastrophic release of untreated sewage to adjacent residential, commercial, and sensitive ecological areas (lagoon and Pacific Ocean). The International Paper Plant also sustained losses during this flood event, and Perkins Road was impassable. The BEMP has been developed in order to ensure natural breaching will occur during a major storm event.

RE: Halaco – groundwater plume

A groundwater modeling study was performed and measures are proposed to address the potential to move Halaco groundwater pollutants toward the J Street Drain. This study was conducted in close coordination with the U.S. Environmental Protection Agency (USEPA) Halaco Superfund Site Project Manager to ensure inclusion of the latest Halaco data and correlation with pending USEPA study results.

The Halaco site is approximately 1,500 feet east of the project site. The numerical model of the groundwater system beneath the J Street Drain area demonstrates that a groundwater sink, possibly the sewer line beneath McWane Blvd and Perkins Road, in combination with elevated surface water in the Ormond Beach Lagoon and the OID have significant effects on groundwater elevations and migration in the area. Groundwater

flows in the direction of the groundwater sink, possibly the sewer line. The simulations demonstrate that it is unlikely for dewatering to draw groundwater from beneath the Halaco Site toward the J Street Drain under current conditions.

However, the District will monitor a series of wells, three located on the Halaco site (MW-15, MW-21, and MW-22) and one located in the beach parking area off Perkins Road (MW-23) to track the status of the groundwater sink. Should this sink diminish, the dewatering effort may cause migration of potentially impacted groundwater from beneath the Halaco Site approximately 50 feet toward the J Street Drain. In this case, injection of water into the shallow aquifer through approximately five wells located in the beach parking area between the J Street Drain and the Halaco Site can be utilized to mitigate potential migration of groundwater from beneath the Halaco Site. Injection of between 10 and 14 gallons per minute per injection well would prevent migration of groundwater from the Halaco site. The monitoring of water levels within selected monitoring wells in the vicinity of the Halaco Site can be utilized to identify if migration of groundwater from the Halaco Site is occurring.

RE: Alternative Outlet is the solution.

Please refer to Letter 8, response to comment 8-4 and Letter 12, response to comment 12-24 for response.

13-7 This comment outlines bullet points regarding alternatives and noticing.

RE: No alternative outlet.

Please refer to Letter 8, response to comment 8-4 and Letter 12, response to comment 12-24 for response regarding alternative outlet.

RE: Failure to notify of meetings.

Please refer to Letter 8, response to comment 8-9 for response regarding public noticing of the EIR.

CEQA does not require public noticing and participation of consultation meetings between regulatory agencies such as the District, USFWS, and CDFG. The consultation history is summarized in Section 4.2 of the EIR.

RE: The District rejects alternative – USFWS permitting

Please refer to Letter 8, response to comment 8-4 and Letter 12, response to comment 12-24 for response regarding alternative outlet and consultation with USFWS and USACE regarding permitting the outlet.

RE: USFWS – endangered species (goby, plover, tern); protection of Surfside III health and property; request an application for “waiver” from USFWS.

Please refer to Letter 8, response to comment 8-4 for response regarding consultation with the USFWS. The District seeks to protect Surfside III residents’ health and property while at the same time balancing compliance with state and federal regulations such as

the California and Federal Endangered Species Acts, the Clean Water Act, and the California Fish and Game Code.

13-8 This comment summarizes the concerns outlined in the bullet points above. No further response to these concerns is necessary. A new comment states that the increased capacity of the J Street Drain would not prevent flooding. Please see response 8-5 regarding the project and its relationship to flood protection.

November 2, 2011

Ventura County Watershed Protection District
C/O Angela Bonfiglio Allen
800 S. Victoria Ave.
Ventura, CA 93009-1600

AS A RESIDENT HOMEOWNER AT SURFSIDE III, I WISH TO INFORM YOU THAT THE FOLLOWING COMMENTS ADDRESS THE INADEQUACY OF THE RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT ANALYSIS 14-1

The two following items are from the Introduction and Summary: Questions section

Item 1:
Question: Is there any federal or outside funding? 14-2
The VCWPD's answer in the RDEIR is that you are depending upon property taxes, benefit assessments, land development fees and additional funding from city governments. It is further stated that local agencies are not eligible for grants.

Concerns:
A. We are in difficult economic times and the housing and building industries have not yet recovered. Large numbers of existing homes are still being foreclosed. If a homeowner is unable to pay their mortgage, how can they be expected to pay their property taxes?
B. Most city governments and counties are financially struggling to meet their own expenses. How can they be depended upon to pay for the additional burden of this project? 14-3
C. Even if phase I of this project were eligible for grants, most are drying up or no longer available.

Item 2:
There is a question regarding Section 3.0. The question requests an explanation of why you are focused on the J Street Drain instead of the Oxnard Industrial Drain. 14-4
The VCWPD's answer is that it is a low priority because it would require the purchase of additional land.

Observation:
A. Real estate values are lower that they have been in several years. With all the potential damage to Surfside III because of the closeness of the project to Buildings 6 & 7 and replacing trees and plants (at Surfside III) it may be less expensive to purchase additional land to widen the Oxnard Industrial Drain. 14-5

Questions:
1. If there is a fear of a 100 year flood, why isn't the affected area on a FEMA 100 year flood map? 14-6
2. If there is a fear of a 100 year flood, why aren't other government agencies helping/permitting assistance with a permanent opening to the ocean, to avoid flooding during rain storms? 14-7

Michelle Hoffman
807 Lighthouse Way
Port Hueneme, CA 93041
[illegible]

[illegible]
NOV 8 2011
WATERSHED PROTECTION DIST

Letter 14
Michelle Hoffman
November 2, 2011

14-1 This comment states Ms. Hoffman's general objection to the proposed project and EIR. This comment does not address the adequacy of the environmental document; therefore, no additional response is required.

14-2 This comment raises the question of available federal or other outside funding for the project. The funding sources of the project are discussed in Section 3.0 of the EIR (see pages 3-9 and 3-10). The District funds capital improvement projects from a combination of revenues, including its portion of the one percent property tax revenues collected by the County Treasurer-Tax Collector on all taxable parcels countywide, interest earnings on its fund balance on deposit with the County Pooled Investment Fund, land development fees, and whenever feasible, project specific grant fund revenues. The District will continue to research grant opportunities for additional funding. The EIR does not state that local agencies are not eligible for grants. In fact, local agencies may receive grants from government agencies, but they are ineligible for grants sponsored by private corporations.

14-3 This comment lists bullet points or concerns regarding project funding. These comments are acknowledged, and do not relate to the adequacy of the EIR; however, the following is offered in response:

(a) Concern regarding the economic times and the housing market; property taxes may not be paid due to foreclosures.

Each year, the District assesses available property tax revenue and determines the amount to be allocated to projects ranked as the highest priority for each zone, as described in Section 3.3 of the EIR.

(b) Concern regarding fiscal burden of this project due to budget constraints of city and county governments

As described in Section 3.3 of the EIR, the District has planned carefully for this project, and is working to ensure that sufficient funds will be available to construct each phase when they are needed. The project has been divided into four separate phases, to be implemented over time as additional property tax revenues are collected.

(c) Grants may no longer be available.

Project implementation is not dependent on grant funding. The District has planned carefully to ensure sufficient property tax revenues will be available when needed, as described above. However, selection of the more costly box culvert alternative (Alternative A) in Phases 2 through 4 would require a supplemental funding source to make up the difference in cost. If supplemental funding cannot be identified, then the Preferred Project would be constructed (Alternative B).

14-4 This comment questions the focus on J Street Drain rather than Oxnard Industrial Drain. As described in the Chapter 3.0 of the RDEIR, all projects with the District are subject to a rigorous CIP ranking and selection process. Where flood control facilities already exist, their current

condition (e.g., concrete deterioration) is evaluated. Potential solutions to known flood threats, or CIPs, are developed through consideration of a range of alternatives. All proposed CIPs are assigned points out of 100 possible, then ranked and prioritized in relation to one another. The OID improvements would require the acquisition of land resulting in a significant increase in cost for the improvements. Furthermore, improvements to the OID would not solve the flooding problems with relation to J Street Drain and Surfside III, as these are located within a separate watershed. The issue of OID flows backing up in the lagoon and into J Street Drain is addressed by the BEMP project feature, which involves grooming the beach sand berm to facilitate natural breaching of the lagoon and thus release of OID flows to the ocean. However, with implementation of the BEMP alone, flooding in the J Street Drain watershed would still occur due to the inadequate capacity of the J Street Drain, not the OID.

14-5 This comment suggests that it may be less expensive to purchase additional land to improve the OID than mitigate for the potential damage to and landscaping of Surfside III. However, no evidence is presented to support this suggestion. Furthermore, improving OID would not resolve flooding within the J Street Drain watershed, which would remain vulnerable to flood damages, estimated at $55.7 million (Section 3.1 of the EIR).

14-6 This comment questions why the J Street Drain watershed is not currently depicted on the FEMA 100-year digital flood insurance rate map (DFIRM). The current DFIRMs are based on pre-1984 hydrologic data and hydraulic analyses conducted over 25 years ago (FEMA 2010b). Since that time, Ventura County has experienced several years of record rainfall, including in 1995, 1998, and 2005 (VCWPD 2009). The DFIRMs are therefore based on data that do not reflect the trend of increasing rainfall since the 1980s. As a result, the District commissioned the 2005 URS study to proactively characterize current conditions and provide adequate flood protection before FEMA initiates a DFIRM update. Construction of the proposed project would be the first major step of a proactive effort to protect properties currently threatened with flooding from J Street Drain overflows, as shown on Figure 3.0-2a. Figure 3.0-2b depicts the Special Flood Hazards Area (SFHA), as mapped by FEMA[1]. These SFHA are related to flooding from wave activity, not from outfall from J Street Drain. Specific SFHA depicted on Figure 3.0-2b includes coastal flooding due to wave action (Zone VE) and coastal flooding due to waves filling up the lagoon. Please also see response 8-5.

14-7 This comment questions why other agencies do not assist with permitting a permanent outlet to the ocean if there is the threat of a 100-year flood. The District has coordinated with other governmental agencies with jurisdiction over the project. While these agencies understand the purpose and need for the project, they are compelled to adhere to their own regulations (e.g. Clean Water Act Section 404 compliance). Please refer to Letter 12, response to comment 12-24 for response regarding alternative outlet. A permanent connection may not be authorized under the Endangered Species Act and the Clean Water Act, due to the potential impact to endangered species. Additionally, extending the channel to the ocean would not be an easy solution. The channel would continually be blocked by sand as the lagoon is now. Keeping it "open" would most likely require frequent attention from maintenance personnel with heavy equipment. Continual maintenance using heavy equipment such as bulldozers would not be permitted by the regulatory agencies due to environmental concerns and restrictions, and would interfere with recreational use of the beach.

[1] DFIRMs 06111C0914E, 06111C0916E, and 06111C0918E dated January 20, 2010.

633 Lighthouse Way
Port Hueneme, CA 93041

November 2, 2011

Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, CA 93009-1600

Attention: Angela Bonfiglio Allen

Dear Ms. Allen:

I am a resident of Surfside III and my residence is at the low point of Lighthouse Way where it turns from and east / west bearing to a north / south bearing. I am writing again to express my concerns about the J Street Drain Project and particularly the inadequacy of the Recirculated Draft Environmental Impact Report. 15-1

My concerns encompass two specific areas, neither of which are mitigated by the new proposals.

First, mosquitoes are a continuing problem. Whereas you are providing studies that indicate the mosquitoes are coming from ½ mile away to the east, empirical observation will show them rising in clouds from the canal on a warm day. They find air currents onerous and hide in wind protected doorways, alcoves and gardens. They do not fly against a prevailing westerly wind to reach us. Current treatment methods for the mosquitoes are inadequate and when we question the vector control individuals who apply abatement chemicals they admit the stuff does not work because if it did, it would also kill the fish and birds. The mosquito infestation began concurrently with the completion of the pumping station that regulates the flow of Bubbling Springs. From that day forward a higher level of water was present in the canal encouraging mosquito breeding. The answer is not to widen the canal but rather to remove the backwater that is adjacent to Surfside III. 15-2

Second, on January 18th, 2010 my property was nearly flooded as the canal overflowed its banks. It took 50 minutes for the water to rise from the bottom of the drainage spillway (top of the canal wall) at the turn in Lighthouse Way to within 18 inches of my garage door. What saved us was our own vigilance by observing the water rising and calling the police who then notified the county 15-3

RECEIVED

personnel, just in time to artificially breach the berm. Had this event occurred at two in the morning we would certainly have been flooded. The new plan requires the simultaneous occurrence of three critical pre-conditions all of which create even more roadblocks to being able to protect our community than existed in January 2010. If we start with the premise that the backwater is too high and too far up the canal from the lagoon, we are creating conditions for a disaster because humans can only act so fast and there are multiple steps to go through to get approval to take mitigating actions. We are also subject to human error or bad judgment, to wit, while the canal was overflowing onto Surfside II in January 2010 water from Bubbling Springs was still being pumped into the canal, exacerbating an already dangerous situation. This, while Bubbling Springs had plenty of capacity to store additional water temporarily. 15-3 Cont.

I find it ironic that more concern is being exhibited for the goby and the plover, than for human beings. If their environment is endangered every agency is up in arms, but if our environment is endangered no one seems to care. A better way to handle the potential 100 year flood risk would simply be to construct a dam between the lagoon and the ocean that controls the water level year round. In such a way the water in the lagoon can be maintained at a level sufficient to promote an excellent environment for the native fish, plants and birds without having to back the water up the canal. Once the backwater is removed, we then revert to pre-pumping station conditions and the mosquito issue is abated. Finally, in the event of a major rain storm the dam can be opened mechanically to accommodate sufficient flow to the ocean to prevent inland flooding and to maintain a healthy level of water in the lagoon. This strategy would prevent the virtually complete draining of the lagoon, which certainly does occur when the berm is breached. 15-4

Further analysis of the RDEIR is attached.

Sincerely,

Al Galluzzo
805-271-0381

VCWPD FLOOD CONTROL MEASURES

1 INCREASED CAPACITY OF DRAIN

* Water seeks it's own level: Lagoon backwater will fill JSDP to the same level [elevation] as in lagoon.
* Increase in width and depth of JSDP [increased capacity] does not change level of water
* **TOTAL CAPACITY OF JSDP IS REDUCED BY THE VOLUME OF BACKWATER THAT ALREADY FILLS THE DRAIN.**
* VCWPD provides total capacity of JSDP [not actual capacity with backwater.]

INCREASED CAPACITY OF JSDP MAY PREVENT FLOODING **ALONG J STREET** DURING A FLOOD EVENT – ONLY IF THE CAPACITY OF THE CHANNEL - ABOVE THE LEVEL OF BACKWATER - PLUS PREVIOUSLY-ADDED STORMWATER IN THE CANAL – IS SUFFICIENT TO CONTAIN THE ADDITIONAL WATER FLOW.

INCREASED CAPACITY OF JSDP WILL NOT PREVENT FLOODING **IN BEACH AREAS** DURING ANY FLOOD EVENTS BECAUSE THE MAIN SOURCE OF MAJOR FLOODING IN THE BEACH AREA IS **INADEQUATE CAPACITY OF THE OXNARD INDUSTRIAL DRAIN [OID]** - AND NOT THE J STREET DRAIN. 15-5

2 OUTLET TO LAGOON: SEDIMENT TRANSPORT

* Erosion of channel to equilibrium slope similar to JSDP slope.
* Assumption of no additional erosion to fill in slope during non-breach periods. (Nature hates a vacuum.)
* **Process ONLY DURING BEMP BREACH PERIODS.**
* No change in berm re-formation 15-6

3 BEACH ELEVATION MANAGEMENT PLAN [BEMP]

* ONLY upon SIMULTANEOUS occurrence of THREE CRITICAL PRE-CONDITIONS
* **Dependence on multiple procedures: subject to unanticipated events; possible failure to prevent flood.**
  [mechanical, environmental or human problems]
* Jan. 18, 2010 flooding: Emergency Action Plan was in place! 15-7

AS NEITHER INCREASED CAPACITY OF JSDP NOR OUTLET MEASURES PROVIDE MITIGATION OF THE BACKWATER CONDITION, THIS EXPENSIVE "FLOOD CONTROL" PROJECT RELIES ON A MAN AND A TRACTOR MOVING SAND FOR FLOOD PREVENTION!!! 15-8

Letter 15
Al Galluzzo
November 2, 2011

15-1 This comment includes introductory remarks and general objection to the proposed project and EIR. This comment does not specifically address the adequacy of the analyses presented in the EIR, therefore no additional response is required.

15-2 This comment refers to concerns regarding the mosquito issue.

RE: Continuing problem. Observe "clouds" from canal on warm day.

Without verification by Ventura County Vector Control Program staff, it is unclear whether the insects observed were mosquitoes. As stated in the mosquito study. "Midges are a diverse group of small, non-biting flies closely related to mosquitoes. Many species have a strong resemblance to mosquitoes in size and appearance… [see Figures 3 and 4 of the study], and they often share the same aquatic habitats. Midges cannot bite and are not vectors for disease. Midge larvae are usually found in wetlands and marshes, as well as wastewaters including wastewater treatment plant lagoons and urban runoff channels (Grodhaus 1975); however, unlike mosquitoes, midge larvae do not breathe atmospheric air and often live attached to surfaces or in sediments. As a result, midges do not have the same restrictions as mosquito larvae and are often very abundant in the bottom sediments of open bodies of water. Midges often hatch simultaneously in blooms during the spring or summer, resulting in large masses of midges grouped together near wetlands and marshes. Many species are strongly attracted to artificial light sources and also use structures as resting sites. Thus, they can become extreme nuisances seasonally by massing in and around residences and other structures. Midges have a shorter life span than mosquitoes that entails finding a mate in order to lay eggs before they die (Grodhaus 1975)." Please refer to Letter 12, response to comment 12-33 for further response on mosquitoes.

RE: Current treatment is not working.

As discussed in Section 4.11 of the EIR, the Vector Control Program of the Ventura County Environmental Health Division monitors and controls mosquito breeding in flood control channels, drains, roadside ditches, catch basins, gutters, creeks, marshes, retention and detention basins, pools, and rain water depressions. The VCVCP staff continuously monitors and controls over 2,000 potential mosquito breeding sources to prevent and minimize exposure of the public to mosquito borne diseases. The VCVCP staff also responds to reports of mosquitoes or potential mosquito breeding sources from the public. The mission of the program is to suppress the population of mosquitoes to minimize the potential transmission of disease and reduce annoyance caused by these insects. The VCVCP staff conducts continuous encephalitis virus surveillance, including West Nile virus, and monitors the County areas for plague, Lyme disease, and hantavirus to prevent and minimize the exposure of the public to these diseases.

Please refer Letter 12, the first and sixth bullet point in response to comment 12-17 for response regarding vector control and mosquito abatement.

RE: Problem began with expansion of the pump station.

Please refer to Letter 12 response to comment 12-28, bullet point three for response.

RE: Rem ove backwater.

The District met with the USFWS on February 3, 2010 to discuss the feasibility of pumping water ponded in the J Street Drain during breach conditions. This approach would be difficult to authorize under the Endangered Species Act (ESA) because of the high potential for "take" of endangered tidewater goby, a fish that resides in the lagoon and the J Street Drain as far north as the Ventura County Railroad. Even if pump intakes are screened, gobies could become impinged on the screens and die. The pumping or continual removal of the backwater in the J Street Drain would not solve the original problem and impetus of the J Street Drain Project, which is the need for 100-year storm flow capacity. The dimensions of the current J Street Drain are not sufficient to contain the flow volume of a 100-year storm. The current J Street Drain would flood during a 100-year storm even if the outlet to the Pacific Ocean was open at the time and the channel was initially empty. Pumping water out of J Street Drain would reduce the size of Ormond Beach Lagoon, resulting in a reduction of foraging habitat for endangered California least terns and critical habitat for endangered tidewater goby. In addition, the act of pumping would cause tidewater gobies to become impinged on the pump screens, resulting in mortality of an endangered species, further violating the ESA.

Please refer to Letter 8, response to comment 8-3(d) for responses regarding implementation of the BEMP.

The main purpose and objective of the proposed project is the protection of property and the human environment from potential flooding during storm events. The increased capacity of the J Street Drain combined with the BEMP would minimize flooding risks during major storm events. For reasons stated previously in Letter 12, response to comment 12-24, pumping/removal of the backwater and construction of an alternative outlet that would require mechanical breaching would not be permitted under the Endangered Species Act.

15-3 RE: In a period of 50 minutes on January 18, 2010, flood water rose to within 18 inches of my garage door. Our vigilance saved our property, as the emergency was reported to the police, and the District responded by breaching the lagoon. If this had happened in the middle of the night, our property would have been flooded.

In 2009, the U.S. Army Corps of Engineers dredged 2,884,040 cubic yards of sand from the Channel Islands Harbor and Port Hueneme, more than half a million cubic yards more than the next largest dredging event in 1977 (2,370,000 cy). This sand was deposited on Hueneme Beach south of the southeast jetty. The combined processes of waves and currents create a longshore current that transports sand south along the shoreline. Heavy surf in December 2009 and January 2010 pushed this sand onto the Ormond Beach, building up the height of the berm in front of the lagoon such that runoff generated during a small (less than two-year event) storm could not overtop it. This condition had not been observed at any time since 1992, when the USFWS ordered the District to cease and desist maintaining an open outlet between the J Street Drain and the ocean. As a result of this new and unprecedented condition, the District developed the BEMP to monitor the height of the sand berm prior to predicted storms of any size, and groom the beach if the berm is observed to exceed a height of 6.5 feet NGVD. This would allow the lagoon to breach naturally in response to storm water inflow. Grooming would occur within 72 hours before storm onset to ensure proactive response to potential flooding.

RE: The new plan requires the simultaneous occurrence of three critical pre-conditions, increasing the potential for human error.

Please see responses 8-3(d) and 12-11 through 12-16.

15-4 Construct a dam between the lagoon and the ocean that controls the water level year round and preserves natural habitat.

Construction of a dam would not meet the project objective of increasing the capacity of J Street Drain. With a dam in place, the channel capacity would remain too small, and storm runoff greater than a 10-year event would overflow the channel walls and flood adjacent properties.

15-5 This comment outlines bullet points refuting the conclusions regarding the need to increase drain capacity.

RE: Water seeks its own level: Lagoon backwater will fill the drain to the same level (elevation) as in lagoon.

Please refer to Letter 12, response to comment 12-4 for response.

RE: Increase in width and depth of the drain will not change the level of water within the drain.

Please refer to Letter 12, response to comment 12-4 for response.

RE: The District provides total capacity of the drain (not actual capacity with backwater).

Please refer to Letter 12, response to comment 12-5 for response. The hydrologic modeling that was conducted for the proposed project in 2008 factored in the existing hydrologic conditions of the area, which includes existing backwater conditions. The capacity determination of the drain included the existing conditions.

RE: Increased capacity of the drain may prevent flooding along J Street only if the capacity of the channel (above the level of backwater plus the previously added storm water in the canal) is sufficient to contain additional water flow.

The hydrologic modeling that was conducted for the proposed project in 2008 includes the existing hydrologic conditions of the area, which includes existing backwater conditions. The capacity determination of the drain included the existing conditions. The Coastal Engineering Reports are include in Appendix C and discussed in Section 4.3 of the EIR. Please see Letter 12, response to comment 12-4 above for further discussion. The purpose of the proposed project is to increase the ability of the channel to contain additional storm water flow to prevent flooding. The BEMP is proposed as part of the project to maintain a safe elevation of the sand berm so that the berm will breach when the water in the lagoon reaches an elevation of 6.5 feet NGVD (flood stage is 7.0 feet NGVD). When the berm breaches, the water will flow to the ocean instead of backing up in the channel resulting in flooding.

RE: The main source of flooding is the OID in the beach areas and not the J Street Drain.

The existing capacity of the J Street Drain is 500-600 cfs, which is less than the 50- and 100-year frequency flood flows of 1,649 and 2,059 cfs, respectively (URS 2005). This drain flow is composed entirely of urban runoff. The OID channel is currently rated by the District as having an approximate flow capacity of 2,900 cfs. Under current conditions, the lagoon receives inflow throughout the year from the Hueneme Drain (pumped to the J Street Drain), J Street Drain, and OID. The backwater issues in the OID result in inland flooding near the paper plant during storm events, which is addressed by the BEMP. However, flooding in the project area (J Street Drain watershed) is due to the inadequate capacity of the J Street Drain, not the OID. Please refer to Letter 12, response to comment 12-6 for further discussion.

15-6 This comment outlines bullet points summarizing disagreement with the sediment transport study.

RE: Erosion of channel to equilibrium slope similar to drain slope.

Section 3.0 of the EIR describes the characteristics of the proposed project. The EIR states that because the concrete lined portion of the channel invert would be lowered about four feet to create the required capacity, excavation would continue a short distance downstream towards the ocean. The finished invert would be daylighted via an earthen ramp to the lagoon at a 10:1 slope over a distance of up to approximately 40 feet from the end of the existing concrete. A ten-foot-thick layer of four-ton rock riprap would be placed horizontally beneath the earthen ramp at the end of and at the same elevation as the concrete drain bottom to dissipate energy flow. It is anticipated that during the first few natural lagoon breaching events following Phase 1 construction, the movement of water (tidal and drain flow) would result in an equilibrium elevation within the channel transition area, between the end of the concrete channel and the Ormond Beach Lagoon annual breach location. Because the lagoon bottom elevation is approximately at the same elevation as the end of the existing concrete channel, there is the potential that water will be ponded at the point where the lowered channel meets the existing lagoon bottom elevation when the lagoon is breached during the first few storms. Please refer to Appendix C, J Street Drain Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon (dated August 2011), for a discussion regarding the sediment transport study and conclusions of the study.

RE: Assumption of no additional erosion to fill slope during non-breach periods.

The sediment transport study prepared for the proposed project discussed potential erosion and buildup of sediment in the channel. The sediment transport study is included in the EIR in Appendix C and summarized in Section 4.3 of the EIR. Based on the analysis, a total inflowing sediment load potential of 17 tons per year was calculated for the J Street Drain and Hueneme Drain. This load is minimal compared to the total load of 5,000 tons leaving the drains in two consecutive 2-year storm events. The proposed project would therefore not result in an increase in sediment deposition within the lagoon downstream of the end of the concrete channel. As sediment is brought in by the ocean it is also removed.

RE: The sediment transport process occurs only during BEMP breach periods.

Sediment transport occurs both during storm events and as a result of the natural tidal action as ocean waves enter the area and recede. Sediment transport does not occur to a significant degree while the lagoon is enclosed by the beach sand berm.

RE: No change in berm re-formation.

The natural action of the ocean waves results in the build up of a sand berm on the beach, enclosing the lagoon and disconnecting it from the ocean. This will not change with project implementation, as it is a natural beach process. The purpose of the BEMP is to monitor and groom the sand berm elevation when it exceeds a height of 6.5 feet NGVD, so that flooding can be prevented.

15-7 This comment outlines bullet points expressing concern over the BEMP.

RE: The BEMP will only occur when three critical conditions are met.

Please see response 15-3 above.

RE: Dependence on multiple procedures: subject to unanticipated events, possible failure to prevent flood.

Please see response 15-3 above.

RE: January 18, 2010 flooding: Emergency Action Plan was in place.

Please see response 15-3 above. Because the Emergency Action Plan would not have been activated by the conditions observed on January 18, 2010, this plan was replaced with the BEMP. The BEMP was designed to prepare for the reoccurrence of the combination of the outlet being closed, the sand berm elevation being above a high threshold level, and a storm being forecast.

15-8. As discussed previously, the removal of backwater is not practical due to endangered tidewater goby living in the channel. Before 1992, the District maintained an open outlet between the J Street Drain and the ocean. The USFWS ordered the District to cease and desist this practice in 1992. As noted in Letter 8, response to comment 8-5(b), the BEMP alone would not be sufficient in storms greater than the 10-year event even under breach conditions, as flows would overtop the existing undersized J Street Drain channel before they could reach the ocean. Therefore, the proposed changes to the drain in addition to the BEMP are necessary to prevent flooding during storms larger than the 10-year and up to the 100-year event. Implementation of the proposed project and BEMP would ensure water flow through the breach and into the ocean. The BEMP would be included as part of the routine maintenance activities for the J Street Drain.

November 3, 2011

Ventura County Watershed Protection District
Attn: Angela Bonfiglio Allen
800 South Victoria Ave.
Ventura, CA 93009-1600

Dear Ms. Allen:

We are residents of Surfside III Condominium Complex in Port Hueneme, located adjacent to the J Street drain. As residents, we feel compelled to express our deep concern that the Recirculated Draft Environmental Impact Report (RDEIR) still does not adequately address the potential flooding issue of our homes. We therefore respectfully submit the following attached comments regarding the inadequacy of your analysis. 16-1

We feel that if the current drain design is implemented, the County should seriously consider erecting some sort of small flood wall along the Surfside III property to prevent immediate flooding due to a delayed or ineffective human effort to timely groom the beach to an appropriate sand berm level allowing breeching. Relying 100% on human monitoring of the critical level does not provide a lot of comfort to any of the Surfside III homeowners. 16-2

Sincerely,

William & Michelle Shanks

William & Michelle Shanks
966 Lighthouse Way
Port Hueneme, CA 93041
805.488.0113

PROBLEMS WITH JSDP and BEMP

* **WINTER WATER-LEVEL OF LAGOON IS AT APPROX. 4-6' [NGVD] ELEVATION. (Reported up to 7.6 [NGVD]). BACKWATER WILL FILL THE JSDP TO THAT LEVEL REGARDLESS OF DEPTH OR WIDTH OF THE CANAL].** 16-3

* **TOTAL CAPACITY OF JSDP IS REDUCED BY THE VOLUME OF BACKWATER THAT ALREADY FILLS THE DRAIN DURING WINTER CONDITIONS.** 16-4

* INCREASED CAPACITY OF JSDP MAY PREVENT FLOODING ALONG J STREET DURING A FLOOD EVENT – IF THE CAPACITY OF THE CHANNEL - ABOVE THE LEVEL OF BACKWATER AND PREVIOUSLY-ADDED STORMWATER IN THE CANAL – IS SUFFICIENT TO CONTAIN THE ADDITIONAL WATER FLOW. IF NOT, FLOOD CONTROL WILL NOT BE PROVIDED AS A RESULT OF THE INCREASED CAPACITY, BUT **ONLY AS A RESULT OF THE INITIATION OF BEMP PROCEDURES.** 16-5

* INCREASED CAPACITY OF JSDP WILL NOT PREVENT FLOODING IN BEACH AREAS DURING ANY FLOOD EVENTS BECAUSE [as VCWPD admitted at the public meeting] THE MAIN SOURCE OF MAJOR FLOODING IN THE BEACH AREA IS **INADEQUATE CAPACITY OF THE OXNARD INDUSTRIAL DRAIN [OID]** - AND NOT THE J STREET DRAIN. THIS OID FLOODING WILL ALSO BE PREVENTED **ONLY AS A RESULT OF BEMP PROCEDURES.** 16-6

* **BEMP INITIATION IS ALLOWED ONLY IF THREE CRITICAL CONDITIONS ARE MET; ALL THREE ARE REQUIRED SIMULTANEOUSLY:**
  + **Lagoon fully enclosed by sand berm**
  + **Berm elevation is observed to be above 6.5 ft.NGVD [8.9 ft.NAVD]**
  + **72 hour prediction of major storm** 16-7

IN THE EVENT OF A FAILURE IN ANY PHASE OF THE BEMP PROCESS:
* **Unanticipated rain event [no 72-hr prediction of a major storm]**
* **Water-level in canal at maximum [previous rainfall]**
* **Malfunction in the ALERT system; Communication delay**
* **Equipment failure; Transport problems**
* **Environmental conditions**
* **Human errors** 16-8

SSIII and neighboring property WILL BE AT RISK OF FLOODING as had occurred on Jan. 18, 2010 - with an emergency plan in place. 16-9

JSDP WON'T PROVIDE RELIABLE FLOOD CONTROL BECAUSE OF BACKWATER, INADEQUATE CAPACITY OF OID, AND REASONABLE POSSIBILITY OF FAILURE OF ANY PRE-CONDITION OR PROCEDURE INVOLVED IN BEMP. 16-10

Letter 16
William and Michele Shanks
November 3, 2011

16-1 This comment includes introductory remarks and general opposition to the proposed project. This comment does not specifically address the adequacy of the EIR; therefore, no further response is required.

16-2 This comment requests a floodwall along the Surfside III property boundary to address possible human error in implementing the BEMP. A floodwall along Surfside would not be feasible because it would block all the inlets to the drain draining from that side, resulting in additional flooding. Please refer to Letter 12, responses to comments 12-11 and 12-13 regarding berm elevation monitoring.

16-3 This comment states that backwater would fill the reconstructed channel regardless of its new depth or width. Please refer to Letter 12, response to comment 12-4 for response.

16-4 This comment states that the capacity of J Street Drain is reduced by the volume of backwater that already fills the drain during winter conditions. Please refer to Letter 12, response to comment 12-5 for response. The hydrologic modeling that was conducted for the proposed project in 2008 includes the existing hydrologic conditions of the area, which includes existing backwater conditions. The capacity determination of the drain included the existing conditions.

16-5 This comment states that flood control will be provided not by the increased channel capacity but by the BEMP implementation. The hydrologic modeling that was conducted for the proposed project in 2008 includes the existing hydrologic conditions of the area, which includes existing backwater conditions. The capacity determination of the drain included the existing conditions. The Coastal Engineering Reports are include in Appendix C and discussed in Section 4.3 of the EIR. Please see Letter 12, response to comment 12-4 above for further discussion. The purpose of the proposed project is to increase the ability of the channel to contain additional storm water flow to prevent flooding. The BEMP is proposed as part of the project to maintain a safe elevation of the sand berm so that the berm will breach when the water in the lagoon reaches an elevation of 6.5 feet NGVD (flood stage is 7.0 feet NGVD). When the berm breaches, the water will flow to the ocean instead of backing up in the channel, thus preventing flooding. Please also see response 8-5(a) for details about channel capacity.

16-6 This comment states that the main source of flooding is the OID in the beach areas, not the J Street Drain. Please refer to Letter 12, comment 12-6 for further discussion.

16-7 This comment summarizes the criteria for implementation of the BEMP. This comment does not specifically address the adequacy of the analysis presented in the EIR; therefore, no additional response is required.

16-8 This comment outlines bullet points refuting the ability of the BEMP to prevent flooding.

- Unanticipated rain event (no 72-hour warning)
- Water level in canal is at maximum from previous rain fall
- Malfunction in ALERT system. Communication delay
- Equipment failure

- Environmental conditions
- Human error

Please see responses 8-3(d) and 12-11 through 12-16.

16-9. This comment states that Surfside III and neighboring properties will remain at risk of flooding, as it was on January 18, 2010. Please refer to Letter 15, response to comment 15-3 regarding emergency breaching of the berm on January 18, 2010.

16-9 This comment summarizes the concerns identified in comments 16-2 through 16-9 above. Please refer to the responses provided above. No further response is required.

November 5, 2011

Ventura County Watershed Protection Dist.
800 South Victoria Avenue
Ventura, Ca 93009-1610

Attn: Angela Bonfiglio Allen

Dear Ms. Bonfiglio Allen:

This is to inform you that my husband and I are against the proposed expansion of the J Street Canal. 17-1

I attended your presentation at Surfside III and did not walk away from that meeting convinced that this expansion is necessary. We do not understand the urgency to expand the canal, since the chances of a 100-year flood are slim to none at best and we believe the project will definitely affect homeowners at Surfside III adversely. Not only are you encroaching on our properties and removing many of our old trees, but we are in Building 6 and fear the pile driving during construction will damage our building, not to speak of the interruption of our quality of life for a year—or more. We recall the construction of the flood station which went on much longer than anticipated. 17-2

We believe the millions being spent on this project would be better utilized elsewhere. 17-3

Sincerely,

Patricia Dileski

Patricia Dileski
828 Bluewater Way
Port Hueneme, CA 93041

Letter 17
Patricia Dileski
November 5, 2011

17-1 This comment states general opposition to the proposed project. This comment does not specifically address the adequacy of the analysis presented in the EIR; therefore, no further response is required.

17-2 This comment states concerns regarding the necessity of the proposed project since the area is not in a 100-year flood plain and will result in potential damage to the Surfside III property and removal of trees.

Please refer to response to Letter 8, response to comment 8-5 regarding the need for the proposed project (re; the project area is located within a 100-year floodplain). Please refer to Letter 8, response to comment 8-7 regarding property damage.

As identified in Letter 21b, response 2 in Appendix L of the EIR, Mitigation Measure VIS-2 would require the replacement of the removed trees and large shrubs within the Surfside III property at a 1:1 ratio and would reduce the construction and operational impact to below a level of significance. Mitigation Measure VIS-3 would require temporary visual screening. Mitigation Measure VIS-4 has been added since the RDEIR was circulated. This measure will screen views of the Oxnard Waste Water Treatment Plant.

VIS-4 Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.

Replacement trees and shrubs would be the same species as those removed, or substitute species if requested by the Surfside III Homeowner's Association. Replacements would be planted on Surfside III property; vegetation currently within the District right-of-way would not be replaced. The table below lists trees identified for removal from the east edge of the Surfside III property boundary, their height as of March 2010, expected growth rate, the estimated number of growing seasons before replanted trees reach the original height (based on the expected growth rate), and the number of growing seasons before trees currently over 20 feet tall would reach a height of 20 feet after planting (based on the expected growth rate). A height of 20 feet is assumed to provide visual shielding for both one- and two-story units. As shown, it is expected that *Eucalyptus sideroxylon, E. camaldulensis, E. polyanthemos,* and *Pinus radiata* trees would gain a height of 20 feet after a maximum of 5.7 years, assuming they are three feet tall when planted. *Myoporum laetum* shrubs would require 5.7 to 8.5 years, depending on their growth rate (two versus three feet per growing season). Of the 54 trees and shrubs identified for removal, 15 are less than 20 feet tall and would require anywhere between one and nine years for the replacements to reach the original heights, assuming they are three feet tall when planted. Replacement of existing trees and shrubs on Surfside III property is expected to provide adequate mitigation for temporary construction impacts.

Tree ID[1]	Species	Current Height (feet)[1]	Growth Rate[2] (inches/season)	Seasons to Current Ht.[3]	Seasons to 20 feet[4]
2	*Myoporum laetum*	14	24 to 36	3.7 to 5.5	
4	*Myoporum laetum*	6	24 to 36	1 to 1.5	
5	*Myoporum laetum*	6	24 to 36	1 to 1.5	
6	*Trachycarpus fortunei*	8.5	24 to 36	1.8 to 2.75	
7	*Eucalyptus sideroxylon*	53	36+	Up to 16.7	Up to 5.7
8	*Eucalyptus camaldulensis*	53	36+	Up to 16.7	Up to 5.7
10	*Eucalyptus camaldulensis*	53	36+	Up to 16.7	Up to 5.7
11	*Eucalyptus camaldulensis*	53	36+	Up to 16.7	Up to 5.7
12	*Myoporum laetum*	14	24 to 36	3.7 to 5.5	
14	*Myoporum laetum*	14	24 to 36	3.7 to 5.5	
21	*Eucalyptus camaldulensis*	60	36+	Up to 19	Up to 5.7
23	*Eucalyptus camaldulensis*	60	36+	Up to 19	Up to 5.7
24	*Eucalyptus sideroxylon*	14 36+		Up to 3.7	
28	*Myoporum laetum*	9	24 to 36	2 to 3	
29	*Eucalyptus sideroxylon*	50	36+	Up to 15.7	Up to 5.7
30	*Eucalyptus camaldulensis*	60	36+	Up to 19	Up to 5.7
34	*Eucalyptus camaldulensis*	60	36+	Up to 19	Up to 5.7
36	*Eucalyptus polyanthemos*	38	36+	Up to 11.7	Up to 5.7
39	*Pinus radiata*	40	36+	Up to 12.3	Up to 5.7
41	*Eucalyptus camaldulensis*	45	36+	Up to 14	Up to 5.7
43	*Myoporum laetum*	25	24 to 36	7.3 to 11	5.7 to 8.5
44	*Myoporum laetum*	25	24 to 36	7.3 to 11	5.7 to 8.5
45	*Eucalyptus camaldulensis*	55	36+	Up to 17.3	Up to 5.7
46	*Myoporum laetum*	25	24 to 36	7.3 to 11	5.7 to 8.5
48	*Myoporum laetum*	25	24 to 36	8.3 to 12.5	5.7 to 8.5
49	*Myoporum laetum*	9	24 to 36	3 to 4.5	
50	*Myoporum laetum*	25	24 to 36	8.3 to 12.5	5.7 to 8.5
51	*Myoporum laetum*	30	24 to 36	10 to 15	5.7 to 8.5
52	*Myoporum laetum*	20	24 to 36	6.7 to 10	5.7 to 8.5
53	*Myoporum laetum*	20	24 to 36	6.7 to 10	5.7 to 8.5
54	*Myoporum laetum*	30	24 to 36	10 to 15	5.7 to 8.5
56	*Myoporum laetum*	23	24 to 36	7.7 to 11.5	5.7 to 8.5
57	*Myoporum laetum*	12	24 to 36	4 to 6	
64	*Myoporum laetum*	21	24 to 36	7 to 10.5	5.7 to 8.5
65	*Eucalyptus camaldulensis*	50	36+	Up to 16.7	Up to 5.7
66	*Myoporum laetum*	20	24 to 36	6.7 to 10	5.7 to 8.5
67	*Myoporum laetum*	20	24 to 36	6.7 to 10	5.7 to 8.5
70	*Myoporum laetum*	25	24 to 36	8.3 to 12.5	5.7 to 8.5
71	*Eucalyptus camaldulensis*	65	36+	Up to 21.7	Up to 5.7
74	*Eucalyptus camaldulensis*	12	36+	Up to 4	
77	*Myoporum laetum*	25	24 to 36	8.3 to 12.5	5.7 to 8.5
78	*Myoporum laetum*	30	24 to 36	10 to 15	5.7 to 8.5
79	*Myoporum laetum*	20	24 to 36	6.7 to 10	5.7 to 8.5
80	*Myoporum laetum*	18	24 to 36	6 to 9	
82	*Myoporum laetum*	18	24 to 36	6 to 9	
83	*Eucalyptus sideroxylon*	65	36+	Up to 21.7	Up to 5.7
85	*Myoporum laetum*	22	24 to 36	7.3 to 11	5.7 to 8.5
88	*Eucalyptus camaldulensis*	65	36+	Up to 21.7	Up to 5.7
89	*Myoporum laetum*	21	24 to 36	7 to 10.5	5.7 to 8.5
94	*Myoporum laetum*	20	24 to 36	6.7 to 10	5.7 to 8.5
95	*Myoporum laetum*	25	24 to 36	8.3 to 12.5	5.7 to 8.5
97	*Myoporum laetum*	10	24 to 36	3.3 to 5	

Tree ID[1]	Species	Current Height (feet)[1]	Growth Rate[2] (inches/season)	Seasons to Current Ht.[3]	Seasons to 20 feet[4]
102	*Eucalyptus sideroxylon*	42	36+	Up to 14	Up to 5.7
103	*Myoporum laetum*	18	24 to 36	6 to 9	

1. *Tree Report: Ventura County Watershed Protection District: J Street Drain-South Surfside Drive* prepared by LAJohnny Consulting Arborist for Jordan, Gilbert and Bain Landscape Architects, Inc. March 1, 2010.
2. Urban Forest Tree Institute Online Tree Selection Guide: http://selectree.calpoly.edu
3. Assumes plants are three feet tall when planted.
4. Years to 20 feet is provided for those trees currently at or above a height of 20 feet, which is the height assumed to shield views from both one- and two-story units.

17-3 This comment states that the money spent on this project would be "better utilized elsewhere." This comment does not specifically address the adequacy of the EIR; therefore, no additional response is required. However, for information on the District's project selection and funding process, please see Section 3.3 of the EIR.

PLEASE CONFIRM RECEIPT

431 South Evergreen Drive
Ventura, Ca 93003
smithsamantha@yahoo.com
November 6, 2011

Ventura County Watershed Protection District
Attention: Angela Bonfiglio Allen
800 South Victoria Avenue
Ventura, CA 93009-1610
Street Drain Comments@vcwatershed.net
Fax 805- 654-3330

Subject: Public Comment for the RDEIR report regarding the I St. Drain Project

Dear Sir or Madam:

4.1-20-21 of the RDEIR states "Mitigation measure VIS-2 would require the replacement of the removed trees and large shrubs within the Surfside III property at 1:1 ratio and would reduce the operational impact to below the level of significance."

THIS IS ABSOLUTELY NOT TRUE. Who determined this and how was it determined? Were the residents of Surfside III asked? Here are you going to really mitigate the removal of mature landscape with expensive foliage that blocks the view of the water treatment plant? I see the 1:1 ratio replacement mitigation measure, but what are you going to replace a 52 foot ,some even 65 foot, Eucalyptus tree with? I contend that you can't replace the present landscape as one the reason they are there is accomplished which is to block the view of the water treatment plant. I take issue with the statement 4.1-20-21 that mitigation would reduce operational impact to below the level of significance. I expressed this before and am bringing it up again because you are stating a mismatch in the RDEIR report. Please tell it like it is. There will be a VERY significant impact for the homeowners and residents for many years to come. 18-1

In your report on page 4.1-6 you refer to picture 4.1-2. This does not show Surfside III's present tree lined J St Drain with the treatment plant not visible due to this foliage. This picture you refer to shows the I Street Drain at Redwood from Northbound I Street which is bare of foliage. I find this very deceptive not to show the beautiful trees and shrubs at Surfside III that the picture is supposed to be of. You need to have proper pictures to whomever is reviewing the report can see what you are talking about removing. Also you need to spell out OWWTP in this section so people know it is a water treatment plant you are talking about when reading your report. It is not something any one would want to look at. Not showing the pictures of the trees at Surfside III and referring readers to a picture of a bare I Street drain needs to be corrected. 18-2

In 4.3-9, Why did you strike out "Due to backwater effect resulting from the lagoon" when stating that the existing capacity of the I Street Drain is less than the 50-100 year frequency? Originally you stated that the backwater effects resulting from the lagoon reduced the capacity of the J Street Drain to 500-600 cfs. Wouldn't recognizing this effect and not deleting it from your report suggest other ways to solve the flooding problem, like deal with the backwash effect? If the berm did not restrict the flow of the drain water flowing out to the ocean wouldn't the flooding problem be solved without spending all this money widening the drain whose construction will probably damage Surfside III buildings due to the soil being subject to liquefaction, remove many of our trees significantly impacting our residents as described above, and add to the surface area of breeding grounds for mosquitoes which are plaguing Surfside III residents. Having to maintain a fish pond instead of allowing the J Street Drain to drain into the ocean with the resulting damage this project will do to Surfside III property is not right. The berm is breached naturally during storms and the fish find their way elsewhere. The Watershed Protection District needs to take issue with the Fish and Game Department. The Watershed Protection District keep telling us that they have to do the widening 18-3 18-4

NOV 8 2011

06/17/2007 19:55 8056485433 TERRY SMITH PAGE 02/02

because of the fish. It doesn't make sense to have built a drain that collects all the water from Port Hueneme and Oxnard, and then not be able to let it drain into the ocean as it should be allowed and instead do a project that will damage our properties. 18-4 Cont.

The fact that you claim that the primary source of mosquitoes is from the Ormond Beach Lagoon does not refute that fact that the mosquitoes from the J Street Drain are biting Surfside III residents and that a widened drain will provide more surface area for mosquitoes to breed. Also, there will be more standing water when there are low rainfall conditions. If you look at your picture of the drain 4.1-2 in your report there is standing water already. Furthermore, as stated on page 4.3-26 "Because the existing lagoon bottom elevation is approximately at the same level as the end of the existing concrete channel, there is potential that water will pond for varying period of time at the point where the lowered concrete channel meets the existing lagoon bottom elevation." This would exacerbate the mosquito problem. 18-5

I am especially concerned about your comments on ES15 under Noise and Vibration that according to Ventura County Noise Standard, "Daytime standards are not applicable to residential areas, as they are not defined as noise-sensitive receptors between 7:00 AM and 7PM." I personally know many people who live in Surfside III who are retired and are home during the day, and some sleep in until 10PM or after. And one doesn't have to be sleeping to be irritated by noise. It is deceptive again to have removed what was originally stated in the DEIR as follows: "Noise levels generated from the construction equipment expected to be used will likely exceed the 55 dBA Leq daytime City standard for residential areas. This noise would impact sensitive land uses in the vicinity of the J Street Drain, including the Surfside III Condominiums" And before you said the impact was "significant and unavoidable" and now you are saying "Less that significant with implementation of identified mitigation." Put the truth back into the EIR report that the noise would impact Surfside III significantly. 18-6

Sincerely,

Terry Ann Smith

Terry Ann Smith
Owner 769 Reef Circle, Surfside III
805-340-0343

Letter 18
Terry Ann Smith
November 6, 2011

18-1 This comment refutes the determination regarding implementation of Mitigation Measure VIS-2 and refers to the comment letter submitted previously on the 2009 EIR.

Please refer to Letter 17, response to comment 17-2 for response regarding implementation of Mitigation Measure VIS-2 and addition of VIS-4.

18-2 This comment expresses concern that Figure 4.1-2 referenced on page 4.1-6 does not show vegetation along the east boundary of the Surfside III property, which screens views of the Oxnard Waste Water Treatment Plant (OWWTP – please note this acronym is also defined in the Acronyms and Abbreviations section at the beginning of the EIR). Figure 4.1-2 is an aerial view of Surfside III, J Street Drain, and the OWWTP. On the aerial photo can be seen a line of landscaped vegetation between the Surfside III community and the OWWTP. This reference was intended to orient the reader geographically to the location of the landscaping in relation to residences and the OWWTP. Photograph 7 in Section 4.1 shows a ground view of the large trees along the east boundary of Surfside III, as seen from the lagoon.

A description of the existing setting is provided on page 4.1-6. As shown in Figure 4.1-2, a row of shrubs, mainly myoporum, and eucalyptus trees along the northeast boundary of the Surfside III property shields condominium residents on the east-facing sides of Buildings 15, 16, and 17 and users of the park immediately east of these buildings from views of the J Street Drain and the OWWTP east of the J Street Drain. Residents in Building 7, located nearest to the proposed project in the vicinity of the OWWTP, are shielded from the industrial view by a 100-foot-long section of approximately 14-foot-tall mesh-screen chain link fence on the west edge of the OWWTP property. This fence screens the view of the OWWTP maintenance yard. The remainder of the OWWTP south of the maintenance yard is screened by trees and shrubs along the plant's west property boundary. Sparser vegetation along the east boundary of the Surfside III property from Building 7 southward forms an inconsistent visual barrier, and residents in Buildings 6 and 7 are able to see the J Street Drain from their dwellings.

18-3 This comment questions text revisions in the RDEIR regarding channel capacity. The changes on page 4.3-9 were made to more accurately represent the existing conditions of the drain and provide more specific data regarding the capacity of the drain according to the *Final Report: J Street Drain Channel Improvement Study and Preliminary Design* prepared by URS in November 2005. The report takes into consideration the existing backwater effect. The capacity of the drain was not reduced to 500-600 cfs as a result of the backwater; rather, the drain's capacity is 500-600 cfs with and without the backwater effect.

18-4 This comment questions the need to enlarge the channel and urges the District to challenge the California Department of Fish and Game regarding endangered species protection. The comment also states that it does not make sense to have a flood control channel that cannot drain to the ocean. Please see responses 8-4(a) and 15-8.

18-5 This comment raises concerns about mosquitoes and ponding at the channel terminus during a breach condition. Please refer to Letter 8, response to comment 8-6 regarding the mosquito issue, and 15-6 regarding development of a new equilibrium elevation in the lagoon within the first few storms following construction completion. The backup relating to the elevation difference

between the reconstructed concrete channel and the lagoon would occur during the rainy season, when mosquito breeding is minimal.

18-6 This comment raises concerns about revisions to the noise and vibration thresholds. Please refer to Letter 6, response to comment 6-12 regarding the noise standards.

Nov 07 11 02:54p marion kelemen 805-986-0303 p.1

TO: ANGELA BONFIGLIO-ALLEN **FAX: 654-3350**

RE: INADEQUACY OF RDEIR
PROPOSED OUTLET AT ORMOND BEACH LAGOON

Draft Sedimentation Report: [March, 2008] states "... significant range of uncertainty (**plus or minus 100%**) associated with this result ..." 19-1

Draft Final Sediment Transport Study: Executive Summary: [August 2011]
* "... concern that water will be ponded for a long time where the lowered channel meets the existing logoon bottom elevation."
* VCWPD "intends to maintain a berm elevation..."
* VCWPD "has maintained the berm recently at elevation 6,5 feet +..."
* **However, during the time that the berm is re-built ... the outlet of J Street will be inundated. In addition, the channel outlet will be inundated at least twice per day even after berm breaching and erosion of the bottom material in the lagoon."** 19-2

1 THIS IS AN ADMISSION THAT NEITHER THE JSDP - NOR THE OUTLET AND THE POSSIBLE FORMATION OF THE EQUILIBRIUM SLOPE; NOR "MAINTAINING" THE BERM (UNDER CURRENT BEMP CONDITIONS) WILL PREVENT INUNDATION OF THE OUTLET AND MITIGATION OF THE BACKWATER CONDITION. 19-3

Transport Study 3.4 Discussion:
* The probabilities of required floods to possibly form a slope are stated as 50%; 25%; 20%; and 50%. AND "**When a berm is present, the channel is also likely to be inundated to some extent over a long period, from lagoon backwater.**" 19-4

2 THIS MEANS THAT THERE IS ONLY A POSSIBILITY OF SLOPE FORMATION TO DRAIN THE CHANNEL DURING BREACH CONDITION AND THE LIKELY STATE OF CHANNEL INUNDATION DURING NON-BREACH CONDITION - WHICH IS THE NORMAL CONDITION OF THE CANAL. 19-5

Transport Study 4.0 Conclusions
"In a maintained breach scenario (under BEMP requirements) and following either storm series .. the J Street outlet would likely only be inundated until the lagoon elevation exceeds elevation 6.0 feet ..." 19-6

3 THIS CONCLUSION VERIFIES THAT ONLY IF BEMP REQUIREMENTS ARE MET - INCLUDING BERM ELEVATION OBSERVED AT 6.5 + FEET ELEVATION ; AND ONLY IF THE REQUIRED STORM CONDITIONS OCCUR AND CREATE THE SLOPE; AND ONLY IF THE LAGOON ELEVATION EXCEEDS 6 FEET, WILL THE J STREET DRAIN OUTLET NOT BE INUNDATED. THIS IS AN ABSOLUTELY UNREASONABLE SET OF CONDITIONS ON WHICH TO BASE A PROJECT THAT IS BEING PRESENTED TO THE PUBLIC AS A FLOOD-CONTROL PROJECT!!! 19-7

Marion Kelemen
962 Lighthouse Way
Port Hueneme, CA 93041

Letter 19
Marion Kelemen
November 7, 2011

19-1 This comment reiterates a statement from the sediment transport study. This comment does not specifically address the adequacy of the analysis provided in the EIR; therefore no further response is required.

19-2 This comment summarizes the Executive Summary in the 2011 Draft Sediment Transport Study and states "this is an admission that neither the JSDP (proposed project), nor the outlet and the possible formation of neither the equilibrium slope, nor maintaining the berm will prevent inundation of the outlet and mitigation of the backwater condition." However, this quote has been taken out of context in this comment.

The following is the excerpt from the Executive Summary quoted in the comment:

"Once the lagoon bottom elevation has been reduced to the elevation of the concrete channel outlet between the channel outlet and the designated berm breach location, it is not expected that it will fill in again because the sediment load from the J Street Drain watershed is very low. However, during the time that the berm is re-built by the natural action of the ocean waves, the outlet of J Street will be inundated. In addition, because the tidal cycle peaks twice each day and the peak tide exceeds the channel outlet elevation, the channel outlet will be inundated at least twice per day even after berm breaching and erosion of the bottom material in the lagoon."

The Draft Sediment Transport Study concluded that the proposed improvements to J Street Drain will lower the existing channel outlet to an elevation of 0.5 feet NGVD 1929. The current Ormond Beach Lagoon bottom at the channel outlet is at elevation 3.0 feet ±. Without excavating a drainage outlet in the lagoon, the lagoon bottom will be higher than the channel outlet after project construction. This will create a condition where J Street Drain will not be able to completely drain through the lagoon. Sediment transport modeling illustrates that if a breached berm condition exists for Ormond Beach Lagoon, it is possible for a new low-flow channel to form in the lagoon. This new low-flow channel would effectively lower portions of the lagoon bottom and maintain positive drainage from the J Street Drain outfall to the Pacific Ocean. Both cases of either two consecutive 2-year storm series or a single 5-year storm series were found to create this low-flow channel. These results are based on a breached condition existing throughout the storm hydrograph. In a maintained breach scenario, and following either storm series just mentioned, the J Street Drain outlet would likely only be inundated until the lagoon elevation exceeds elevation 6.5 feet (the beach grooming elevation), during storm events, and twice a day during tidal action.

As responded to in Letter 12, response to comment 12-6, the BEMP alone would not be sufficient in storms greater than the 10-year event, as flows would overtop the existing undersized J Street Drain channel before they could reach the ocean. Therefore, the proposed changes to the drain in addition to the BEMP are necessary to prevent flooding during storms larger than the 10-year and up to the 100-year event. Implementation of the proposed project and BEMP would ensure water flow through the breach and into the ocean.

19-3 This comment states that information in the Sediment Transport Study admits that the proposed project will not prevent inundation of the outlet and mitigation of the backwater condition. The following is an excerpt from the Draft Sediment Transport Study:

"Sediment transport modeling identified two threshold conditions at which the lagoon bottom downstream of the proposed J Street Drain concrete channel outfall would erode to maintain positive drainage for the proposed improvements. Either two consecutive 2-year storm series or a single 5-year storm series would create a low-flow channel capable of maintaining positive drainage. The probability of a 2-year flood event in a given year is 50 percent. The probability of two consecutive 2-year storms occurring in any given year is approximately 25 percent. The probability of a 5-year storm occurring in a given year is 20 percent. The probability of a 5-year flood event occurring within a 3-year period is approximately 50 percent."

The modeling assumed an initial berm breach condition. Without intervention, a breach condition is highly variable depending on flow conditions within the lagoon and the development of the beach berm by the ocean waves. A controlled breach location with a maintained beach grooming elevation will facilitate conditions similar to those used in the modeling. In a maintained breach scenario, and following either storm series just mentioned, the J Street Drain outlet would likely only be inundated until the lagoon elevation exceeds elevation 6.5 feet (i.e., the lagoon exceeds the groomed beach elevation), during storm events, and twice a day during tidal action.

As explained in Letter 12, response to comment 12-6, the BEMP alone would not be sufficient in storms greater than the 10-year event, as flows would overtop the existing undersized J Street Drain channel before they could reach the ocean. Therefore, the proposed changes to the drain in addition to the BEMP are necessary to prevent flooding during storms larger than the 10-year and up to the 100-year event. Implementation of the proposed project and BEMP would ensure water flow through the breach and into the ocean during storm conditions. It is not the purpose of the J Street Drain Project to eliminate backwater within J Street Drain during non-storm conditions.

19-4 This comment quotes from the Sediment Transport Study, but does not address the adequacy of the analysis in the EIR. Therefore, no response is required.

19-5 This comment states that there is only a possibility of a new equilibrium slope developing from the concrete channel to the ocean during a breach condition, and that it is likely that the channel will be inundated during the non-breach condition. Because it is impossible to predict at this time exactly when two-year and five-year storms will occur after project construction, the Sediment Transport Study relies on probabilities for its analysis. Two-year and five-year storms will occur, but it cannot be stated with certainty exactly when they will occur. As stated in response 19-3, it is not the purpose of the J Street Drain Project to eliminate backwater within J Street Drain during non-storm conditions.

19-6 This comment quotes from the Sediment Transport Study, but does not address the adequacy of the analysis in the EIR. Therefore, no response is required.

19-7 This comment states that it is unreasonable for a flood control project to be inundated. The project description includes a BEMP to ensure that storm runoff is able to leave the channel and lagoon. It is not the project purpose to evacuate water from the channel during non-storm conditions, as there is no flood threat at that time. Please see response 8-3(d) for further information about BEMP activation.

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November 7, 2011

PLEASE REFER TO:
149.1022

VIA REGISTERED MAIL AND ELECTRONIC MAIL
JStreet Drain.Comments@ventura.org

Ventura County Watershed Protection District
Attn: Angela Bonfiglio Allen
800 South Victoria Avenue
Ventura, CA 93009-1600

Re: ***Public Comments by Surfside III Condominium Owners Association to J Street Recirculated Draft Environmental Impact Statement***

Surfside III Condominium Owners Association [hereafter "Surfside III"] submits the following public comments to the Recirculated Draft Environmental Impact Report, J Street Drain Project, Ventura County, California, September 2011, prepared for the Ventura County Watershed District ["District"] by HDR Engineering. 20-1

On January 15, 2010, Surfside III previously submitted comments and objections to the Draft Environmental Impact Report, J Street Drain Project. These comments and objections are hereby incorporated. 20-2

At a public meeting on October 22, 2011, the District agreed to provide documentation that the US Department of Fish and Wildlife did not agree to a waiver to implement the direct beach outlet alternative. 20-3

In response to public comments and a near flooding event which occurred on January 18, 2010, the District withdrew the Draft Environmental Impact Report. The District issued a Recirculated Draft Environmental Impact Report ["RDEIR"] in September 2011 for public comments. Upon reviewing the Recirculated Draft Environmental Impact Report, Surfside III, along with many homeowners, still has serious concerns about the direct and indirect impacts the contemplated J Street Drain project will have on Surfside III and whether the proposed mitigation measures are sufficient as to several aspects of the proposed project. Surfside III's comments to the revised sections of the Recirculated Draft Environmental Impact Report are as follows: 20-4

SLAUGHTER & REAGAN, LLP
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Re: ***Public Comments by Surfside III Condominium Owners Association to J Street Recirculated Draft Environmental Impact Statement***
November 7, 2011
Page 2

I. RDEIR: 3-30: Beach Elevation Management Plan

The Ormond Beach Lagoon inlet normally remains in a semi-closed condition due to sand accretion on Ormond Beach, but during winters it may breach naturally to allow free outflow during storms and some high tides. However, in a storm event on January 18, 2010, which was not a major storm, the lagoon did not breach naturally. This storm event caused flooding at the Oxnard Waste Water Treatment Plant ["OWWTP"], which was at risk of releasing untreated sewage, and threatened to flood Surfside III property. In response, the District replaced the Emergency Action Plan ["EAP"] in the Draft EIR with a Beach Elevation Management Plan ["BEMP"] in the Recirculated Draft Environmental Impact Report.

According to the RDEIR, the purpose of the BEMP is to protect the communities and industrial facilities along J Street Drain and Ormond Beach Lagoon by maintaining downstream water levels below a predetermined safe elevation, thereby lowering flood inundation elevations. The implementation of the BEMP would constitute a new maintenance activity associated with operation of the proposed project.

According to the RDEIR, the BEMP threshold conditions are: 20-5

1. The Ormond Beach Lagoon is fully enclosed by the Ormond Beach sand berm, and

2. The Ormond Beach Lagoon and berm elevation adjacent to the lagoon is observed to be above 6.5 NGVD or greater, and

3. A 72-hour prediction of a storm event affecting the watershed is received, which would likely cause the designed capacity of the J Street Drain to be exceeded if the lagoon water surface elevation cannot overtop the observed adjacent beach sand elevation. [RDEIR, p. 3-30.]

Any one of the above conditions alone may not trigger initiation of the BEMP. All three conditions must occur simultaneously to enact the BEMP. [RDEIR, p. 3-30.]

Surfside III generally approves the proposed change from an EAP to a BEMP since it is proactive. It potentially provides for better flood control by attempting to avoid an emergency event and does not depend on the prediction of a "major storm" event to trigger measures to lower the berm to allow the water in the lagoon to empty into the ocean.

Because the sand berm enclosing the lagoon is constantly shifting, Surfside III requests that the District include a plan in the Final EIR outlining that it will constantly observe the height 20-6

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Re: ***Public Comments by Surfside III Condominium Owners Association to J Street Recirculated Draft Environmental Impact Statement***
November 7, 2011
Page 3

of the sand berm during the 72 hour predicted storm event by camera and directly through District personnel to ensure that the height of the sand berm does not exceed 6.5 NGVD. 20-6 Cont.

Furthermore, condition number 3 is vague and ambiguous. From the proposed language, it is not clear who would or how it could determined whether or not a 72 hour prediction of a storm event "would likely cause the designed capacity of the J Street Drain to be exceeded if the lagoon water surface elevation cannot overtop the observed adjacent beach sand elevation." Storms often have higher or lower than predicted precipitation and timing. Some moving faster by almost a full day, some slow and stall totally voiding original predictions. 20-7

Furthermore, there was a minor rainstorm on October 5, 2010, which caused the water in the J Street drain to rise and threatened to cause water to flood Surfside III property. In particular, the backed up water in the canal rose to a level which entered into Surfside III side drains, located at the South corner of Building 6, the parking area between Buildings 6 and 7; and the drain between Buildings 7 and 17, preventing the drains' ability to discharge surface waters into the canal, thus threatening to flood the areas. 20-8

Therefore, the BEMP and resulting grooming procedure must be triggered ***before any storm***, because it simply cannot be predicted with any certainty whether the designed capacity of the J Street Drain is to be exceeded if the lagoon water surface elevation cannot overtop the observed adjacent beach sand elevation. ***Accordingly, the sand berm must be maintained from the first winter storm in October to May before any storm event so it will not exceed 6.5 NGVD at the permanent beach elevation sand markers.*** 20-9

In addition, District representative stated at the public meeting on October 22, 2011, that a trash boom would be installed upstream from Surfside III to collect debris being washed down the canal. This will eliminate breeding opportunities for mosquitoes. Surfside III requests that this mitigation measure be included in the Final EIR. 20-10

II. Visual Resources/Removal of Trees, ¶ 4.1

Trenching near the Surfside III buildings during construction would result in the removal of approximately 110 trees and shrubs of various sizes and species, including 25 mature eucalyptus trees from both J Street Drain and Surfside III properties. Vertical shoring rather than trenching near the Surfside III property, as discussed in the RDEIR, would reduce the number of trees and shrubs to be removed from Surfside III and from District right-of-way. Though such a plan may require less removal of Surfside III trees and other property, it will cause a severe degradation of visual resources, as well as significantly more noise and vibration. As discussed in IV. below, vertical shoring will increase the risk of damage to Surfside III property. 20-11

SLAUGHTER & REAGAN, LLP
Attorneys at Law

Re: ***Public Comments by Surfside III Condominium Owners Association to J Street Recirculated Draft Environmental Impact Statement***
November 7, 2011
Page 4

However, even if fewer trees are being removed, the removal of trees and shrubs will nevertheless substantially degrade visual resources. The removal of trees and shrubs will expose unsightly views of the water treatment plant and the J Street Drain to residents along the east side of Buildings 15, 16, and 17, and to people visiting the adjacent park. 20-12

The proposed mitigation measure, V-2, contemplates that any tree or large shrub removed from the Surfside III property would be replaced at a 1:1 ratio. However, the District has acknowledged that the replacement will not be kind. Instead, it simply means the supply of a small box tree. A small box tree will take many years to mature and does not provide any of the visual screening benefits that exist currently. Instead of seeing lush greenery, Surfside III residents will see only the Waste Treatment Plant and J Street Drain, along with the stagnant water and floating debris until such time as the small box trees grow to full maturity, if at all. 20-13

The impact will have a significant effect on the use and enjoyment of all Surfside III residents. The proposed mitigation measures are insufficient. Mature eucalyptus trees cannot be replaced. In particular, the owners of third story units will not have any visual screening from the OWWTP or the work site for many years to come. In addition to replacement of the trees with new box trees, Surfside III must be compensated for loss of its mature trees. Furthermore, additional privacy screening must be installed by the District during the years it will take for the replacement trees to mature and provide screening from the canal and the OWWTP. 20-14

The District proposes that during construction temporary privacy screening would be placed along the north-eastern boundary of the Surfside III to shield resident from views of the construction site and of the OWWTP. [RDEIR, p. ES – 7.] Again, the proposed mitigation measure is insufficient, because even if the temporary construction privacy screening was 12 feet high, it would not be sufficient to provide any privacy screening during construction for the second and third floor owners. 20-15

III. Water Resources and Hydraulics/Standing Water, ¶ 4.3-28

In its prior comments, Surfside III pointed out that the lower elevation of the proposed canal outlet would create a bathtub effect which would aggravate the problems of backed up and standing water in the J Street Drain.

In response, the District had a Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon prepared in August 2011. The purpose of the study was to evaluate what storm event (e.g., 2-year, 5-year) would allow a reduced elevation low-flow channel to form from the concrete channel outlet through the lagoon, preventing the "ponding" or "bath-tub" effect during breach conditions. Sediment transport modeling identified two threshold conditions at which the lagoon bottom downstream of the proposed J Street Drain concrete channel outfall would flow to 20-16

SLAUGHTER & REAGAN, LLP
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Re: ***Public Comments by Surfside III Condominium Owners Association to J Street Recirculated Draft Environmental Impact Statement***
November 7, 2011
Page 5

maintain positive drainage for the proposed improvements: (1) two consecutive 2-year storm events (not necessarily within the same storm season); or (2) a single 5-year storm event. Either one of these scenarios would create a low-flow channel capable of maintaining positive drainage. The probability of a 2-year storm event in a given year is 50 percent. The probability of two consecutive 2-year storms occurring in any given year is approximately 25 percent. The probability of a 5-year storm occurring in a given year is 20 percent. The probability of a 5-year flood event occurring within a 3-year period is approximately 50 percent. [RDEIR, p. 4.3-28]. 20-16 Cont.

Surfside III's proposed additional mitigation measure to be included in BEMP, see I., *supra*, to lower the sand berm outside the storm season to 6.5 NAVD, would increase the flow of water from the J Street into the lagoon and mitigate the bath tub effect during the time the sediments have not sufficiently moved to create a low flow channel in the lagoon. It would reduce the problem of standing water and back up water in the canal. 20-17

IV. Noise and Vibration/ Damages Surfside III Property, ¶ 4.6-22

Much of the Phase 1 of the J Street Drain Project ["JSDP"] is directly adjacent to the Surfside III property. At some points the J Street Drain Canal is only several feet from Surfside III residential buildings and improvements. Due to the close proximity, Surfside III is more directly affected by the JSDP than most, if not all, of the local community. Surfside III and its residents have grave concerns that the proposed project will cause damage to buildings and improvements at Surfside III. 20-18

The District proposed vertical shoring to construct the canal. The construction also requires lowering of the ground water level. Both will likely have negative impacts on Surfside III property. The RDEIR acknowledges that the proposed project has the potential to expose people and property to excessive ground borne vibration. The RDEIR acknowledged that effect is "significant." [RDEIR, p. ES-16.] 20-19

Due to the composition of the soil, which is sandy and granular and within a liquefaction zone, there is a high likelihood of damages to buildings within Surfside III, in particular to Building 6, 7 and 17, which are located closest to the J Street canal, through pile driving, vertical shoring and excavation. There is a significant risk of subsidence from the construction. In addition, the pile driving and shoring may cause damages to the Association's sewer and water lines. 20-20

Surfside III generally approves the proposed mitigation measure NOISE-3, which provides, that prior to construction, the District shall request property owners' permission to video record the condition of structures adjacent to the J Street Drain in the presence of the property owner. The recording shall be performed and stored by an independent third-party, with 20-21

SLAUGHTER & REAGAN, LLP
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Re: ***Public Comments by Surfside III Condominium Owners Association to J Street Recirculated Draft Environmental Impact Statement***
November 7, 2011
Page 6

a copy given to the property owner. If vibration-induced damages occur as a result of construction, property owners would be invited to submit claims documenting such damages within one year following construction completion. The third-party would again enter the property to video record its post-construction condition, again providing a copy to the property owner. Both recordings would be compared, and the District would provide compensation to repair new damages observed in the post-construction recordings. Once both parties have agreed to the compensation, both pre- and post construction video recordings stored by the third-party would be given to the property owner. [RDEIR, p. ¶ 4.6-22.] 20-21 Cont.

At a public meeting on October 22, 2011, District representatives indicated that the following additional mitigation would be added to the Final EIR to address potential damages from construction activity: 20-22

- Contractor to prepare a work plan before construction may begin.
- Consider all available geotechnical information for vertical shoring areas.
- Plan must specify how contractor will install vertical shoring to minimize potential vibration damage to buildings.
- Place elevation monuments on adjacent buildings before construction.
- Monitor adjacent structures.
- Modify work plan to reduce potential damage if problems are observed.
- Phone number for reporting possible damage observations immediately.

However, ***the proposed mitigation measures are insufficient to mitigate the potential damages to Association property and the property of the individual owners from the District's construction activity.*** 20-23

Surfside III requires that in addition to recording the conditions of the property, the District shall include the ***following additional mitigation measures*** in the Final EIR: 20-24

1. The District shall require the contractors to apply construction techniques which do not cause damages. In particular, the contractors must be required to submit work plans prior to construction showing how to install and to prevent damages from shoring.

SLAUGHTER & REAGAN, LLP
Attorneys at Law

Re: ***Public Comments by Surfside III Condominium Owners Association to J Street Recirculated Draft Environmental Impact Statement***
November 7, 2011
Page 7

2. In addition to pre and post construction recording, daily surveying and measurement of any subsidence or cracks in buildings must be performed by District representatives during construction to track any changes. Electronic monitors, new auger samplings with analysis, and elevation monuments to measure impact of soil movement are to be added. In particular, surveys have to be performed before and after shoring, dewatering, excavation and backfill.

3. The survey monuments must be kept in place for at least one year after the construction has been completed to track latent changes. The District will monitor these monuments monthly and notify Surfside III immediately if any changes are noticed.

4. Should the surveys or measurements notice any subsidence or cracks or other damage, construction must be halted and the District's contractors must submit plans how to prevent further subsidence and to fix the existing damages.

5. Surfside III and the owners of the affected building shall be notified immediately if the measurements and surveying reveal any subsidence, elevation changes or other damages. 20-24 Cont.

6. The revised construction plans and measures to be implemented to prevent future damages and repair existing damages must be made available to Surfside III and the affected individual owners upon request.

7. The District shall indemnify Surfside III and individual owners for all damages due to construction activity performed by the District's contractors. Because the District has decided to pursue this project within feet of residential structures and common areas, it must be the District who is directly responsible for damages.

8. Surfside III and the individual owners shall have three years from the time they became aware to damages to their property from to submit a claim to the District for damages to their real property in accordance with the applicable statute of limitations for damages to real property. (Code of Civil Procedure section 338, subdivision (b); Government Code section 911.2, subdivision (a).)

9. Furthermore, Surfside III and the individual owners must be added as additional insured to the insurance policy of the District's contractors, including all subcontractors.

The District's position, as expressed in its response to the prior public comments by Surfside III; see Appendix L Response to Comments, p. 138-139, that any potential claims must be filed with the contractor's insurance company, contradicts the proposed mitigation measure of 20-25

SLAUGHTER & REAGAN, LLP
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Re: ***Public Comments by Surfside III Condominium Owners Association to J Street Recirculated Draft Environmental Impact Statement***
November 7, 2011
Page 8

the RDEIR which provides that claims can be made against the District. The District's comment is also unacceptable because limiting liability for damages from the construction to the contractors' insurance carriers does not provide any mitigation. Since the District is proposing and implementing the project, it is unacceptable that it should be up to Surfside III or the individual residents to pursue, and possibly be forced to initiate litigation, against the contractors retained by District, to ensure damage is either repaired or paid for. 20-25 Cont.

V. Hazardous Materials 4.8-14

Groundwater contamination from the Halaco site is discussed in Section 4.8 of the RDEIR. The nearby Halaco Superfund Site, located approximately 1,500 feet east of the southern portion of the J Street Drain, is underlain by a groundwater plume impacted primarily by metals. The entrainment of metals in groundwater nearest the J Street Drain project area is considered potentially problematic, in that the contaminated plume could be encountered during construction activity, in which case treatment of the extracted groundwater would be required prior to discharge into the Perkins Drain. 20-26

The DEIR acknowledges that implementation of the proposed project may result in significant impacts to groundwater contaminants from the Halaco site as a result of dewatering. [RDEIR, p. ES-18.] Dewatering at the site would result in a temporary impact with regards to the potential migration of heavy metals within the ground water plume from the Halaco site. This is considered a significant impact and mitigation is required. [RDEIR, ¶ 4.8-14.] 20-27

The Recirculated DEIR includes as mitigation measure, that prior to dewatering activities between the Ventura County Railroad and the south project terminus, sheet piling shall be placed on the east side of the drain channel in order to prevent the migration of groundwater from the Halaco site. Should additional field testing that is being conducted show the need for sheet piling on the west side of the drain, sheet piling will be placed on both sides of the drain. [RDEIR, ¶ ES-18.]

As the RDEIR acknowledges, the mitigation proposal appears to resolve the problem with ground water migration, but it may potentially result in damages to SSIII buildings if vertical shoring is necessary on the west side of the canal. 20-28

Due to the fact that shoring may cause damages to SSIII, the District instead should install injection wells to achieve a groundwater barrier in order to prevent the Halaco plum from migrating and contaminating ground water. 20-29

At a public meeting on October 22, 2011 at Surfside III, representatives of the District indicated that the District will include groundwater injection wells as alternative mitigation 20-30

SLAUGHTER & REAGAN, LLP
Attorneys at Law

Re: ***Public Comments by Surfside III Condominium Owners Association to J Street Recirculated Draft Environmental Impact Statement***
November 7, 2011
Page 9

measure. Surfside III reserves the right to submit further comments once the additional mitigation measures are included in the DEIR. 20-30 Cont.

VI. Conclusion

Based on the topics discussed in the Public Comment submitted on January 15, 2010 and this Public Comment, Surfside III asserts that the RDEIR is technically inadequate and several issues must be addressed and resolved in more detail before the EIR is issued and before the JSDP is allowed to go forward, if at all. 20-31

The RDEIR's conclusions that certain critical issues, such as Visual Resources [ES-7], Noise and Vibration [ES -16], Hazardous Material [ES-18] have "less than significant effect" with the proposed mitigation measures are factually and legally incorrect, and not supported by facts, evidence, or science. Furthermore, the Beach Elevation Management Plan is inadequate as presently proposed and will result in flooding danger to Surfside III. The RDEIR and the implementation of the JSDP as currently contemplated by the District are still insufficient. 20-32

Surfside III requests the District to implement the additional mitigation measures proposed in this Public Comment to address the serious concerns described in the Previous Comment/Opposition and this Public Comment before the issuance of the Final EIR. If the issues are not adequately resolved, however, Surfside III reserves its right to initiate legal proceedings to protect itself against the environmental and other negative impacts that the proposed JSDP would cause if implemented as described in the RDEIR. 20-33

Very Truly Yours,

SLAUGHTER & REAGAN, LLP

G. Lashly

Gabriele M. Lashly

GML/crc
cc: Surfside III Board of Directors

Letter 20
Slaughter & Reagan, LLP
November 7, 2011

20-1 This comment includes introductory remarks. This comment does not specifically address the adequacy of the analysis provided in the EIR; therefore, no further response is required.

20-2 This comment states that comments and objections to the 2009 EIR were previously submitted on January 15, 2010. This comment does not specifically address the adequacy of the analysis provided in the EIR; therefore, no further response is required.

20-3 This comment states that the District agreed to provide documentation that the U.S. Fish and Wildlife Service (USFWS) did not agree to a waiver to implement the direct beach outlet alternative. The District consulted with Chris Dellith, Senior Fish and Wildlife Biologist with the USFWS (who administers the Endangered Species Act) and Antal Szijj, Senior Project Manager with the USACE (who administers the Clean Water Act), regarding the possibility of creating a permanent connection to the ocean or manually breaching the berm during the summer via Email on November 10, 2011 and November 15, 2011, respectively. The Emails were provided to the Surfside III Homeowner's Association Board on November 16, 2011.

20-4 This comment summarizes the determination by the District to recirculate the EIR for public review and comment. This comment does not specifically address the adequacy of the analysis provided in the EIR; therefore, no further response is required.

20-5 This comment summarizes the EIR discussion regarding the replacement of the Emergency Action Plan (EAP) to the BEMP and summarizes the criteria thresholds for implementation of the BEMP. This comment also states Surfside III's general approval of the change from the EAP to a BEMP. This comment does not specifically address the adequacy of the analysis provided in the EIR; therefore, no further response is required.

20-6 This comment requests that the District include measures in the BEMP that will require constant video observation of the berm height during the 72 hour predicted storm event and directly through District personnel to ensure that the height of the berm does not exceed 6.5 NGVD. The District has installed a camera at the Hueneme Drain Pump Station that visually monitors the water level in the J Street Drain. In addition, the District has installed a stream gage in the J Street Drain directly across from the Hueneme Drain Pump Station that records the water level in the drain and notifies several District personnel via cellular phone if the level approaches the flood stage. District staff that receive this notification are required to respond immediately. J Street Drain stream gage data may be accessed via the internet at the following address: http://www.vcwatershed.net/fws/VCAHPS/php/ahps.php?gage=793. Furthermore, after BEMP implementation, District staff monitors the beach and lagoon elevation daily until the lagoon breaches.

20-7 This comment states that condition number 3 for BEMP activation is vague. The District's Operations and Maintenance (O&M) Deputy Director will be in charge of monitoring the berm and storm events to determine when the BEMP threshold criteria have been met. Once the BEMP thresholds have been met, the BEMP will be implemented by the O&M Deputy Director. As stated in Section 3.0 of the EIR, the lead role of the District in flood emergency avoidance is aided by the County's Flood Warning System and by its Automated Local Evaluation in Real Time (ALERT) system. The Flood Warning System provides advance weather forecasts. ALERT

is a hydrologic data collection and recording system that has been in operation since 1979. ALERT provides reliable rainfall and flow information for determination of storm magnitude. ALERT will be used as the primary source for rainfall and storm event data in the BEMP. The District water level gauge in the J Street Drain will be primarily used to monitor water surface elevation to help determine whether the lagoon is currently connected to the ocean (lagoon is empty) or closed off by the beach sand berm (lagoon is full). If a storm of any magnitude is predicted through the Flood Warning system and the other two BEMP threshold conditions are met (i.e. the Ormond Beach Lagoon is fully enclosed by the Ormond Beach sand berm and the Ormond Beach sand berm elevation adjacent to the lagoon is observed to be above 6.5 feet NGVD), the BEMP would be implemented. All three of the BEMP threshold conditions being met "would likely cause the designed capacity of the J Street Drain to be exceeded if the lagoon water surface elevation cannot over top the observed adjacent beach sand elevation." As stated, all three conditions must occur simultaneously to enact the BEMP. Once the BEMP threshold criteria have been met, the bulldozer will be pre-positioned (72 hours prior to the predicted storm) at the south side parking lot of Port Hueneme Beach Park. As soon as the BEMP is enacted, the dozer operator accompanied by District environmental staff would move the dozer to the designated beach grooming location, and shave the sand berm down to the maximum safe beach elevation. This would ensure that the berm would breach in response to storm runoff, allowing the water to flow freely to the ocean, and preventing flooding. Condition 3 of the BEMP (page 3-30 of the EIR) will be modified to clarify that a storm of any magnitude may trigger its implementation.

20-8 This comment addresses the "minor rainstorm" on October 5, 2010, which caused the water to rise in the J Street Drain and threatened to flood Surfside III property. According to the comment, the Surfside III drains between Buildings 7 and 17 were unable to drain to the channel due to the back up of water. This information is known to the District and does not change the conclusions of the EIR, or the purpose and need for the project.

20-9 This comment requests that the BEMP be triggered by any storm between October and May. The BEMP would be implemented when conditions warrant as outlined in Section 3.0 of the EIR. One of the conditions is a 72-hour prediction of a storm event of any magnitude affecting the watershed. As stated above in response 20-7, this will be clarified in the EIR. The BEMP would be implemented, given all three conditions are met, before the predicted storm hits.

Regularly maintaining the sand berm from October to May would require the continual use of heavy equipment. Continual maintenance using heavy equipment such as bulldozers would not be permitted by the regulatory agencies due to environmental concerns and restrictions; therefore, the BEMP would only be implemented once all three criteria are met. The berm will be monitored per the operations and maintenance procedures outlined by the District. The BEMP realistically coordinates the grooming response with sensitivity to environmental resources.

20-10 This comment requests that trash boom installation be included as a mitigation measure in the EIR. The existence of trash in the J Street Drain is an existing condition. The proposed project would not cause an increase in trash and debris entering the drain; therefore, mitigation is not required under CEQA. The trash collection devices would be installed and maintained as part of the District's compliance with its National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit (Permit CAS004002, Order No. R4-2010-0108) issued on July 8, 2010 (see page 4.3-11 and 12).

20-11 This comment states that despite the decision to use vertical shoring rather than trenching, visual resources would be degraded, noise and vibration would increase, and risk of damage to Surfside III property would increase. Vertical shoring rather than open cut trenching along the property line would reduce the number of trees and shrubs (110) to be removed from Surfside III and from District right-of-way by up to 44 individuals (or up to 40 percent of the trees and shrubs originally identified for removal), preserving more of the existing visual resources. Mitigation Measure VIS-2 would require the replacement of the removed trees and large shrubs within the Surfside III property at a 1:1 ratio and would reduce the construction and operational impact to below a level of significance. Mitigation Measure VIS-3 would require temporary visual screening. Mitigation Measure NOISE-2 requires a temporary noise barrier during construction.

To further minimize visual impacts, the District proposes an additional mitigation measure that would involve installing a 10- to 12-foot-tall fence with green vinyl screening along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced. Mitigation Measure VIS-4 has been added to Section 4.1 of the EIR.

VIS-4 Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.

To address residents' concerns regarding the potential for vibration impacts to affect structures along the J Street Drain, the Mitigation Measure NOISE-3 requiring video documentation of pre- and post-project condition was added to Section 4.6 of the RDEIR. To address concerns about potential movement of Surfside III residential structures nearest the J Street Drain, the District proposes the new Mitigation Measure GEO-3:

a) A Licensed Surveyor shall plan and install a survey monument monitoring system on buildings within 25 feet of proposed vertical shoring to collect monthly baseline data for six months before construction. The monuments shall remain in place and be monitored monthly for one year after construction completion to track any latent changes. During construction, the Licensed Surveyor shall conduct surveys corresponding to major phases of work such as shoring installation, excavation, and backfill.

b) Before Phase 1 construction may begin, the District shall require the Contractor to prepare a Work Plan, which would take into account all available geotechnical information for the areas where vertical shoring and sheet piles are to be installed. The Plan would specify the contractor's approach to installing vertical shoring and sheet piles in a manner that would avoid and minimize associated potential vibration damage to adjacent structures.

c) The Work Plan shall require the Contractor to take daily measurements of the survey monuments on adjacent structures described in (a) above to track potential changes during construction.

d) Should the surveys or measurements described in (a) and (c) above indicate subsidence or other damage due to construction activities, the Contractor shall modify the Work Plan to address the causes. Property owners within 25 feet of the proposed shoring shall be promptly notified of observed damage, and any Work Plan revisions shall be available to property owners upon request. For multi-unit structures, the District shall identify a single designated representative with whom to communicate.

e) The District shall provide a construction contact telephone number to adjacent residents before work commences so that they may report possible observations of damage immediately to the District.

20-12 This comment states that construction will expose residences to unsightly views. As provided in the response to comment 20-11 above, the District proposes a new mitigation measure (Mitigation Measure VIS-4) that would involve installing a 10- to 12-foot-tall fence with green vinyl screening along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.

20-13 This comment states that 1:1 replacement of landscaping with small boxed trees will not be in kind. Please refer to Letter 17, response to comment 17-2 for response regarding replacement of trees and landscaping.

20-14 This comment states that tree removal would have a significant effect on the use and enjoyment of the Surfside III property. Please refer to responses to comments 20-11 through 20-13 regarding visual impacts and new mitigation requiring additional privacy screening.

20-15 This comment states that installation of a 12-foot-high fence would insufficiently screen views from second- and third-floor units. As described in response to comment 20-11, to further minimize visual impacts, the District proposes an additional mitigation measure that would involve installing a 10- to 12-foot-tall fence with green vinyl screening along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced. Mitigation Measure VIS-4 has been added to Section 4.1 of the EIR. The combination of this mitigation measure, the decision to employ vertical shoring to preserve approximately 44 additional trees and shrubs, and replacement of removed trees and shrubs at a 1:1 ratio will reduce impacts to visual resources.

20-16 This comment summarizes the findings of the Sediment Transport Study. This comment does not specifically address the adequacy of the EIR. No further response is required.

20-17 This comment requests additional mitigation lowering the sand berm elevation to 6.5 feet elevation outside the storm season to increase the flow of water from the J Street Drain into the lagoon and mitigate the bath tub effect during the time that sediment transport has not yet occurred sufficiently to lower the lagoon bottom elevation. Outside the storm season, the J Street Drain water elevation naturally rests at approximately 6.0 to 6.5 feet NGVD, as storm water runoff is lacking and normal urban runoff entering the lagoon slowly percolates through the beach and into the ocean. Therefore, there is no need to groom the beach elevation to 6.5 feet NGVD outside the storm season, and this may cause unnecessary adverse impact to threatened and endangered shore birds. Please also refer to response to comment 20-9 for response.

20-18 This comment states concerns about damage to Surfside III structures. Please refer to the response to comment 20-11.

20-19 This comment states that dewatering and vertical shoring will have negative impacts on the Surfside III property. As stated in the response to comment 20-11, to address concerns about potential movement of Surfside III residential structures nearest the J Street Drain, the District proposes a new mitigation measure (Mitigation Measure GEO-3). Please refer to response to comment 20-11 for mitigation language.

20-20 This comment reiterates the residents' concern regarding liquefaction and property damage. Please refer to responses to comments 20-19 and 20-11 above.

20-21 This comment concurs with Mitigation Measure Noise-3. No additional response is required.

20-22 This comment states a District commitment made during an October 22, 2011 meeting with the Surfside III community regarding additional mitigation for potential vibration impacts. As stated in response to comment 20-11, to address concerns about potential movement of Surfside III residential structures nearest the J Street Drain, the District proposes a new mitigation measure (Mitigation Measure GEO-3). Please refer to response to comment 20-11 for mitigation language. This measure was expanded following the October 22, 2011 meeting.

20-23. This comment suggests that the mitigation measures shared on October 22, 2011 are insufficient to mitigate the potential damage to the property. As noted, the District has proposed new mitigation to ensure impacts to the adjacent property are minimized to the greatest extent possible.

20-24 This comment requests the addition of more mitigation measures to address vibration impacts. As stated in responses to comments 20-11 and 20-22, to address concerns about potential movement of Surfside III residential structures nearest the J Street Drain, the District proposes a new mitigation measure (Mitigation Measure GEO-3), which was enhanced after the October 22, 2011 meeting. Please refer to response to comment 20-11 for mitigation language.

Regarding Item 7 on the list of additional requested mitigation measures, the District will require its contractor to exercise due care during construction, and will further require the contractor to repair or replace any damage to adjacent property resulting from construction activities. If any property owner sustains property damage as a result of the project, they may submit a claim for reimbursement to the District. Contractual indemnity is not necessary, as property owners are protected through the tort process.

Regarding Item 8 on the list of additional requested mitigation measures, the timeline for presenting claims is governed exclusively by Government Code Section 911.2, subdivision (a), which states that the time limit for presenting claims for property damage is one year from the accrual of the cause of action. The cited "applicable statute of limitations for damages to real property" refers to when a lawsuit must be filed, and does not apply to the presentation of claims. An additional two years to present a claim would be in conflict with the Government Code.

Regarding Item 9 on the list of additional requested mitigation measures, individual owners cannot be included as "additional insured" to the insurance policies of the District's contractors and subcontractors because the construction contract is between the public agency (in this case the District) and the contractor, not the contractor and the property owners. "Additional insured" must be one of the contracting parties.

20-25 This comment states that the District's response to a previous comment regarding filing claims with a contractor's insurance company contradicts one of the EIR mitigation measures. As stated in Appendix L, Letter 13, response to comment 20-12, "it is the responsibility of all contractors to obtain sufficient insurance to cover their construction activities. Any potential claims must therefore be filed with the contractor's insurance company. The District, however, will ensure proper documentation of private property conditions before and after project implementation to help ensure that any potential construction-related damages are compensated." A claim may also

be submitted to the District, but the District would then forward it to the contractor's insurance company. Mitigation Measure NOISE-3 requires the District to video document pre- and post-construction conditions and facilitates the submittal of claims for compensation. The claims would be processed through the contractor's insurance company.

20-26 This comment summarizes potential impacts related to groundwater dewatering. Please refer to Letter 13, response to comment 13-6 for response.

20-27 This comment summarizes the impact conclusion in Section 4.8 of the EIR regarding potential migration of heavy metals. This comment does not address the adequacy of the conclusion. No further response is required.

20-28 This comment acknowledges Mitigation Measure HAZ-1 and notes that the mitigation measure may result in damage to Surfside III due to vertical shoring. Additional mitigation has been added to respond to concerns regarding property damage. Please refer to response to comments 20-11, 20-22, and 20-24. In addition, the District has determined that mitigating through use of injection wells instead of sheetpiling is feasible, and is therefore modifying HAZ-1 accordingly.

HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, ~~sheet piling shall be placed on the east side of the drain channel in order to prevent the migration of groundwater from the Halaco site~~ the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site. ~~Note that additional field testing is currently being conducted to provide a more representative value for hydraulic conductivity for the vicinity of the drain. In the event that the results show the need for sheet piling on both the west and east side of the drain, sheet piling will be placed on both sides of the drain~~.

20-29 This comment requests that injection wells be installed to achieve a groundwater barrier instead of sheet piling for mitigating the Halaco plume. Please see response 20-28 above.

20-30 This comment notes that at the public meeting, the District indicated that groundwater injection wells will be considered as an alternative mitigation. Surfside III residents' request the right to submit further comments on the new mitigation measures proposed in the Final EIR.

CEQA Guidelines Section 15089 states:

> *(a) The Lead Agency shall prepare a final EIR before approving the project. The contents of a final EIR are specified in Section 15132 of these Guidelines.*
>
> *(b) Lead Agencies may provide an opportunity for review of the final EIR by the public or by commenting agencies before approving the project. The review of a final EIR should focus on the responses to comments on the draft EIR.*

The District will hold a public hearing prior to certifying the Final EIR. The public will be allowed to comment at that time.

20-31 This comment reiterates the disagreements outlined above and in the comment letter submitted on January 15, 2010 (see Letter 24). Please refer to responses to comments 20-5 through 20-30 above and Appendix L of the RDEIR for responses.

20-32 This comment refutes the conclusions in the EIR regarding Visual Resources, Noise and Vibration, and Hazardous Materials and states that the BEMP is inadequate as proposed. Please refer to responses to comments 20-6 through 20-15 and 20-22 through 20-29 above for responses.

20-33 This comment requests that the District implement the additional mitigation measures proposed by Surfside III as identified in comment 20-24. Please refer to response to comment 20-24 above.

Angela Bonfiglio - Robert Banfill comments on J Street Drain R-DEIR

From: "bob banfill" <bob_banfill@yahoo.com>
To: "JStreet_Drain.Comments@ventura.org" <JStreet_Drain.Comments@ventura.org>
Date: 11/7/2011 9:11 AM
Subject: Robert Banfill comments on J Street Drain R-DEIR
Attachments: BB input Letter Comments RDEIR.doc

Please see letter below, also attached.

Robert A. Banfill
607 Lighthouse Way, Port Hueneme, CA. 93041

Via Registered Mail, fax, hand delivered and
Email: JStreet Drain.Comments@ventura.org

Ventura County Watershed Protection District
Attn: Angela Bonfiglio Allen
800 South Victoria Avenue
Ventura, CA 93009-1600

Re: ***Re-circulated Draft Environmental Impact Report for J Street Drain project: Comment input during review period.***

As an owner of property in the J Street canal drainage area, a Ventura county tax payer and a resident of Surfside III, I hereby submit the following public comments to the Recirculated Draft Environmental Impact Report, J Street Drain Project, Ventura County, California, September 2011, prepared for the Ventura County Watershed District ["District"] by HDR Engineering.

Summary of Issues/Problems with the DEIR and R-DEIR for J Street Drain Project

1. Improper consideration of impact on the Ormond Beach and Ormond Beach Lagoon
2. Incomplete due diligence when exploring options to consider for better drainage
3. Premature development of projects while delaying existing flood risks.

21-1

4. Increase of mosquito breeding areas with new J Street Design
5. Possible impact on SS III buildings, landscaping and potential flooding risks
6. Failure to include Oxnard 2020 Plans re: major housing developments in drainage areas
7. VCWPD good faith community interaction/review issues.

21-1 Cont.

For the above reasons, detailed in the following pages I request VCWPD reassess the priority and design of a J Street canal upgrade at this time and focus funds and assets towards existing higher flood risk areas.

21-2

Expanded detail of summarized items:

1. Improper consideration of impact on the Ormond Beach and Ormond Beach Lagoon
   a. The proposed BEMP will increase number of lagoon drainages per year
   b. The lowering of the J Street canal will scour the existing lagoon deeper changing topography, chemistry, possibly vegetation and acquatic life for several years.
   c. No documented co-ordination of planning and approvals with US F&W, Sierra Club, Oxnard City Plan 2020 and other parties of interest.

21-3

2. Incomplete due diligence when exploring options to consider for better drainage
   a. The VCWPD staff indicated they had never requested waivers in writing from USF&WS before considering plans and options on drainage canal design.

21-4

3. Premature development of projects while delaying existing flood risks.
   a. The VCWPD has stated there is not now a FEMA or other required need for the J Street canal improvement and they are doing the project based on their study.
   b. Existing flood risks in 2010 have been documented from the Oxnard Industrial Drain to the Oxnard Waste Water Treatment Plant and other industrial sites in the area. Only the BEMP and nothing in the J Street canal design reduces that flooding issue which is of critical interest and potentially high impact to Surfside III and to the city of Oxnard as a whole.

21-5

4. Increase of mosquito breeding areas with new J Street Design
   a. The new design of the canal will increase the depth of the 'standing water' in the SS III area but will greatly increase the **total square footage of surface water of all depths** up the J Street area thereby increasing standing water much of the year and indirectly increasing mosquito issues.
   b. The new standing water in the J Street project, as it is proposed, between a large number of apartments and condominiums occupied by transient low income families with large numbers of children and possible poor vaccination and limited health care coverage could produce both an economic and health problem for Oxnard and Ventura County.

21-6

5. Possible impact on SS III buildings, landscaping and potential flooding risks
   a. SS III has two 30+ unit three story condominiums within 10 feet of the proposed project at its maximum depth. These buildings are built over 30 years ago, on filled land, in a liquefaction zone, and neighboring a building that has already had a subsidence problem. The project includes ground water pumping, possibly ground water injection which has a potential for damages to the described buildings.
   b. The proposed insurance is focused on individual contractors and probably requiring litigation by SS III to recover damages. It should be coverage from the VCWPD and/or Ventura County as the responsible financial risk party to SS III. If problems or faults existed with individual contractors that should **not** be a SS III issue to resolve or seek compensation.

21-7

6. Failure to include Oxnard 2020 Plans re: major housing developments in drainage areas
   a. Since the original DEIR and the R-DEIR, the city of Oxnard has passed its 2020 plan which includes a major housing area in/near the drainage areas. These new developments should be integrated into the priority of drainage and flooding upgrades before any area projects are started.

21-8

7. VCWPD good faith community interaction/review issues.
   a. Withdrawal of Initial DEIR with clearly announcing limitations on future R-DEIR comment areas. After design and flooding issues prompted the early withdrawal of the original DEIR for J Street the VCWPD **did not clearly notify** identified persons of interest of the dis-allowing comments on some DEIR sections and not making those areas public via internet during the R-DEIR review. This should not be allowed to happen.
   b. VCWPD communications and notifications to impacted home owners has been spotty and in many cases stated notification mailings have not been delivered and were routed through San Diego at the last possible notification date or possibly non-existent. A large population on the J Street Canal area is of Hispanic origin and there is a question about the adequate notification and education to those owners/residents.

21-9

Conclusion:

A. The J Street Canal project is a premature effort to correct a relatively rare potential flood.

B. The VCWPD and Ventura County Taxpayers have higher priority usage of the VCWPD skills and funds.

C. The design raises significant issues for Surfside III COA and residents

D. The VCWPD is not currently proposing adequate plans and insurance to fully mitigate and possibly compensate SS III for the impact to SS III.

E. The proposed design impacts Ormond Lagoon and doesn't solve the protection of endangered species, possibly exacerbating those risks. Including adding larger amounts of runoff from streets with oil residue

21-10

and pesticide/fertilizer tainted agricultural run-off.

F. VCWPD does not appear to have conducted good faith and timely notification and inclusion of all potentially interested parties including Oxnard city planning, USF & WS, Sierra Club, Hispanic residents on J Street and timely/complete notification of documents and meetings to self-identified persons wishing to comment. 21-10 Cont.

Sincerely,

Robert A. Banfill

Letter 21
Robert A. Banfill
November 7, 2011

This letter is identical to Letter 8. Please see responses to Letter 8 comments.

From: Pamela Evans [evanspd1@me.com]
Sent: Monday, November 07, 2011 9:58 PM
To: Elizabeth.Martinez@ventura.org
Subject: J Street Drain.

As a homeowner who lives adjacent to the drain, I do not think it should be expanded. My tenants are constantly complaining about Mosquitos which Ventura continues to tell Surfside HOA that there is no issue. Please put yourself in my tenant's place and reject this expansion. Our community should not take the brunt of your expansion, unless you can afford to provides us funds to make up for the loss in our property values. 22-1

Please find another way…. please

Pamela Evans

Dilbeck Real Estate Real Living

(818) 216-0591
pamela.evans@dilbeck.com

file:///C|/pwworking/sac/d0319576/J Street Drain. htm[11/28/2011 3:40:18 PM]

Letter 22
Pamela Evans
November 7, 2011

22-1 This comment states general objection to the proposed project and specifically references the mosquito issue.

Please refer to Letter 12, responses to comments 12-17 through 12-19 and 12-28 through 12-40 for discussion regarding mosquitoes.

From: "Linda Kodman" <linda.kodman@live.com>
To: "JStreet_Drain.Comments@ventura.org" <JStreet_Drain.Comments@ventura.org...
Date: 11/7/2011 6:44 PM
Subject: Mosquito problem at Surfside III

I wish to convey my impassioned request to make sure any plans for the J Street drain include appropriate mosquito abatement. I have been plagued by spider bites the past few years and recently learned from the pest control company that the increased population of spiders in my building (6) at Surfside III is shared by the other building along the canal and is due to the abundance of food...mosquitos.

Two years ago it got so bad that I had 19 bites on me at one time! Can you even imagine how miserable I have been? It has been so bad that I had to leave work to buy anti-itch medication and had to try prescription meds because nothing else seemed to work. It is mostly a seasonal problem, but a very long season. Our building often looks like a haunted house due to the cobwebs. The pest control company is prohibited by law to spray the railings, trees or other locations that would put their chemicals into the air. My options are very limited. 23-1

The ideal is to not have chemicals sprayed, but rather have a body of water that continuously flows adequately to prevent the mosquitos from breeding/hatching. Please help! 23-2

I would be happy to answer any questions you might have.

Linda Kodman
209-658-6884 cell
805-981-5270 work

Letter 23
Linda Kodman
November 7, 2011

23-1 This comment requests mosquito abatement to address an increased population of spiders at Building 6 (Surfside III), which are presumed to have caused several bites. Spiders feed on many types of insects. An increase in insect population within the lagoon and vicinity may result in an increase in spider population in the area. However, according to Vector Control, they have not received complaints from residents regarding spiders (Cary Svoboda, Personal Communication, January 4, 2012). Mr. Svoboda confirmed the findings in the EIR that the J Street Drain is not the source of the mosquito issue and also indicated that the adjacent lagoon is a source for numerous types of insects that would be a food source for spiders. Please refer to Letter 12, comment number 12-28, bullet point three for a discussion regarding the recent source of mosquito breeding in the area.

Spider bites are rare since spiders do not "feed" on humans. Additionally, not all species of spiders bite. There are many that do not bite and are not venomous. According to Mr. Richard S. Vetter with the Department of Entomology at the University of California, Riverside, a person would not have multiple bites from one or many spiders at any one time, as spiders bite humans only to defend themselves. Mr. Vetter also indicated that in general spider bites are extremely rare, and that the increased occurrence of spiders in an area could be due to a multitude of factors, as well as an increase in insect (not just mosquito) population (Personal Communication, January 5, 2012). Therefore, there is no correlation between either the existing J Street Drain or the proposed project and the spider population within the area.

23-2 The comment requests a body of water that continuously flows. While mosquito control best management practices (BMPs) largely advocate reducing or eliminating standing water in channels and drains as the primary strategy for mosquito control, the endangered species requirements in Ormond Lagoon prevent such practices.

The current J Street Drain has a concrete substrate and relatively steep sides, both of which inhibit emergent vegetation growth along the bottom and margins of the channel. Lack of vegetation can prevent mosquito production as no sheltered areas for mosquito larvae to use as refuge are provided. The current J Street Drain is 20-30 feet wide. Because of this wide, open surface, the lack of vegetative cover, and the location near the Pacific Ocean, the water surface in the drain experiences wind and wave action, especially near the beach. Even relatively minor wind and wave action on the surface of the water prevent the breathing siphons of mosquito larvae from maintaining a connection to the air, therefore effectively drowning the larvae. This makes the current J Street drain not ideal habitat for mosquito breeding. In addition, the depth of the J Street Drain allows it to support numerous fish of various sizes (Section 4.2, page 4.2-14 of the EIR) that will opportunistically prey on mosquito larvae. Recent inspections of the J Street Drain by California Department of Public Health, Vector-Borne Disease Section staff confirmed that the J Street Drain does not currently provide suitable habitat to support large mosquito populations (Larry Walker Associates 2011). Additionally, the open channel allows for safe and easy maintenance, monitoring, and treatment.

PUBLIC COMMENT / OPPOSITION OF SURFSIDE III CONDOMINIUM OWNERS' ASSOCIATION, INC. TO J STREET DRAIN PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

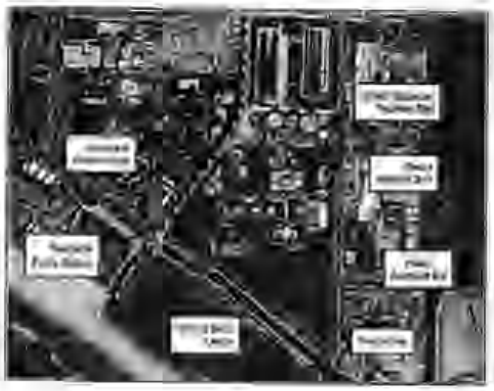
JANUARY 15, 2010

LOEWENTHAL, HILLSHAFER & ROSEN LLP
DAVID A. LOEWENTHAL
KEVIN P. CARTER
15260 VENTURA BOULEVARD, SUITE 1400
SHERMAN OAKS, CA 91403
COUNSEL FOR SURFSIDE III
CONDOMINIUM OWNERS' ASSOCIATION

Surfside III Condominium Owners' Association, Inc. (hereafter "SSIII") hereby submits the following public comments and opposition regarding the *Draft Environmental Impact Report J Street Drain Project Ventura County, California* (hereafter "DEIR") prepared for the Ventura County Watershed Protection District (hereafter "VCWPD") by HDR Engineering, Inc.

I. **INTRODUCTION.**

SSIII is a not for profit common interest development duly organized and incorporated pursuant to the laws of the State of California for the purpose, among other things, of providing maintenance, repair and preservation of the residential condominium project (hereafter "SSIII Project") comprised of two hundred and fifty eight (258) condominiums and fifty one (51) townhomes completed in 1978 in Port Hueneme, Ventura County, California.



24-1

Much of the SSIII project is directly adjacent to the J Street Drain Project (hereafter "JSDP") – at some points the Drain Canal is only several feet from SSIII residential buildings and improvements. Due to the close proximity, SSIII is likely more

SURSIDE III HOA PUBLIC COMMENT / OPPOSITION TO JSDP DEIR

directly affected by the JSDP than most, if not all, of the local community. The diagrams above, prepared for the DEIR, illustrates the proximity. (Yellow dotted line depicts the J Street Drain.)

The actual proximity of SSIII structures to the J Street Drain is depicted in the photo below:

24-1 Cont.

Being the closest residential project to the JSDP, SSIII is also the most directly affected by the multiple problems and issues that will be created and exacerbated if the JSDP is implemented in its current state as described in the DEIR.

II. SUMMARY OF ISSUES.

The SSIII Association, along with the majority of SSIII homeowners, has serious concerns about the direct and indirect impacts that the contemplated JSDP will have on the SSIII community as well as the local community in general. These issues include, but are not limited to, the following:

24-2

- Public Health – Worsening of already intolerable mosquito infestation.
- Public Health and Water Resources – Stagnant Water / Backwater Effect / Permanent 4 foot "bathtub" in the J Street canal;

- Public Health / Hazards and Hazardous Materials – Proximity to Halaco Superfund Toxic Site;
- Noise and Vibration;
- Visual Resources – Removal and non-replacement of mature trees
- Damage to SSIII Property.

24-2 Cont.

III. STANDARD FOR DETERMINING TECHNICAL ADEQUACY OF DEIR

The standard for adequacy of an EIR or DEIR are described in CEQA Guideline Section 15151 as follows:

"An EIR should be prepared with a sufficient level of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effect of a proposed project need not be exhaustive, but sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have not looked for perfection but for adequacy, completeness, and good faith effort at full disclosure".

Thus, the important element is a complete, good faith effort at full disclosure. As shown below, there are several areas in the DEIR that do not meet this standard and must be expanded with more facts and alternatives to be deemed adequate. Regarding several important issues, the DEIR simply glosses over the associated problems and comes to an unsupported conclusion that any impact will be "less than significant". As it stands, SSIII asserts that the DEIR is technically and factually inadequate.

24-3

IV. PUBLIC HEALTH - THE INCREASE OF STANDING AND STAGNANT WATER IN THE JSDP ADJACENT TO SSII WILL SIGNIFICANTLY EXACERBATE THE ALREADY INTOLERABLE AND DANGEROUS MOSQUITO INFESTATION.

The Ventura County Environmental Health Services Website states the following relating to mosquitoes:

"Mosquitoes are blood sucking insects that develop in the water in their early stages and hatch out as adults often seeking a blood meal. They may transmit many diseases"

"Many of these have specific habitats, for example; some may prefer creeks or marshes, others prefer gutters or catch basins . . . not all mosquitoes bite man."

"All mosquitoes require water in which to pass their early life stages (eggs, larva and pupal stages); this usually takes from 7 to 10 days. Most mosquitoes lay their eggs in standing water, where they hatch in a day or two. . . **Any location where water stands for over two weeks may become suitable for mosquito breeding**." (Emphasis added.) 24-4

"The female mosquito may need blood meals for their egg development. This is when potential diseases are transmitted".

(See County of Ventura Environmental Health Information, attached as Exhibit "A" to Declaration of Kevin P. Carter.)

The DEIR also describes mosquitoes as follows:

"An organism, such as a mosquito or tick that carries disease-causing microorganisms from one host to another is known as a disease vector. Mosquitoes are of particular concern because of their breeding habits. The mosquito's water requirement during breeding makes areas with quantities of standing water breeding grounds for mosquitoes. Areas with natural and induced standing water are susceptible. . . Mosquitoes are

potential vectors of organisms that can cause disease in pets, domestic animals, wildlife, or humans. Although 12 mosquito-borne viruses are known to occur in California, only West Nile virus, western equine encephalomyelitis virus, and St. Louis encephalitis virus are significant causes of human disease in California. Mosquito-borne diseases that are of concern in Ventura County are St. Louis encephalitis (SLE), western equine encephalitis (WEE), West Nile virus (WNV) and malaria." (DEIR, p. 4.10-1, Section 4.11.1.)

24-4 Cont.

A. THE DEIR IGNORES THE INCREASED MOSQUITO BREEDING AND THE PERMANENT "BATHTUB" EFFECT THAT WILL RESULT FROM THE CONTEMPLATED DRAIN EXPANSION.

The DEIR acknowledges that the large quantities of standing water in the current configuration of the Drain creates mosquito breeding sites. (DEIR, 4.11.1) As acknowledged in the DEIR: "The expected maximum water level is regulated by the lowest beach crest elevation or the height of the sand berm, above which a breach in the lagoon would take place (in the absence of manual breaching) and water from the lagoon would discharge into the Pacific Ocean. When the lagoon closes off to the ocean, there are times when the backed up, or 'ponded' water, extends from the lagoon to just upstream of Hueneme Road in the drain . . . Because of the dynamic nature of the project area, the level of water at the lagoon and drain varies throughout the year. Because the water level is typically higher prior to breaching, the water ponds further upstream in the drain. At that time, the water level may reach 6.5 feet, covering about 41.8 acres of the lagoon and the drain and extending just north of Hueneme Road." (DEIR, Page 4.10-2, Section 4.11.1.)

24-5

Currently, standing water in the portion of the drain adjacent to SSIII is allowed to drain on occasion when there is a natural breach of the sand berm. This happened most recently during the month of December 2009. After the breach, virtually no water was left in the portion of the drain adjacent to SSIII.

However, the DEIR completely ignores the fact that by deepening the drain by approximately four feet, a "dam" will be created just south of SSIII at the end of the J Street Drain and a "bathtub" of four foot standing water will be created adjacent to SSIII that cannot drain whatsoever under any circumstance, including breach of the sand berm. It is undisputed that throughout the summer months, there will always be at least four feet of stagnant water in the drain adjacent to SSIII. At the end of the drain, just past SSIII, the "dam effect" will exist where the deepened drain meets the four foot higher beach condition near the Pump Station and Ormond Beach Lagoon. The photo above depicts where the deepened canal ends (near residential structure) and where the "dam" holding at least four feet of water in the drain canal will occur.

24-5 Cont.

Thus, the deeper and wider area of increased standing water will be, in essence, permanently stagnant, especially during the summer months. This omission in the DEIR is discussed below in Section IV(C) as well. For purposes of this Section, it is critical to note that the DEIR fails to acknowledge the "dam" or "bathtub" effect and permanent four feet of stagnant water that will be in Phase I of the JSDP directly alongside and within feet of the Surfside Project. It is a clear fact that mosquito breeding will significantly increase if JSDP proceeds as currently intended.

Notwithstanding the failure to acknowledge the obvious "bathtub" effect that will perpetuate at least four feet of standing water, the DEIR concedes that mosquito breeding will likely increase if the project is implemented.

"As a result, the proposed project would increase the surface area and amount of standing water in the drain. As shown in Figure 4.11.1, under both conditions, the Phase I (end of the drain to north side of Hueneme Road [3,430 linear feet]) portion of the drain would result in an increase of one acre of water surface area at a water surface level of 6.5 feet due to the increased channel width. . . **Therefore, the proposed project would result in increased standing water for potential mosquito breeding sites and additional vector sources within the project site.**" (Emphasis added.) (DEIR, p. 4.10-7, Section 4.11.4.)

It is very surprising, then, that the DEIR next states "[h]owever, the Ventura County Vector Control Program would continue to conduct mosquito surveillance and abatement activities within the project area during operations. In addition, the products the Vector Control Program uses to control both adult and larval mosquitoes are environmentally safe and approved by the EPA. **This impact is considered less than significant**." (DEIR, page 4.10-7, section 4.11.4.) Finally, the DEIR does not contemplate any mitigation efforts whatsoever to combat the increased mosquito breeding and associated problems: "No significant impacts were identified, therefore no mitigation is required". (DEIR, page 4.10-8, Section 4.11.6.) 24-5 Cont.

B. VECTOR CONTROL HAS BEEN COMPLETELY UNABLE TO CONTROL THE ALREADY EXISTING MOSQUITO INFESTATION ALONG THE J STREET DRAIN AND ADJACENT TO SSIII.

It cannot be disputed that where there is standing water, mosquitoes will breed. Since the expansion of the Hueneme Pump Station, the J Street Drain has caused an extremely severe mosquito problem for Surfside III and its residents. The impact of the mosquito infestation and risk of disease transmission cannot be deemed "less than significant". The DEIR dismisses the increase in severity of these issues by simply stating that the Department of Health Services (Vector Control) will continue its current task of monitoring and attempting to lessen the problem. 24-6

SURFSIDE III HOA PUBLIC COMMENT - OPPOSITION TO JSDP DEIR

The significance of the mosquito related public health problem must be determined on a case by case basis and is related to project type, location and other environmental factors. If it is determined that project-related impacts are significant and can be mitigated through minor project redesign or adoption of standard conditions, then project specific mitigation shall be identified. (DEIR, 4.11.3.)

Below are excerpts from the handful of attached declarations from concerned SSIII homeowners who have had the use and enjoyment of their homes significantly interfered with and reduced by the mosquito problem caused by the expansion of the Pump Station, notwithstanding the larger problem that will be certain to occur if the JSDP is allowed to go forward as in its present incarnation:

- "It was also during this time, last summer, that I began using Deet-containing mosquito repellants on a daily basis, in order to watch television peacefully inside my own home. Despite the constant application of the repellant, however, I was still being bitten repeatedly and would wake in the night to apply anti-itching lotions and creams. I have never needed to use anti-itch lotions and creams in the middle of the night before." (Marion Kelemen Declaration, SSIII Owner.)
- "On two different occasions last summer I complained to men I saw on the canal, who said they worked for Vector Control. Both times they told me that they were constrained by the EPA rules from using more effective measures to combat the mosquito problem. I also called Vector Control and they informed me that the mosquitoes had never been a problem before because the water in the lagoon had previously been at a low level, but the high level of water was now creating a 'backwater effect in the canal'". (Marion Kelemen Declaration, SSIII Owner.)
- "On several occasions this summer I personally observed hoards of mosquitoes hovering directly above, and very close to, the J Street Canal." (Marion Kelemen Declaration, SSIII Owner.)

24-6 Cont.

SUNSIDE III HOA PUBLIC COMMENT / OPPOSITION TO JSDP DEIR

- "Beginning in June 2009, we have been unable to use our patio because there were so many mosquitoes. Additionally, beginning in June 2009, we were unable to leave any doors open as there were so many mosquitoes on the patio and outside. If I left the door open for even a moment, mosquitoes would enter our home." (Inna Fischer Declaration, SSIII Owner.)
- "In addition, every night before going to bed, we would run the vacuum cleaner along the ceiling in an effort to catch as many mosquitoes as possible to avoid nighttime bites. Before this summer, I never needed to do this." (Inna Fischer Declaration, SSIII Owner.)
- "During the summer 2009 months of June, July, August and September I had an obnoxious mosquito problem that did not exist in 2008. I purchased this property in March 2008." (Robert Banfill Declaration, SSIII Owner.)
- "On at least 60 occasions I had to remove, swat out and cause to fly away a dozen or more mosquitoes that had taken up residence in my dog's house on the back patio." (Robert Banfill Declaration, SSIII Owner.)
- "For the past five years we were able to freely use our patio, as well as the Lighthouse Way Park (SSIII common area), with no mosquitoes bothering us in our day-to-day lives. However, over the past two years I have noticed that a mosquito problem has developed. This past summer, beginning in June 2008, and continuing through September 2009, we were unable to open any of the doors, front or rear, to our home without mosquitoes entering." Since June 2009 we have been unable to use either our patio or the Lighthouse Way Park (SSIII common area) without being bothered by mosquitoes." (Louis Perry Declaration, SSIII Owner.)
- "Since June 2008, the mosquitoes have become so prevalent in our home that the buzzing has kept me up at night." (Louis Perry Declaration, SSIII Owner.)
- "In June 2009, though, the mosquito problem became much worse. Every time I opened either the front or back door, dozens of mosquitoes would fly into our

24-6 Cont.

SUMMARY OF HOA PUBLIC COMMENT / OPPOSITION TO JSDP DEIR

home, which we were unable to eliminate. There were so many mosquitoes in our home that my husband and I were forced to sleep under a sheet in an attempt to cut down on the number of bites we suffered every night. The mosquito repellants which we used on a daily basis were ineffective against the mosquitoes in our home." (Amy Sagawa Declaration, SSIII Owner.)

- "Beginning at that same time, in June 2009, we were unable to use our patio, as there were so many mosquitoes." (Amy Sagawa Declaration, SSIII Owner.)
- "While my husband and I experienced the impact of the mosquitoes acutely, it was our son Michael who was the most affected. Because he was not even a year old this summer we were unable to use any repellants on him. One morning in this summer, the mosquitoes had become so aggressive that our baby woke up covered in bites [see attached photos] . . . The mosquito situation has caused my husband and me severe anxiety. Watching the affect they have had on our young son has been extremely worrisome." (Amy Sagawa Declaration, SSIII Owner.)
- "However, beginning in June 2009, it became impossible to either sit outside on our patio or visit Lighthouse Way Park [SSIII common area] without being repeatedly bitten by mosquitoes." (Cornelia Ortiz Declaration, SSIII Owner.) 24-6 Cont.
- "In addition to being bitten while outside, we were continuously bitten throughout the night by mosquitoes that made their way into our home, despite the fact that we kept our doors and screen doors closed and used mosquito repelling blue lights at both the front and back entrances to our home." (Cornelia Ortiz Declaration, SSIII Owner.)
- "I noticed at different times this past summer that the mosquitoes were coming to our home from the J Street Canal where they seemed to reside." (Cornelia Ortiz Declaration, SSIII Owner.)
- "Because there were so many mosquitoes, and I was concerned about the viruses which the mosquitoes carried, I called Vector Control to see if they could

SUBSIDE III HOA PUBLIC COMMENT / OPPOSITION TO JSDP DEIR

do anything about the problem. Vector Control informed me that they were aware of the problem, that they were researching the issues, that they were trying to determine what they could do, but that in the meantime, they were doing everything they could do." (Comelia Ortiz Declaration, SSIII Owner.)

The DEIR takes the position that Vector Control has the current mosquito condition well under control and that there will not be any increase in mosquito related or public health issues due to the tremendous increase of permanent standing water contemplated by the JSDP. The above excerpts and complete homeowner declarations submitted concurrently with this Surfside III Public Comment clearly evidence the fact that Vector Control has been totally unable to manage the serious problem as it currently exists. It is axiomatic that the dramatic increase in stagnant surface water that will be created by the drain expansion will seriously exacerbate the condition. As various homeowners and committees at Surfside III have repeatedly made VCWPD and Vector Control aware of the severity of the existing problem, it is disingenuous, at best, for the DEIR to conclude that the impact of the expansion on the mosquito problem and public health "is considered less than significant". 24-6 Cont.

Not only are many SSIII residences within a few feet to the J Street Drain Canal, but several important common area amenities are adjacent or near as well, including, but not limited to, common area parks and picnic areas available for use by all SSIII residents and their guests. Besides the obvious significant problem of disease communication, SSIII residents are literally attacked by the hordes of existing mosquitoes, especially during the summer months.

The photos below and to the right, for example, were taken during the summer of 2009 and after the expansion of the Port Hueneme Pumping Station, when resident Amy Segawa's son,

Michael, was repeatedly bitten by mosquitoes near the J Street drain. (See Declaration of Amy Segawa submitted concurrently.) The photos are illustrative of the fact that, contrary to the representations and conclusions contained in the DEIR, the mosquito problem is not being adequately mitigated by Ventura County Vector Control. An increase in mosquito breeding due to the increased stagnant water contemplated by the JSDP will not be "less than significant" to SS III residents, their families, and their guests. The DEIR's statements to the contrary are nothing short of fanciful. The mosquito / public health issues are very significant to SSIII owners. Moreover, expansion of the drain canal and increase in stagnant water poses a very real significant public health issue (disease transmission) to SSIII residents and the local community as a whole. SSIII residents should not have to fear for their health and well being while on their patios, in bed, or strolling through common areas. The DEIR completely fails to acknowledge this problem and fails to propose effective methods of mitigation.

24-6 Cont.

C. THE DEIR FAILS TO PROPOSE METHODS OF MITIGATING THE PUBLIC HEALTH AND OTHER MOSQUITO RELATED PROBLEMS THAT WILL BE CAUSED BY THE JSDP.

As discussed above, the "dam" effect at the end of the four foot deepened J Street drain canal will basically cause permanent stagnant water of at least four feet deep. It is intuitive and the DEIR has conceded, that this will increase mosquito breeding in the drain adjacent to the border of SSIII. Along with the obvious problems of disease transmission, mosquito bites and annoyance, this will increase odors, floating debris, and other issues that will significantly lessen the use enjoyment of ownership for SSIII owners and the Association. Notwithstanding these facts, the DEIR fails to propose any method of mitigating the serious effects of increased stagnant water and the backwater effect.

The DEIR states that the primary goal of the JSDP is to increase the capacity of the drain canal to provide capacity for a 100 year flood, should one ever occur in the local community. The simplest way to achieve this goal without negative effects on SSIII and the entire local community would be to pump out, or remove, the stagnant water that is currently in the drain canal during most of the year. By removing the water on a regular basis, the capacity of the existing drain would increase significantly and the drain would not have to be deepened and widened. The DEIR does not address the idea of a pumping system or any other method of draining or removing the stagnant water. 24-7

If the VCWPD has a legitimate basis for rejecting the proposal stated in the previous paragraph, there are other "common sense" forms of mitigation. One such method would be the installation of a pump system to periodically clear the deepened "bathtub" (drain canal) of the stagnant water that cannot escape due to the dam effect described above. As an alternative, a form of pump system could be used to keep the water circulating (in a non stagnant state) could be implemented to mitigate the problem. In its current state, water escapes the drain canal at various times, including

when a natural breach of the sand berm occurs. If the JSDP is implemented, the bottom four feet of water in the canal can never clear or escape without the help of a pump system. This cannot be considered acceptable and the DEIR simply ignores the issue.

At a recent meeting with various VCWPD representatives, SSIII proposed that the VCWPD include a pump system, along the lines of that described above, or any method of removing / circulating the stagnant water. At that time, VCWPD represented that they would investigate the idea. On or about January 7, 2010, VCWPD communicated that they were not pursuing the idea of a pump system, inflatable dam, or other method to remove / circulate the stagnant water.

As a pump or similar system would potentially alleviate SSIII's concerns regarding public health and mosquitoes at a relatively minimal cost, SSIII is not aware of any reason such a system should not be incorporated into the JSDP. The public health and other effects of the contemplated increase in stagnant water require something more than a mere dismissal and unjustified conclusion that the effects will be "less than significant". 24-7 Cont.

V. THE JSDP WILL CAUSE UNACCEPTABLE NOISE LEVELS THAT WILL SIGNIFICANTLY AFFECT THE USE, ENJOYMENT, AND HEALTH OF SSIII RESIDENTS.

The DEIR acknowledges that the very high noise levels associated with the Project will impact SSIII. "Buildings 6 and 7 of the Surfside III condominiums, located immediately north of the Pump Station, are noise sensitive receptors approximately five feet from the temporary work area's west boundary." (DEIR, page 4.6-1, section 4.6.1.2.) SSIII asserts that many important common areas of the Association, as well as other residential buildings and townhomes will suffer from the extreme noise levels as well. 24-8

The DEIR states that loud equipment including, but not limited to, wheel loaders, track dozers, scrapers, excavators with hydraulic hammers, pile drivers, motor graders,

concrete pumps, concrete trucks, dump trucks, concrete mixers, portable generators will be utilized during the JSDP. Table 4.6-5 of the DEIR describes the noise level of such equipment from a 50 foot distance.

According to Table 4.6-1 of the DEIR, noise levels of above 60 db are "normally unacceptable" and levels of 75 db and above are "clearly unacceptable". In its definition of "clearly unacceptable," the DEIR's *Land Use Noise Compatibility Guidelines* state that "new construction or development should generally not be undertaken". (DEIR, page 4.6-2, Table 4.6-1.) At fifty feet, virtually all of the construction equipment described above that will be used during construction will be either "normally unacceptable" or "clearly unacceptable". SSIII buildings and common areas, in many cases, are <u>much</u> closer than 50 feet. The DEIR makes no attempt to identify the noise levels from such equipment at any distance closer than 50 feet which is misleading because SSIII residential structures and common areas are much closer to the project.

The City of Oxnard and County of Ventura do not allow exterior sound levels of more than 55 db (DEIR, Table 4.6-3) and the City of Port Hueneme does not allow noise levels in residential developments of greater than 65 db. (DEIR, page 4.6-6, Section 4.6.2.) 24-8 Cont.

The DEIR states that many planned construction activities will exceed allowable noise levels, including, but not limited to, compactors, generators, graders, pile drivers, and tractors. Each of these items, at a fifty foot distance, produce noise levels far in excess of 55 db. (DEIR, Table 4.6-5.) As an example, pile drivers alone produce a fifty foot noise level of up to 107db which nearly doubles the required maximum levels. (DEIR, Table 4.6-5.) Though the DEIR only states 50 foot noise levels, several SSIII residential buildings are only 5-10 feet from the proposed Project and construction.

The DEIR states that "construction activities have the potential to result in noise levels above the Ventura County outdoor noise thresholds. Temporary increases in ambient noise would be significant." (DEIR, page 4.6-13, Section 4.6.4.)

"The only mitigation proposed by the VCWPD is "a temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain" (DEIR, page 4.6-17, Section 4.6.6.

The installation of the noise barrier will not significantly lessen the direct impact on SSIII. "Implementation of the identified mitigation measures would not reduce the noise impacts associated with the construction of proposed project to a level below significant. Impacts are significant and unavoidable." (DEIR, page 4.6-19, section 4.6.7.)

The proximity of the construction is so close to the SSIII residences and common area amenities that the extreme noise levels are very significant indeed. To be acceptable, much more comprehensive mitigation measures must be taken to ensure less of a disruption to the community.

On or about January 7, 2010, the VCWPD informed SSIII that it had completely changed its plan and now intends to use vertical shoring for the entirety of the Project adjacent to SSIII. Besides causing significantly more noise, vibration, and damage to SSIII property, the "new" vertical shoring plan will still cause a severe degradation of visual resources as well as impairment of the use and enjoyment of SSIII residents.

A. GROUND BORNE VIBRATION AND GROUND BORNE NOISE LEVELS.

The DEIR states that "vertical shoring at Surfside III may be placed with a vibratory technique instead of driving or pounding, therefore, ground-borne vibration and ground-borne noise impacts are potentially significant". (DEIR, page 4.6-12, section 4.6.4.) Moreover, VCWPD has recently informed SSIII that, in contrast to the intent stated in the DEIR, it intends to use vertical shoring along the entire SSIII border.

24-8 Cont.

The DEIR proposes no mitigation to avoid the obvious problems associated with the significant ground-borne vibration. Property and other damage will almost certainly occur and this cannot be acceptable to SSIII and its residents who live in such close proximity to the contemplated construction project.

Until January 7, 2010, the VCWPD represented that it intended to use vertical shoring only where absolutely necessary along the SSIII property line. On or about January 7, VCWPD changed its position and stated its intention to perform all construction near SSIII using a vertical shoring method.

Unfortunately, the VCWPD has acknowledged that use of the vertical shoring method would result in more damage, noise, and ground based vibration to SSIII property.

"Trench shoring must occur along Building 7 of the Surfside III Condominiums, but is not required for the remainder of this residential community. If trench shoring is not used along the remainder of the condominium complex, the excavation area would need to be wider, necessitating temporary removal of some private landscaping. In addition, the current fence, which does not coincide with the property boundary, will be removed during construction and relocated to the property line at the end of the project. **These incursions into private property would allow the project to proceed without the need for extensive shoring of the excavations, therefore reducing the potential for noise and vibration impacts to the adjacent areas.**" (DEIR, page 3-9, section 3.4.) (Emphasis added.) 24-8 Cont.

Thus, the use of vertical shoring along the SSIII boundary will increase noise, ground vibration, and damage to SSIII. The VCWPD is attempting to purposely choose a construction technique that it knows will cause damage to SSIII with full knowledge that reasonable alternatives exist that will cause significantly less damage. Additional forms of mitigation are required before such a plan can be allowed to proceed.

VI. VISUAL RESOURCES.

"Land uses generally considered to be sensitive in terms of view include homes, recreational areas, and designated scenic roads." (DEIR, page. 4.1-1, section 4.1.1.1) The DEIR states the following relating to the visual impact on SSIII: "As shown in Figure 4.1-2, a row of shrubs, mainly myoporum, and eucalyptus trees along the northeast boundary of the Surfside III property shields condominium residents on the east facing sides of Buildings 15, 16, and 17 and users of the park immediately east of these buildings from views of the J Street Drain and the Oxnard Waste Water Treatment Plant ("OWWTP") east of the J Street Drain. Residents in Building 7, located nearest to the proposed project in the vicinity of the OWWTP, are shielded from the industrial view by a 100 foot long section of approximately 14 foot tall mesh screen chain link fence on the west edge of the OWWTP property. This fence screens the view of the OWWTP maintenance yard. The remainder of the OWWTP south of the maintenance yard is screened by trees and shrubs along the plant's west property boundary. Sparser vegetation along the east boundary of the Surfside III property from Building 7 southward forms an inconsistent visual barrier, and residents in Buildings 6 and 7 are able to see the J Street Drain from their dwellings." (DEIR, page 4.1-8, section 4.1.1.1.) 24-9

Though the DEIR is not "inaccurate," it is misleading. Trees and bushes, including many mature, large Eucalyptus trees, shield SSIII from the Drain canal and the ("OWWTP"), both of which are very unsightly.

The DEIR acknowledges that there will be substantial degradation of the existing visual character or quality of the site and surroundings relating to SSIII. Specifically, the DEIR states that "Trenching near the Surfside III buildings during construction would result in the removal of approximately 110 trees and shrubs of various sizes and species (including 25 eucalyptus trees with a diameter at breast height (DBH) of at least 12 inches) from both the J Street Drain and Surfside III properties." (DEIR, page 4.1-14, section 4.1.4.) "Loss of vegetation along the

SURFSIDE III HOA PUBLIC COMMENT / OPPOSITION TO JSDP DEIR

Surfside III property during construction would also cause continued visual impacts during operations. Therefore, implementation of the J Street Drain project would result in degradation of the existing visual character and quality at the project area. The impact is significant." (DEIR, page 4.1-15, section 4.1.4.)

As to mitigation, the DEIR suggests that "Any tree or large shrub removed from the Surfside III property during construction would be replaced at a 1:1 ratio." (DEIR, page 4.1-17, section 4.1.6.) "Mitigation measure VIS-2 would require the replacement of the removed trees and large shrubs within the Surfside III property at 1:1 ratio and would reduce the construction and operational impact to below a level of significance." Upon further questioning, VCWPD acknowledged that replacement at a 1:1 ratio does not mean replacing a mature, large eucalyptus tree with another mature, large tree. Instead, it simply means the supply of a small box tree. A small box tree will take many years to mature and not provide any of the visual screening benefits that exist currently. Instead of seeing lush greenery, SSIII residents will see only the Waste Treatment Plant and J Street Drain, along with the stagnant water and floating debris until such time as the small box trees grow to full maturity, if at all.

SSIII completely disagrees with the DEIR's conclusion that the construction and operational impact will be "below a level of significance". In fact, the impact will have a significant effect on the use and enjoyment of all SSIII residents.

On or about January 7, 2010, the VCWPD informed SSIII that it had completely changed its plan and now intends to use vertical shoring for the entirety of the Project adjacent to SSIII. Though such a plan may require less removal of SSIII trees and other property, it will cause a severe degradation of visual resources, as well as significantly more noise, vibration, and damage to SSIII property.

24-9 Cont.

VII. HAZARDOUS MATERIALS AND WASTES, PUBLIC HEALTH – PROXIMITY TO HALACO SUPERFUND SITE.

Less than ½ mile to the east of the southern end of the J Street Drain is the Halaco facility which has been designated a Superfund site by the Environmental Protection Agency. The site includes an 11 acre parcel containing a formal smelter and an adjacent 26 acre waste management area where dangerous and toxic wastes were deposited. The primary wastes were metal oxides, metal salts and other materials skimmed off the top of the molten metal or that settled to the bottom during the smelting process (i.e. slag or dross).

The DEIR concedes that sampling conducted by the State of California and the EPA have repeatedly found contamination. Moreover, a surface impoundment and waste disposal pile contain over 500,000 cubic yards of waste. The contaminants include, but are not limited to, aluminum, arsenic, barium, beryllium, cadmium, chromium, copper, lead, magnesium, nickel, and many others. Similar toxics were found on adjacent properties, including a nature preserve, wetlands, and public beach. (DEIR, page 4.8-1, section 4.8.1.1.) The EPA also found radioactive materials buried at the site. 24-10

The DEIR states that the associated hazard risk relating to the Halaco Superfund site is "Unsubstantial because currently undergoing remediation with EPA". (DEIR, page 4.8-5, Table 4.8-1.) This conclusion is not satisfactory and somewhat misleading because the DEIR does not state anything regarding the EPA remediation plan or timetable other than: "In July of 2006, the U.S. EPA reached an agreement with site owners to conduct a 'time critical removal action' to remove drums and other hazardous substances, fence the waste pile, and install a silt curtain and straw wattles.

In February of 2007, the EPA began working to stabilize and secure the site and limit offsite migration of contaminated wastes." (DEIR, page 4.8-2, section 4.8.1.1.)

The DEIR fails to state whether the actual remediation has been started, when it will be completed, or how comprehensive or successful the remediation will be. The simple fact that the EPA is investigating remediation does not solve the hazardous material/waste and public health issues. The Halaco issue is simply ignored by the VCWPD and the DEIR.

Sierra Club representatives are of the scientific opinion that the Halaco slag heap already comes in contact with water sources that comingle with water from the J Street Drain. Moreover, in 2001, the Los Angeles County Water Quality Control Board found evidence that ammonia and other toxic chemicals were leaking from Halaco's property into nearby wetlands. (*Los Angeles Times* November 14, 2001.) This is a very serious public health concern. Expansion of the J Street Drain, as contemplated by the JSDP, will only increase the risks of contamination from the nearby Superfund site. 24-10 Cont.

Much more information is needed before an intelligent analysis can be made regarding this potentially dangerous condition. Simply stating that there is no problem because the EPA may be beginning remediation procedures is far from the full disclosure required under CEQA. The DEIR's representations and conclusions regarding the Halaco Superfund issue is technically and practically inadequate.

VIII. THERE HAS NEVER BEEN A 100-YEAR FLOOD IN THE COMMUNITY AND FEMA HAS NOT DESIGNATED THE AREA AS A HIGH FLOOD RISK. 24-11

The DEIR states the goal of the JSDP as follows: "The proposed project involves increasing the capacity of the existing J Street Drain to accommodate the 100 year flood flow and to reduce potential flooding in the surrounding area during a moderate rain event." (DEIR, page 1-4, Section 1.5.3.)

While this may sound like a noble goal, the DEIR concedes that "there has not been a 100-year flood on record in Oxnard or the project area". (DEIR, page 1-9, 1.5-

1.) Moreover, VCWPD representatives recently conceded that the JSDP is not within a FEMA designated flood zone or high flood risk area. A review of the new flood maps released by FEMA in January 2010 confirms that SSIII and the JSDP is not within a FEMA designated flood zone. 24-11 Cont.

While the goals of the project may sound noble, the DEIR does not explain why it is necessary or appropriate to spend significant public monies and cause negative environmental impacts and damage to residents of the community, if the area has never suffered a 100 year flood and is not a high flood risk area.

IX. IT IS NOT EQUITABLE TO FORCE SSIII TO SUE CONTRACTORS RETAINED BY VCWPD FOR DAMAGE CAUSED TO SSIII PROPERTY.

As described above, the JSDP contemplates significant ground borne vibration and massive construction directly adjacent to SSIII. In addition, VCWPD intends to remove and possibly reconstruct / replace planters, carports, trees, walls, and other SSIII property. SSIII has no involvement with the selection or retention of the contractors who will perform this work.

VCWPD representatives have informed SSIII that, when the inevitable construction related damage occurs to SSIII property, it will be up to SSIII to pursue, and possibly be forced to initiate litigation, against the contractors retained by VCWPD, to ensure damage is either repaired or paid for. This is not appropriate and cannot be acceptable. Damage is even more likely if the VCWPD is allowed to proceed using vertical shoring along the entire SSIII boundary. This new intent to utilize vertical for the entirety of the SSIII boundary was only communicated to SSIII on or about January 7, 2010. 24-12

Moreover, SSIII will not be privy to any of the construction contracts and has no information regarding contractor insurance coverage and coverage exclusions. Because VCWPD has decided to pursue this project within feet of residential structures and common areas, it must be VCWPD who is directly responsible for damages. Moreover, it is simply not fair or equitable to require SSIII to expend additional time and

money (including, potentially, legal and expert fees) to repair what will be damaged by the VCWPD project. Thus, VCWPD must be directly responsible for all damage to SSIII and its owners, as a result of the massive construction work to be performed 24-12 Cont.

X. THE SERIOUS CONCERNS DESCRIBED IN THIS PUBLIC COMMENT ARE ECHOED BY THE MAJORITY OF OWNERS IN THE SSIII COMMUNITY.

Through the many written communications previously sent by SSIII committees and owners, the VCWPD has been aware of the serious concerns held by the local community regarding the JSDP. It is not simply the Association's Board of Directors or a few homeowners that share these very important concerns. Approximately 130 community response letters have been executed by SSIII Owners and compiled by a parliamentarian for review by the VCWPD. True and correct copies of the Parliamentarian's Certification and an unsigned exemplar of the community response letters is attached hereto as Exhibit "B" to the Declaration of Kevin P. Carter, submitted concurrently herein. The environmental impact of the contemplated JSDP is a very serious issue to a large number of people in the local community and these issues should not simply be dismissed as "less than significant" 24-13

XI. CONCLUSION.

Based on the topics discussed above in this Public Comment, SSIII asserts that the DEIR is technically inadequate and several issues must be addressed and resolved in more detail before the EIR is issued and before the JSDP is allowed to go forward, if at all.

The DEIR's conclusions that certain critical issues, such as public health, have a "less than significant effect" are factually and legally incorrect. The DEIR's conclusions must be supported by facts, evidence, or science. Regarding the issues contained above, the DEIR does not meet the required standard of adequacy, completeness, and good faith effort at full disclosure. Until and unless the DEIR fully discloses all known facts and arrives at good faith reasonable conclusions, SSIII opposes the contents of 24-14

the DEIR and the implementation of the JSDP as currently contemplated by the VCWPD.

It is SSIII's hope that the VCWPD will take measures to address the serious concerns described in this Public Comment / Opposition before the issuance of the Final EIR. If the issues are not adequately resolved, however, SSIII reserves its right to initiate legal proceedings to protect itself against the environmental and other negative impacts that the JSDP would cause if implemented as described in the DEIR. 24-14 Cont.

DATED: January 14, 2010

LOEWENTHAL, HILLSHAFER & ROSEN, LLP

Kevin P. Carter,
General Counsel for Surfside III
Condominium Owners' Association, Inc.

DECLARATION OF KEVIN P. CARTER

1. I am an attorney licensed to practice before all courts of the State of California. I am a partner with Loewenthal, Hillshafer & Rosen, LLP, general counsel for the Surfside III Condominium Owners' Association, Inc. (hereafter "SSIII"). I have personal knowledge of the following facts, and if called to testify, I could and would competently do so.

2. On or about December 14, 2009, I attended a meeting along with the SSIII Board of Directors, representatives of the Ventura County Watershed Protection District, Ventura County Department of Health Services, and others. During this meeting, SSIII suggested the inclusion of a pump or similar system that would periodically pump out the stagnant water within the J Street Drain. The inclusion of such a pump system would alleviate the severe stagnant water / mosquito problem that the Association faces should the JSDP be implemented, thus allowing for further capacity in the event of a 100 year storm. During the December 14 meeting, the VCWPD representatives stated that they would investigate such an idea and communicate their conclusion to SSIII. On or about January 7, Kirk Norman of the VCWPD informed me that the VCWPD is not likely to include such a pump or other system to alleviate the stagnant water / mosquito problem. To date, the VCWPD has not proposed any form of lessening the increased stagnant water that will exist if the JSDP is implemented in its current incarnation. 24-15

3. Moreover, at the December 14, 2009 meeting, the VCWPD representatives stated it intended to use only vertical shoring where absolutely necessary along the SSIII boundary line because the vertical shoring technique could cause more ground based vibration, noise, and damage to SSIII. On or about January 7, Kirk Norman informed me that the VCWPD now intends to use vertical shoring along the entire SSIII boundary.

4. Attached hereto as Exhibit "A" is a true and correct copy of the excerpt obtained from the Ventura County Environmental Health Services website which

Letter 24
Loewenthal, Hillshaffer and Rosen LLP
Re-submittal of Letter Submitted January 15, 2010 on the EIR

The comments provided in this letter were responded to in Appendix L of the EIR. Please refer to Letter 13, responses to comments 13-1 through 13-14 in Appendix L for responses to comments.

0.4 MITIGATION MONITORING AND REPORTING PROGRAM

0.4.1 INTRODUCTION AND SUMMARY

Pursuant to Section 21081.6 of the Public Resources Code and the *California Environmental Quality Act* (CEQA) *Guidelines* Section 15097, public agencies are required to adopt a monitoring or reporting program to assure that the mitigation measures and revisions identified in the Environmental Impact Report (EIR) are implemented. As stated in Section 21081.6 of the Public Resources Code:

> *"…the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment."*

Pursuant to Section 21081(a) of the Public Resources Code, findings must be adopted by the decision-maker coincidental to certification of the EIR. The Mitigation Monitoring and Reporting Program (MMRP) must be adopted when making the findings (at the time of approval of the project).

As defined in the *CEQA Guidelines*, Section 15097, "reporting" is suited to projects that have readily measurable or quantitative measures or which already involve regular review. "Monitoring" is suited to projects with complex mitigation measures, such as wetland restoration or archaeological protection, which may exceed the expertise of the local agency to oversee, are expected to be implemented over a period of time, or require careful implementation to assure compliance. Both reporting and monitoring would be applicable to the proposed project.

The EIR prepared for the J Street Drain project (SCH No. 2008041057) provided an analysis of the environmental effects resulting from construction and operation of the project. A thorough scientific and engineering evaluation of each alternative was undertaken in compliance with CEQA, including the identification of measures designed to avoid or substantially reduce the potential adverse effects of each alternative.

0.4.2 MITIGATION MATRIX

To sufficiently track and document the status of mitigation measures, a mitigation matrix has been prepared and includes the following components:

- Mitigation measure (text)
- Type
- Monitor
- Schedule

Mitigation measure timing of verification has been apportioned into several specific timing increments. Of these, the most common are:

1. During construction of the project
2. During operation of the J Street Drain
3. During Beach Elevation Management Plan Implementation

The mitigation matrix is included in Table 0.4-1.

Table 0.4-1. Mitigation Monitoring and Reporting Program Checklist

	Mitigation Measure	Type	Monitor	Schedule
Visual Resources				
VIS-1	The District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard. Landscaping shall be replaced incrementally, within six months of completion of each project phase. ~~The District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard. Landscaping shall be replaced incrementally, within six months of completion of each project phase.~~	Operation Monitoring (OM)	District Water and Environmental Resources and Design and Construction Divisions (WERD and DCD)	Within 6 months post construction of each phase.
VIS-2	Any tree or large shrub removed from the Surfside III property during construction would be replaced at a 1:1 ratio.	Construction Monitoring (CM)	District WERD and DCD	During Phase 1 construction.
VIS-3	During construction, temporary privacy screening would be placed along the northeast boundary of the Surfside III property to shield residents from views of the construction site and of the Oxnard Wastewater Treatment Plant (OWWTP).	CM	District WERD and DCD	During Phase 1 construction.
VIS-4	Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.	CM	District WERD and DCD	Prior to Phase 1 construction.
VIS-5	Although night construction is not anticipated, in the event that it becomes necessary, all lighting shall be shielded to prevent illumination of residences.	CM	District WERD and DCD	During construction of each phase.
Biological Resources				
BIO-1	During construction, the sensitive vegetation communities adjacent to the project alignment shall be flagged as Environmentally Sensitive Areas (ESA) and construction fencing shall be installed to avoid indirect impacts to these areas. Staging areas shall be identified during construction for lay down areas, equipment storage, etc., to avoid indirect impacts to the ESA. Biological monitoring shall occur during construction activities to prevent indirect impacts. Temporarily disturbed OW habitat, which falls under CDFG, USACE, and RWQCB jurisdiction, would be restored at a 1:1 ratio upon completion of construction. OW habitat restoration shall include replacement on the lagoon bottom of the top 12 inches of original soil to ensure suitable conditions for tidewater gobies and benthic fauna.	CM	District WERD and DCD	Prior to and during Phase 1 construction.
BIO-2	To prevent a decrease in the foraging success of California least terns, temporary construction fencing ("snow fencing") shall be installed surrounding the project site to delineate the construction footprint.	CM	District WERD and DCD	Prior to Phase 1 construction activities.

Mitigation Measure		Type	Monitor	Schedule
BIO-3	To prevent a decrease in the nesting and foraging success of the California least tern and western snowy plover, phase 1 construction activities adjacent to California least tern and western snowy plover habitat shall occur outside of the breeding season (March to September) to the extent feasible. If construction activities must occur during the breeding season, phase 1 project initiation through coffer dam installation shall be completed before May 1 to avoid direct impacts to foraging terns. In addition, a preemptive nesting bird survey shall be conducted by a qualified biologist to determine if any nesting terns or plovers are located near proposed activities. If nesting birds are found, all construction activities shall be prohibited within a 300-foot buffer area surrounding the nest location during the breeding season until the young have fledged. The qualified biologist shall ensure that the buffer area is appropriately defined with flagging and/or other means of suitable identification. The District shall consult with USFWS and CDFG in the event that nesting California least terns or western snowy plover are observed within 500 feet of the project area. If no nesting birds are found, construction activities could be conducted during the breeding season without restriction.	CM	District WERD and DCD	Prior to and during Phase 1 construction activities.
BIO-4	To prevent a decrease in the foraging success of California least terns and tidewater goby, silt fencing shall be installed prior to project construction between the project area and waters of Ormond Lagoon. For project activities within waters of Ormond Lagoon, dual silt fencing shall be installed around each work area to prevent/decrease the clouding of water within the lagoon as a result of potential runoff.	CM	District WERD and DCD	Prior to and during Phase 1 construction.
BIO-5	To avoid impacts to tidewater goby eggs, Phase 1 project initiation through coffer dam installation shall be completed before May 1, as the peak breeding season for this species extends from late spring through early summer, and again in late summer through early fall. Prior to the installation of the temporary cofferdam, a Section 10 (a)(1) (a) permitted tidewater goby biologist shall capture and relocate gobies to appropriate habitat located outside of the project area. The temporary cofferdam shall remain in place throughout construction activities south of Hueneme Road to prevent tidewater goby from entering the construction area from the lagoon. The biologist shall also be present during and after dewatering to ensure all gobies and other native fish are relocated to the lagoon prior to construction. A suitable number of biologists working under the supervision of the permitted biologist shall be present during and immediately after the dewatering phase to ensure that all gobies are detected. In addition, the surface water pumps installed for the dewatering of the work area shall be screened (less than five mm mesh size). A permitted tidewater goby biologist shall also be required to relocate any tidewater goby that may enter the work area from upstream.	CM	District WERD and DCD	Prior to Phase 1 project initiation and during construction.
BIO-6	Although night construction is not anticipated, in the event that it becomes necessary, all lighting will be shielded to prevent illumination of the beach.	CM	District WERD and DCD	During construction.

Mitigation Measure		Type	Monitor	Schedule
BIO-7	In order to avoid conflicts with the federal MBTA, if construction is proposed during the migratory bird nesting season, a preconstruction survey shall be conducted by a qualified biologist for the eucalyptus woodland located within the project footprint. The breeding season is defined as February 15 to September 15. If nesting birds/raptors are found, all construction activities shall be prohibited within a 300-foot impact avoidance buffer area surrounding the nest location during the breeding season. In consultation with CDFG and/or USFWS, the buffer area may be reduced in the case of bird species/individuals accustomed to urban disturbance. The qualified biologist shall ensure that the avoidance buffer area is appropriately defined with flagging and/or other means of suitable identification. If no nesting birds/raptors are found, construction could be conducted during the breeding season. Trees may be removed outside of the breeding season without restriction.	CM	District WERD and DCD	Prior to and during construction.
Water Resources and Hydraulic Hazards				
Stormwater Pollution Prevention Plan The District shall submit a completed Notice of Intent (NOI) and obtain a waste discharge identification number to obtain coverage under the NPDES General Permit for Discharges Associated with Construction Activity issued by the California State Water Resources Control Board (SWRCB). The applicant/contractor shall submit to the County a Stormwater Pollution Prevention Plan (SWPPP) and monitoring program consistent with SWRCB rules for the construction phase of the project prior to initiating construction. The SWPPP shall contain the following specific mitigation measures designed to reduce or eliminate construction site runoff pollution:				
WQ-1	Construction Site Planning BMPs, including but not limited to: • The amount of cuts and fills shall be minimized; and • Temporary and permanent roads and driveways shall be aligned along slope contours. Grading operations shall be phased to reduce the extent of disturbed areas and length of exposure.	CM	District WERD and DCD	Prior to and during construction.
WQ -2	BMPs to Minimize Soil Movement including but not limited to: • Soil stockpiles shall be contained; • Stabilized access roads and entrances shall be constructed in the initial phase of construction; • Tire wash stations, gravel beds, and/or rumble plates shall be installed at site entrance and exit points to prevent sediment from being tracked onto adjacent roadways; • Sediments and construction materials shall be dry-swept from finished streets the same day they are deposited; and • Site runoff control structures, such as earth berms, drainage swales, and ditches that convey surface runoff during construction into temporary or permanent sediment detention basins shall be installed and made operational in the initial phase of construction, as necessary.	CM	District WERD and DCD	Prior to and during construction.

Mitigation Measure	Type	Monitor	Schedule
WQ -3 BMPs to capture sediment including but not limited to: • Storm drain inlets shall be protected from sediment-laden runoff with inlet protection devices such as gravel bag barriers, filter fabric fences, block and gravel filters, excavated inlet sediment traps, sand bag barriers, and/or other devices; and • Sediment shall be removed from dewatering discharge with portable settling and filtration methods, such as Baker tanks or other devices.	CM	District WERD and DCD	Prior to and during construction.
WQ -4 Good housekeeping BMPs, including but not limited to the following requirements: • All storm drains, drainage patterns, and creeks located near the construction site prior to construction shall be identified to ensure that all subcontractors know their location to prevent pollutants from entering them; • Washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site; wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands; areas designated for washing functions shall be at least 100 feet from any storm drain, waterbody or sensitive biological resources to the extent feasible; the location(s) of the washout area(s) shall be clearly noted at the construction site with signs; the applicant shall designate a washout area; the wash-out areas shall be shown on the construction and/or grading and building plans and shall be in place and maintained throughout construction; • All leaks, spills, and drips shall be immediately cleaned up and disposed of properly; • Vehicles and heavy equipment that are leaking fuel, oil, hydraulic fluid or other pollutants shall be immediately contained and either repaired immediately or removed from the site; • One or more emergency spill containment kits shall be placed onsite in easily visible locations. Personnel will be trained in proper use and disposal methods; • Vehicles and heavy equipment shall be refueled and serviced in one designated site located at least 100 feet from the drain to the extent feasible; • Temporary storage of construction equipment shall be limited to an area approved by the City of Oxnard, and shall be located at least 100 feet from any water bodies to the extent feasible; • Dry clean-up methods shall be used whenever possible; • Exposed stockpiles of soil and other erosive materials shall be covered or contained during the rainy season; • Trash cans shall be placed liberally around the site and properly maintained;	CM	District WERD and DCD	Prior to and during construction.

	Mitigation Measure	Type	Monitor	Schedule
	• All subcontractors and laborers shall be educated about proper site maintenance and stormwater pollution control measures through periodic "tailgate" meetings; • Roadwork or pavement construction, concrete, asphalt, and seal coat shall be applied during dry weather only; and • Storm drains and manholes within the construction area shall be covered when paving or applying seal coat, slurry, fog seal, etc.			
Air Quality				
AQ-1	VCAPCD recommends the following measures to mitigate ozone precursor emissions from construction motor vehicles: 1. Minimize equipment idling time. 2. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications. 3. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time. 4. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible.	CM	District WERD and DCD	During construction.
AQ-2	1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. 2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities. 3. All trucks shall be required to cover their loads as required by California Vehicle Code Section 23114. 4. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to periodic watering, application of environmentally-safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. 5. Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be permanently stabilized or periodically treated to prevent excessive fugitive dust.	CM	District WERD and DCD	Prior to and during construction.

	Mitigation Measure	Type	Monitor	Schedule
	6. Signs shall be posted on site limiting traffic on unpaved areas to 15 miles per hour or less. 7. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on site activities and operations from being a nuisance or hazard, either off site or on site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive. 8. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads. 9. Personnel involved in grading operations, including contractors and subcontractors, shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations. 10. Material stockpiles shall be enclosed, covered, stabilized, or otherwise treated as needed to prevent blowing fugitive dust off site.			
AQ-3	All project construction and site preparation operations shall be conducted in compliance with all applicable VCAPCD Rules and Regulations with emphasis on Rule 50 (Opacity), Rule 51 (Nuisance), and Rule 55 (Fugitive Dust), as well as Rule 10 (Permit Required).	CM	District WERD and DCD	During construction.
Transportation and Circulation				
TR-1	The District shall prepare a construction worksite traffic control plan and submit it to the County, cities, Gold Coast Transit, Oxnard School District, Oxnard Union High School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan.	CM	District WERD and DCD	Prior to and during construction.
TR-2	The Contractor shall coordinate with emergency service providers (police, fire, ambulance and paramedic services) to provide advance notice of any lane closures, construction hours and changes to local access and to identify alternative routes where appropriate.	CM	District WERD and DCD	Prior to and during construction.
TR-3	To preserve parking for residents during phase 1 construction, the District shall employ vertical shoring techniques along the Surfside III property where open trenching would result in the temporary removal of off-street parking spaces.	CM	District WERD and DCD	During construction.

Mitigation Measure	Type	Monitor	Schedule
Noise and Vibration			
NOISE-1 Equipment Noise Reduction 1. Minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete or asphalt demolition and removal. 2. Pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise limitations. 3. Provide impact noise reducing equipment; i.e., jackhammers and pavement breaker(s), with noise attenuating shields, shrouds or portable barriers or enclosures, to reduce operating noise. 4. Provide upgraded mufflers, acoustical lining or acoustical paneling for other noisy equipment, including internal combustion engines. 5. Avoid blasting and impact-type pile driving. 6. Use alternative procedures of construction and select a combination of techniques that generate the least overall noise and vibration. Such alternative procedures could include the following: a. Use electric welders powered by remote generators. b. Mix concrete at non-sensitive off-site locations, instead of on-site. c. Erect prefabricated structures instead of constructing buildings on-site. 7. Use construction equipment manufactured or modified to reduce noise and vibration emissions, such as: a. Electric instead of diesel-powered equipment. b. Hydraulic tools instead of pneumatic tools. c. Electric saws instead of air- or gasoline-driven saws. 8. Turn off idling equipment when not in use for periods longer than 30 minutes.	CM	District WERD and DCD	During construction.
NOISE-2 A temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain. Additionally, temporary noise control barriers shall be installed and maintained in residential and commercial areas along Phases 2-4 to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-25. In addition to placement of noise control blankets along the construction area adjacent to the Shoreline Care Facility, located at 5225 South J Street, and if needed, Our Saviour's Evangelical Lutheran Church	CM	District WERD and DCD	Prior to and during construction

Mitigation Measure		Type	Monitor	Schedule
	at 905 Redwood Street, to further reduce noise levels below 68 dB(A) L_{eq}, additional noise control barriers shall be installed. To ensure sufficient noise barriers are deployed, construction noise levels shall be monitored ten feet from the exterior of the nursing home and church at the start of work activities within 500 feet of these two locations. Barriers would be installed to reduce noise levels generated by the loudest equipment when construction activities are closest to the nursing home and church. Monitoring would occur at the nursing home during construction Phases 2 and 3 and at the church during construction Phase 4. Construction noise levels would be monitored weekly thereafter to ensure proper function of the barriers throughout work and that the desired noise attenuation at these locations is achieved. This noise control barrier will also provide visual screening for all residents along the work area, ~~eastern boundary of~~ including the Surfside III property to shield residents from views of the J Street Drain during construction. If the Surfside III Condominium Owners' Association does not grant a temporary work area to enable installation of temporary noise barriers at Buildings 6 and 7, the District will provide funds for the Association to arrange the barrier installation on their property. Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J St Drain in Phase 1).			
NOISE-3	Prior to construction, the District shall request property owner permission to video record the condition of structures adjacent to the J Street Drain in the presence of the property owner. The recording shall be performed and stored by an independent third-party, with a copy given to the property owner. If vibration-induced damages occur as a result of construction, property owners would be invited to submit claims documenting such damages within one year following construction completion. The third-party would again enter the property to video record its post-construction condition, again providing a copy to the property owner. Both recordings would be compared, and the District would provide compensation to repair new damages observed in the post-construction recordings. Once both parties have agreed to the compensation, both pre- and post-construction video recordings stored by the third-party would be given to the property owner.	CM and OM	District WERD and DCD	Prior to construction and upon project completion.
Geologic and Seismic Hazards				
GEO-1	Erosion and Sediment Control In order to mitigate potential soil erosion and loss of topsoil from excavation, the construction SWPPP shall incorporate, but not be limited to, the following measures, as appropriate, to minimize erosion: • Excavation and grading shall be restricted to the dry season (April 15th to October 15th) unless an erosion control plan is in place and all measures therein are in effect.	CM	District WERD and DCD	Prior to and during construction.

	Mitigation Measure	Type	Monitor	Schedule
	• Best Management Practices (BMPs) will be employed to control erosion, including temporary siltation protection devices such as silt fencing, straw bales, and sand bags. These shall be placed at the base of all cut and fill slopes and soil stockpile areas where potential erosion may occur. Refer to Section 4.3, Water Resources and Hydraulic Hazards, for additional requirements related to stormwater and non-stormwater pollution prevention and control.			
GEO-2	Seismic Related Ground Failure and Expansive Soils The proposed project shall comply with all recommendations set forth in the Preliminary Geologic Geotechnical Investigation (Appendix F) to reduce the risk of hazards associated with seismic-related ground failure, liquefaction and expansive soils along the J Street Drain. These recommendations address the following: • Site preparation • Excavation – stabilization measures, dewatering procedure, and shoring • Fill Material and General Fill Placement • Channel Foundation Design	CM	District WERD and DCD	During construction.
GEO-3	a) A Licensed Surveyor shall plan and install a survey monument monitoring system on buildings within 25 feet of proposed vertical shoring to collect monthly baseline data for six months before construction. The monuments shall remain in place and be monitored monthly for one year after construction completion to track any latent changes. During construction, the Licensed Surveyor shall conduct surveys corresponding to major phases of work such as shoring installation, excavation, and backfill. b) Before Phase 1 construction may begin, the District shall require the Contractor to prepare a Work Plan, which would take into account all available geotechnical information for the areas where vertical shoring and sheet piles are to be installed. The Plan would specify the contractor's approach to installing vertical shoring and sheet piles in a manner that would avoid and minimize associated potential vibration damage to adjacent structures. c) The Work Plan shall require the Contractor to take daily measurements of the survey monuments on adjacent structures described in (a) above to track potential changes during construction. d) Should the surveys or measurements described in (a) and (c) above indicate subsidence or other damage due to construction activities, the Contractor shall modify the Work Plan to address the causes. Property owners within 25 feet of the proposed shoring shall be promptly notified of observed damage, and any Work Plan revisions shall be available to	CM	District WERD and DCD	Six months prior to, during, and for one year after project construction.

Mitigation Measure		Type	Monitor	Schedule
	property owners upon request. For multi-unit structures, the District shall identify a single designated representative with whom to communicate. e) The District shall provide a construction contact telephone number to adjacent residents before work commences so that they may report possible observations of damage immediately to the District.			
Hazardous Materials				
HAZ-1	Prior to dewatering activities between the Ventura County Railroad and the south project terminus, the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined t hat there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site.	CM	District WERD and DCD	Prior to dewatering activities and during construction.
Cultural Resources				
CULT-1	In the event that archaeological resources are exposed during project construction, all earth disturbing work within the vicinity of the find shall be temporarily suspended or redirected until a qualified archaeologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume.	CM	District WERD and DCD	During construction.
CULT-2	If the resource is determined to be potentially significant, a cultural resources treatment plan shall be developed to provide appropriate mitigation measures. These measures may include archaeological testing and data recovery excavation. The treatment plan shall also include a detailed description of associated reporting requirements, curation requirements for any cultural materials collected during treatment, and the qualifications for archaeologists involved in treatment activities.	CM	District WERD and DCD	During construction.
CULT-3	If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Ventura County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Ventura County Coroner determines the remains to be Native American, the NAHC shall be contacted within a reasonable timeframe. Subsequently, the NAHC shall identify the “most likely descendant.” The most likely descendant shall then make recommendations, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98.	CM	District WERD and DCD	During construction.

0.4.3 PROJECT OPERATION CONSIDERATIONS

The project incorporates several best management practices (BMPs) contained in the Final Program EIR for the Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program, previously adopted by the Ventura County Board of Supervisors in May 2008. These BMPs minimize the project's operational impacts. These BMPs are currently implemented at all existing District facilities, including the J Street Drain, and would continue to be implemented after construction of the proposed J Street Drain improvements. Specifically, operational BMPs are provided for aesthetics, air quality, biological resources, geology and soils, hydrology/water quality, land use, noise, public services, traffic, and utilities. A complete list of the design considerations for the project is presented in Table 0.4-2.

Table 0.4-2. Project Design Features

Biological Resources	
BMP-2	Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning. The removal of sediments, vegetation, algae, and trash from fully lined improved channels for purposes of NPDES storm water permit compliance shall include measures to prevent the discharge of silt-laden water or pollutants to downstream unimproved channels with soft bottoms (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000). These measures may include temporary downstream silt barriers (sand bags, straw bales, in-channel materials), silt fences, upstream diversion, etc. Per Section 401 Water Quality Certification requirements, a Water Diversion Plan would be needed for water diversion activities
BMP-3	Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.
BMP-4	Survey for Habitat Prior to Routine Maintenance Work. Prior to routine maintenance and repair activities performed within or adjacent to an earthen or earthen bottom channel or in-channel structure during the period 1 March to 1 August, a District biologist or consulting biologist shall determine if suitable habitat is present for riparian-dependent breeding birds in or within 400 feet of the work area. Suitable habitat is generally defined as dense or moderately dense willow or mulefat scrub or woodland with sufficient density and vegetative structure to support nesting and foraging. Prior to routine maintenance and repair activities performed within or adjacent to an earthen or earthen bottom channel or in-channel structure that would disrupt foraging or nesting of raptors during the period 1 February to 1 August, a District biologist or consulting biologist shall survey the 400 feet radius around the project site for raptor nest initiation or occupation. Channel cleanout shall be postponed to 1 August if such habitat is present in the work area or within 200 feet of the work area, or until nestlings have fledged if the District determines that riparian bird or raptor nesting is occurring in the habitat area. This restriction does not apply if the nesting birds are house sparrows, house finches, crows, cowbirds, or other common upland species or introduced species. If any federally or state listed birds are found nesting within the 200 or 400 feet survey radius, the District shall consult with CDFG for the applicability of this restriction.
BMP-8	Avoid Disturbance to Native Beach or Wetland Species. The District shall avoid areas of beach dune vegetation when accessing storm drain outlets at the beach with vehicles for routine maintenance. The removal of native beach or wetland plants that are located at or near the beach outlet shall be minimized. Prior to the removal of obstructive sand or vegetation from a beach outlet, qualified District personnel shall determine if suitable habitat (i.e., a brackish waterbody) is present at the outlet for tidewater gobies, and if the species is present. In addition,

	qualified District personnel shall determine if suitable habitat is present along the vehicle access route across the beach for foraging or nesting snowy plovers and California least terns. If any of these sensitive species are present at the storm drain outlet or along the access route, the District will either postpone the routine maintenance work until these species are no longer present, or follow avoidance and/or relocation procedures approved by U.S. Fish and Wildlife Service (USFWS). This BMP shall not apply if there is a threat of a storm and the outlet is plugged. The District shall contact CDFG and USFWS when California least terns, snowy plover, or tidewater gobies are observed during the pre-project surveys for consultation.
BMP-9	Aquatic Pesticide BMPs. The District shall follow the most up-to-date BMPs and the monitoring and reporting requirements in the District's NPDES Stormwater Quality Management Plan (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000, available at http://vcstormwater.org/documents/workproducts/stormwater_quality_mangement_plan.pdf) when applying herbicides to channels and basins. The District shall also follow BMPs in the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides (included in Appendix I).
BMP-11	Leave Patches of Vegetation in Channel Bottom. The District shall minimize vegetation removal or reduction from earthen or earthen bottom channels to the least amount necessary to achieve the specific maintenance objectives for the reach. Vegetation removal in the channel bottom shall be conducted in a non-continuous manner, allowing small patches of in-channel vegetation to persist provided it will not adversely affect conveyance capacity.
BMP-12	Leave Herbaceous Wetland Vegetation in Channel Bottom. Consistent with the maintenance objectives, the District shall avoid removal or reduction of emergent herbaceous wetland vegetation on the channel bottom that is rooted in or adjacent to the low flow channel or a pond in order to provide cover for aquatic wildlife. This same type of vegetation shall be protected during the removal of taller obstructive woody vegetation on the channel bottom.
BMP-14	Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.
BMP-15	Mitigate/Replace Temporary Impacts to Habitat. For repair of in-channel structures and features that results in the temporary disturbance of native wetland or riparian vegetation adjacent to the facility, the District shall restore native wetland or riparian vegetation in the affected work areas after the repair or reconstruction work. Restoration shall include planting or seeding native plants that were present prior to the work and/or are compatible with existing riparian vegetation near the work area. The District shall prepare a restoration plan for each repair project that specifies the limits of restoration, planting mix and densities, performance criteria for survival and growth, and at least a three-year maintenance and monitoring procedures. Restoration sites shall be located outside the limits of the repaired structure. If no suitable restoration site is available near the work area or the creation of a restoration area near the work area would conflict with flood control needs, the District shall select another location on District right-of-way in close proximity. If suitable restoration sites are not available, the District shall provide funds to a third party (public agency or non-profit organization) to implement the required mitigation in the same watershed as the impact. Habitat restoration under this BMP shall only occur if the affected areas support native wetland or riparian vegetation; no restoration is required for barren areas or areas dominated by non-native plants. The District shall submit all habitat restoration plans to CDFG prior to implementation.
BMP-17	Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.
BMP-18	Water Diversion Guide. Water diversion activities undertaken as part of routine repair and maintenance operations in improved and unimproved channels as well as debris basins shall follow the BMP guidance established as the Water Diversion Guide incorporated into the Final Program EIR addressing Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program, adopted by the District in May 2008.

BMP-20	Implementation of Integrated Pest Management. The District shall inspect its critical and non-critical facilities regularly to document and identify the presence or absence of ground squirrels. The District shall develop and implement an Integrated Pest Management (IPM) program that identifies tolerance level, control thresholds and approved rodent control methods and/or combinations of methods at each District facility. Rodent control methods implemented at each facility shall be applied as needed and as appropriate for site conditions and the season. Methods implemented shall minimize potential primary and secondary hazards to non-target species. The District shall maintain a preventative IPM program with zero tolerance for ground squirrels for its critical facilities where failure would impact public safety. When rodent control becomes necessary at non-critical facilities, the District shall choose applicable, cost-effective treatment method(s) from the District's IPM program. Treatment options considered for each site shall include: trapping, habitat modification, alternative construction methods and materials, use of raptors, clean and rodenticide-treated bait stations, broadcast diphacinone and zinc phosphide with or without carcass collection, and other methods. As part of an ongoing monitoring program to determine the effectiveness of the squirrel control program, the District shall maintain uniform inspection records for each facility and all control efforts. The District shall conduct a staff training program that covers the IPM program including rodent issues, inspection and monitoring requirements, and treatment options.
BMP-21	Avoid Spills and Leaks. The District shall ensure that all equipment operating in and near a watercourse, or in a basin, is in good working condition and free of leaks. No equipment maintenance or refueling shall occur in a channel or basin bottom. Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse. In addition, all maintenance crews working with heavy equipment shall be trained in spill containment and response.
BMP-22	Biological Surveys in Appropriate Habitat Prior to Vegetation Maintenance. Prior to any sediment removal, vegetation control (by herbicide application, mowing, or discing), or repair work in earthen or earthen bottom channels and basins that contain native aquatic, riparian, or wetland habitats suitable for sensitive fish and wildlife species, the District shall conduct appropriate field investigations to determine if any threatened, endangered, or sensitive species are present. If such species are determined to be present in or in close proximity to the work areas, the District shall reschedule the work when the species are not present. If it is necessary to conduct the work while the species are present or in proximity to the work areas, the District shall develop other avoidance or relocation measures in consultation with the CDFG, USFWS, or National Oceanic and Atmospheric Administration (NOAA) Fisheries prior to conducting the work. If the work could affect state or federally listed species or their habitat, the District would employ avoidance or relocation measures approved by USFWS, NOAA Fisheries, or CDFG, as appropriate, for the maintenance program. This measure includes protection for the following threatened, endangered, or sensitive species that could occur at maintenance sites: tidewater goby, southern steelhead, trout, unarmored threespine stickleback, California redlegged frog, arroyo toad, least Bell's vireo, southwestern willow flycatcher, arroyo chub, southwestern pond turtle, two-striped garter snake, Cooper's hawk, sharp-shinned hawk, yellow warbler, yellow breasted chat, purple marlin, tri-colored blackbird, and long-eared owl
Water Resources and Hydraulic Hazards	
BMP 1	Avoid Channel Work During the Rainy Season. Routine maintenance and repair activities in earthen channels and in channels with soft bottoms and bank protection shall not occur during the rainy season 1 December to 1 April to avoid work when water could be present in the drainage due to runoff. Routine maintenance and repair activities may occur during this period if water is absent from the drainage because of low runoff conditions, or activities can be performed without working in flowing water. Work in flowing water during this period may proceed if there are no feasible alternatives and completion of the maintenance work during this time period is critical. Work in flowing water shall be conducted according to the BMPs established in the Water Diversion Guide attached as Appendix E to this EIR.
BMP 2	Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning. The removal of sediments, vegetation, algae, and trash from fully lined improved channels for purposes of NPDES storm water permit compliance shall include measures to prevent the discharge of silt-laden water or pollutants to downstream unimproved channels with soft bottoms (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000). These measures may include temporary downstream silt barriers (sand bags, straw bales, in-channel materials), silt fences, upstream diversion, etc. Per Section 401 Water Quality Certification requirements, a Water Diversion Plan would be needed for water diversion activities.

BMP 3	Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.
BMP 14	Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.
BMP 17	Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.
BMP 21	Avoid Spills and Leaks. The District shall ensure that all equipment operating in and near a watercourse, or in a basin, is in good working condition and free of leaks. No equipment maintenance or refueling shall occur in a channel or basin bottom. Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse. In addition, all maintenance crews.
Air Quality	
The following measures are part of the APCD's Model Fugitive Dust Mitigation Plan and shall be incorporated to maintenance activities as needed to further reduce the District's fugitive dust emissions during grading, excavation, and construction activities. • The areas disturbed at any one time by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. • Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during earthmoving, grading, and excavation activities. • All trucks shall be required to cover their loads as required by California Vehicle Code §23114. • All graded and excavated material, exposed soil areas, including unpaved parking and staging areas, and other active portions of the construction site, including unpaved on site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. • Graded and/or excavated inactive areas of the construction site shall be monitored by the District's operation and maintenance staff at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be periodically treated with environmentally-safe dust suppressants. • During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on site activities and operations from being a nuisance or hazard, either on site or off site. The District staff shall use his/her discretion in conjunction with the APCD in determining when winds are excessive. • Rumble strips or track out devices shall be installed where vehicles enter and exit unpaved roads onto paved road, or wash off trucks and any other equipment leaving the site. • All on site construction roads that have a daily traffic volume of more than 50 daily trips shall be stabilized as to minimize transport of earthen material from the site.	

- Open material stockpiles shall be roller compacted, periodically watered, or treated with appropriate dust suppressants.
- There shall be at least one qualified District staff on site each work day to monitor the provisions of the Fugitive Dust Mitigation Plan and any other applicable fugitive dust rules, ordinances, or conditions.
- Personnel involved in grading operations shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health Regulations.

All project construction operations shall be conducted in compliance with all applicable APCD Rules and Regulations with emphasis on Rule 50 (Opacity) and Rule 51 (Nuisance).

Transportation and Circulation

- If maintenance activities would result in substantial vehicle trips on a roadway with unacceptable LOS at peak hours, maintenance staff should either choose an alternate route or conduct vehicle trips off peak hours. In addition, District staff shall avoid stacking of maintenance trucks on public roads during maintenance activities. The minimum acceptable LOS for road segments and intersections within the County Regional Road Network and Local Road Network shall be as follows:
  - LOS D for all County thoroughfares and federal highways and state highways in the unincorporated area of the County, except as otherwise provided below;
  - LOS E for SR-33 between the northerly end of the Ojai Freeway and the City of Ojai, Santa Rosa Road, Moorpark Road north of Santa Rosa Road, and SR-34 north of the City of Camarillo;
  - LOS C for all County-maintained local roads; and
  - The LOS prescribed by the applicable city for all federal highways, state highways, city thoroughfares and city-maintained local roads located within that city, if the city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County respecting development in the city that would individually or cumulatively affect the LOS of federal highways, state highways, County thoroughfares and County-maintained local roads in the unincorporated area of the County.

Noise and Vibration

- Construction Noise BMPs. Noise-generating construction activities shall be restricted to the daytime (i.e., 7:00 AM to 7:00 PM, Monday through Friday), during which noise levels shall not exceed:
- 75 dB(A) Leq(h) at noise sensitive locations when construction work duration would last up to 3 days;
- Ventura County Watershed Protection District 2-64 Final Program EIR – May 2008
- 70 dB(A) Leq(h) at noise sensitive locations when construction work would last from 4 to 7 days;
- 65 dB(A) Leq(h) at noise sensitive locations when construction work would last from 1 to 2 weeks;
- 60 dB(A) Leq(h) at noise sensitive locations when construction work would last from 2 to 8 weeks, or
- 55 dB(A) Leq(h) at noise sensitive locations when construction work duration would exceed 8 weeks.

  If these thresholds are exceeded at noise sensitive locations, noise abatement measures shall be implemented to reduce noise levels. Noise abatement measures shall include, but are not limited to, the construction equipment source noise reduction methods and construction noise propagation path reduction methods provided in the County of Ventura Construction Noise Threshold Criteria and Control Plan. As defined by the County of Ventura Construction Noise Threshold Criteria (2005), daytime noise-sensitive receptors include hospital, nursing homes (quasi-residential), schools, churches, and libraries (when in use). Single-family, multi-family dwellings, hotels, and motels are considered evening and nighttime noise-sensitive receptors. Since noise-generating construction activities would not occur during the evening or night hours, no noise mitigation for single-family dwellings, multi-family dwellings, hotels or motels is necessary.

Geology and Seismic Hazards

BMP 1 Avoid Channel Work During the Rainy Season. Routine maintenance and repair activities in earthen channels and in channels with soft bottoms and bank protection shall not occur during the rainy season 1 December to 1 April to avoid work when water could be present in the drainage due to runoff. Routine maintenance and repair activities may occur during this period if water is absent from the drainage because of low runoff conditions, or activities can be performed without working in flowing water. Work in flowing water during this period may proceed if there are no feasible alternatives and completion of the maintenance work during this time period is critical. Work in flowing water shall be conducted according to the BMPs established in the Water Diversion Guide attached as Appendix E to this EIR.

BMP 3	Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.
BMP 14	Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.
BMP 17	Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.
Public Health	
BMP-9	Aquatic Pesticide BMPs. The District shall follow the most up-to-date BMPs and the monitoring and reporting requirements in the District's NPDES Stormwater Quality Management Plan (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000, available at: http://vcstormwater.org/documents/workproducts/stormwater_quality_mangement_plan.pdf) when applying herbicides to channels and basins. The District shall also follow BMPs in the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides (included in Appendix I).

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ES.0 EXECUTIVE SUMMARY

This Final Environmental Impact Report (FEIR) ~~Recirculated Draft Environmental Impact Report (RDEIR)~~ has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code, Section 21000 et seq.) and the *CEQA Guidelines* (California Code of Regulations (CCR), Section 15000 et seq.) to analyze the potential significant impacts associated with the J Street Drain Project.

ES.1 THE PROJECT

The proposed project would involve increasing the capacity of the existing channel to reduce potential flooding in residential and commercial areas within the Cities of Oxnard and Port Hueneme. The existing concrete-lined channel has a varying depth of four feet at the northern end to almost four feet at the southern end, with a bottom width varying from 20 to 30 feet and 1:1 side slopes. In order to increase the capacity of the channel and maintain an appropriate drainage slope, the channel needs to be deeper and wider. Operation and maintenance of the proposed channel would be conducted in accordance with the Ventura County Watershed Protection District's routine operation and maintenance protocols, as identified in the Final EIR for the Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program (May 2008).

The proposed project involves converting the existing trapezoidal concrete channel into an open rectangular channel with a bottom up to four feet deeper than the existing channel bottom. The existing box culverts under the street crossings and railroad crossing would be replaced by larger structures to improve flow conveyance. The existing concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station. Because the concrete lined portion of the channel invert would be lowered about 2.5 to 4 feet to create the required capacity, the excavation would continue south beyond the concrete-lined channel. The finished invert would be daylighted via an earthen ramp to the lagoon at a 10:1 slope at a distance of up to 40 feet from the end of the existing concrete. A ten-foot-thick layer of four-ton rock riprap would be placed ~~on~~ horizontally beneath the earthen ramp at the end of and at the same elevation as the concrete drain bottom to dissipate flow energy. It anticipated that during the first few natural lagoon breaching events following Phase 1 construction, the movement of water (tidal and drain flow) and sediment would ~~ultimately~~ create an equilibrium elevation within the channel transition area, between the end of the concrete channel and the Ormond Beach Lagoon annual breach location ~~and the rock lining would be covered by sediment~~.

ES.2 PROJECT OBJECTIVES

The District's primary project objectives include:

- Flood control protection – increase drain size to provide capacity for 100-year flood flow;
- Maintain the existing functional characteristics of the Ormond Beach Lagoon;
- Ensure project compatibility with future Ormond Beach Lagoon restoration plans;
- Minimize the disturbance to tidewater goby habitat downstream of the J Street Drain lined channel as well as snowy plover and California least tern nesting areas on Ormond Beach;
- Minimize operation and maintenance requirements, especially during storms; and
- Minimize effects on water quality of the lagoon.

ES.3 LOCATION AND EXISTING CONDITIONS

The project site is located along J Street, within the City of Oxnard and near the City of Port Hueneme in Ventura County. It extends approximately 12,100 feet from the Ormond Beach Lagoon to Redwood Street in the City of Oxnard (Figure 4.1-1). The existing J Street Drain is a concrete-lined trapezoidal channel from Redwood Street to approximately 50 feet south of the Hueneme Drain Pump Station where it discharges into Ormond Beach Lagoon (Figure 4.2-1). The proposed concrete-lined channel would end at the same location as the existing concrete lining.

The J Street Drain comprises four reaches:

1. Ormond Beach Lagoon outlet to Hueneme Road;
2. Hueneme Road to Pleasant Valley Road;
3. Pleasant Valley Road to Yucca Street; and
4. Yucca Street to Redwood Avenue

Reach 1 contains approximately 2,900 linear feet of channel improvements and two crossings, one at Hueneme Road and the other at the Ventura County Railroad. The channel is located within a 70.5-foot-wide easement. The District owns the northern approximately 2,300 linear feet. The southern 600 feet is a District easement on land owned by the City of Oxnard. The boundary between the cities of Oxnard and Port Hueneme occurs along the western property line. High density residential and commercial storage exists on the west side of the channel. A wastewater treatment plant and industrial manufacturing occur east of the channel. A service road provides maintenance access along the east side of the channel. At the south end of this reach, the existing concrete-lined channel outlets into the Ormond Beach Lagoon.

Reach 2 contains approximately 2,600 linear feet of channel improvements and two crossings, one at Pleasant Valley Road and the other at Clara Street. The channel runs along the center of the street, dividing the northbound and southbound lanes of traffic. Residential dwellings of varying densities front both sides of the street. The southern approximately 1,300 linear feet of J Street is 132 feet wide. The J Street Drain is contained within a 52-foot-wide easement centered within the roadway. The northern approximately 1,300 linear feet of J Street is 122 feet wide. The District's 52-foot-wide J Street Drain easement is roughly centered within this area, with 40 feet of land owned by the City of Oxnard to the east and 30 feet to the west.

Reach 3 contains approximately 4,000 linear feet of channel improvements and two crossings, one at Bard Road and the other at Yucca Street. Single family homes front both sides of the street except for the Bubbling Springs Community Park, owned by the City of Port Hueneme, located on the southwest corner of Bard Road. The total J Street easement is 122 feet from Pleasant Valley Road northward approximately 250 feet to Sonoma Way. The J Street easement is 118 feet from Sonoma Way to Bard Road, and 114 feet from Bard Road to Yucca Street. The J Street Drain is maintained within a 40-foot wide easement roughly centered within the road easement.

Reach 4 contains approximately 2,600 linear feet of channel improvements and one crossing at Teakwood Street. Single family homes front both sides of the street. The J Street easement is 114 feet wide, and the J Street Drain is 40 feet wide. The District owns the northern portion of the channel, between Redwood Street and the west side of Teakwood Street. In the southern portion of this reach, from the west side of Teakwood Street to Yucca Street, the District maintains a channel easement.

ES.4 ENVIRONMENTAL IMPACTS

The original DEIR (SCH 2008041057) was circulated for public review from November 2, 2009 to January 19, 2010. All interested persons and organizations had an opportunity during this time to submit their written comments on the DEIR to the Ventura County Watershed Protection District (District). These comments along with their responses are located in Appendix L ~~in this~~ of the September 2011 Recirculated (RDEIR). ~~The original DEIR addressed increasing the capacity of the J Street Drain channel to reduce potential flooding in residential and commercial areas of the Cities of Oxnard and Port Hueneme.~~ The RDEIR was prepared as a result of the January 18, 2010 flood emergency north of Ormond Beach Lagoon, the release of new information concerning the Halaco Superfund site in 2010 and 2011, revisions to Ventura County significance thresholds adopted in 2011, and issues raised during the DEIR process. The RDEIR was circulated for a 45-day public review from September 23, 2011 through November 7, 2011. All interested persons and organizations had an opportunity during that time to submit their written comments on the RDEIR to the District. A public meeting was held on September 23, 2011 to discuss the changes made to the original DEIR. Twenty-four comment letters were received during the RDEIR public review period. These comments along with their responses are located in Section 0.3 of this Final EIR.

~~As the result of comments on the original DEIR along with the District's responses to those comments, the occurrence of a flood emergency north of Ormond Beach Lagoon on January 18, 2010, the release of new information concerning the Halaco Superfund site in 2010 and 2011, and revisions to Ventura County significance thresholds adopted in 2011, the District determined that the DEIR for the J Street Drain project should be recirculated for public review and comment.~~ A summary of environmental impacts, mitigation measures, and a level of impact remaining after mitigation is presented in Table ES-1 at the end of this Executive Summary.

The analysis contained in this FEIR ~~RDEIR~~ uses words "significant" and "less than significant" in the discussion of impact. These words specifically define the degree of impact and parallel language used in *CEQA Guidelines*. As required by CEQA, mitigation measures have been identified in this RDEIR to avoid or substantially reduce the level of potentially significant impacts to the greatest extent possible. Certain significant impacts, even with the inclusion of mitigation measures, cannot be reduced to a level below significance. Such impacts are identified as "unavoidable significant impacts."

ES.5 UNAVOIDABLE SIGNIFICANT IMPACTS

The *CEQA Guidelines* define a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project, including land, air, water, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (Section 15382). In order to approve a project with unavoidable significant impacts, the lead agency must adopt a Statement of Overriding Considerations. In adopting such a statement, the lead agency finds that it has reviewed the EIR, has balanced the benefits of the project against its unavoidable significant effects, and has concluded that the benefits of the project outweigh the unavoidable adverse environmental effects, and thus, the adverse environmental effects may be considered "acceptable" (*CEQA Guidelines*, Section 15093[a]). No unavoidable significant impacts resulting from the J Street Drain Project have been identified in the RDEIR.

ES.6 POTENTIALLY SIGNIFICANT IMPACTS THAT CAN BE MITIGATED

The EIR analysis identified the following potentially significant impacts associated with the proposed project that can be mitigated to less than significant levels:

- Biological Resources
- Water Resources and Hydraulic Hazards
- Transportation and Circulation
- Noise and Vibration
- Geologic and Seismic Hazard
- Cultural and Paleontological Resources
- Visual Resources
- Hazardous Materials and Waste

ES.7 IMPACTS CONSIDERED AND FOUND TO BE LESS THAN SIGNIFICANT

The analysis contained in the ~~RD~~EIR indicates that the project will not result in a significant impact with respect to the following:

- General Plan Environmental Goals and Policies
- Coastal Beaches and Sand Dunes
- Recreation
- Waste Treatment/Disposal
- Public Health

Pursuant to CEQA and the *CEQA Guidelines*, an Initial Study was prepared for this project (refer to Appendix A). The Initial Study concluded that the J Street Drain Project will result in either no impact or a less than significant impact with regards to:

- Agricultural Resources (including soils, water, air quality/microclimate, pests/diseases, land use incompatibility)
- Visual Resources (including scenic highway)
- Land Use (including community character, housing, and growth inducement)
- Mineral Resources (including aggregate and petroleum)
- Energy Resources
- Aviation Hazards
- Fire Hazards
- Glare
- Public Health
- Transportation/Circulation (including safety/design and tactical analysis [fire] on public and private roads, bus transit, railroads, airports, harbors, and pipelines)
- Water Supply (including quality, quantity, and fire flow)
- Flood Control/Drainage (including District and non-District flood control/drainage facilities)
- Utilities (including electric, gas, and communication)

- Law Enforcement and Emergency Services (including personnel/equipment and facilities)
- Fire Protection (including distance/response time and personnel/equipment/facilities)
- Education (including schools and libraries)

ES.8 BENEFICIAL EFFECTS

This ~~RD~~EIR identifies the following effects of the proposed project that are beneficial:

- Flood control and drainage
- Minimize operation and maintenance requirements, especially during storms

ES.9 ALTERNATIVES TO THE PROJECT

Several alternatives to the proposed project were considered, and are described in the following sections.

ES.9.1 Channel Alternatives

Alternative A: Buried Box Culverts that Would Allow for Planting on Top
Alternative B: Preferred Channel Alternative
Alternative C: Open Rectangular Channel with Step
Alternative D: Two Separated Buried Box Culverts
Alternative E: Natural Channel
Alternative F: No Project

ES.9.2 Beach Outlet Alternatives

Outlet Alternative A: Dike System
Outlet Alternative B: Natural System with the Restoration Project
Outlet Alternative C: Preferred Outlet Alternative
Outlet Alternative D: No Project

ES.10 ISSUES IDENTIFIED DURING THE NOP PROCESS

No areas of controversy were identified during the Notice of Preparation (NOP) process. In response to the NOP, certain issues were raised by public agencies and individuals and these issues are addressed in the EIR as follows:

- Biological Resources (addressed in Section 4.2)
- Water Resources and Hydraulic Hazards (addressed in Section 4.3)
- Noise and Vibration (addressed in Section 4.6)
- Hazardous Materials/Waste (addressed in Section 4.8)
- Public Health (addressed in Section 4.11)

ES.11 MITIGATION MONITORING PROGRAM

In accordance with CEQA Section 21081.6, a mitigation monitoring program will be adopted by the District upon approval of the J Street Drain Project. The mitigation monitoring program is included as

Section 0.4 of this Final EIR. ~~will be prepared as a separate document and designed to ensure compliance with the adopted mitigation measures contained in the Final EIR~~. The program will be available for public review prior to the District taking action on the proposed project.

ES.12 SUMMARY OF IMPACTS

Table ES-1 summarizes the environmental effects associated with implementation of the proposed project, the mitigation measures required to avoid or minimize impact, and the level of impact remaining after full implementation of identified mitigation measures. Changes to the EIR were made in response to comments received on the RDEIR. Overall, the new information clarifies information and analysis presented in the RDEIR, or revises mitigation measures as requested by commenters on the RDEIR. Text that has been added to the document appears in an underline format. Text that has been deleted appears with ~~strikeout.~~

~~All new information in the RDEIR is presented in an underlined format. Removed language is shown in a strikeout format.~~

The Ventura County Board of Supervisors adopted the District's Final Program Environmental Impact Report for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project No. 80030 in May 2008. The final document includes Best Management Practices (BMPs) that will be added to the District's Maintenance Activity Guidelines. The Operation and Maintenance Division staff will be responsible for ensuring the proper implementation of the BMPs on a routine, year-round basis. The Division staff will also be responsible for ensuring compliance with all permit conditions, conducting or employing qualified personnel for any required pre-project site surveys or inspections, updating the Activity Guidelines sheets, instructing crews on BMPs, overseeing certain BMP implementation, documenting the implementation of the BMPs, and conducting any agency coordination.

The District currently maintains the existing J Street Drain. The proposed J Street Drain Project would not result in new operational maintenance activities associated with the drain. After the construction of the proposed Drain, maintenance activities are expected to be similar to the existing maintenance activities. ~~Therefore, the proposed project would create only construction impacts. Nevertheless, the environmental discussion of this RDEIR will assume that the operational maintenance for the proposed project is similar to the existing activities and therefore similar impacts associated with them. The BMPs outlined from the District's Ongoing Routine Operations and Maintenance Program are supplied for informational purposes and to gain a complete understanding of the project.~~

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Significance Before Mitigation	Mitigation Measures		Significance After Mitigation
Visual Resources				
Removal of oleander bushes and eucalyptus woodland along the J Street Drain fence line would substantially degrade visual resources by altering the views of residents and travelers along J Street.	Significant	VIS-1	The District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard. Landscaping shall be replaced incrementally, within six months of completion of each project phase. ~~Within six months of project completion, the District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard~~.	Less than significant with implementation of identified mitigation
		VIS-2	Any tree or large shrub removed from the Surfside III property during construction would be replaced at a 1:1 ratio.	
		VIS-3	During construction, temporary privacy screening would be placed along the northeast boundary of the Surfside III property to shield residents from views of the construction site and of the OWWTP.	
		VIS-4	Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.	
		VIS-5	Although night construction is not anticipated, in the event that it becomes necessary, all lighting shall be shielded to prevent illumination of residences.	
Biological Resources				
Implementation of the proposed project would result in temporary direct impacts to Open Water (OW) habitat. The project also has the potential to cause temporary indirect impacts to adjacent Coastal Brackish Marsh (CBM), Southern Coastal Salt Marsh (SCSM), and Southern Foredune (SFD) sensitive habitats.	Significant	BIO-1	During construction, the sensitive vegetation communities adjacent to the project alignment shall be flagged as Environmentally Sensitive Areas (ESA) and construction fencing shall be installed to avoid indirect impacts to these areas. Staging areas shall be identified during construction for lay down areas, equipment storage, etc., to avoid indirect impacts to the ESA. Biological monitoring shall occur during construction activities to prevent indirect impacts. Temporarily disturbed OW habitat, which falls under CDFG, USACE, and RWQCB jurisdiction, would be restored at a 1:1 ratio upon completion of construction. OW habitat restoration shall include replacement on the lagoon bottom of the top 12 inches of original soil to ensure suitable conditions for tidewater gobies and benthic fauna.	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures		Significance After Mitigation
Implementation of the proposed project would result in the following: *California Least Tern* Although the California least tern has not been observed within the proposed work area, construction would affect potential tern nesting and foraging habitat. *Tidewater Goby* Construction of the proposed project would involve temporarily draining natural sand substrates that are used by tidewater goby for burrowing during breeding. Therefore, project construction would result in significant impacts to 0.57 acres of tidewater goby critical habitat.	Significant	BIO-2	To prevent a decrease in the foraging success of California least terns, temporary construction fencing ("snow fencing") shall be installed surrounding the project site to delineate the construction footprint.	Less than significant with implementation of identified mitigation
		BIO-3	To prevent a decrease in the nesting and foraging success of the California least tern and western snowy plover, phase 1 construction activities adjacent to California least tern and western snowy plover habitat shall occur outside of the breeding season (March to September) to the extent feasible. If construction activities must occur during the breeding season, phase 1 project initiation through coffer dam installation shall be completed before May 1 to avoid direct impacts to foraging terns. In addition, a preemptive nesting bird survey shall be conducted by a qualified biologist to determine if any nesting terns or plovers are located near proposed activities. If nesting birds are found, all construction activities shall be prohibited within a 300-foot buffer area surrounding the nest location during the breeding season until the young have fledged. The qualified biologist shall ensure that the buffer area is appropriately defined with flagging and/or other means of suitable identification. The District shall consult with USFWS and CDFG in the event that nesting California least terns or western snowy plover are observed within 500 feet of the project area. If no nesting birds are found, construction activities could be conducted during the breeding season without restriction.	
		BIO-4	To prevent a decrease in the foraging success of California least terns and tidewater goby, silt fencing shall be installed prior to project construction between the project area and waters of Ormond Lagoon. For project activities within waters of Ormond Lagoon, dual silt fencing shall be installed around each work area to prevent/decrease the clouding of water within the lagoon as a result of potential runoff.	
		BIO-5	To avoid impacts to tidewater goby eggs, Phase 1 project initiation through coffer dam installation shall be completed before May 1, as the peak breeding season for this species extends from late spring through early summer, and again in late summer through early fall. Prior to the installation of the temporary cofferdam, a Section 10 (a)(1) (a) permitted tidewater goby biologist shall capture and relocate gobies to appropriate habitat located outside of the project area. The temporary cofferdam shall remain in place throughout construction activities south of Hueneme Road to prevent tidewater goby from entering the construction area from the lagoon. The	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		biologist shall also be present during and after dewatering to ensure all gobies and other native fish are relocated to the lagoon prior to construction. A suitable number of biologists working under the supervision of the permitted biologist shall be present during and immediately after the dewatering phase to ensure that all gobies are detected. In addition, the surface water pumps installed for the dewatering of the work area shall be screened (less than five mm mesh size). A permitted tidewater goby biologist shall also be required to relocate any tidewater goby that may enter the work area from upstream. BIO-6 Although night construction is not anticipated, in the event that it becomes necessary, all lighting will be shielded to prevent illumination of the beach.	
Implementation of the proposed project would result in removal of potential migratory bird nesting habitat (e.g., eucalyptus trees) and noise generated from construction activities and may have an indirect impact to nesting migratory birds.	Significant	BIO-7 In order to avoid conflicts with the federal MBTA, if construction is proposed during the migratory bird nesting season, a preconstruction survey shall be conducted by a qualified biologist for the eucalyptus woodland located within the project footprint. The breeding season is defined as February 15 to September 15. If nesting birds/raptors are found, all construction activities shall be prohibited within a 300-foot impact avoidance buffer area surrounding the nest location during the breeding season. In consultation with CDFG and/or USFWS, the buffer area may be reduced in the case of bird species/individuals accustomed to urban disturbance. The qualified biologist shall ensure that the avoidance buffer area is appropriately defined with flagging and/or other means of suitable identification. If no nesting birds/raptors are found, construction could be conducted during the breeding season. Trees may be removed outside of the breeding season without restriction.	Less than significant with implementation of identified mitigation
Implementation of the proposed project would result in temporary impacts to jurisdictional waters.	Significant	Temporary direct impacts to Waters of the U.S. and Waters of the State would be mitigated through BIO-1, which would restore OW habitat upon completion of construction.	Less than significant with implementation of identified mitigation
Implementation of the proposed project would result in temporary impacts to wetlands.	Significant	Temporary indirect impacts to waters and wetlands would be mitigated through measures that protect water quality, including BIO-4 and WQ-1 through WQ-4.	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Water Resources and Hydraulic Hazards			
Implementation of the proposed project would potentially violate water quality standards or waste discharge requirements.	Significant	*Stormwater Pollution Prevention Plan* The District shall submit a completed Notice of Intent (NOI) and obtain a waste discharge identification number to obtain coverage under the NPDES General Permit for Discharges Associated with Construction Activity issued by the California State Water Resources Control Board (SWRCB). The applicant/contractor shall submit to the County a Stormwater Pollution Prevention Plan (SWPPP) and monitoring program consistent with SWRCB rules for the construction phase of the project prior to initiating construction. The SWPPP shall contain the following specific mitigation measures designed to reduce or eliminate construction site runoff pollution: WQ-1 Construction Site Planning BMPs, including but not limited to: • The amount of cuts and fills shall be minimized; and • Temporary and permanent roads and driveways shall be aligned along slope contours. Grading operations shall be phased to reduce the extent of disturbed areas and length of exposure. WQ -2 BMPs to Minimize Soil Movement including but not limited to: • Soil stockpiles shall be contained; • Stabilized access roads and entrances shall be constructed in the initial phase of construction; • Tire wash stations, gravel beds, and/or rumble plates shall be installed at site entrance and exit points to prevent sediment from being tracked onto adjacent roadways; • Sediments and construction materials shall be dry-swept from finished streets the same day they are deposited; and • Site runoff control structures, such as earth berms, drainage swales, and ditches that convey surface runoff during construction into temporary or permanent sediment detention basins shall be installed and made operational in the initial phase of construction, as necessary. WQ -3 BMPs to capture sediment including but not limited to: • Storm drain inlets shall be protected from sediment-laden runoff with inlet protection devices such as gravel bag barriers, filter fabric	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		fences, block and gravel filters, excavated inlet sediment traps, sand bag barriers, and/or other devices; and • Sediment shall be removed from dewatering discharge with portable settling and filtration methods, such as Baker tanks or other devices. WQ -4 Good housekeeping BMPs, including but not limited to the following requirements: • All storm drains, drainage patterns, and creeks located near the construction site prior to construction shall be identified to ensure that all subcontractors know their location to prevent pollutants from entering them; • Washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site; wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands; areas designated for washing functions shall be at least 100 feet from any storm drain, waterbody or sensitive biological resources to the extent feasible; the location(s) of the washout area(s) shall be clearly noted at the construction site with signs; the applicant shall designate a washout area; the wash-out areas shall be shown on the construction and/or grading and building plans and shall be in place and maintained throughout construction; • All leaks, spills, and drips shall be immediately cleaned up and disposed of properly; • Vehicles and heavy equipment that are leaking fuel, oil, hydraulic fluid or other pollutants shall be immediately contained and either repaired immediately or removed from the site; • One or more emergency spill containment kits shall be placed onsite in easily visible locations. Personnel will be trained in proper use and disposal methods; • Vehicles and heavy equipment shall be refueled and serviced in one designated site located at least 100 feet from the drain to the extent feasible; • Temporary storage of construction equipment shall be limited to an area approved by the City of Oxnard, and shall be located at least 100 feet from any water bodies to the extent feasible;	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Dry clean-up methods shall be used whenever possible; • Exposed stockpiles of soil and other erosive materials shall be covered or contained during the rainy season; • Trash cans shall be placed liberally around the site and properly maintained; • All subcontractors and laborers shall be educated about proper site maintenance and stormwater pollution control measures through periodic "tailgate" meetings; • Roadwork or pavement construction, concrete, asphalt, and seal coat shall be applied during dry weather only; and • Storm drains and manholes within the construction area shall be covered when paving or applying seal coat, slurry, fog seal, etc.	
Air Quality			
The construction of the proposed drain would result in short-term generation of fugitive dust, construction equipment exhaust, employee trip emissions, and other construction-related emissions. Construction emissions during the phases of the J Street Drain project would exceed the VCAPCD threshold for NO_x emissions. NO_x emissions are mainly the result of haul truck trips.	Less Than Significant	AQ-1 VCAPCD recommends the following measures to mitigate ozone precursor emissions from construction motor vehicles: 1. Minimize equipment idling time. 2. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications. 3. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time. 4. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible. AQ-2 1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. 2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities. 3. All trucks shall be required to cover their loads as required by California Vehicle Code Section 23114. 4. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on site	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to periodic watering, application of environmentally-safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. 5. Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be permanently stabilized or periodically treated to prevent excessive fugitive dust. 6. Signs shall be posted on site limiting traffic on unpaved areas to 15 miles per hour or less. 7. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on site activities and operations from being a nuisance or hazard, either off site or on site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive. 8. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads. 9. Personnel involved in grading operations, including contractors and subcontractors, shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations. 10. Material stockpiles shall be enclosed, covered, stabilized, or otherwise treated as needed to prevent blowing fugitive dust off site.	
		AQ-3 All project construction and site preparation operations shall be conducted in compliance with all applicable VCAPCD Rules and Regulations with emphasis on Rule 50 (Opacity), Rule 51 (Nuisance), and Rule 55 (Fugitive Dust), as well as Rule 10 (Permit Required).	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Transportation and Circulation			
Implementation of the proposed project would cause a temporary increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections). Traffic impacts from the construction phase of the proposed project would be relatively short-term and intermittent involving road closures and detours which would impact motorists (delay and inconvenience), impacts on businesses (other uses) along the corridor, and impacts on emergency response operations. During construction, no more than three haul trucks would be on site for loading and approximately 45 trips per day are expected to occur. The haul truck trips are expected to result in delays and congestion at the project intersections. The intermittent road closures and haul truck trips during construction may disrupt traffic flow and cause delays, increasing traffic congestion. A significant impact is identified for this issue.	Significant	TR-1 The District shall prepare a construction worksite traffic control plan and submit it to the County, ~~and,~~ cities, Gold Coast Transit, Oxnard School District, Oxnard Union High School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan. TR-2 The Contractor shall coordinate with emergency service providers (police, fire, ambulance and paramedic services) to provide advance notice of any lane closures, construction hours and changes to local access and to identify alternative routes where appropriate. TR-3 To preserve parking for residents during phase 1 construction, the District shall employ vertical shoring techniques along the Surfside III property where open trenching would result in the temporary removal of off-street parking spaces.	Less than significant with implementation of identified mitigation
Traffic impacts from the construction phase of the proposed project would be relatively short-term and intermittent involving road/lane closures and detours which would impact motorists (delay and inconvenience), impacts on businesses (other uses) along the corridor, and impacts on emergency response operations. J Street, Pleasant Valley Road, and Hueneme Road would remain open during all construction phases with intermittent lane closures. While project	Significant	See mitigation measures TR-1 through TR-3.	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
construction impacts would be temporary, traffic impacts have the potential to contribute to the exceedance of the level of service standard established by county congestion management agency at the project intersections. Impact is significant.			
Construction activities would require detours and road and land closures that would temporarily result in transportation hazards.	Significant	See mitigation measures TR-1 through TR-3.	Less than significant with implementation of identified mitigation
Implementation of the proposed project would result in inadequate emergency access due to road closures and detours during the construction phase. This impact is potentially significant.	Significant	See mitigation measures TR-1 through TR-3.	Less than significant with implementation of identified mitigation
Noise and Vibration			
The project site is located in a predominantly residential location. Allowable exterior sound level from 7:00 p.m. to 10:00 p.m. is 50 dBA Leq and from 10:00 p.m. to 7:00 a.m. is 45 dBA Leq, according to the Ventura County Noise Standards. Daytime Ventura County standards are not applicable to residential areas, as they are not defined as noise-sensitive receptors between 7:00 a.m. and 7:00 p.m., but they do apply to hospitals, nursing homes, schools, churches, and libraries at the level of 68 dB(A) (Ambient Leq(h) + 3 dB). Existing sensitive land uses along J Street Drain range from ~~50~~ 5 to 500 feet from the project alignment. These uses would not be affected during evening or night hours.	Significant	NOISE-1 Equipment Noise Reduction 1. Minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete or asphalt demolition and removal. 2. Pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise limitations. 3. Provide impact noise reducing equipment; i.e., jackhammers and pavement breaker(s), with noise attenuating shields, shrouds or portable barriers or enclosures, to reduce operating noise. 4. Provide upgraded mufflers, acoustical lining or acoustical paneling for other noisy equipment, including internal combustion engines. 5. Avoid blasting and impact-type pile driving. 6. Use alternative procedures of construction and select a combination of techniques that generate the least overall noise and vibration. Such alternative procedures could include the following:	Less than Significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		a. Use electric welders powered by remote generators. b. Mix concrete at non-sensitive off-site locations, instead of on-site. c. Erect prefabricated structures instead of constructing buildings on-site. 7. Use construction equipment manufactured or modified to reduce noise and vibration emissions, such as: a. Electric instead of diesel-powered equipment. b. Hydraulic tools instead of pneumatic tools. c. Electric saws instead of air- or gasoline-driven saws. 8. Turn off idling equipment when not in use for periods longer than 30 minutes.	
		NOISE-2 A temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain. Additionally, temporary noise control barriers shall be installed and maintained in residential and commercial areas along Phases 2-4 to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-25. In addition to placement of noise control blankets along the construction area adjacent to the Shoreline Care Facility, located at 5225 South J Street, and if needed, Our Saviour's Evangelical Lutheran Church at 905 Redwood Street, to further reduce noise levels below 68 dB(A) L_{eq}, additional noise control barriers shall be installed. To ensure sufficient noise barriers are deployed, construction noise levels shall be monitored ten feet from the exterior of the nursing home and church at the start of work activities within 500 feet of these two locations. Barriers would be installed to reduce noise levels generated by the loudest equipment when construction activities are closest to the nursing home and church. Monitoring would occur at the nursing home during construction Phases 2 and 3 and at the church during construction Phase 4. Construction noise levels would be monitored weekly thereafter to ensure proper function of the barriers throughout work and that the desired noise attenuation at these locations is achieved.	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		This noise control barrier will also provide visual screening for all residents along the work area, ~~eastern boundary of~~ including the Surfside III property to shield residents from views of the J Street Drain during construction. If the Surfside III Condominium Owners' Association does not grant a temporary work area to enable installation of temporary noise barriers at Buildings 6 and 7, the District will provide funds for the Association to arrange the barrier installation on their property. Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J St Drain in Phase 1).	
The proposed project has the potential to expose people to or generate excessive groundborne vibration or groundborne noise levels because pile driving may be required for construction.	Significant	NOISE-3 Prior to construction, the District shall request property owner permission to video record the condition of structures adjacent to the J Street Drain in the presence of the property owner. The recording shall be performed and stored by an independent third-party, with a copy given to the property owner. If vibration-induced damages occur as a result of construction, property owners would be invited to submit claims documenting such damages within one year following construction completion. The third-party would again enter the property to video record its post-construction condition, again providing a copy to the property owner. Both recordings would be compared, and the District would provide compensation to repair new damages observed in the post-construction recordings. Once both parties have agreed to the compensation, both pre- and post-construction video recordings stored by the third-party would be given to the property owner. Please refer to mitigation measure GEO-3.	Less than significant with implementation of identified mitigation
J Street Drain Project is proposed to be constructed in four phases with the first phase scheduled to begin in spring 2010 and lasting for 10 months. Temporary noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators has the potential to reach high levels as evident from Table 4.6-12.	Significant	See above mitigation measures.	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Geologic and Seismic Hazards			
Construction of the proposed project will require excavation of the existing drain which would result in disturbance of the soils and subsequent exposure to wind and water erosion. Proposed development will require the groundwater dewatering, demolition of existing concrete lining, removal and stockpiling of soils onsite, and the construction of the new, higher capacity drain. Project excavation will expose areas of soil to erosion by wind or water during construction processes prior to the replacement of concrete lining. Additionally, construction of the proposed drain may result in erosion or sedimentation due to exposed soils and sediment removal and dewatering discharges may cause erosion at the discharge point. Impacts associated with short-term exposure of graded soils and sedimentation is considered significant.	Significant	GEO-1 Erosion and Sediment Control In order to mitigate potential soil erosion and loss of topsoil from excavation, the construction SWPPP shall incorporate, but not be limited to, the following measures, as appropriate, to minimize erosion: • Excavation and grading shall be restricted to the dry season (April 15th to October 15th) unless an erosion control plan is in place and all measures therein are in effect. • Best Management Practices (BMPs) will be employed to control erosion, including temporary siltation protection devices such as silt fencing, straw bales, and sand bags. These shall be placed at the base of all cut and fill slopes and soil stockpile areas where potential erosion may occur. • Refer to Section 4.3, Water Resources and Hydraulic Hazards, for additional requirements related to stormwater and non-stormwater pollution prevention and control.	Less than significant with implementation of identified mitigation
Implementation of the proposed project would potentially result in seismic-related ground failure. Additionally, expansive soils associated with the project site have the potential to substantially damage the proposed drain.	Potentially Significant	GEO-2 Seismic Related Ground Failure and Expansive Soils The proposed project shall comply with all recommendations set forth in the Preliminary Geologic Geotechnical Investigation (Appendix F) to reduce the risk of hazards associated with seismic-related ground failure, liquefaction and expansive soils along the J Street Drain. These recommendations address the following: • Site preparation • Excavation – stabilization measures, dewatering procedure, and shoring • Fill Material and General Fill Placement • Channel Foundation Design GEO-3 a) A Licensed Surveyor shall plan and install a survey monument monitoring system on buildings within 25 feet of proposed vertical shoring to collect monthly baseline data for six months before	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		construction. The monuments shall remain in place and be monitored monthly for one year after construction completion to track any latent changes. During construction, the Licensed Surveyor shall conduct surveys corresponding to major phases of work such as shoring installation, excavation, and backfill. b) Before Phase 1 construction may begin, the District shall require the Contractor to prepare a Work Plan, which would take into account all available geotechnical information for the areas where vertical shoring and sheet piles are to be installed. The Plan would specify the contractor's approach to installing vertical shoring and sheet piles in a manner that would avoid and minimize associated potential vibration damage to adjacent structures. c) The Work Plan shall require the Contractor to take daily measurements of the survey monuments on adjacent structures described in (a) above to track potential changes during construction. d) Should the surveys or measurements described in (a) and (c) above indicate subsidence or other damage due to construction activities, the Contractor shall modify the Work Plan to address the causes. Property owners within 25 feet of the proposed shoring shall be promptly notified of observed damage, and any Work Plan revisions shall be available to property owners upon request. For multi-unit structures, the District shall identify a single designated representative with whom to communicate. e) The District shall provide a construction contact telephone number to adjacent residents before work commences so that they may report possible observations of damage immediately to the District.	
Implementation of the proposed project would potentially result in on- or off-site subsidence, liquefaction or collapse. Based on the existing soils at the proposed project site, it is likely that unstable soils exist. A potentially significant impact is identified and mitigation is required.	Significant	See Seismic Failure and Expansive Soils mitigation measure.	Less than significant with implementation of identified mitigation
Hazardous Materials			
Implementation of the proposed project may result in significant impacts to groundwater contaminants from the Halaco site as a result of dewatering.	Significant	HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, ~~sheet piling shall be placed on the east side of the drain channel in order to prevent the migration of groundwater from the~~	Less than significant with implementation

Environmental Impact	Significance Before Mitigation	Mitigation Measures		Significance After Mitigation
			~~Halaco site~~ the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site. ~~Note that additional field testing is currently being conducted to provide a more representative value for hydraulic conductivity for the vicinity of the drain. In the event that the results show the need for sheet piling on both the west and east side of the drain, sheet piling will be placed on both sides of the drain~~.	of identified mitigation
Cultural Resources				
Implementation of the proposed project would potentially disturb and/or damage undiscovered archaeological resources.	Significant	CULT-1	In the event that archaeological resources are exposed during project construction, all earth disturbing work within the vicinity of the find shall be temporarily suspended or redirected until a qualified archaeologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume.	Less than significant with implementation of identified mitigation
		CULT-2	If the resource is determined to be potentially significant, a cultural resources treatment plan shall be developed to provide appropriate mitigation measures. These measures may include archaeological testing and data recovery excavation. The treatment plan shall also include a detailed description of associated reporting requirements, curation requirements for any cultural materials collected during treatment, and the qualifications for archaeologists involved in treatment activities.	
Implementation of the proposed project would potentially disturb and/or damage undiscovered human remains.	Significant	CULT-3	If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Ventura County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Ventura County Coroner determines the remains to be Native American, the NAHC shall be contacted within a reasonable timeframe. Subsequently, the NAHC shall identify the "most likely descendant." The most likely descendant shall then make recommendations, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98.	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Waste Treatment/Disposal			
Implementation of the proposed project would not result in significant impacts to waste treatment/disposal.	Less than significant	Impacts related to waste treatment/disposal were less than significant; therefore, mitigation measures are not required.	Less than significant
Public Health			
Implementation of the proposed project would not result in significant impacts to public health.	Less than significant	Impacts related to public health were less than significant; therefore, mitigation measures are not required.	Less than significant
Greenhouse Gas Emissions			
Implementation of the proposed project would not result in significant impacts related to greenhouse gas emissions.	Less than significant	Impacts related to greenhouse gas emission were less than significant; therefore, mitigation measures are not required.	Less than significant

Table ES-2. Summary of Ventura County Watershed Protection District Best Management Practices during Operations and Maintenance Activities[1]

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
Biological Resources	BMP-2. Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning. The removal of sediments, vegetation, algae, and trash from fully lined improved channels for purposes of NPDES storm water permit compliance shall include measures to prevent the discharge of silt-laden water or pollutants to downstream unimproved channels with soft bottoms (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000). These measures may include temporary downstream silt barriers (sand bags, straw bales, in-channel materials), silt fences, upstream diversion, etc. Per Section 401 Water Quality Certification requirements, a Water Diversion Plan would be needed for water diversion activities.
	BMP-3. Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.
	BMP-4. Survey for Habitat Prior to Routine Maintenance Work. Prior to routine maintenance and repair activities performed within or adjacent to an earthen or earthen bottom channel or in-channel structure during the period 1 March to 1 August, a District biologist or consulting biologist shall determine if suitable habitat is present for riparian-dependent breeding birds in or within 400 feet of the work area. Suitable habitat is generally defined as dense or moderately dense willow or mulefat scrub or woodland with sufficient density and vegetative structure to support nesting and foraging. Prior to routine maintenance and repair activities performed within or adjacent to an earthen or earthen bottom channel or in-channel structure that would disrupt foraging or nesting of raptors during the period 1 February to 1 August, a District biologist or consulting biologist shall survey the 400 feet radius around the project site for raptor nest initiation or occupation. Channel cleanout shall be postponed to 1 August if such habitat is present in the work area or within 200 feet of the work area, or until nestlings have fledged if the District determines that riparian bird or raptor nesting is occurring in the habitat area. This restriction does not apply if the nesting birds are house sparrows, house finches, crows, cowbirds, or other common upland species or introduced species. If any federally or state listed birds are found nesting within the 200 or 400 feet survey radius, the District shall consult with CDFG for the applicability of this restriction.

[1] From the Final Program EIR for the Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program. Adopted by the District in May 2008.

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
	BMP-8. Avoid Disturbance to Native Beach or Wetland Species. The District shall avoid areas of beach dune vegetation when accessing storm drain outlets at the beach with vehicles for routine maintenance. The removal of native beach or wetland plants that are located at or near the beach outlet shall be minimized. Prior to the removal of obstructive sand or vegetation from a beach outlet, qualified District personnel shall determine if suitable habitat (i.e., a brackish waterbody) is present at the outlet for tidewater gobies, and if the species is present. In addition, qualified District personnel shall determine if suitable habitat is present along the vehicle access route across the beach for foraging or nesting snowy plovers and California least terns. If any of these sensitive species are present at the storm drain outlet or along the access route, the District will either postpone the routine maintenance work until these species are no longer present, or follow avoidance and/or relocation procedures approved by U.S. Fish and Wildlife Service (USFWS). This BMP shall not apply if there is a threat of a storm and the outlet is plugged. The District shall contact CDFG and USFWS when California least terns, snowy plover, or tidewater gobies are observed during the pre-project surveys for consultation.
	BMP-9. Aquatic Pesticide BMPs. The District shall follow the most up-to-date BMPs and the monitoring and reporting requirements in the District's NPDES Stormwater Quality Management Plan (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000, available at http://vcstormwater.org/documents/workproducts/stormwater_quality_mangement_plan.pdf) when applying herbicides to channels and basins. The District shall also follow BMPs in the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides (included in Appendix I).
	BMP-11. Leave Patches of Vegetation in Channel Bottom. The District shall minimize vegetation removal or reduction from earthen or earthen bottom channels to the least amount necessary to achieve the specific maintenance objectives for the reach. Vegetation removal in the channel bottom shall be conducted in a non-continuous manner, allowing small patches of in-channel vegetation to persist provided it will not adversely affect conveyance capacity.
	BMP-12. Leave Herbaceous Wetland Vegetation in Channel Bottom. Consistent with the maintenance objectives, the District shall avoid removal or reduction of emergent herbaceous wetland vegetation on the channel bottom that is rooted in or adjacent to the low flow channel or a pond in order to provide cover for aquatic wildlife. This same type of vegetation shall be protected during the removal of taller obstructive woody vegetation on the channel bottom.
	BMP-14. Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.
	BMP-15. Mitigate/Replace Temporary Impacts to Habitat. For repair of in-channel structures and features that results in the temporary disturbance of native wetland or riparian vegetation adjacent to the facility, the District shall restore native wetland or riparian vegetation in the affected work areas after the repair or reconstruction work. Restoration shall include planting or seeding native plants that were present prior to the work and/or are compatible with existing riparian vegetation near the work area. The District shall prepare a restoration plan for each repair project that specifies the limits of restoration, planting mix and densities, performance criteria for survival and growth, and at least a three-year

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
	maintenance and monitoring procedures. Restoration sites shall be located outside the limits of the repaired structure. If no suitable restoration site is available near the work area or the creation of a restoration area near the work area would conflict with flood control needs, the District shall select another location on District right-of-way in close proximity. If suitable restoration sites are not available, the District shall provide funds to a third party (public agency or non-profit organization) to implement the required mitigation in the same watershed as the impact. Habitat restoration under this BMP shall only occur if the affected areas support native wetland or riparian vegetation; no restoration is required for barren areas or areas dominated by non-native plants. The District shall submit all habitat restoration plans to CDFG prior to implementation.
	BMP-17. Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.
	BMP-18. Water Diversion Guide. Water diversion activities undertaken as part of routine repair and maintenance operations in improved and unimproved channels as well as debris basins shall follow the BMP guidance established as the Water Diversion Guide incorporated into the Final Program EIR addressing Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program, adopted by the District in May 2008.
	BMP-20. Implementation of Integrated Pest Management. The District shall inspect its critical and non-critical facilities regularly to document and identify the presence or absence of ground squirrels. The District shall develop and implement an Integrated Pest Management (IPM) program that identifies tolerance level, control thresholds and approved rodent control methods and/or combinations of methods at each District facility. Rodent control methods implemented at each facility shall be applied as needed and as appropriate for site conditions and the season. Methods implemented shall minimize potential primary and secondary hazards to non-target species. The District shall maintain a preventative IPM program with zero tolerance for ground squirrels for its critical facilities where failure would impact public safety. When rodent control becomes necessary at non-critical facilities, the District shall choose applicable, cost-effective treatment method(s) from the District's IPM program. Treatment options considered for each site shall include: trapping, habitat modification, alternative construction methods and materials, use of raptors, clean and rodenticide-treated bait stations, broadcast diphacinone and zinc phosphide with or without carcass collection, and other methods. As part of an ongoing monitoring program to determine the effectiveness of the squirrel control program, the District shall maintain uniform inspection records for each facility and all control efforts. The District shall conduct a staff training program that covers the IPM program including rodent issues, inspection and monitoring requirements, and treatment options.

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
	BMP-21. Avoid Spills and Leaks. The District shall ensure that all equipment operating in and near a watercourse, or in a basin, is in good working condition and free of leaks. No equipment maintenance or refueling shall occur in a channel or basin bottom. Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse. In addition, all maintenance crews working with heavy equipment shall be trained in spill containment and response.
	BMP-22. Biological Surveys in Appropriate Habitat Prior to Vegetation Maintenance. Prior to any sediment removal, vegetation control (by herbicide application, mowing, or discing), or repair work in earthen or earthen bottom channels and basins that contain native aquatic, riparian, or wetland habitats suitable for sensitive fish and wildlife species, the District shall conduct appropriate field investigations to determine if any threatened, endangered, or sensitive species are present. If such species are determined to be present in or in close proximity to the work areas, the District shall reschedule the work when the species are not present. If it is necessary to conduct the work while the species are present or in proximity to the work areas, the District shall develop other avoidance or relocation measures in consultation with the CDFG, USFWS, or National Oceanic and Atmospheric Administration (NOAA) Fisheries prior to conducting the work. If the work could affect state or federally listed species or their habitat, the District would employ avoidance or relocation measures approved by USFWS, NOAA Fisheries, or CDFG, as appropriate, for the maintenance program. This measure includes protection for the following threatened, endangered, or sensitive species that could occur at maintenance sites: tidewater goby, southern steelhead, trout, unarmored threespine stickleback, California redlegged frog, arroyo toad, least Bell's vireo, southwestern willow flycatcher, arroyo chub, southwestern pond turtle, two-striped garter snake, Cooper's hawk, sharp-shinned hawk, yellow warbler, yellow breasted chat, purple marlin, tri-colored blackbird, and long-eared owl.
Water Resources and Hydraulic Hazards	BMP 1. Avoid Channel Work During the Rainy Season. Routine maintenance and repair activities in earthen channels and in channels with soft bottoms and bank protection shall not occur during the rainy season 1 December to 1 April to avoid work when water could be present in the drainage due to runoff. Routine maintenance and repair activities may occur during this period if water is absent from the drainage because of low runoff conditions, or activities can be performed without working in flowing water. Work in flowing water during this period may proceed if there are no feasible alternatives and completion of the maintenance work during this time period is critical. Work in flowing water shall be conducted according to the BMPs established in the Water Diversion Guide attached as Appendix E to this EIR.
	BMP 2. Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning. The removal of sediments, vegetation, algae, and trash from fully lined improved channels for purposes of NPDES storm water permit compliance shall include measures to prevent the discharge of silt-laden water or pollutants to downstream unimproved channels with soft bottoms (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000). These measures may include temporary downstream silt barriers (sand bags, straw bales, in-channel materials), silt fences, upstream diversion, etc. Per Section 401 Water Quality Certification requirements, a Water Diversion Plan would be needed for water diversion activities.
	BMP 3. Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
	methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible. BMP 14. Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms. BMP 17. Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs. BMP 21. Avoid Spills and Leaks. The District shall ensure that all equipment operating in and near a watercourse, or in a basin, is in good working condition and free of leaks. No equipment maintenance or refueling shall occur in a channel or basin bottom. Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse. In addition, all maintenance crews.
Air Quality	The following measures are part of the APCD's Model Fugitive Dust Mitigation Plan and shall be incorporated to maintenance activities as needed to further reduce the District's fugitive dust emissions during grading, excavation, and construction activities. • The areas disturbed at any one time by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. • Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during earthmoving, grading, and excavation activities. • All trucks shall be required to cover their loads as required by California Vehicle Code §23114. • All graded and excavated material, exposed soil areas, including unpaved parking and staging areas, and other active portions of the construction site, including unpaved on site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
	• Graded and/or excavated inactive areas of the construction site shall be monitored by the District's operation and maintenance staff at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be periodically treated with environmentally-safe dust suppressants. • During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on site activities and operations from being a nuisance or hazard, either on site or off site. The District staff shall use his/her discretion in conjunction with the APCD in determining when winds are excessive. • Rumble strips or track out devices shall be installed where vehicles enter and exit unpaved roads onto paved road, or wash off trucks and any other equipment leaving the site. • All on site construction roads that have a daily traffic volume of more than 50 daily trips shall be stabilized as to minimize transport of earthen material from the site. • Open material stockpiles shall be roller compacted, periodically watered, or treated with appropriate dust suppressants. • There shall be at least one qualified District staff on site each work day to monitor the provisions of the Fugitive Dust Mitigation Plan and any other applicable fugitive dust rules, ordinances, or conditions. • Personnel involved in grading operations shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health Regulations. • All project construction operations shall be conducted in compliance with all applicable APCD Rules and Regulations with emphasis on Rule 50 (Opacity) and Rule 51 (Nuisance).
Transportation and Circulation	• If maintenance activities would result in substantial vehicle trips on a roadway with unacceptable LOS at peak hours, maintenance staff should either choose an alternate route or conduct vehicle trips off peak hours. In addition, District staff shall avoid stacking of maintenance trucks on public roads during maintenance activities. The minimum acceptable LOS for road segments and intersections within the County Regional Road Network and Local Road Network shall be as follows: – LOS D for all County thoroughfares and federal highways and state highways in the unincorporated area of the County, except as otherwise provided below; – LOS E for SR-33 between the northerly end of the Ojai Freeway and the City of Ojai, Santa Rosa Road, Moorpark Road north of Santa Rosa Road, and SR-34 north of the City of Camarillo; – LOS C for all County-maintained local roads; and – The LOS prescribed by the applicable city for all federal highways, state highways, city thoroughfares and city-maintained local roads located within that city, if the city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County respecting development in the city that would individually or cumulatively affect the LOS of federal highways, state highways, County thoroughfares and County-maintained local roads in the unincorporated area of the County.

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
Noise and Vibration	• Construction Noise BMPs. Noise-generating construction activities shall be restricted to the daytime (i.e., 7:00 AM to 7:00 PM, Monday through Friday), during which noise levels shall not exceed: • 75 dB(A) Leq(h) at noise sensitive locations when construction work duration would last up to 3 days; • Ventura County Watershed Protection District 2-64 Final Program EIR – May 2008 • 70 dB(A) Leq(h) at noise sensitive locations when construction work would last from 4 to 7 days; • 65 dB(A) Leq(h) at noise sensitive locations when construction work would last from 1 to 2 weeks; • 60 dB(A) Leq(h) at noise sensitive locations when construction work would last from 2 to 8 weeks, or • 55 dB(A) Leq(h) at noise sensitive locations when construction work duration would exceed 8 weeks. If these thresholds are exceeded at noise sensitive locations, noise abatement measures shall be implemented to reduce noise levels. Noise abatement measures shall include, but are not limited to, the construction equipment source noise reduction methods and construction noise propagation path reduction methods provided in the County of Ventura Construction Noise Threshold Criteria and Control Plan. As defined by the County of Ventura Construction Noise Threshold Criteria (2005), daytime noise-sensitive receptors include hospital, nursing homes (quasi-residential), schools, churches, and libraries (when in use). Single-family, multi-family dwellings, hotels, and motels are considered evening and nighttime noise-sensitive receptors. Since noise-generating construction activities would not occur during the evening or night hours, no noise mitigation for single-family dwellings, multi-family dwellings, hotels or motels is necessary.
Geology and Seismic Hazards	BMP 1. Avoid Channel Work During the Rainy Season. Routine maintenance and repair activities in earthen channels and in channels with soft bottoms and bank protection shall not occur during the rainy season 1 December to 1 April to avoid work when water could be present in the drainage due to runoff. Routine maintenance and repair activities may occur during this period if water is absent from the drainage because of low runoff conditions, or activities can be performed without working in flowing water. Work in flowing water during this period may proceed if there are no feasible alternatives and completion of the maintenance work during this time period is critical. Work in flowing water shall be conducted according to the BMPs established in the Water Diversion Guide attached as Appendix E to this EIR. BMP 3. Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible. BMP 14. Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
	BMP 17. Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.
Public Health	BMP-9. Aquatic Pesticide BMPs. The District shall follow the most up-to-date BMPs and the monitoring and reporting requirements in the District's NPDES Stormwater Quality Management Plan (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000, available at: http://vcstormwater.org/documents/workproducts/stormwater_quality_mangement_plan.pdf) when applying herbicides to channels and basins. The District shall also follow BMPs in the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides (included in Appendix I).

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1.0 INTRODUCTION AND SUMMARY

1.1 INTRODUCTION

This Final Environmental Impact Report (FEIR) has been prepared in compliance with the California Environmental Quality Act (CEQA) Public Resources Code Section 21000 et seq., the *CEQA Guidelines* (Section 15000 et seq.) as promulgated by the California Resources Agency and the Governor's Office of Planning and Research, and the County of Ventura *Initial Study Assessment Guidelines*. The original Draft EIR (DEIR) (SCH 2008041057) was circulated for public review from November 2, 2009 to January 19, 2010. All interested persons and organizations had an opportunity during this time to submit their written comments on the November 2009 DEIR to the Ventura County Watershed Protection District (District). These comments along with their responses were provided in Appendix L of the September 2011 Recirculated DEIR (RDEIR). The September 2011 RDEIR has been incorporated into the FEIR, with new revisions resulting from public comments received on the RDEIR. The responses to the public comments are included as Section 0.3 of this FEIR.

The District's proposed J Street Drain Project (project) involves increasing the capacity of the existing J Street Drain channel to reduce potential flooding in residential and commercial areas of the Cities of Oxnard and Port Hueneme. The J Street Drain is located in the City of Oxnard adjacent to the City of Port Hueneme. From the northern limit of the proposed project just north of Redwood Street to Hueneme Road, the J Street Drain lies between the north and south bound lanes of J Street. The J Street Drain continues beyond the terminus of J Street at Hueneme Road to its southern limit just south of the Hueneme Pump Station, which is located at Ormond Beach Lagoon. The area from Hueneme Road to the Ormond Beach Lagoon is within the Coastal Zone. The existing J Street Drain was created to convey stormwater flows away from the developed areas into the Pacific Ocean. Currently, the District is responsible for the existing J Street Drain operation and maintenance.

Pursuant to CEQA, a Notice of Preparation (NOP) was prepared by the District in April 2008. Based on the conclusions that implementation of the J Street Drain Project could result in significant environmental impacts, District staff directed preparation of a ~~D~~EIR. The NOP was submitted for public review to the State Clearinghouse and the District's distribution list. The NOP and distribution list are included in Appendix A. See Section 1.5 for a discussion of the NOP comment letters.

1.2 PURPOSE OF AN EIR

The purpose of an EIR is to analyze the potential environmental impacts associated with a project. CEQA (Section 15002) states that the purpose of an EIR is to: (1) inform the public and decision-makers of the potential environmental impacts of a project; (2) identify methods that could reduce the magnitude of a potentially significant impact of a project, and (3) identify alternatives that could reduce the magnitude of environmental impacts or propose more effective uses of the project site. The principal use of this DEIR is to evaluate and disclose potential environmental impacts associated with the implementation of the J Street Drain Project. An EIR is an informational document and is not intended to determine the merits or recommend approval or disapproval of a project. Ultimately, District decision-makers, in this case the Ventura County Board of Supervisors, must weigh the environmental effects of a project among other considerations, including planning, economic, and social concerns.

1.3 EIR ADEQUACY

Information presented in the EIR is to be factual, adequate, and complete. The standards of adequacy of an EIR, defined by Section 15151 of the *CEQA Guidelines*, are as follows:

> "*An EIR should be prepared with a sufficient level of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effect of a proposed project need not be exhaustive, but sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have not looked for perfection but for adequacy, completeness, and good faith effort at full disclosure.*"

1.4 ORGANIZATION OF THE EIR DOCUMENT

The content and format of this ~~RD~~EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code Section 21000 et seq.), and CEQA Guidelines (California Administrative Code Section 15000 et seq.). This ~~RD~~EIR is organized into the following chapters so the reader can easily obtain information about the proposed project and its specific issues. All new information in the ~~RD~~EIR is presented in an underlined format. Removed language is shown in a ~~strikeout~~ format.

Section 0.1 – Introduction to Final EIR. This section describes CEQA requirements and content of this FEIR.

Section 0.2 – Corrections and Additions. This section provides a list of those revisions made to the EIR text and figures as a result of comments received and/or clarifications subsequent to release of the Revised Draft EIR for public review.

Section 0.3 – Responses to Comment Letters Received on the Revised Draft EIR. This section provides copies of the comment letters received and individual responses to written comments. In accordance with Public Resources Code 21092.5, copies of the written proposed responses to public agencies will be forwarded to the agencies at least 10 days prior to certifying an EIR. The responses will conform to the legal standards established for response to comments on EIRs.

Section 0.4 – Mitigation Monitoring and Reporting Program. This section includes the Mitigation Monitoring and Reporting Program (MMRP) which identifies the mitigation measures, timing and responsibility for implementation of the measures.

Section 1.0 – Introduction and Summary: provides a summary of the potential impacts, mitigation measures of the J Street Drain Project and impact conclusion. This section also describes the project history, project components, purpose and use of the ~~RD~~EIR, and the organization of the ~~RD~~EIR.

Section 2.0 – General Environmental Setting: summarizes the regulatory and environmental setting for the project and also identifies the cumulative projects that are considered in this ~~RD~~EIR.

Section 3.0 – Project Description: describes the project site, outlines the overall objectives for the project, purpose and need of the project, and summarizes the project components.

Section 4.0 – Environmental Impact Analysis: presents, for each environmental issue, the existing environmental setting or conditions before project implementation; methods and assumptions used in impact analysis; thresholds of significance; impacts that would result from the J Street Drain Project; applicable County conditions and mitigation measures that would eliminate or reduce significant impacts; and cumulative impacts.

Section 5.0 – Project Alternatives: evaluates the environmental effects of the project alternatives, including Channel Alternatives and Beach Outlet Alternatives. This chapter also identifies an environmentally superior alternative.

Section 6.0 –Other Environmental Considerations: discusses other environmental considerations required per CEQA, including growth-inducing impacts, an inventory of significant unavoidable impacts, and a discussion of significant irreversible changes.

Section 7.0 – Persons and Organizations Consulted: lists the individuals involved in preparing this DEIR and the organizations and persons consulted in preparing this ~~RD~~EIR.

Section 8.0 – References: lists the documents (printed references) and individuals (personal communications) consulted in preparing this ~~RD~~EIR.

Appendices – presents data supporting the analysis or contents of this ~~RD~~EIR, including the responses to comments received during the original circulation period. These are included in Appendix L. All technical appendices are provided electronically on a CD at the end of this document. In addition, copies of these reports are on file at the Ventura County Watershed Protection District, 800 South Victoria Avenue, Ventura, California.

1.5 EIR BACKGROUND AND CONTENT

Development of the J Street Drain Project is subject to the requirements of CEQA because it is an action that has the potential to result in a physical change in the environment subject to discretionary approval by a public agency (in this case, the Ventura County Watershed Protection District). In accordance with *CEQA Guidelines*, the District completed an NOP, including a project description and the preliminary site plan (Appendix A).

The District, as lead agency, prepared an Initial Study (IS) for the proposed project in April of 2008 and determined that implementation of the proposed project would likely result in significant environmental impacts and that an EIR should be prepared to determine the extent of the impacts and whether any of the impacts can be mitigated. On April 9, 2008, a NOP was prepared and circulated for review and comment by responsible, trustee, and local agencies and the general public. The NOP served as a chance for interested members of the public, non-governmental agencies, and government agencies to solicit input on the scope, focus, and content of the EIR. A copy of the Initial Study, NOP, and written NOP comments are included in Appendix A of this EIR. The State Clearinghouse number for the proposed project is 2008041057. The NOP was circulated beginning April 10, 2008 and ending on May 9, 2008. Three informational meetings were held to present the project and accept input from interested parties prior to a formal scoping meeting. The formal CEQA scoping meeting was held on February 25, 2008 at the City of Oxnard Recycling Center, 111 South Del Norte Boulevard, Oxnard, CA.

As mentioned previously, the original DEIR (SCH 2008041057) was circulated for a ~~45~~ 79-day public review from November 2, 2009 to January 19, 2010. All interested persons and organizations had an opportunity during this time to submit their written comments on the DEIR to the District. As the result of comments on the original DEIR along with the District's responses to those comments, the occurrence of a flood emergency north of Ormond Beach Lagoon on January 18, 2010, the release of new information concerning the Halaco Superfund site in 2010 and 2011, and revisions to Ventura County significance thresholds adopted in 2011, the District determined that the DEIR for the J Street Drain project should be recirculated for public review and comment.

The Recirculated DEIR (SCH 2008041057) was circulated for a 45-day public review from September 23, 2011 through November 7, 2011. All interested persons and organizations had an opportunity during that time to submit their written comments on the Recirculated DEIR to the District. A public meeting was held on September 23, 2011 to discuss the changes made to the original DEIR. Twenty-four comment letters were received during the public review period. These comments along with their responses are located in Section 0.3 of this Final EIR.

1.5.1 Environmental Topics Addressed

Based on the analysis presented in the Initial Study and the information provided in the comments to the NOP, the following environmental topics are analyzed in this EIR.

- Visual Resources
- Biological Resources
- Water Resources and Hydraulic Hazards
- Air Quality
- Transportation and Circulation
- Public Health
- Noise and Vibration
- Geologic and Seismic Hazards
- Hazardous Materials and Wastes
- Cultural and Paleontological Resources
- Waste Treatment/Disposal
- Greenhouse Gas Emissions

1.5.2 Environmental Topics Found to be Less than Significant During the Initial Study Process

As identified in the Initial Study, included as Appendix A of this ~~RD~~EIR, the following environmental topics were found to be less than significant during the Initial Study process and, with the exception of Public Health, are not discussed in this EIR:

- Agricultural Resources (including soils, water, air quality/microclimate, pests/diseases, land use incompatibility)
- Visual Resources (including scenic highway)
- Land Use (including community character, housing, and growth inducement)
- Mineral Resources (including aggregate and petroleum)
- Energy Resources
- Aviation Hazards
- Fire Hazards
- Glare
- Public Health
- Transportation/Circulation (including safety/design and tactical analysis [fire] on public and private roads, bus transit, railroads, airports, harbors, and pipelines)
- Water Supply (including quality, quantity, and fire flow)
- Flood Control/Drainage (including District and non-District flood control/drainage facilities)
- Utilities (including electric, gas, and communication)
- Law Enforcement and Emergency Services (including personnel/equipment and facilities)

- Fire Protection (including distance/response time and personnel/equipment/facilities)
- Education (including schools and libraries)

1.5.3 Environmental Topics Found to be Less than Significant During the EIR Process

The following environmental topics were found to be less than significant, but were identified in the Initial Study as issues that would be discussed in the EIR.

General Plan Environmental Goals and Policies

General Plan Goals and Policies

The proposed project involves increasing the capacity of the existing J Street Drain to accommodate the 100-year flood flow and to reduce potential flooding in the surrounding area during a moderate rain event. The proposed project would contribute to minimizing the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from flood hazards. Therefore, the proposed project would be consistent with the Ventura County General Plan goals, policies, and programs, including goals and policies identified in Section 2.10 Flood Hazards, Section 4.6 Flood Control and Drainage Facilities, and the Coastal Area Plan. Additionally, the project would be consistent with environmental policies identified in the City of Oxnard and City of Hueneme General Plan environmental policies; specifically, goals regarding minimizing the impact of flooding to private and public development. Therefore, the proposed project would not result in significant impacts related to General Plan goals and policies. A less than significant impact is identified.

Local Coastal Plan Goals and Policies

The Local Coastal Plans for the cities of Oxnard and Port Hueneme are contained within each city's General Plan. Construction of the J Street Drain is not anticipated to conflict with any goals and policies of these Local Coastal Plans because a site-specific Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs) would be implemented during construction activities. A site-specific SWPPP and BMPs would prevent degradation of water quality or habitat damage that may result during construction activities. Operation of the J Street Drain is not anticipated to conflict with any goals and policies of the Local Coastal Plans since the J Street Drain would operate as it does under existing conditions, but with an expanded capacity. Any potential impacts resulting from surface water flow velocity would be avoided because approximately 0.07 acres of rock riprap would dissipate energy from surface water flows. Therefore, it is not anticipated that surface water velocity would adversely impact Ormond Beach Lagoon. Further, although implementation of the Beach Elevation Management Plan (BEMP) has the potential to adversely impact coastal habitat, which is inconsistent with the Local Coastal Plan, the BEMP would only be implemented periodically to groom the berm to a pre-determined height prior to forecasted large storm events. The BEMP would ensure natural opening of the Ormond Beach Lagoon outlet during a storm event to prevent flooding of developed properties.

BEMP implementation would occur predominantly outside the endangered California least tern and threatened western snowy plover breeding season and be supervised by a biologist to ensure sensitive coastal habitats and biological resources are avoided. The District would obtain permits in advance to groom a small area of beach sand from the California Coastal Commission (CCC), California Department of Fish and Game (CDFG), Los Angeles Regional Water Quality Control Board (LARWQCB), U.S. Army Corps of Engineers (USACE), and U.S. Fish and Wildlife Service (USFWS). The ultimate effects

of the BEMP are anticipated to be less than significant. Therefore, the proposed project would not significantly impact Local Coastal Plan goals and policies and a less than significant impact is identified.

Coastal Beaches and Sand Dunes

According to the 2011 Ventura County *Initial Study Assessment Guidelines*, a significant impact to coastal beaches and sand dunes would result if a project would conflict with the Ventura County General Plan (Section 1.10) and/or Local Coastal Program (LCP) (Area Plan and Ordinance). As identified above, the proposed project would involve increasing the capacity of the existing J Street Drain to minimize the risk of loss of life, injury, damage to property, and economic and social dislocation that may result from flood hazards. Therefore, the project would be consistent with the general goals, policies, and programs identified in Section 1.10 of the Ventura County General Plan. Additionally, as discussed above, although implementation of the BEMP has the potential to impact coastal habitat, including beaches and sand dunes, the BEMP would be permitted in advance by the CCC, CDFG, LARWQCB, USACE, and USFWS and be supervised by a biologist to ensure avoidance of sensitive biological resources. The resulting effects of the BEMP are anticipated to be less than significant. Therefore, the proposed project would not result in a conflict with the Ventura County General Plan or LCP and impacts would be less than significant.

Recreation

According to the 2011 Ventura County *Initial Study Assessment Guidelines,* a significant impact to recreation would result if a project would cause an increase in demand for recreational facilities. Bubbling Spring Community Park, South Winds Park, Moranda Park, Port Hueneme Beach Park, and the public beach are recreational facilities located in the project vicinity. The proposed project would increase the capacity of the existing J Street Drain. Increase in drain capacity would not result in an increased demand for recreational facilities. Additionally, the use of these recreational facilities would not be impacted by the proposed project. Therefore, impacts to recreation resulting from implementation of the proposed project would be less than significant.

1.5.4 Comments to the NOP

As identified above, on April 9, 2008, the NOP was circulated from April 10 to May 9, 2008 to accept input from interested parties regarding the proposed project. Table 1.5-1 contains a summary of the comments received during this comment period and a brief response to the comment. Individual sections in the ~~Draft~~ EIR also contain responses to NOP comments.

1.5.5 Lead, Responsible and Trustee Agencies

Per §15367 of the State *CEQA Guidelines*, a Lead Agency is defined as "the public agency which has the principal responsibility of carrying out or approving a project." The Lead Agency for the proposed project is the Ventura County Watershed Protection District. A Responsible Agency is a public agency, other than the Lead Agency, that has a legal responsibility for also carrying out or approving a project. Additionally, State law requires that all EIRs be reviewed by Trustee Agencies. A Trustee Agency is defined in §15386 of the State *CEQA Guidelines* as "a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California."

Table 1.5-1. Summary of NOP Comment Letters

Issue Raised	Response
Office of Planning and Research State Clearinghouse and Planning Unit – April 10, 2008.	
This letter provides dates of review for the NOP.	No environmental issues were raised.
Edmund Pert, Regional Manager, California Department of Fish and Game – May 9, 2008	
Project should develop a hydraulic model to analyze project impacts on the Ormond Beach Lagoon. An assessment of flora and fauna should be performed to analyze and minimize impacts on biological resources, evaluate a range of alternatives, obtain CESA permit for the potential of a "taking," and recommends minimum natural buffer of 100 feet from outside edge of riparian zone on each side of drain.	A Coastal Resources Report, Inland Flooding Report, Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon, Ormond Beach Lagoon Sand Berm Management Technical Memo, and a Biological Technical Report were prepared for the project describing the coastal processes, lagoon breaching, the existing habitat, potential project impacts, and appropriate mitigation measures for impacts. These reports are included as appendices to this RDEIR (Appendix C and D). Section 4.2, Biological Resources, addresses these issues. Additionally, Section 4.3, Water Resources and Hydraulic Hazards, addresses the hydraulic and hydrology impacts of the project.
Rita Graham, Ventura County Agricultural Commissioner's office – April 16, 2008(email)	
The Agricultural Commissioner's office concurs with the Agricultural Resources findings in the Initial Study.	No environmental issues were raised.
Don Occhiline, Ventura County Airports Department – April 21, 2008(email)	
The letter states the proposed project will not cause a hazard to aviation or affect Federal Regulation 49 CFR Part 77 surfaces during construction or after completion.	No environmental issues were raised.
Katrina Rice Schmidt, City Planner, City of Ojai – April 23, 2008(email)	
The proposed project is outside of the City of Ojai sphere of influence and areas of interest.	No environmental issues were raised.
Christopher Williamson, Senior Planner, City of Oxnard - August 27,2008	
This memorandum indicated six points that the City expressed concern over, including; construction impacts to the current bike path and potential creation of a Class I bike path as part of this project; construction impacts to J Street as well as intersecting streets; circulation impacts resulting from the project; improve aesthetic appearance; work with lagoon restoration group; conduct public meetings and a study session with the City Planning Commission.	There are no anticipated impacts to the existing bike lane during construction, and a project alternative is being considered that would cover the culvert and allow an overlying bike path. Section 4.5, Transportation and Circulation, discusses construction impacts to traffic. There is ongoing coordination with the Ormond Beach Task Force and several presentations have taken place and more are planned. The City of Oxnard may replace landscaping along the J Street Drain. Section 4.1, Visual Resources, discusses the aesthetic impacts of the project and proposes mitigation measures.
Alicia Stratton, Ventura County Air Pollution Control District – April 23, 2008	
The VCAPCD agrees with the Initial Study and the determination that air quality impacts will be short-term and not significant. The project should include conditions to minimize fugitive dust and particulate matter from construction.	Section 4.4, Air Quality, addresses air quality issues and the best management practices and mitigation measures for all phases of the project, particularly construction. Project activities will be consistent with SB 656, and VCAPCD Rule 55 Fugitive Dust guidelines, Rule 50 for Opacity, and Rule 51 for Nuisance emissions.
Reed Smith, Science Chair, Ventura Audubon Society, Inc. – April 28, 2008	
The letter requests clarification of the proposed project Alternatives B and C and to include a discussion of California Least Terns and Western Snowy Plover, and Belding's savannah sparrow in EIR.	Section 5.0, Alternatives, presents the potential alternatives and analysis of impacts per alternative. Additionally, Section 4.2, Biological Resources, includes a discussion and the potential impacts and mitigation for the California Least Terns, Western Snowy Plover, and

Issue Raised	Response
	Belding's savannah sparrow. Also, A Biological Technical Report was prepared for the project and is contained in Appendix D of this document.
Nazir Lalani, Deputy Director, Public Works Agency – Transportation Department, April 25, 2008	
The transportation/circulation discussion should include a construction truck route, potential impacts and proper precautions.	Section 4.5, Transportation and Circulation, addresses the use of a construction truck route, the potential impacts to the project area traffic and circulation system, and appropriate mitigation. A Traffic Control Plan will be developed and implemented as part of the project and will identify precautionary actions to reduce traffic impacts and protect motorists traveling through the project area.
Peter Brand, Project Manager, State Coastal Conservancy – May 9, 2008(email)	
This letter indicated concern over the proposed outlet alternatives and the potential effects on sensitive biological resources including tidewater goby, and bird species. Additional concerns raised include: project boundaries, appropriate permitting, as well as potential water quality impacts.	Section 4.2, Biological Resources addresses the presence / absence of sensitive species, potential impacts, and appropriate mitigation measures. The section also identifies the survey areas and necessary permitting. Section 4.3, Water Resources and Hydraulic Hazards, addresses the water quality impacts of the project and identifies appropriate mitigation measures. The Biological Technical Report (Appendix D), an Inland Flooding Report, Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon, the Ormond Beach Lagoon Sand Berm Management Technical Memo at Ormond Beach Lagoon, Ormond Beach Lagoon Sand Berm Management Technical Memo and a Coastal Processes Report (Appendix C) prepared for the project are contained in the appendices of this document.
Melinda Talent, County of Ventura, Resource Management Agency – April 28, 2008	
Hazardous material/waste impacts related to construction and demolition debris.	Section 4.8 of the ~~RD~~EIR addresses impacts related to hazardous materials. As discussed, the proposed project would not result in significant impacts related to hazardous construction and demolition materials.
Katy Sanchez, Program Analyst, Native American Heritage Commission – April 16, 2008	
This response requests specific archeological resource evaluation as well as specific requirements for a Sacred Lands File Check and Native American consultation for the project area.	~~RD~~EIR Section 4.9 addresses potential cultural resource impacts and identifies the Native American contacts that were initiated. The Cultural Resource Report is included as an appendix to the EIR (Appendix E).
Bruce Smith, Manager General Plan Section, County of Ventura, Resource Management Agency, Planning Division – April 24, 2008	
Identified mitigation measures that reduce impacts to less than significant should be explained in EIR. Alternative E and removal of housing should be discussed. Biological resources should be analyzed.	Section 5.0 of the ~~RD~~EIR contains analysis of project alternatives. Section 4.2 addresses biological resources issues. All sections include discussion of impacts, mitigation measures, and level of significance determinations.
Frank Kiesler, County of Ventura Integrated Waste Management Division – April 24, 2008	
Letter recommends compliance with Ventura County Ordinances #4308 and #4357 and contract specifications regarding recycling and reuse.	~~RD~~EIR Section 4.10 Waste Treatment/Disposal includes construction waste analysis.
Brian Trushinski, County of Ventura, Public Works Agency, Water Resources and Engineering Department – April 24, 2008	
This letter requests that each seismic and geologic hazard identified in the Initial Study be evaluated in the EIR.	Section 4.7 of the ~~RD~~EIR evaluates geologic and seismic hazards. A geotechnical evaluation for the project was prepared and included in the ~~RD~~EIR as Appendix F.

Issue Raised	Response
Scoping Meeting Comments – February 25, 2008	
There is lots of trash in the channel. Can it be filtered out before it goes to the ocean?	The District is responsible for flood protection improvements related to the proposed drain. The City of Oxnard is responsible for capturing trash that is generated in the City before it reaches the J Street Drain. Under a separate action, the District is coordinating with the Cities of Oxnard and Port Hueneme on a trash collection device in J Street Drain in compliance with the Countywide Municipal Stormwater Permit (see Section 4.3 Water Resources and Hydraulic Hazards).
What will be done with the construction demolition waste? Will it be recycled?	Section 4.10 Waste Treatment/Disposal includes construction waste analysis. Construction demolition waste will be recycled to the maximum extent feasible.
Area hydrology needs to be better understood.	A J Street Drain /Ormond Beach Lagoon Coastal Engineering Report, Inland Flooding Study, Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon, and Ormond Beach Lagoon Sand Berm Management Technical Memo were prepared and included as an appendix (Appendix C). The report includes a review of other reports related to hydrologic, hydraulic, and coastal processes at the project site
There is a problem with this project being fragmented from the Oxnard Industrial Drain (OID) project and from plans that others (Calleguas MWD) have to discharge water (i.e., take it out of the Oxnard treatment plant process).	The project is planned to increase the capacity of the J Street Drain. This is an existing storm drain, and the OID is a separate flood control facility. Both the J Street Drain and the OID empty into Ormond Beach Lagoon, and this interaction of flows is discussed within the Coastal Engineering report and the Inland Flooding Report prepared for the project (Appendix C).
The mouth of the lagoon moves up and down coast, it's not static and worthy of study for this project.	The entire lagoon system, including the mouth (or breach location), is dynamic and expected to vary naturally in the future, as described in the J Street Drain /Ormond Beach Lagoon Coastal Engineering Report, included as an appendix. Prior to the January 18, 2010 flood emergency, hydraulic analysis indicated that the preferred breaching location was near Oxnard Industrial Drain. The design considered multiple lagoon mouth locations and the dynamic nature of the lagoon. As a result of emergency response in 2010 and known threatened and endangered bird breeding sites, the preferred beach grooming site is located near the northwest portion of the lagoon.
Sand deposited from dredging of Port Hueneme contributes to the littoral process.	Sand bypassing from Port of Port Hueneme contributed to the formation of the lagoon, as discussed in the J Street Drain /Ormond Beach Lagoon Coastal Engineering Report, included as an appendix. The Ormond Beach Lagoon Sand Berm Management Technical Memo also discusses this issue and appears in Appendix C of this ~~RD~~EIR. Changes in future maintenance at the Port would affect the future location of the beach and littoral processes, which are beyond the control of project design.
The beach may be receding due to less sand from the Port.	Ormond beach has been relatively stable in recent times due to sand bypassing the Port. Natural recession of the beach will likely occur in the future due to sea level rise. The project design is flexible and can accommodate future change to the beach and lagoon.
The Coastal Conservancy plans for lagoon restoration are not ripe and should not be used.	The Coastal Conservancy restoration plans were reviewed during analysis and design for information only. These were not used or applied for design of the project. The proposed project is not intended to restrict or promote lagoon restoration plans, but rather to alleviate flooding and minimize adverse impacts to the lagoon.

Issue Raised	Response
We should figure out how to move water over/around the Reliant Energy plant.	Reliant Energy is located at 6635 South Edison Drive, which is approximately 1.5 miles southeast of the J Street Drain outlet. Moving water around the Plant is outside the scope of the J Street Drain project. Therefore, no environmental issues related to the proposed project were raised.
We need to check on the limits of the conservation easement over Hueneme Beach west of the J Street outlet to the beach. It was recorded in the 1990s (?).	The J Street Drain project is anticipated to be contained within the existing District easement. The BEMP access route would traverse the Resource Conservation Zone Overlay defined in Figure 3 of the City of Port Hueneme Local Coastal Plan, requiring a Coastal Development Permit. A conservation easement was not discovered on Hueneme Beach property. The District would obtain all necessary regulatory permits prior to initiating work on the J Street Drain Project.
We need to study the tide and 100 year flood. Observations show the lagoon breaches well before 100-year flood water accumulates in the J Street Drain. The additive effects of the 100-year flood and tide won't likely materialize.	A J Street Drain /Ormond Beach Lagoon Coastal Engineering Report, Inland Flooding Report, and Ormond Beach Lagoon Sand Berm Management Technical Memo were prepared and are included as an appendix (Appendix C). The Coastal Engineering Report includes a review of other reports related to hydrologic, hydraulic, and coastal processes at the project site. The Report discusses the dynamic nature of the Lagoon and height of the sand berm. While evidence of Lagoon breaching before the 100-year flood exists, potential flooding may still occur during a 100 year flood even if the J Street Drain and Lagoon are initially empty. Section 3.0 of the ~~RD~~EIR discusses the project background as well as purpose and need.
How does the 550 acre subdivision project north of Hueneme Road affect our project? That project currently proposes to drain water to Oxnard Drain No. 2 but if that doesn't work, then water may come to OID.	Each Section of Chapter 4 of the ~~RD~~EIR includes a cumulative impact discussion and Section 2.0 includes a related projects list. The Ormond Beach Specific Plan is approximately 900 acres and is included as a related project. The OBSP is located outside the J Street Drain watershed, would not discharge directly to the J Street Drain, and would thus not affect flooding in this facility.
The City of Oxnard Utility Task Force is a forum for residents to get involved w/ local issues.	The City Utility Task Force has the opportunity to become involved with the project. The project NOP and IS was sent to City Departments, a website was created for the Project, and public meetings have been held.
Is Prop 1E funding available? It may be available for protection of homes from flooding.	The District's ongoing activities are funded through property taxes, benefit assessments, and land development fees. Additional funding may be available through grant programs such as Prop. 1E, if project details meet grant requirements. However, such funding would be unlikely to significantly offset project costs.
Is there any federal or other outside funding?	The District's ongoing activities are funded through property taxes, benefit assessments, and land development fees. Additional funding for a potentially more costly but more locally desirable alternative might be obtained from city governments, if available, or potentially through federal or state grant programs, if project details meet grant requirements. However, federal or state grant funding would be unlikely to significantly offset project costs. Local agencies and governments are not eligible for grant funding sponsored by private foundations, but 501(c)(e) organizations may receive such funding if they meet program requirements. Private foundations may offer larger grant awards that could significantly offset project costs.

Issue Raised	Response
Check with EPA to see if they would oppose new culverts under McWane. It should be noted that McWane Road is located in the OID watershed and not the J Street Drain's watershed.	No environmental issues related to the proposed project were raised.
EPA has been asked to evaluate fill on McWane because it likely came from the Halaco slag pile.	The proposed project site would not result in impacts to the Halaco Superfund site, which is located approximately 0.3 miles southeast from the project site. No environmental issues related to the proposed project were raised.
Putting fresh water on the floodplain would be beneficial reuse of water which would transition into saline lagoon system. Brackish marsh habitat is missing.	The entire floodplain between Redwood Street and Hueneme Road is developed and therefore is not suitable for receiving flood flows. Between Hueneme Road to Ormond Beach, the west floodplain is entirely developed and the east floodplain is developed from the channel eastward at least 640 feet. Therefore, permitting overflow from the J Street Drain onto the adjacent floodplain is infeasible. For much of the year, fresh water originating from J Street Drain resides within the Ormond Beach Lagoon.
Please discuss the potential for a permanent opening of J Street Drain.	A J Street Drain/Ormond Beach Lagoon Coastal Engineering Report was prepared and is included as an appendix. The report includes a review of other reports related to hydrologic, hydraulic, and coastal processes at the project site. The Report discusses the dynamic nature of the Lagoon and the coastal process. A beach outlet alternative involving a permanent connection between J Street Drain and the ocean is discussed in Chapter 5.0 Alternatives. This alternative was not selected due to significant impacts to threatened and endangered fish and birds.
Please study the effects of opening old drains and enlarging culverts as suggested by the Sierra Club rep (Al Sanders).	The project design of the culverts is underway and will include culvert enlarging. This is part of the proposed project and is analyzed in the ~~RD~~EIR. However, Mr. Sanders was referring to old drains that do not connect with J Street Drain and therefore would not alleviate flooding along the facility.
When was the last 100-year flood in Oxnard?	There has not been a 100-year flood on record in Oxnard or the project area.
A covered channel would provide a safe corridor for kids on bikes going to/from school.	Section 5.0 of the ~~RD~~EIR contains analysis of project alternatives. One of the alternatives proposes a covered channel.
There is a concern about graffiti, trash, vermin etc, in open channel alternatives.	The District is responsible for flood protection improvement related to the proposed drain. As part of on-going maintenance the channel is regularly maintained by removing trash and sediment, and covering any graffiti. Any improvements to the street inlets into the drain, including capturing trash generated in developed areas, are the responsibility of the City of Oxnard. Additionally, the landscaping currently outside the District safety fencing is the responsibility of the City.
Can taxes be assessed to help pay for a particular alternative or features thereof that residents want? How can residents facilitate this?	The District's ongoing activities are funded through property taxes, benefit assessments, and land development fees. Additional funding for a potentially more costly but more locally desirable alternative might be obtained from city governments, if available, or potentially through grant programs, if project details meet grant requirements. No environmental issues related to the proposed project were raised.

Issue Raised	Response
How much input do residents have to select an alternative?	The CEQA process allows the public to comment and offer input to the proposed project during public meetings, public document circulation, and comment periods.
Who recommends preferred alternatives and who decides on the project that gets built?	Section 5.0 of the ~~RD~~EIR contains analysis of project alternatives. Alternatives are developed through coordination between the District and consultant. The approval of the project is at the discretion of the Ventura County Board of Supervisors.
Will a direct outlet from J Street to the ocean increase the reach of the tide in J Street?	Section 3.0 of the ~~RD~~EIR discusses the project background as well as purpose and need. Additionally, the J Street Drain/Ormond Beach Lagoon Coastal Engineering Report was prepared and is included as Appendix C. The report includes a review of other reports related to hydrologic, hydraulic, and coastal processes at the project site. The Ormond Beach Lagoon berm impounds freshwater that flows from J Street Drain, Hueneme Drain, and Oxnard Industrial Drain in the lagoon. This causes the backwater effect in J Street Drain, not tidal influence. A direct and permanent connection to the ocean may increase the reach of the tide in J Street Drain.
We need to explain why we are focused on the J Street project instead of OID. OID fills almost to the bridge soffit on Hueneme Road during high tides. More full than J Street on same tide.	Section 3.0 of the ~~RD~~EIR discusses the purpose and need for the J Street Drain project. The OID improvements project was given lower priority than the J Street Drain project because it would require the purchase of additional land.
We need to study the potential for reestablishing flow in the old blocked channel along the Halaco slag pile (immediately south of it) and of putting a culvert into McWane to get water from OID to the beach.	The areas mentioned are not located near the J Street Drain project and therefore not included in the project analysis.
We need to explain what prompted the J Street project.	Section 3.0 of the ~~RD~~EIR discusses the purpose and need for the J Street Drain project.
We need to include the Coastal Conservancy scenarios and historical aerial photos that show changes in the lagoon in the EIR.	The Coastal Conservancy restoration plans were reviewed during analysis and design for information only. These were not used or applied for design of the project. The proposed project is not intended to restrict or promote lagoon restoration plans, but rather to alleviate flooding and minimize adverse impacts to the lagoon. The J Street Drain /Ormond Beach Lagoon Coastal Engineering Report was prepared and is included as Appendix C. The report includes a review of other reports related to hydrologic, hydraulic, and coastal processes at the project site. The report also includes historical aerial photos.
Marion Keleman, JSDP Committee Chair, Surfside III Condominiums resident – June 27, 2009 and July 6, 2009	
The two letters indicated concerns from the Surfside III property residents regarding removal of trees and bushes during construction and temporary work easement within their property.	In the response from the District dated July 30, 2009, the following issues were clarified: • The proposed 8-feet wide temporary work easement beyond the District's ROW would entail the removal of existing trees, shrubbery, walkways and planters. • Where retaining walls, walkways, and planters/vegetation would be removed within the temporary work easement, they would be replaced as part of the construction project to be administered and paid for by the District, once a replacement plan is agreed to.

Issue Raised	Response
Marion Keleman, JSDP Committee Chair, Surfside III Condominiums resident – July 15, 2009	
This letter requests reconsideration of the "flood-condition sand-berm removal alternative," the relocation of 8-feet work easement within Surfside III property, and the District's cooperation with the residents to design a Restoration Plan.	In the response from the District dated July 30, 2009, the following issues were clarified: • The "Flood-condition sand-berm alternative" is not feasible due to regulatory prohibitions imposed by the U.S. Fish and Wildlife Service concerning endangered tidewater gobies in the Ormond Beach Lagoon. See Section 5.0 Alternatives for the list and discussion of alternatives considered. • The District plans to obtain a temporary work easement from the Oxnard Wastewater Treatment Facility across the channel from J Street Drain. However due to confined work area, access is needed on both sides of the channel. • An estimate detailing the landscape and hardscape replacement costs resulting from the temporary work easement will be developed in coordination with the Surfside III Landscaping committee. The replacement costs would be borne by the District. Where retaining walls, walkways, and planters would be removed within the temporary work easement, they we be replaced in kind as part of the construction project to be administered by the District.
JSDP Committee Concerns, Surfside III Condominiums– July 24, 2009	
On July 24, 2009, the District's design engineer met with representatives from Surfside III to discuss preliminary project design and ways to minimize impacts to the Surfside III property. The following questions were from this meeting: How far from the existing fence will the construction work-area fence be located?	The new permanent fence would be 3 to 4 feet closer to Surfside III property; the current fence is located 3 to 4 feet east of the District/Surfside III property boundary. Open cut trenching would require the placement of a temporary construction fence eight feet west of the property boundary. Vertical shoring would require placement of a temporary construction fence approximately one or two feet west of the property boundary.
How many large trees will have to be removed?	Please see Section 4.1 Visual Resources; the District can meet with Surfside III Landscaping Committee to document all plants and structures that would be replaced.
Will construction equipment be using our streets?	The proposed construction discussion can be found in Section 3.0 Project Description, subheading Section 3.4 Construction, and Section 4.5 Transportation and Circulation
How long will the construction go on?	The proposed construction discussion can be found in Section 3.0 Project Description, subheading Section 3.4 Construction. The project will be constructed in four phases and Phase 1 is anticipated to begin in early 2013. Each phase will take approximately 12 months to complete.
How much money is in your budget for replacement of our trees and repair of structures damaged by this project?	An estimate detailing the landscape and hardscape replacement costs resulting from the temporary work easement will be developed in coordination with the Surfside III Landscaping committee. The replacement costs would be borne by the District. Where retaining walls, walkways, and planters would be removed within the temporary work easement, they we be replaced in kind as part of the construction project to be administered by the District.

Issue Raised	Response
Your plans do not address electrical, sewer, water lines, and/or parking spaces that may be affected. Also, residents of Bldg 7 in the apartments nearest to the canal will be only a few feet away from the construction work. Was this environmental cost considered?	The Real Estate Services Division will contact the Homeowner's Association Board to negotiate an agreement regarding plant replacement between the District and Surfside III Landscape Committee. In addition, property damage, if any, would be rectified by the contractor's insurance company as provided for in 7-4 of the Ventura County Standard Specification (VCSS).
Why was this project not designed with construction work done from the other side of the canal?	The District plans to obtain a temporary work easement from the Oxnard Wastewater Treatment Facility across the channel from the J Street Drain. However due to confined work area, access is needed on both sides of the channel.
If you were involved in consideration of the alternative plans, why isn't the alternative of removing the sand-berm when necessary chosen?	The "Flood-condition sand-berm alternative" is not feasible due to regulatory prohibitions imposed by the U.S. Fish and Wildlife Service concerning endangered tidewater gobies in the Ormond Beach Lagoon. Furthermore, removal of the sand berm would not increase the capacity of the existing channel, which is only large enough to convey the 10-year storm. Even when initially empty, the drain would overflow upstream of the coast during a storm larger than the 10-year event. See Section 5.0 Alternatives for the list and discussion of alternatives considered.
Marion Keleman, JSDP Committee Chair, Surfside III Condominiums resident – August 15, 2009	
This letter included questions regarding the following issues: • Surfside III residents were not notified of the project • Existing stagnant water backup in the project area • Legal agreement for temporary work easement • Restoration/replacement language • Compensation for damage	In the response from the District dated September 1, 2009, the following issues were clarified: • HDR has records of public notification for Surfside III residents; however, the NOP letters were not delivered. Public comments from the residents on the project have been accepted after official NOP period and additional coordination with the residents has occurred. • The project impacts to existing stagnant water backup and potential mosquito issues are discussed in Section 4.11 Public Health. • A legal agreement associated with the temporary work easement for the work on Surfside III property will crafted by the District's Real Estate Services Division with input from both parties. • The phrase "in kind" used in the July 30, 2009 letter applicable to hardscape and landscape replacement was explained; however, it is most efficient to negotiate an agreement regarding plant replacement between the District and Surfside III Landscape Committee. • Property damage, if any, would be rectified by the contractor's insurance company as provided for in 7-4 of the Ventura County Standard Specification (VCSS).

1.5.5.1 Responsible Agencies

City of Oxnard

- Coastal Development Permit, road encroachment permits

City of Port Hueneme

- Coastal Development Permit, road encroachment permits

California Coastal Commission

The CCC was established by voter initiative in 1972 (Proposition 20) and later made permanent by the Legislature through adoption of the California Coastal Act of 1976. The CCC is an independent, quasi-judicial state agency. The Commission, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. Development activities, which are broadly defined by the Coastal Act to include construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the CCC or the local government.

Implementation of Coastal Act policies is accomplished primarily through the preparation of LCPs that are required to be completed by each of the 15 counties and 59 cities located in whole or in part in the coastal zone. The City of Oxnard, the City of Port Hueneme, and the County of Ventura all have approved LCPs. The CCC has the responsibility for issuing coastal development permits for the area below the mean high tide line, which includes the proposed outlet. In addition, the Cities of Oxnard and Port Hueneme may elect to transfer their Coastal Development Permit authority to the CCC to streamline the permit process. In that event, a single Coastal Development Permit would be issued by the CCC, rather than the two cities issuing separate permits. The CCC, acting under the authority of the California Coastal Act, is not subject to the provisions of CEQA, but is required to prepare a "functional equivalent" to the documentation that would otherwise be required under CEQA.

Los Angeles Regional Water Quality Control Board

The LARWQCB is one of nine regional boards under the California "State Water Resources Control Board" (SWRCB). Under the direction of the SWRCB, the RWQCB exercises authority under the federal Clean Water Act (CWA) and the state Porter-Cologne Water Quality Act that regulate the discharge of "fill" into waters of the United States or waters of the State within its Los Angeles region of influence. Regulation is either through a Section 401 Water Quality Certification or through Waste Discharge Requirements. Issuance of a Section 401 Certification or Waste Discharge Requirements is based on a finding that the proposed project would comply with all pertinent water quality standards as established by the RWQCB.

California Department of Fish & Game

The California Endangered Species Act (CESA) (California Fish and Game Code §2050, et seq.) generally parallels the main provisions of the Federal Endangered Species Act (FESA) and is administered by the CDFG. Its intent is to prohibit the unauthorized "take" and protect state listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, CESA also applies the take prohibitions to species petitioned for listing (state candidates).

The CDFG also has the authority to reach an agreement with an agency or private party proposing to affect intermittent or permanent wetlands or riparian habitat, pursuant to Sections 1601-1616 of the State Fish and Game Code. A Streambed Alteration Agreement would be required by the project for any alteration to a streambed or riparian area.

United States Army Corps of Engineers

The USACE has jurisdiction over development pursuant to the CWA, as amended. Projects that include potential discharge of dredge or fill impacts to the "waters of the U.S." (including wetlands) are subject to Section 404 of the CWA and require a permit.

United States Fish & Wildlife Service

The USFWS is responsible for enforcing FESA, and reviews and comments on applications for Section 404 CWA permits submitted to the USACE under the Fish & Game Coordination Act (16 U.S.C. §661 et seq.). If the proposed project is determined to have an adverse effect on a species that is federally listed as threatened or endangered, consultation with the USFWS would be required. If the proposed project may result in a "take" of a federally listed species, an incidental take permit would be required. "Take" is defined in the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage any such conduct." A Section 7 or 10(a) take authorization would be required.

1.5.5.2 Trustee Agencies

California Department of Fish & Game

Because the CDFG is a state agency that has jurisdiction over natural resources affected by the proposed project, it is also identified as a trustee agency.

California State Lands Commission

The Land Management Division (LMD) has primary responsibility for the surface management of all sovereign and school lands in California. This responsibility includes the identification, location, and evaluation of the State's interest in these lands and its leasing and management. Public and private entities may apply to the Commission for leases or permits on state lands for many purposes including marinas, industrial wharves, dredging, sand mining, tanker anchorages, grazing, right-of-ways, bank protection, recreational uses, etc. Applications for use of any of these lands can be made to the SLC.

In California, tidelands are those lands that lie between the mean high tide and the mean low tide while submerged lands are those lands that lie between the mean low tide and the three-mile seaward extent of the state's jurisdictional limit. The LMD of the California SLC has primary responsible for the leasing of California's sovereign tidelands and submerged lands. The SLC may grant leases on tidelands and submerged lands for any public trust purpose. Leases generally fall into the following categories: recreational, commercial, industrial, right-of-way, or salvage; however, leases have also been given for wetlands and habitat management projects.

1.6 PROJECT APPROVALS AND PERMITS

The District would require the following:

Certification of the EIR

Per §15090 of the State *CEQA Guidelines*, prior to approving a project, the District, acting as lead agency, shall certify that: (1) the final EIR has been completed in compliance with CEQA; (2) the final EIR was presented to the decision-making body of the lead agency and that the decision-making body reviewed and considered the information contained in the final EIR prior to approving the project; and (3) the final EIR reflects the lead agency's independent judgment and analysis.

Regulatory Approvals

The J Street Drain project would require the following regulatory approvals prior to implementation:

- Consolidated Coastal Development Permit (CDP) from the CCC (providing for a single CDP to be issued by the Commission rather than separate permits by the two cities and another permit by the CCC for its jurisdictional area) pursuant to the provisions of the California Coastal Act;
- A USACE Individual Permit pursuant to Section 404 of the federal CWA (1990, as amended), and/or qualification under a Nationwide Permit pursuant to Section 404 of the CWA;
- Clean Water Certification in compliance with the California Porter-Cologne Water Quality Control Act as defined by the state RWQCB or CWA Section 401 Certification requirements. Additionally, Waste Discharge Requirements would be required for groundwater discharge activities;
- A Section 1600-Series Streambed Alteration Agreement (SAA) with the CDFG in compliance with the CDFG Code and a Section 2081 Take Permit for potential impacts to state threatened and endangered species in compliance with the CESA; and
- Section 7 Consultation with the USFWS for potential impacts to federal threatened and endangered species in compliance with the FESA.

1.7 DRAFT EIR REVIEW PROCESS

The original DEIR (SCH 2008041057) for the J Street Drain project was circulated for a ~~45~~ 79-day public review period (November 2, 2009 to January 19, 2010). All interested persons and organizations had an opportunity during that time to submit their written comments on the DEIR to the District. These comments along with their responses are located in Appendix L in this Final EIR.

The Recirculated DEIR (SCH 2008041057) was circulated for a 45-day public review from September 23, 2011 through November 7, 2011. All interested persons and organizations had an opportunity during that time to submit their written comments on the Recirculated DEIR to the District. These comments along with their responses are located in Section 0.3 of this Final EIR. The Final EIR is available for review at the following address:

Contact

Kirk Norman, P.E., Project Manager
Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, California 93009-1600

1.8 SUMMARY OF IMPACTS AND MITIGATION MEASURES

A detailed discussion of existing environmental conditions, environmental impacts, and recommended mitigation measures is included in Section 4.0, Environmental Impact Analysis. Table 1.8-1 summarizes the environmental impacts, mitigation measures, and level of significance after mitigation associated with the J Street Drain project.

1.9 SUMMARY OF BEST MANAGEMENT PRACTICES

The Ventura County Board of Supervisors adopted the District's Final Program Environmental Impact Report for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project No. 80030 in May 2008. The final document includes BMPs that will be added to the District's Maintenance Activity Guidelines. The Operation and Maintenance Division staff will be responsible for ensuring the proper implementation of the BMPs on a routine, year-round basis. The Division staff will also be responsible for ensuring compliance with all permit conditions, conducting or employing qualified personnel for any required pre-project site surveys or inspections, updating the Activity Guidelines sheets, instructing crews on BMPs, overseeing certain BMP implementation, documenting the implementation of the BMPs, and conducting any agency coordination.

The District currently maintains the existing J Street Drain. The proposed J Street Drain Project would not result in new operational maintenance activities associated with the drain. After the construction of the proposed drain, maintenance activities are expected to be similar to the existing maintenance activities. Therefore, the proposed project would create only construction impacts. Nevertheless, the environmental discussion of this EIR will assume that the operational maintenance for the proposed project is similar to the existing activities and therefore similar impacts associated with them. The BMPs outlined from the District's Ongoing Routine Operations and Maintenance Program are supplied in Table 1.9-1 for informational purposes and to gain a complete understanding of the project.

Table 1.8-1. Summary of Impacts and Mitigation Measures

Environmental Impact	Significance Before Mitigation	Mitigation Measures		Significance After Mitigation
Visual Resources				
Removal of oleander bushes and eucalyptus woodland along the J Street Drain fence line would substantially degrade visual resources by altering the views of residents and travelers along J Street.	Significant	VIS-1	The District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard. Landscaping shall be replaced incrementally, within six months of completion of each project phase. ~~Within six months of project completion, the District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard~~.	Less than significant with implementation of identified mitigation
		VIS-2	Any tree or large shrub removed from the Surfside III property during construction would be replaced at a 1:1 ratio.	
		VIS-3	During construction, temporary privacy screening would be placed along the northeast boundary of the Surfside III property to shield residents from views of the construction site and of the OWWTP.	
		VIS-4	Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.	
		VIS-5	Although night construction is not anticipated, in the event that it becomes necessary, all lighting shall be shielded to prevent illumination of residences.	
Biological Resources				
Implementation of the proposed project would result in temporary direct impacts to Open Water (OW) habitat. The project also has the potential to cause temporary indirect impacts to adjacent Coastal Brackish Marsh (CBM), Southern Coastal Salt Marsh (SCSM), and Southern Foredune (SFD) sensitive habitats.	Significant	BIO-1	During construction, the sensitive vegetation communities adjacent to the project alignment shall be flagged as Environmentally Sensitive Areas (ESA) and construction fencing shall be installed to avoid indirect impacts to these areas. Staging areas shall be identified during construction for lay down areas, equipment storage, etc., to avoid indirect impacts to the ESA. Biological monitoring shall occur during construction activities to prevent indirect impacts. Temporarily disturbed OW habitat, which falls under CDFG, USACE, and RWQCB jurisdiction, would be restored at a 1:1 ratio upon completion of construction. OW habitat restoration shall include replacement on the lagoon bottom of the top 12 inches of original soil to ensure suitable conditions for tidewater gobies and benthic fauna.	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures		Significance After Mitigation
Implementation of the proposed project would result in the following: *California Least Tern* Although the California least tern has not been observed within the proposed work area, construction would affect potential tern nesting and foraging habitat. *Tidewater Goby* Construction of the proposed project would involve temporarily draining natural sand substrates that are used by tidewater goby for burrowing during breeding. Therefore, project construction would result in significant impacts to 0.57 acres of tidewater goby critical habitat.	Significant	BIO-2	To prevent a decrease in the foraging success of California least terns, temporary construction fencing ("snow fencing") shall be installed surrounding the project site to delineate the construction footprint. .	Less than significant with implementation of identified mitigation
		BIO-3	To prevent a decrease in the nesting and foraging success of the California least tern and western snowy plover, phase 1 construction activities adjacent to California least tern and western snowy plover habitat shall occur outside of the breeding season (March to September) to the extent feasible. If construction activities must occur during the breeding season, Phase 1 project initiation through coffer dam installation shall be completed before May 1 to avoid direct impacts to foraging terns. In addition, a preemptive nesting bird survey shall be conducted by a qualified biologist to determine if any nesting terns or plovers are located near proposed activities. If nesting birds are found, all construction activities shall be prohibited within a 300-foot buffer area surrounding the nest location during the breeding season until the young have fledged. The qualified biologist shall ensure that the buffer area is appropriately defined with flagging and/or other means of suitable identification. The District shall consult with USFWS and CDFG in the event that nesting California least terns or western snowy plover are observed within 500 feet of the project area. If no nesting birds are found, construction activities could be conducted during the breeding season without restriction.	
		BIO-4	To prevent a decrease in the foraging success of California least terns and tidewater goby, silt fencing shall be installed prior to project construction between the project area and waters of Ormond Lagoon. For project activities within waters of Ormond Lagoon, dual silt fencing shall be installed around each work area to prevent/decrease the clouding of water within the lagoon as a result of potential runoff.	
		BIO-5	To avoid impacts to tidewater goby eggs, Phase 1 project initiation through coffer dam installation shall be completed before May 1, as the peak breeding season for this species extends from late spring through early summer, and again in late summer through early fall. Prior to the installation of the temporary cofferdam, a Section 10 (a)(1) (a) permitted tidewater goby biologist shall capture and relocate gobies to appropriate habitat located outside of the project area. The temporary cofferdam shall remain in place throughout construction activities south of Hueneme Road to prevent tidewater goby from entering the construction area from the lagoon. The	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		biologist shall also be present during and after dewatering to ensure all gobies and other native fish are relocated to the lagoon prior to construction. A suitable number of biologists working under the supervision of the permitted biologist shall be present during and immediately after the dewatering phase to ensure that all gobies are detected. In addition, the surface water pumps installed for the dewatering of the work area shall be screened (less than five mm mesh size). A permitted tidewater goby biologist shall also be required to relocate any tidewater goby that may enter the work area from upstream. BIO-6 Although night construction is not anticipated, in the event that it becomes necessary, all lighting will be shielded to prevent illumination of the beach.	
Implementation of the proposed project would result in removal of potential migratory bird nesting habitat (e.g., eucalyptus trees) and noise generated from construction activities and may have an indirect impact to nesting migratory birds.	Significant	BIO-7 In order to avoid conflicts with the federal MBTA, if construction is proposed during the migratory bird nesting season, a preconstruction survey shall be conducted by a qualified biologist for the eucalyptus woodland located within the project footprint. The breeding season is defined as February 15 to September 15. If nesting birds/raptors are found, all construction activities shall be prohibited within a 300-foot impact avoidance buffer area surrounding the nest location during the breeding season. In consultation with CDFG and/or USFWS, the buffer area may be reduced in the case of bird species/individuals accustomed to urban disturbance. The qualified biologist shall ensure that the avoidance buffer area is appropriately defined with flagging and/or other means of suitable identification. If no nesting birds/raptors are found, construction could be conducted during the breeding season. Trees may be removed outside of the breeding season without restriction.	Less than significant with implementation of identified mitigation
Implementation of the proposed project would result in temporary impacts to jurisdictional waters.	Significant	Temporary direct impacts to impacts to Waters of the U.S. and Waters of the State would be mitigated through BIO-1, which would restore OW habitat upon completion of construction	Less than significant with implementation of identified mitigation
Implementation of the proposed project would result in temporary impacts to wetlands.	Significant	Temporary indirect impacts to waters and wetlands would be mitigated through measures that protect water quality, including BIO-4 and WQ-1 through WQ-4.	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Water Resources and Hydraulic Hazards			
Implementation of the proposed project would potentially violate water quality standards or waste discharge requirements.	Significant	*Stormwater Pollution Prevention Plan* The District shall submit a completed Notice of Intent (NOI) and obtain a waste discharge identification number to obtain coverage under the NPDES General Permit for Discharges Associated with Construction Activity issued by the California State Water Resources Control Board (SWRCB). The applicant/contractor shall submit to the County a Stormwater Pollution Prevention Plan (SWPPP) and monitoring program consistent with SWRCB rules for the construction phase of the project prior to initiating construction. The SWPPP shall contain the following specific mitigation measures designed to reduce or eliminate construction site runoff pollution. WQ-1 Construction Site Planning BMPs, including but not limited to: • The amount of cuts and fills shall be minimized; and • Temporary and permanent roads and driveways shall be aligned along slope contours Grading operations shall be phased to reduce the extent of disturbed areas and length of exposure. WQ -2 BMPs to Minimize Soil Movement including but not limited to: • Soil stockpiles shall be contained; • Stabilized access roads and entrances shall be constructed in the initial phase of construction; • Tire wash stations, gravel beds, and/or rumble plates shall be installed at site entrance and exit points to prevent sediment from being tracked onto adjacent roadways; • Sediments and construction materials shall be dry-swept from finished streets the same day they are deposited; and • Site runoff control structures, such as earth berms, drainage swales, and ditches that convey surface runoff during construction into temporary or permanent sediment detention basins shall be installed and made operational in the initial phase of construction, as necessary. WQ -3 BMPs to capture sediment including but not limited to: • Storm drain inlets shall be protected from sediment-laden runoff with inlet protection devices such as gravel bag barriers, filter fabric	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		fences, block and gravel filters, excavated inlet sediment traps, sand bag barriers, and/or other devices; and • Sediment shall be removed from dewatering discharge with portable settling and filtration methods, such as Baker tanks or other devices. WQ -4 Good housekeeping BMPs, including but not limited to the following requirements: • All storm drains, drainage patterns, and creeks located near the construction site prior to construction shall be identified to ensure that all subcontractors know their location to prevent pollutants from entering them; • Washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site; wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands; areas designated for washing functions shall be at least 100 feet from any storm drain, waterbody or sensitive biological resources to the extent feasible; the location(s) of the washout area(s) shall be clearly noted at the construction site with signs; the applicant shall designate a washout area; the wash-out areas shall be shown on the construction and/or grading and building plans and shall be in place and maintained throughout construction; • All leaks, spills, and drips shall be immediately cleaned up and disposed of properly; • Vehicles and heavy equipment that are leaking fuel, oil, hydraulic fluid or other pollutants shall be immediately contained and either repaired immediately or removed from the site; • One or more emergency spill containment kits shall be placed onsite in easily visible locations. Personnel will be trained in proper use and disposal methods; • Vehicles and heavy equipment shall be refueled and serviced in one designated site located at least 100 feet from the drain to the extent feasible; • Temporary storage of construction equipment shall be limited to an area approved by the City of Oxnard, and shall be located at least 100 feet from any water bodies to the extent feasible;	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Dry clean-up methods shall be used whenever possible; • Exposed stockpiles of soil and other erosive materials shall be covered or contained during the rainy season; • Trash cans shall be placed liberally around the site and properly maintained; • All subcontractors and laborers shall be educated about proper site maintenance and stormwater pollution control measures through periodic "tailgate" meetings; • Roadwork or pavement construction, concrete, asphalt, and seal coat shall be applied during dry weather only; and • Storm drains and manholes within the construction area shall be covered when paving or applying seal coat, slurry, fog seal, etc.	
Air Quality			
The construction of the proposed drain would result in short-term generation of fugitive dust, construction equipment exhaust, employee trip emissions, and other construction-related emissions. Construction emissions during the phases of the J Street Drain project would exceed the VCAPCD's threshold for NO_x emissions. NO_x emissions are mainly the result of haul truck trips.	Less Than Significant	AQ-1 VCAPCD recommends the following measures to mitigate ozone precursor emissions from construction motor vehicles: 1. Minimize equipment idling time. 2. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications. 3. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time. 4. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible. AQ-2 1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. 2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities. 3. All trucks shall be required to cover their loads as required by California Vehicle Code Section 23114.	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		4. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to periodic watering, application of environmentally-safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. 5. Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be permanently stabilized or periodically treated to prevent excessive fugitive dust. 6. Signs shall be posted on site limiting traffic on unpaved areas to 15 miles per hour or less. 7. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on site activities and operations from being a nuisance or hazard, either off site or on site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive. 8. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads. 9. Personnel involved in grading operations, including contractors and subcontractors, shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations. 10. Material stockpiles shall be enclosed, covered, stabilized, or otherwise treated as needed to prevent blowing fugitive dust off site. AQ-3 All project construction and site preparation operations shall be conducted in compliance with all applicable VCAPCD Rules and Regulations with	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		emphasis on Rule 50 (Opacity), Rule 51 (Nuisance), and Rule 55 (Fugitive Dust), as well as Rule 10 (Permit Required).	
Transportation and Circulation			
Implementation of the proposed project would cause a temporary increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections). Traffic impacts from the construction phase of the proposed project would be relatively short-term and intermittent involving road closures and detours which would impact motorists (delay and inconvenience), impacts on businesses (other uses) along the corridor, and impacts on emergency response operations. During construction, no more than three haul trucks would be on site for loading and approximately 45 trips per day are expected to occur. The haul truck trips are expected to result in delays and congestion at the project intersections. The intermittent road closures and haul truck trips during construction may disrupt traffic flow and cause delays, increasing traffic congestion. A potentially significant impact is identified for this issue.	Significant	TR-1 The District shall prepare a construction worksite traffic control plan and submit it to the County, ~~and,~~ cities, Gold Coast Transit, Oxnard School District, Oxnard Union High School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan. TR-2 The Contractor shall coordinate with emergency service providers (police, fire, ambulance and paramedic services) to provide advance notice of any lane closures, construction hours and changes to local access and to identify alternative routes where appropriate. TR-3 To preserve parking for residents during phase 1 construction, the District shall employ vertical shoring techniques along the Surfside III property where open trenching would result in the temporary removal of off-street parking spaces.	Less than significant with implementation of identified mitigation
Traffic impacts from the construction phase of the proposed project would be relatively short-term and intermittent involving road/lane closures and detours which would impact motorists (delay and inconvenience), impacts on businesses (other uses) along the corridor, and impacts on emergency response operations. J Street, Pleasant Valley Road, and Hueneme Road would	Significant	See mitigation measures TR-1 through TR-3.	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
remain open during all construction phases with intermittent lane closures. While project construction impacts would be temporary, traffic impacts have the potential to contribute to the exceedance of the level of service standard established by county congestion management agency at the project intersections. Impact is potentially significant.			
Construction activities would require detours and road and land closures that would temporarily result in transportation hazards.	Significant	See mitigation measures TR-1 through TR-3.	Less than significant with implementation of identified mitigation
Implementation of the proposed project would result in inadequate emergency access due to road closures and detours during the construction phase. This impact is potentially significant.	Significant	See mitigation measures TR-1 through TR-3.	Less than significant with implementation of identified mitigation
Noise			
The project site is located in a predominantly residential location. Allowable exterior sound level from 7:00 p.m. to 10:00 p.m. is 50 dBA Leq and from 10:00 p.m. to 7:00 a.m. is 45 dBA Leq, according to the Ventura County Noise Standards. Daytime Ventura County standards are not applicable to residential areas, as they are not defined as noise-sensitive receptors between 7:00 a.m. and 7:00 p.m., but they do apply to hospitals, nursing homes, schools, churches, and libraries at the level of 68 dB(A) (Ambient Leq(h) + 3 dB). Existing sensitive land uses along J Street Drain range from 50 5 to 500 feet from the project alignment. These uses would not be affected during evening or night hours. .	Significant	NOISE-1 Equipment Noise Reduction 1. Minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete or asphalt demolition and removal. 2. Pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise limitations. 3. Provide impact noise reducing equipment; i.e., jackhammers and pavement breaker(s), with noise attenuating shields, shrouds or portable barriers or enclosures, to reduce operating noise. 4. Provide upgraded mufflers, acoustical lining or acoustical paneling for other noisy equipment, including internal combustion engines. 5. Avoid blasting and impact-type pile driving. 6. Use alternative procedures of construction and select a combination	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		of techniques that generate the least overall noise and vibration. Such alternative procedures could include the following: a. Use electric welders powered by remote generators. b. Mix concrete at non-sensitive off-site locations, instead of on-site. c. Erect prefabricated structures instead of constructing buildings on-site. 7. Use construction equipment manufactured or modified to reduce noise and vibration emissions, such as: a. Electric instead of diesel-powered equipment. b. Hydraulic tools instead of pneumatic tools. c. Electric saws instead of air- or gasoline-driven saws. 8. Turn off idling equipment when not in use for periods longer than 30 minutes. NOISE-2 A temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain. Additionally, temporary noise control barriers shall be installed and maintained in residential and commercial areas along Phases 2 - 4 to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-25. In addition to placement of noise control blankets along the construction area adjacent to the Shoreline Care Facility, located at 5225 South J Street, and if needed, Our Saviour's Evangelical Lutheran Church at 905 Redwood Street, to further reduce noise levels below 68 dB(A) L_{eq}, additional noise control barriers shall be installed. To ensure sufficient noise barriers are deployed, construction noise levels shall be monitored ten feet from the exterior of the nursing home and church at the start of work activities within 500 feet of these two locations. Barriers would be installed to reduce noise levels generated by the loudest equipment when construction activities are closest to the nursing home and church. Monitoring would occur at the nursing home during construction Phases 2 and 3 and at the church during construction Phase 4. Construction noise	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		levels would be monitored weekly thereafter to ensure proper function of the barriers throughout work and that the desired noise attenuation at these locations is achieved. This noise control barrier will also provide visual screening for all residents along the work area, ~~eastern boundary of~~ including the Surfside III property to shield residents from views of the J Street Drain during construction. If the Surfside III Condominium Owners' Association does not grant a temporary work area to enable installation of temporary noise barriers at Buildings 6 and 7, the District will provide funds for the Association to arrange the barrier installation on their property. Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J St Drain in Phase 1).	
The proposed project has the potential to expose people to or generate excessive groundborne vibration or groundborne noise levels because pile driving may be required for construction.	Significant	NOISE-3 Prior to construction, the District shall request property owner permission to video record the condition of structures adjacent to the J Street Drain in the presence of the property owner. The recording shall be performed and stored by an independent third-party, with a copy given to the property owner. If vibration-induced damages occur as a result of construction, property owners would be invited to submit claims documenting such damages within one year following construction completion. The third-party would again enter the property to video record its post-construction condition, again providing a copy to the property owner. Both recordings would be compared, and the District would provide compensation to repair new damages observed in the post-construction recordings. Once both parties have agreed to the compensation, both pre- and post-construction video recordings stored by the third-party would be given to the property owner.	Less than significant with implementation of identified mitigation
J Street Drain Project is proposed to be constructed in ~~into~~ four phases with the first phase scheduled to begin in spring 2010 and lasting for 10 months. Temporary noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators has the potential to reach high levels as evident from Table 4.6-12.	Significant	See above mitigation measures.	Less than significant with implementation of identified mitigation
Geologic and Seismic Hazards			

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Construction of the proposed project will require excavation of the existing drain which would result in disturbance of the soils and subsequent exposure to wind and water erosion. Proposed development will require the groundwater dewatering, demolition of existing concrete lining, removal and stockpiling of soils onsite, and the construction of the new, higher capacity drain. Project excavation will expose areas of soil to erosion by wind or water during construction processes prior to the replacement of concrete lining. Additionally, construction of the proposed drain may result in erosion or sedimentation due to exposed soils and sediment removal and dewatering discharges may cause erosion at the discharge point. Impacts associated with short-term exposure of graded soils and sedimentation is considered significant.	Significant	GEO-1 Erosion and Sediment Control In order to mitigate potential soil erosion and loss of topsoil from excavation, the construction SWPPP shall incorporate, but not be limited to, the following measures, as appropriate, to minimize erosion: • Excavation and grading shall be restricted to the dry season (April 15th to October 15th) unless an erosion control plan is in place and all measures therein are in effect. • Best Management Practices (BMPs) will be employed to control erosion, including temporary siltation protection devices such as silt fencing, straw bales, and sand bags. These shall be placed at the base of all cut and fill slopes and soil stockpile areas where potential erosion may occur. • Refer to Section 4.3, Water Resources and Hydraulic Hazards, for additional requirements related to stormwater and non-stormwater pollution prevention and control.	Less than significant with implementation of identified mitigation
Implementation of the proposed project would potentially result in seismic related ground failure. Additionally, expansive soils associated with the project site have the potential to substantially damage the proposed drain.	Significant	GEO-2 Seismic Related Ground Failure and Expansive Soils The proposed project shall comply with pertinent recommendations set forth in the Preliminary Geologic Geotechnical Investigation (Appendix F) to reduce the risk of hazards associated with seismic-related ground failure, liquefaction and expansive soils along the J Street Drain. These recommendations address the following: • Site preparation • Excavation – stabilization measures, dewatering procedure, and shoring • Fill Material and General Fill Placement • Channel Foundation Design GEO-3 a) A Licensed Surveyor shall plan and install a survey monument monitoring system on buildings within 25 feet of proposed vertical shoring to collect monthly baseline data for six months before construction. The monuments shall remain in place and be monitored	Less than significant with implementation of identified mitigation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		monthly for one year after construction completion to track any latent changes. During construction, the Licensed Surveyor shall conduct surveys corresponding to major phases of work such as shoring installation, excavation, and backfill. b) Before Phase 1 construction may begin, the District shall require the Contractor to prepare a Work Plan, which would take into account all available geotechnical information for the areas where vertical shoring and sheet piles are to be installed. The Plan would specify the contractor's approach to installing vertical shoring and sheet piles in a manner that would avoid and minimize associated potential vibration damage to adjacent structures. c) The Work Plan shall require the Contractor to take daily measurements of the survey monuments on adjacent structures described in (a) above to track potential changes during construction. d) Should the surveys or measurements described in (a) and (c) above indicate subsidence or other damage due to construction activities, the Contractor shall modify the Work Plan to address the causes. Property owners within 25 feet of the proposed shoring shall be promptly notified of observed damage, and any Work Plan revisions shall be available to property owners upon request. For multi-unit structures, the District shall identify a single designated representative with whom to communicate. e) The District shall provide a construction contact telephone number to adjacent residents before work commences so that they may report possible observations of damage immediately to the District.	
Implementation of the proposed project would potentially result in on- or off-site subsidence, liquefaction or collapse. Based on the existing soils at the proposed project site, it is likely that unstable soils exist. A potentially significant impact is identified and mitigation is required.	Significant	See Seismic Failure and Expansive Soils mitigation measure.	Less than significant with implementation of identified mitigation
Hazardous Materials and Public Health			
Implementation of the proposed project may result in significant impacts to groundwater contaminants from the Halaco site as a result of dewatering.	Significant	HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, ~~sheet piling shall be placed on the east side of the drain channel in order to prevent the migration of groundwater from the~~	Less than significant with implementation

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		~~Halaco site~~ the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site. ~~Note that additional field testing is currently being conducted to provide a more representative value for hydraulic conductivity for the vicinity of the drain. In the event that the results show the need for sheet piling on both the west and east side of the drain, sheet piling will be placed on both sides of the drain~~.	of identified mitigation
Cultural Resources			
Implementation of the proposed project would potentially disturb and/or damage undiscovered archaeological resources.	Significant	CULT-1 In the event that archaeological resources are exposed during project construction, all earth disturbing work within the vicinity of the find shall be temporarily suspended or redirected until a qualified archaeologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume. CULT-2 If the resource is determined to be potentially significant, a cultural resources treatment plan shall be developed to provide appropriate mitigation measures. These measures may include archaeological testing and data recovery excavation. The treatment plan shall also include a detailed description of associated reporting requirements, curation requirements for any cultural materials collected during treatment, and the qualifications for archaeologists involved in treatment activities.	Less than significant with implementation of identified mitigation
Implementation of the proposed project would potentially disturb and/or damage undiscovered human remains.	Significant	CULT-3 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Ventura County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Ventura County Coroner determines the remains to be Native American, the NAHC shall be contacted within a reasonable timeframe. Subsequently, the NAHC shall identify the "most likely descendant." The most likely descendant shall then make recommendations, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98.	Less than significant with implementation of identified mitigation
Waste Treatment/Disposal			

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Implementation of the proposed project would not result in significant impacts to waste treatment/disposal.	Less than significant	Impacts related to waste treatment/disposal were less than significant; therefore, mitigation measures are not required.	Less than significant
Public Health			
Implementation of the proposed project would not result in significant impacts to public health.	Less than significant	Impacts related to public health were less than significant; therefore, mitigation measures are not required.	Less than significant
Greenhouse Gas Emissions			
Implementation of the proposed project would not result in significant impacts related to greenhouse gas emissions.	Less than significant	Impacts related to greenhouse gas emission were less than significant; therefore, mitigation measures are not required.	Less than significant

Table 1.9-1. Summary of Ventura County Watershed Protection District Best Management Practices During Operations and Maintenance Activities[1]

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)	
Biological Resources	BMP-2	Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning. The removal of sediments, vegetation, algae, and trash from fully lined improved channels for purposes of NPDES storm water permit compliance shall include measures to prevent the discharge of silt-laden water or pollutants to downstream unimproved channels with soft bottoms (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000). These measures may include temporary downstream silt barriers (sand bags, straw bales, in-channel materials), silt fences, upstream diversion, etc. Per Section 401 Water Quality Certification requirements, a Water Diversion Plan would be needed for water diversion activities.
	BMP-3	Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.
	BMP-4	Survey for Habitat Prior to Routine Maintenance Work. Prior to routine maintenance and repair activities performed within or adjacent to an earthen or earthen bottom channel or in-channel structure during the period 1 March to 1 August, a District biologist or consulting biologist shall determine if suitable habitat is present for riparian-dependent breeding birds in or within 400 feet of the work area. Suitable habitat is generally defined as dense or moderately dense willow or mulefat scrub or woodland with sufficient density and vegetative structure to support nesting and foraging. Prior to routine maintenance and repair activities performed within or adjacent to an earthen or earthen bottom channel or in-channel structure that would disrupt foraging or nesting of raptors during the period 1 February to 1 August, a District biologist or consulting biologist shall survey the 400 feet radius around the project site for raptor nest initiation or occupation. Channel cleanout shall be postponed to 1 August if such habitat is present in the work area or within 200 feet of the work area, or until nestlings have fledged if the District determines that riparian bird or raptor nesting is occurring in the habitat area. This restriction does not apply if the nesting birds are house sparrows, house finches, crows, cowbirds, or other common upland species or introduced species. If any federally or state listed birds are found nesting within the 200 or 400 feet survey radius, the District shall consult with CDFG for the applicability of this restriction.
	BMP-8	Avoid Disturbance to Native Beach or Wetland Species. The District shall avoid areas of beach dune vegetation when accessing storm drain outlets at the beach with vehicles for routine maintenance. The removal of native beach or wetland

[1] From the Final Program EIR for the Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program. Adopted by the District in May 2008.

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)	
		plants that are located at or near the beach outlet shall be minimized. Prior to the removal of obstructive sand or vegetation from a beach outlet, qualified District personnel shall determine if suitable habitat (i.e., a brackish waterbody) is present at the outlet for tidewater gobies, and if the species is present. In addition, qualified District personnel shall determine if suitable habitat is present along the vehicle access route across the beach for foraging or nesting snowy plovers and California least terns. If any of these sensitive species are present at the storm drain outlet or along the access route, the District will either postpone the routine maintenance work until these species are no longer present, or follow avoidance and/or relocation procedures approved by U.S. Fish and Wildlife Service (USFWS). This BMP shall not apply if there is a threat of a storm and the outlet is plugged. The District shall contact CDFG and USFWS when California least terns, snowy plover, or tidewater gobies are observed during the pre-project surveys for consultation.
	BMP-9	Aquatic Pesticide BMPs. The District shall follow the most up-to-date Best Management Practices (BMPs) and the monitoring and reporting requirements in the District's NPDES Stormwater Quality Management Plan (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000, available at http://vcstormwater.org/documents/workproducts/stormwater_quality_mangement_plan.pdf) when applying herbicides to channels and basins. The District shall also follow BMPs in the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides (included in Appendix I).
	BMP-11	Leave Patches of Vegetation in Channel Bottom. The District shall minimize vegetation removal or reduction from earthen or earthen bottom channels to the least amount necessary to achieve the specific maintenance objectives for the reach. Vegetation removal in the channel bottom shall be conducted in a non-continuous manner, allowing small patches of in-channel vegetation to persist provided it will not adversely affect conveyance capacity.
	BMP-12	Leave Herbaceous Wetland Vegetation in Channel Bottom. Consistent with the maintenance objectives, the District shall avoid removal or reduction of emergent herbaceous wetland vegetation on the channel bottom that is rooted in or adjacent to the low flow channel or a pond in order to provide cover for aquatic wildlife. This same type of vegetation shall be protected during the removal of taller obstructive woody vegetation on the channel bottom.
	BMP-14	Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.
	BMP-15	Mitigate/Replace Temporary Impacts to Habitat. For repair of in-channel structures and features that results in the temporary disturbance of native wetland or riparian vegetation adjacent to the facility, the District shall restore native wetland or riparian vegetation in the affected work areas after the repair or reconstruction work. Restoration shall include planting or seeding native plants that were present prior to the work and/or are compatible with existing riparian vegetation near the work area. The District shall prepare a restoration plan for each repair project that specifies the limits of restoration, planting mix and densities, performance criteria for survival and growth, and at least a three-year maintenance and monitoring procedures. Restoration sites shall be located outside the limits of the repaired structure. If no suitable restoration site is available near the work area or the creation of a restoration area near the work area would conflict with flood control needs, the District shall select another location on District right-of-way in close proximity. If

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)	
		suitable restoration sites are not available, the District shall provide funds to a third party (public agency or non-profit organization) to implement the required mitigation in the same watershed as the impact. Habitat restoration under this BMP shall only occur if the affected areas support native wetland or riparian vegetation; no restoration is required for barren areas or areas dominated by non-native plants. The District shall submit all habitat restoration plans to CDFG prior to implementation.
	BMP-17	Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.
	BMP-18	Water Diversion Guide. Water diversion activities undertaken as part of routine repair and maintenance operations in improved and unimproved channels as well as debris basins shall follow the BMP guidance established as the Water Diversion Guide incorporated into the Final Program EIR addressing Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program, adopted by the District in May 2008.
	BMP-20	Implementation of Integrated Pest Management. The District shall inspect its critical and non-critical facilities regularly to document and identify the presence or absence of ground squirrels. The District shall develop and implement an Integrated Pest Management (IPM) program that identifies tolerance level, control thresholds and approved rodent control methods and/or combinations of methods at each District facility. Rodent control methods implemented at each facility shall be applied as needed and as appropriate for site conditions and the season. Methods implemented shall minimize potential primary and secondary hazards to non-target species. The District shall maintain a preventative IPM program with zero tolerance for ground squirrels for its critical facilities where failure would impact public safety. When rodent control becomes necessary at non-critical facilities, the District shall choose applicable, cost-effective treatment method(s) from the District's IPM program. Treatment options considered for each site shall include: trapping, habitat modification, alternative construction methods and materials, use of raptors, clean and rodenticide-treated bait stations, broadcast diphacinone and zinc phosphide with or without carcass collection, and other methods. As part of an ongoing monitoring program to determine the effectiveness of the squirrel control program, the District shall maintain uniform inspection records for each facility and all control efforts. The District shall conduct a staff training program that covers the IPM program including rodent issues, inspection and monitoring requirements, and treatment options.
	BMP-21	Avoid Spills and Leaks. The District shall ensure that all equipment operating in and near a watercourse, or in a basin, is in good working condition and free of leaks. No equipment maintenance or refueling shall occur in a channel or basin bottom. Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse. In addition, all

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)	
		maintenance crews working with heavy equipment shall be trained in spill containment and response.
	BMP-22	Biological Surveys in Appropriate Habitat Prior to Vegetation Maintenance. Prior to any sediment removal, vegetation control (by herbicide application, mowing, or discing), or repair work in earthen or earthen bottom channels and basins that contain native aquatic, riparian, or wetland habitats suitable for sensitive fish and wildlife species, the District shall conduct appropriate field investigations to determine if any threatened, endangered, or sensitive species are present. If such species are determined to be present in or in close proximity to the work areas, the District shall reschedule the work when the species are not present. If it is necessary to conduct the work while the species are present or in proximity to the work areas, the District shall develop other avoidance or relocation measures in consultation with the CDFG, USFWS, or NOAA Fisheries prior to conducting the work. If the work could affect state or federally listed species or their habitat, the District would employ avoidance or relocation measures approved by USFWS, NOAA Fisheries, or CDFG, as appropriate, for the maintenance program. This measure includes protection for the following threatened, endangered, or sensitive species that could occur at maintenance sites: tidewater goby, southern steelhead, trout, unarmored threespine stickleback, California redlegged frog, arroyo toad, least Bell's vireo, southwestern willow flycatcher, arroyo chub, southwestern pond turtle, two-striped garter snake, Cooper's hawk, sharp-shinned hawk, yellow warbler, yellow breasted chat, purple marlin, tri-colored blackbird, and long-eared owl.
Water Resources and Hydraulic Hazards	BMP-1	Avoid Channel Work During the Rainy Season. Routine maintenance and repair activities in earthen channels and in channels with soft bottoms and bank protection shall not occur during the rainy season 1 December to 1 April to avoid work when water could be present in the drainage due to runoff. Routine maintenance and repair activities may occur during this period if water is absent from the drainage because of low runoff conditions, or activities can be performed without working in flowing water. Work in flowing water during this period may proceed if there are no feasible alternatives and completion of the maintenance work during this time period is critical. Work in flowing water shall be conducted according to the BMPs established in the Water Diversion Guide attached as Appendix E to this EIR.
	BMP-2	Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning. The removal of sediments, vegetation, algae, and trash from fully lined improved channels for purposes of NPDES storm water permit compliance shall include measures to prevent the discharge of silt-laden water or pollutants to downstream unimproved channels with soft bottoms (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000). These measures may include temporary downstream silt barriers (sand bags, straw bales, in-channel materials), silt fences, upstream diversion, etc. Per Section 401 Water Quality Certification requirements, a Water Diversion Plan would be needed for water diversion activities.
	BMP-3	Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
	temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible. BMP-14 Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms. BMP-17 Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs. BMP-21 Avoid Spills and Leaks. The District shall ensure that all equipment operating in and near a watercourse, or in a basin, is in good working condition and free of leaks. No equipment maintenance or refueling shall occur in a channel or basin bottom. Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse. In addition, all maintenance crews
Air Quality	The following measures are part of the APCD's Model Fugitive Dust Mitigation Plan and shall be incorporated to maintenance activities as needed to further reduce the District's fugitive dust emissions during grading, excavation, and construction activities. • The areas disturbed at any one time by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. • Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during earthmoving, grading, and excavation activities. • All trucks shall be required to cover their loads as required by California Vehicle Code §23114. • All graded and excavated material, exposed soil areas, including unpaved parking and staging areas, and other active portions of the construction site, including unpaved on site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. • Graded and/or excavated inactive areas of the construction site shall be monitored by the District's operation and maintenance staff at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
	excavation operations are planned for the area, the area should be periodically treated with environmentally-safe dust suppressants. • During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on site activities and operations from being a nuisance or hazard, either on site or off site. The District staff shall use his/her discretion in conjunction with the APCD in determining when winds are excessive. • Rumble strips or track out devices shall be installed where vehicles enter and exit unpaved roads onto paved road, or wash off trucks and any other equipment leaving the site. • All on site construction roads that have a daily traffic volume of more than 50 daily trips shall be stabilized as to minimize transport of earthen material from the site. • Open material stockpiles shall be roller compacted, periodically watered, or treated with appropriate dust suppressants. • There shall be at least one qualified District staff on site each work day to monitor the provisions of the Fugitive Dust Mitigation Plan and any other applicable fugitive dust rules, ordinances, or conditions. • Personnel involved in grading operations shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health Regulations. • All project construction operations shall be conducted in compliance with all applicable APCD Rules and Regulations with emphasis on Rule 50 (Opacity) and Rule 51 (Nuisance).
Transportation and Circulation	• If maintenance activities would result in substantial vehicle trips on a roadway with unacceptable LOS at peak hours, maintenance staff should either choose an alternate route or conduct vehicle trips off peak hours. In addition, District staff shall avoid stacking of maintenance trucks on public roads during maintenance activities. The minimum acceptable LOS for road segments and intersections within the County Regional Road Network and Local Road Network shall be as follows: – LOS D for all County thoroughfares and federal highways and state highways in the unincorporated area of the County, except as otherwise provided below; – LOS E for SR-33 between the northerly end of the Ojai Freeway and the City of Ojai, Santa Rosa Road, Moorpark Road north of Santa Rosa Road, and SR-34 north of the City of Camarillo; – LOS C for all County-maintained local roads; and – The LOS prescribed by the applicable city for all federal highways, state highways, city thoroughfares and city-maintained local roads located within that city, if the city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County respecting development in the city that would individually or cumulatively affect the LOS of federal highways, state highways, County thoroughfares and County-maintained local roads in the unincorporated area of the County.

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)
Noise and Vibration	• Construction Noise BMPs. Noise-generating construction activities shall be restricted to the daytime (i.e., 7:00 AM to 7:00 PM, Monday through Friday), during which noise levels shall not exceed: • 75 dB(A) Leq(h) at noise sensitive locations when construction work duration would last up to 3 days; • Ventura County Watershed Protection District 2-64 Final Program EIR – May 2008 • 70 dB(A) Leq(h) at noise sensitive locations when construction work would last from 4 to 7 days; • 65 dB(A) Leq(h) at noise sensitive locations when construction work would last from 1 to 2 weeks; • 60 dB(A) Leq(h) at noise sensitive locations when construction work would last from 2 to 8 weeks, or • 55 dB(A) Leq(h) at noise sensitive locations when construction work duration would exceed 8 weeks. If these thresholds are exceeded at noise sensitive locations, noise abatement measures shall be implemented to reduce noise levels. Noise abatement measures shall include, but are not limited to, the construction equipment source noise reduction methods and construction noise propagation path reduction methods provided in the County of Ventura Construction Noise Threshold Criteria and Control Plan. As defined by the County of Ventura Construction Noise Threshold Criteria (2005), daytime noise-sensitive receptors include hospital, nursing homes (quasi-residential), schools, churches, and libraries (when in use). Single-family, multi-family dwellings, hotels, and motels are considered evening and nighttime noise-sensitive receptors. Since noise-generating construction activities would not occur during the evening or night hours, no noise mitigation for single-family dwellings, multi-family dwellings, hotels or motels is necessary.
Geology and Seismic Hazards	BMP-1 Avoid Channel Work During the Rainy Season. Routine maintenance and repair activities in earthen channels and in channels with soft bottoms and bank protection shall not occur during the rainy season 1 December to 1 April to avoid work when water could be present in the drainage due to runoff. Routine maintenance and repair activities may occur during this period if water is absent from the drainage because of low runoff conditions, or activities can be performed without working in flowing water. Work in flowing water during this period may proceed if there are no feasible alternatives and completion of the maintenance work during this time period is critical. Work in flowing water shall be conducted according to the BMPs established in the Water Diversion Guide attached as Appendix E to this EIR. BMP-3 Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.

Operational Maintenance Environmental Impact	Best Management Practices (BMPs)	
	BMP-14	Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.
	BMP-17	Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.
Public Health	BMP-9	Aquatic Pesticide BMPs. The District shall follow the most up-to-date BMPs and the monitoring and reporting requirements in the District's NPDES Stormwater Quality Management Plan (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000, available at http://vcstormwater.org/documents/workproducts/stormwater_quality_mangement_plan.pdf) when applying herbicides to channels and basins. The District shall also follow BMPs in the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides (included in Appendix I).

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2.0 ENVIRONMENTAL SETTING

2.1 PROJECT LOCATION

The proposed project is located in the City of Oxnard, adjacent to the border of the City of Port Hueneme in the County of Ventura (Figure 2.0-1). The County of Ventura is located in southern California and is bordered by the County of Santa Barbara to the north and the County of Los Angeles to the south and east. Regional access to the area is provided by the Ventura Freeway (US-101), which is the principal east-west route through the County of Ventura. The Santa Paula Freeway (SR-126) runs from US-101 in Ventura to Interstate 5 (I-5) in Santa Clarita, which is also an east-west route. These freeways are located north and northeast of the project site. Pacific Coast Highway, or State Route 1 (SR-1), is known locally as Oxnard Boulevard in the City of Oxnard, and extends in a northwesterly fashion from the County of Los Angeles. At Wooley Road, the direction of SR-1 changes from northwest to north and joins US-101 in Oxnard approximately five miles inland from the coast.

The J Street Drain is an existing stormwater drain that is located within the City of Oxnard and adjacent to the City of Port Hueneme. The drain extends approximately 2.2 miles from north of Redwood Street, southward into the Ormond Beach Lagoon. The existing J Street Drain is a trapezoidal concrete-lined channel for the entire length. From approximately Redwood Street downstream to Hueneme Road, the drain lies between the north- and southbound lanes of J Street. The downstream end of the concrete channel is approximately 50 feet south of the Hueneme Drain Pump Station.

2.2 PROJECT SETTING

The general topographic character of the project area is flat and ranges in elevation from approximately 24 feet above mean seal level (AMSL) at the northern end of the project boundary to three feet AMSL at the southern end within the Ormond Beach Lagoon. The lagoon is approximately eight feet AMSL with a depth of surrounding water from four to six feet. Beach elevation ranges from approximately eight feet AMSL along the north to sea level at the south.

The surrounding land uses along J Street north of Hueneme Road consist mainly of residential development of varying densities and includes the Bubbling Springs Community Park at Bard Road and J Street. The project vicinity in the downstream portion of J Street Drain contains mixed land uses, including the Surfside III Condominiums, commercial uses, and wastewater treatment infrastructure. The recently designated Halaco Superfund Site is located approximately one-quarter mile east of the J Street Drain (Figure 2.0-2).

Ormond Beach and the Ormond Beach Lagoon are located at the terminus of the existing and proposed drain. The Lagoon is defined in the Los Angeles Regional Water Quality Control Board (LARWQCB) Basin Plan as local surface water resources/freshwater and saltwater marshes and was formed as a result of man-made drainage improvements involving the Oxnard Industrial Drain (OID), Hueneme Drain, and J Street Drain. The following describes the relationship between the Lagoon and relevant drainages in the project vicinity.

J Street Drain, Lower Channel and Ormond Lagoon

The J Street Drain is a fully-lined concrete channel that ends approximately 50 feet south of the Hueneme Drain Pump Station. This is the end of the improved channel, and the end of where drain maintenance takes place. Because the lagoon closes off to the ocean, there are times when the backed up, or "ponded"

water, extends over this area and can reach as far north as Hueneme Road. Because of the cycle of lagoon closing and breaching, this is a transitional area for habitat from salt marsh/coastal lagoon, to concrete channel. These habitats support tidewater goby, California least terns, and other migrating birds.

Ormond Beach Lagoon

The Ormond Beach Lagoon consists of a dynamic array of wetland, freshwater, estuarine, and marine habitats. Prior to the 1960s, the OID and J Street Drain discharged directly to the ocean, and Hueneme Drain flows were conveyed southeastward to Mugu Lagoon. Historically, a smaller lagoon, formed through natural hydraulic and tidal actions, existed at the current location of the OID outlet prior to its channelization. Man-made drainage improvements involving the OID, Hueneme Drain, and J Street Drain caused a second small lagoon to develop near the end of the J Street Drain. Eventually, the two small lagoons became hydraulically connected and grew to the current configuration (HDR 2008).

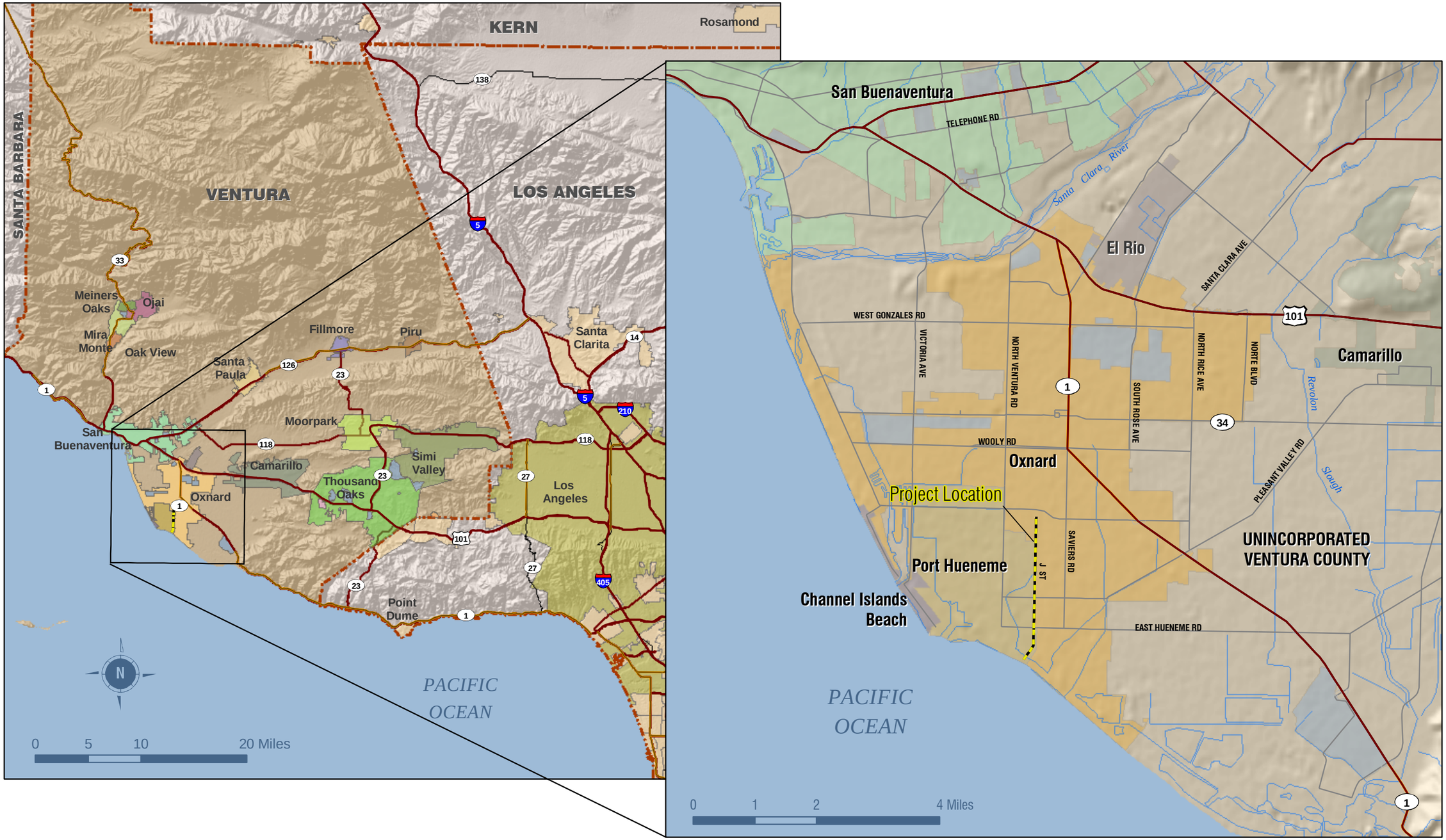
Oxnard Industrial Drain (OID)

The OID is a manmade, earthen trapezoidal (at the downstream end) and rectangular concrete channel that extends several miles northeast of the Ormond Beach Lagoon through the City of Oxnard. One other major stormwater channel, the Rice Drain, is a tributary to the OID. Current inputs to the OID consist of urban and agricultural runoff with some groundwater seepage near the coast where the channel bottom lies below the water table. The District maintains and regulates discharges to the OID. The OID watershed totals approximately 5,935 acres.

Hueneme Drain

The Hueneme Drain, also known as the Bubbling Springs Drain, extends from Richard Bard Bubbling Springs Park and forms the center of the Bubbling Springs Recreation corridor in the City of Port Hueneme. The Hueneme Drain is located west of the J Street Drain. From Bubbling Springs Park, it extends south towards the Pacific Ocean and bends east to run parallel to the coastline as the drain nears the Hueneme Drain Pump Station. Hueneme Drain is a perennial watercourse, supplied by springs and impounded by the sand berm at the Ormond Beach Lagoon that was created when the J Street Drain was built over the Hueneme Drain. The District's Hueneme Drain Pump Station (about 1,000 feet downstream of Surfside Drive) periodically pumps the impounded water into the J Street Drain. Prior to construction of the pump station in the 1960s, the Hueneme Drain (then known as the Oxnard Drain or Hueneme Canal) conveyed flows approximately three miles southeast along the coast to Mugu Lagoon.

Hueneme Drain is a man-made earthen channel with a trapezoidal shape. The channel is about 75 feet across from top of bank to top of bank near the pump station. The banks and tops of the banks are landscaped and maintained as part of the Bubbling Springs Recreation Corridor. Water levels in the drain are regulated by the pump station. In the summer, the water is maintained at one- to two-foot depths. Emergent wetlands are present sporadically in the channel in the form of native cattails and other herbaceous plants.



Source: ESRI; 2007 | \\G:\Projects\76217 J Street\map docs\mxd\EIR\Regional Vicinity Jst.mxd | Last Updated 09-24-08

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Project Regional & Vicinity Map

FIGURE 2.0-1

J Street Drain | Ventura County Watershed Protection District | EIR

Source: ESRI; 2006; Coastal Zone Commission; 2008 | \\G:\Projects\75217 J Street\map docs\mxd\EIR\LandUseFeature.mxd | Last Updated : 12-24-08

Land Use Features

FIGURE 2.0-2

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Perkins Drain

Perkins Drain represents that portion of the historic Oxnard Drain or Hueneme Canal that exists downstream of the Hueneme Drain Pump Station. That portion of this historic drain that exists upstream of the pump station is currently known as the Hueneme Drain. Perkins Drain previously conveyed perennial flows from Bubbling Springs southeast along the coast to Mugu Lagoon. These perennial flows are currently pumped into both J Street Drain and Perkins Drain. Perkins Drain now exists as an isolated channel between J Street Drain and OID, and is no longer hydrologically connected to Mugu Lagoon. A flap gate in a remnant portion of the Perkins Drain east of the OID allows runoff from the Ormond Lagoon to flow down the coast and ultimately to a wetland area east of the Halaco site.

2.3 RELATED PROJECTS FOR CUMULATIVE ANALYSIS

The *California Environmental Quality Act (CEQA) Guidelines* (Section 15355) define a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The *CEQA Guidelines* [Section 15130(a)(1)] further state that "an Environmental Impact Report (EIR) should not discuss impacts which do not result in part from the project."

Section 15130(a) of the *CEQA Guidelines* provides that "[A]n EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable..." Cumulatively considerable, as defined in Section 15065(a)(3), "means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

An adequate discussion of significant cumulative impacts requires either: (1) "a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (2) "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact." The cumulative effects discussion for the J Street Drain project will be based on a list of related projects within the project vicinity (Figure 2.0-3 and Table 2.0-1). The list of projects is based on information supplied from both the City of Oxnard and the City of Port Hueneme.

The *CEQA Guidelines* recognize that cumulative impacts may require mitigation, such as new rules and regulations that go beyond project-by-project measures. An EIR may also determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The Lead Agency must identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable [*CEQA Guidelines*, Section 15130(a)(3)].

Table 2.0-1. Cumulative Projects

Map Number(1)	Project(2)	Description	Address	Project Status*
City of Oxnard				
1	DAL-Villa San Lorenzo	16 Condominiums. SWC Saviers Road and Pleasant Valley Road	130 W. Pleasant Valley Road	Withdrawn
2	Centerpoint Mall buildings	Demolish and replace commercial building	2801 Saviers Road	City's status is "Plan Check"
3	Home Depot Store	Demolish existing commercial building and construct home improvement with garden center	1355 Channel Islands Road	Withdrawn
4	Saviers/Laurel	Commercial/retail mixed use	2330 Saviers Road	Completed
5	Victory Outreach Church	Church in existing building	232 W. Pleasant Valley Road	City's status is "Plan Check"
6	Emerald Professional Building	Two-story commercial building, veterinarian and general office on northwest corner	5577 Saviers Road	Approved
7	Advanced Purification Facility	Construction of advanced water treatment facility in southern part of Oxnard	NEC of Perkins Road and Magelian Avenue	Under Construction
8	Ormond Beach Specific Plan	1,283 residential dwelling units, two schools, parks, lake, mix-use commercial, light industrial, open space, and business park on 900 acres	Boundaries: E. Pleasant Valley Drive, Pacific Ocean, Old Road, and Arnold Road, and Edison Drive	EIR is certified–construction to begin summer 2011
9	Water Pipeline I	A recycled water pipeline that will run down Hueneme Road under the J Street Drain from the Oxnard Wastewater Treatment Plant		Under Construction
10	Industrial Condo Conversion	Conversion of 36,480 sf of warehouse into 3 industrial condo units	2311 Staham Parkway	Approved
11	Baptist Church	Construction of 5,765 sf church	NW Corner Raiders Way and Rose Avenue	Approved
12	Lions Gate Annex	Self storage and RV storage	2751 Statham Blvd.	Approved
13	Emerald Professional Building	2-story commercial building. Veterinarian and General Office NWC Saviers Road and Hueneme Road	5777 Saviers Road	Approved
14	Paseo Nuevo	Planned Development permit for 12 two-story structures, total of 72 affordable apartments, on-site amenities, Density Bonus, and Zone Change to R-2-PD on a 5-acre property	5637-5727 Cypress Road	Proposed
15	Cuesta Del Mar Affordable Housing	Construct a 3-story 6,080 sf multifamily building with 7 apartments	610 Cuesta Del Mar	Approved

Map Number(1)	Project(2)	Description	Address	Project Status*
16	Rose/Pleasant Valley	98 condos/12 live work spaces	474 S. Rose Avenue (Rose and Pleasant Valley)	Proposed
City of Port Hueneme				
17	Water Pipeline II	Calleguas Municipal Water District has approvals to build its treated water pipeline (48-inch diameter) that will run under the existing J Street drain to a proposed ocean outfall off Port Hueneme Beach Park		Construction to begin March 2012
18	J Station Elimination Project	Approximately 670 linear feet of gravity sewer line following the Ventura County Railroad	Boundaries: immediately west of the J Street Drain to Perkins Road	Completed

*Notes: (1) See Figure 2.0-3
(2) Due to passage of time, the cumulative project list was updated in May 2011 to reflect current status and add any new projects that would be within the cumulative project analysis area.

Source: City of Oxnard and City of Port Hueneme, May 2011.

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Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217_J Street\map docs\mxd\EIR\Related Projects.mxd | Last Updated : 05-26-2011

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Related Projects

FIGURE 2.0-3

J Street Drain | Ventura County Watershed Protection District | EIR

3.0 PROJECT DESCRIPTION

The Ventura County Watershed Protection District (District) proposes the J Street Drain Project to increase the flow capacity of the existing J Street Drain within the existing facility right-of-way to accommodate runoff from a 100-year storm event, and reduce potential flooding in residential and commercial areas of the Cities of Oxnard and Port Hueneme. J Street Drain is located within a Ventura County easement which includes the concrete channel, some box culverts under the roadways, and south of Hueneme Road, an adjacent access road (Figure 3.0-1). The drain itself is located near the border between City of Oxnard and City of Port Hueneme. The proposed construction of the J Street Drain could potentially impact the land uses and roadways of both cities during construction activities.

3.1 BACKGROUND

The J Street Drain was identified in the District's Fiscal Year 2005 Integrated Watershed Protection Plan (IWPP) as a project in District Zone 2, which roughly includes the Santa Clara River Watershed and coastal drainages in the cities of San Buenaventura, Port Hueneme, and Oxnard. According to studies sponsored by the District, the area surrounding the J Street Drain is anticipated to flood during a moderate rain event (Figures 3.0-2a and 3.0-2b). The J Street Drain Channel Improvement Study and Preliminary Design (URS 2005) estimates the capacity of the J Street Drain to be 500-600 cubic feet per second (cfs), which could be exceeded during a ten-year flood event. Flood damages were estimated using the depth of flooding in the residential and commercial areas along J Street, the structural value data obtained from the District, and the 1975 revised depth-damage curves for residential and small business structures calculated by the Federal Insurance Administration (FIA). A benefit cost analysis (BCA) was conducted using estimated pre-project flood damages and losses to calculate benefits. Based on these calculations a total of $55.7 million was estimated as the damage that would result from a 100-year flood in the J Street Drain Channel.

The flood extent shown in Figure 3.0-2a is not currently depicted within Federal Emergency Management Agency (FEMA) Flood Zone A, or the one percent annual chance (previously known as the100-year) flood zone. The one percent annual chance flood has a one percent chance of being equaled or exceeded each year. Thus, the 100-year flood could occur more than once in a relatively short period of time or even within the same month. The 100-year flood has a 26 percent chance of occurring during a 30-year period, the length of many mortgages[1].

Flood zones appear on Digital Flood Insurance Rate Maps (DFIRMs). Property owners within Flood Zone A are federally mandated to purchase flood insurance. The current DFIRMs are based on pre-1984 hydrologic data and hydraulic analyses conducted over 25 years ago (FEMA Flood Insurance Study 06111CV001A for Ventura County, California and Incorporated Areas, Volume 1 of 3). Since that time, Ventura County has experienced several years of record rainfall, including 1995, 1998, and 2005 (VCWPD 2009). The DFIRMs are therefore based on data that do not reflect the trend of increasing rainfall since the 1980s. As a result, the District commissioned the 2005 URS study to proactively characterize current conditions and provide adequate flood protection before FEMA initiates a DFIRM update. Construction of the proposed project would be the first major step of a proactive effort to protect properties currently threatened with flooding from J Street Drain overflow, as shown on Figure 3.0-2a. Figure 3.0-2b depicts the Special Flood Hazards Area (SFHA), as mapped by FEMA[2]. These SFHA are related to flooding from wave activity, not from outfall from J Street Drain. Specific SFHA depicted on

[1] http://www.vcfloodinfo.com/index.php/flood-maps-flood-insurance-studies-a-map-changes/digital-flood-insurance-rate-maps-dfirm
[2] DFIRMs 06111C0914E, 06111C0916E, and 06111C0918E dated January 20, 2010.

Figure 3.0-2b includes coastal flooding due to wave action (Zone VE) and coastal flooding due to waves filling up the lagoon.

In addition to the drain capacity, the outlet of the drain is sometimes constrained by a sand berm that can reach over seven feet in height surrounding the Ormond Beach Lagoon. The sand berm hinders the direct flow path of the J Street Drain channel to the Pacific Ocean. The berm currently directs the water to the east, toward the Oxnard Industrial Drain (OID). If the berm does not open during a storm event, then storm water ponds in the lagoon and can fill the drain to capacity as far as Hueneme Road, posing a flood risk to the Oxnard Wastewater Treatment Plant (OWWTP), residential, and commercial property during even minor storms.

Prior to 1992, the sand berm at the Ormond Beach Lagoon was periodically breached by the District. Bulldozers were used to create a discharge path directly to the ocean and prevent water and silt buildup in the channel. However, this practice ceased in 1992 due to environmental concerns and restrictions. Due to constant wind and wave action, the elevation across the sand berm is not uniform in space or constant in time and its maximum elevation is approximately 11.6 feet National Geodetic Vertical Datum of 1929 (NGVD) (14 feet North American Vertical Datum of 1988 [NAVD])[3].Under existing conditions, natural breaching typically occurs when the surface water in the lagoon reaches an elevation of 5.1 to 5.6 feet NGVD (7.5 to 8 feet NAVD) above mean sea level (AMSL). However, the expected maximum water level in the lagoon is regulated by the lowest beach crest elevation (the height of the sand berm). Natural breaching takes place after the lagoon water level exceeds the height of the sand berm. Due to the dynamic nature of the lagoon and sand berm elevation, surface water elevation for natural breaching will likely vary. Therefore, natural breaching at the lagoon may not occur during a ten-year flood event (capacity of existing drain), in which case the project area would flood due to backwater effects.

3.2 PURPOSE, NEED AND PROJECT OBJECTIVES

Project Purpose and Need

The purpose of the proposed project is to provide flood protection to the 100-year flood level for the area surrounding J Street Drain. Protection from a 100-year flood is the standard set by FEMA under the National Flood Insurance Program (NFIP). The need for such protection is evidenced by the studies that show the existing drain has the capacity to handle only a ten-year flood event without overtopping the channel. Without the increase in flood protection the local area would continue to be susceptible to flooding, as well as federal requirements to purchase flood insurance for properties within the 100-year flood zone after FEMA remaps the project area in the future.

Along with the proposed increase in drain capacity, the proposed project also includes a Beach Elevation Management Plan (BEMP). The BEMP identifies a set of threshold environmental conditions that together activate the need for reducing the height of the sand berm. Once these threshold conditions are observed, a predetermined list of actions would be implemented to ensure the opening of the lagoon outlet if the water level exceeds a target safe elevation and thereby prevent flooding of developed properties.

[3] Note that at the lagoon location, 0 feet NGVD 1929 = 2.42 feet NAVD 1988.

The Coastal Zone Boundaries depicted on this map were digitized from the official 1:24,000 scale Coastal Zone Boundary maps. However, the digital Coastal Zone Boundaries have not been adopted by the Commission, and do not supersede the official version of the Coastal Zone Boundary adopted by the Coastal Commission in March 1977 and amended from time to time since then.

Source: ESRI; 2006; Coastal Zone Commission; 2008 | \\G:\Projects\75217 J Street\map docs\mxd\EIR\SiteMap J St.mxd | Last Updated : 09-29-08

Project Site

FIGURE 3.0-1

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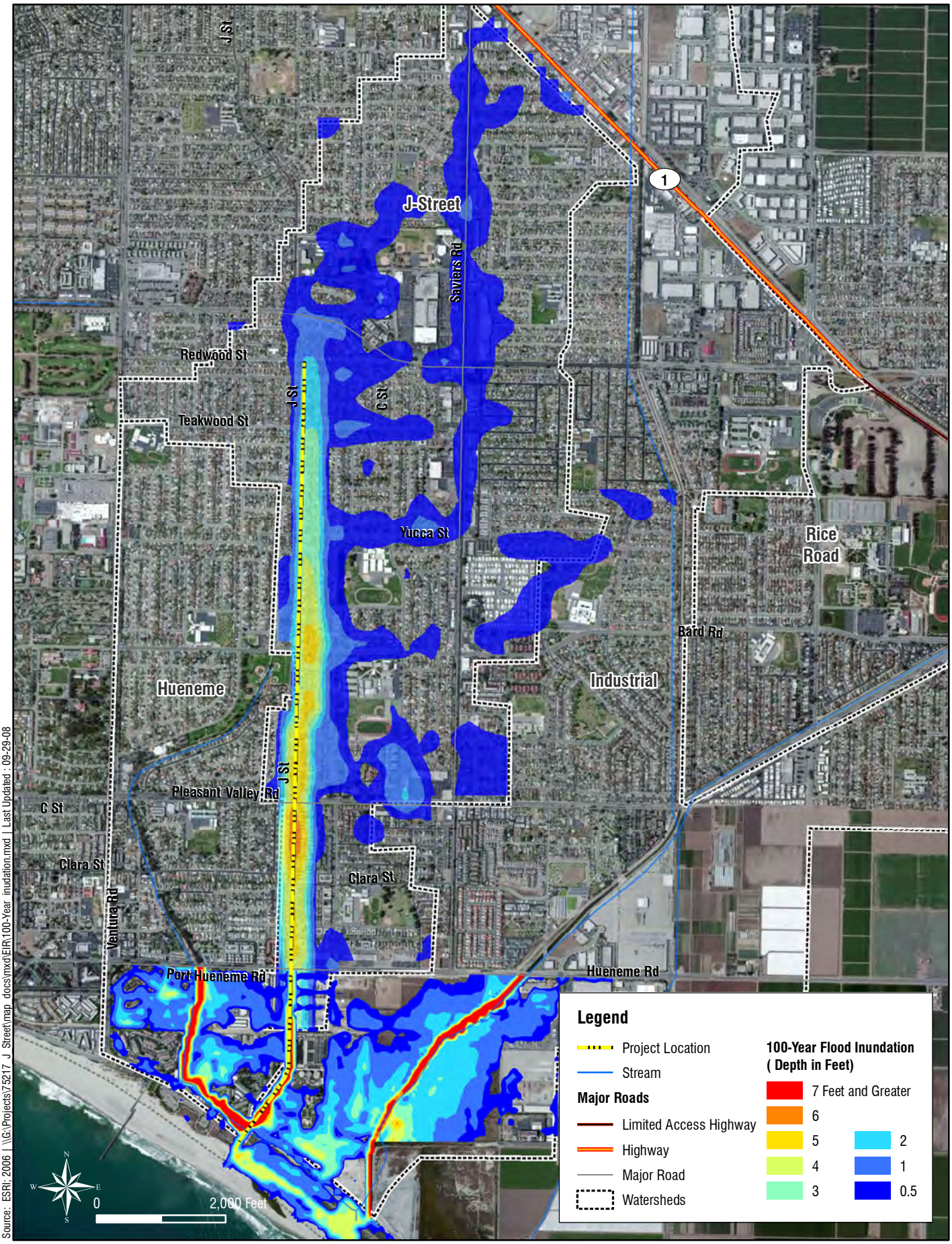

Source: ESRI; 2006 | \\G:\Projects\75217 J Street\map docs\mxd\EIR\100-Year inudation.mxd | Last Updated : 09-29-08

100-Year Flood Inundation (Depth in Feet)

FIGURE 3.0-2a

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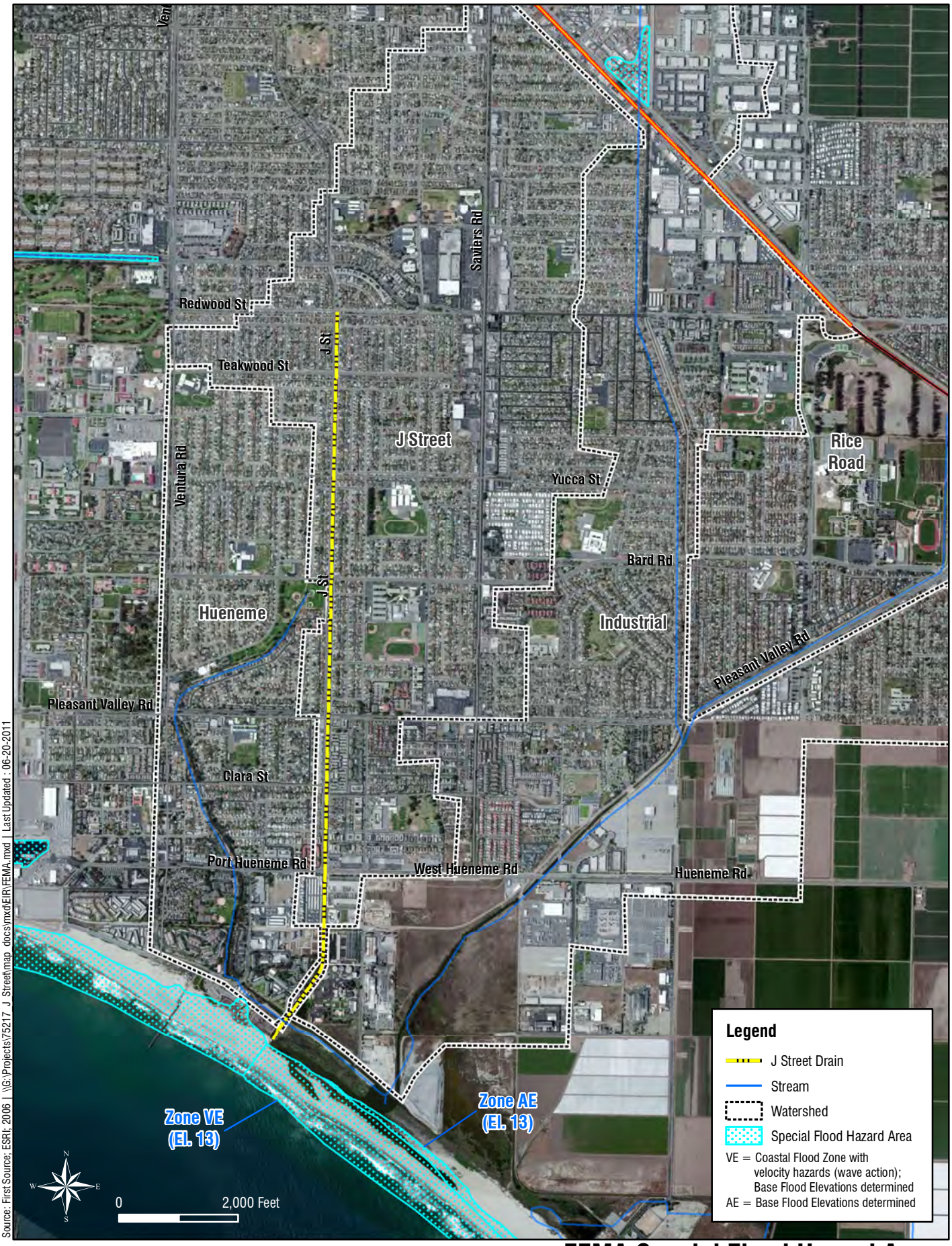

Source: First Source; ESRI; 2006 | \\G:\Projects\75217_J_Street\map_docs\mxd\EIR\FEMA.mxd | Last Updated : 06-20-2011

FEMA Special Flood Hazard Areas

FIGURE 3.0-2b

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Project Objectives

The District's primary project objectives include:

- Provide flood control protection by increasing the drain size to provide capacity for 100-year flood flow;
- Maintain the existing functional characteristics of the Ormond Beach Lagoon;
- Ensure project compatibility with future Ormond Beach Lagoon restoration plans;
- Minimize the disturbance to tidewater goby habitat downstream of the J Street Drain lined channel, as well as snowy plover and California least tern nesting areas on Ormond Beach;
- Minimize operation and maintenance requirements, especially during storms; and
- Minimize effects on water quality of the lagoon.

3.3 PROJECT FUNDING AND SELECTION

The District has planned carefully for this project, and is working to ensure that sufficient funds will be available to construct each phase, when they are needed.

The District funds capital improvement projects from a combination of revenues, including its portion of the 1 percent property tax revenues collected by the County Treasurer-Tax Collector on all taxable parcels countywide, interest earnings on its fund balance on deposit with the County Pooled Investment Fund, land development fees, and whenever feasible, project specific grant fund revenues.

The District's revenues are divided by four geographical zones, Zones 1 through 4. The boundaries of the first three zones roughly correspond to the boundaries of the Ventura River (Zone 1), Santa Clara River (Zone 2), and Calleguas Creek (Zone 3) watersheds. Zone 4 includes the extreme northwest and southeast portions of Ventura County (Figure 3.0-3).

Zone revenues are sequestered for use only in the zone from which they were collected. As stated above, the J Street Drain Project is located within Zone 2. As of July 27, 2010, approximately $66.8 million of revenue was projected to be available to fund District expenditures in Zone 2 between fiscal year (FY) 2010-11 and 2015-16. Of this amount, $12.7 million would be available to construct Phase 1 of the Project, which is scheduled to be constructed during this period. The remaining three phases, totaling approximately $23.0 million, would be constructed after FY 2015-16. Each phase would be implemented individually as funding becomes available.

The J Street Drain Project went through the District's rigorous capital improvement project (CIP) ranking and selection process. The process begins with identifying flood threats to residential, commercial, industrial, and agricultural lands throughout Ventura County. Where flood control facilities already exist, their current condition (e.g., concrete deterioration) is evaluated. Potential solutions to known flood threats, or CIPs, are developed through consideration of a range of alternatives.

All proposed CIPs are assigned points out of 100 possible, then ranked and prioritized in relation to one another. Points are distributed according to four categories (Table 3.0-1). Fiscal year 2010-11 CIP ranking and funding data for projects in all zones was presented to the District Board of Supervisors (Board) as Agenda Item No. 28 on July 27, 2010[4].

[4] http://bosagenda.countyofventura.org/sirepub/agdocs.aspx?doctype=agenda&itemid=34367

Table 3.0-1. District Project Ranking Categories and Maximum Point Assignments

Public Health and Safety (34%) • Flooding Extent and Magnitude (10 points) • Flooding Frequency (10 points) • Existing Facility Repair (14 points)	Community Components (16%) • Recreation Potential (3 points) • Socio-Economic Impacts (3 points) • Stakeholder Acceptance (10 points)
Environmental (25%) • Water Supply (5 points) • Water Quality (5 points) • Ecosystem Restoration (5 points) • Regulatory/Environmental Review (CEQA) (10 points)	Economics (25%) • Benefit/Cost Ratio (7 points) • Sustainability of the Project (7 points) • Cost Sharing/Grant Funding/Leveraging (5 points) • Construction/Technical Feasibility (3 points) • Property Acquisition (3 points)

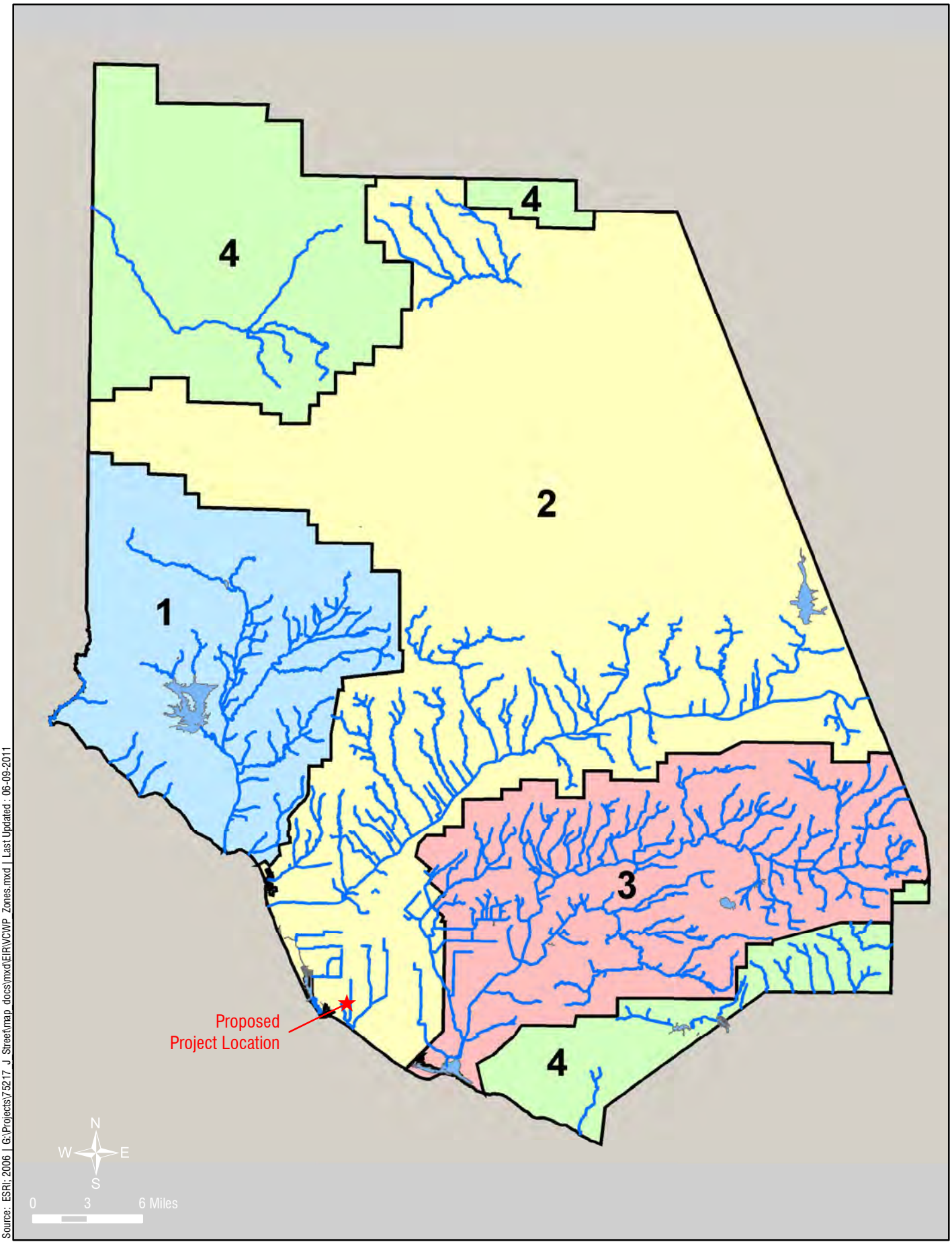
These data are updated and presented to the Board annually in July to reflect projects completed, added, deleted, and re-ranked. As of July 27, 2010, Phase 1 of the J Street Drain Project was ranked 13th and Phases 2-4 were ranked 15th within Zone 2. As described above, these rankings may change annually due to new conditions.

3.4 PROJECT CHARACTERISTICS

The proposed project involves converting the existing trapezoidal concrete channel into an open rectangular channel with a bottom approximately four feet deeper than the existing channel bottom. The existing trapezoidal channel would be widened and deepened to increase the capacity; the channel walls would be vertical with the top being an open channel (Figure 3.0-4). The existing box culverts under the street crossings and railroad crossing would be replaced by larger structures to improve flow conveyance. The existing concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station. Because the concrete lined portion of the channel invert would be lowered about four feet to create the required capacity, excavation would continue downstream towards the ocean. The finished invert would be daylighted via an earthen ramp to the lagoon at a 10:1 slope over a distance of up to 40 feet from the end of the existing concrete. A ten-foot-thick layer of four-ton rock riprap would be placed ~~on~~ horizontally beneath the earthen ramp at the end of and at the same elevation as the concrete drain bottom to dissipate flow energy ~~flow~~. It is anticipated that during the first few natural lagoon breaching events following Phase 1 construction, the movement of water (tidal and drain flow) and sediment would result in an equilibrium elevation within the channel transition area, between the end of the concrete channel and the Ormond Beach Lagoon annual breach location.

3.5 CONSTRUCTION

The demolition of the existing drain and construction of the new, higher capacity drain would take place in phases. It is anticipated that the demolition and construction would start at the southern end of the drain, south of Hueneme Road and move northward in phases. The construction phases are anticipated as: Phase I–Downstream end of the drain to north side of Hueneme Road (3430 lineal feet); Phase II–Hueneme Road to Pleasant Valley Road (2620 lineal feet); Phase III–Pleasant Valley Road to Yucca Street (4100 lineal feet); and Phase IV–Yucca Street to just north of Redwood Street (2680 lineal feet). Each of these phases would occur independently rather than concurrently. Additionally, during each of these phases, culverts under existing facilities will be replaced. The culverts to be replaced include: the Ventura County Railroad (VCRR) crossing, Hueneme Road, Clara Street, Pleasant Valley Road, Bard Road, Yucca Street, Teakwood Street, and Redwood Street. During the work on these culvert crossings vehicle access would be maintained for Hueneme Road and Pleasant Valley Road. The other crossings



Source: ESRI; 2006 | G:\Projects\75217 J Street\map docs\mxd\EIR\VCWP Zones.mxd | Last Updated: 06-09-2011

Ventura County Watershed Protection District Geographic Zones

FIGURE 3.0-3

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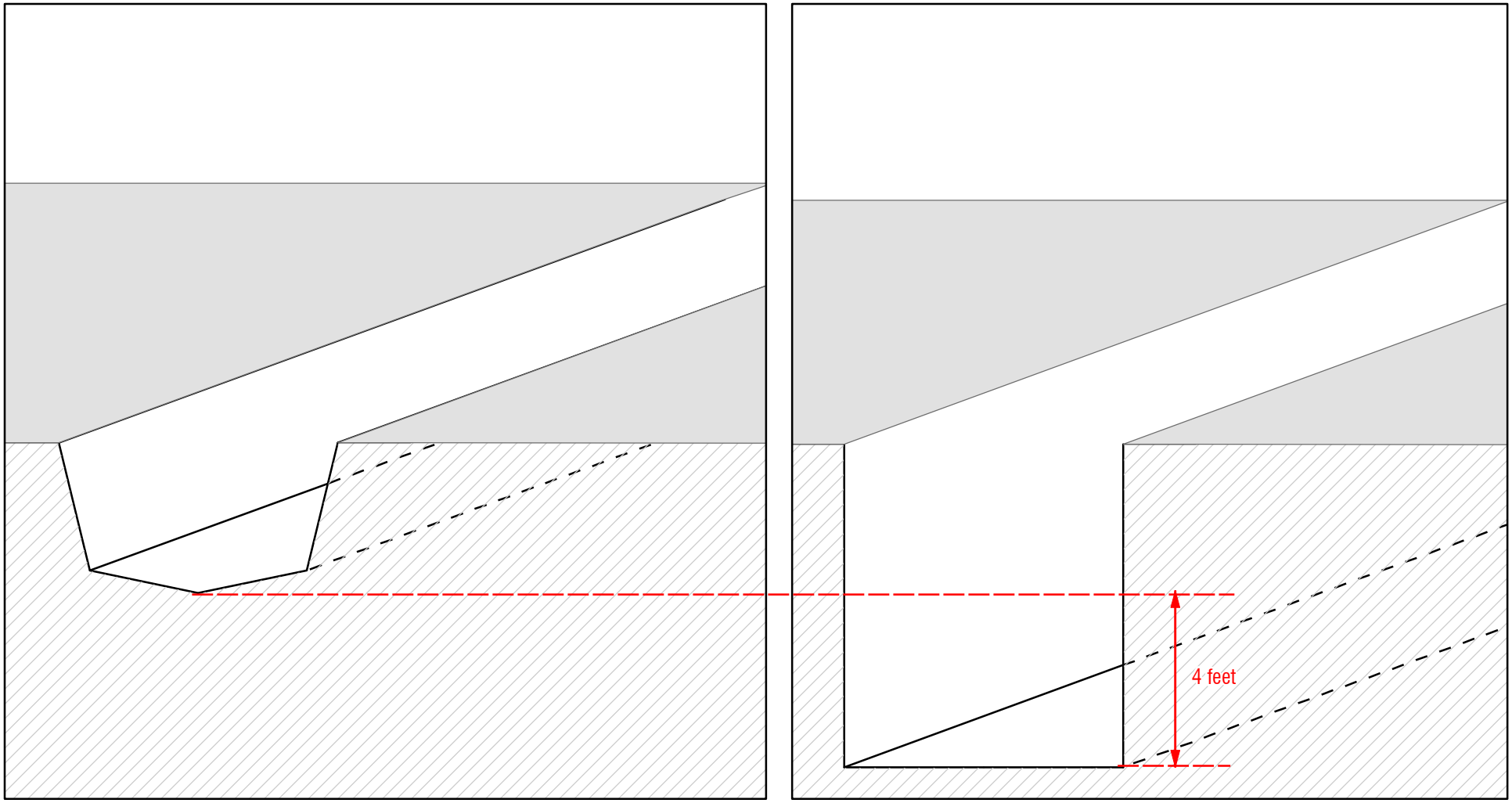
Source: URS J Street Drain Channel Improvement Study and Preliminary Design | \\G:\Projects\75217_J_Street\map_docs\mxd\EIR\cross_section.mxd | Last Updated : 09-29-08



Existing Trapezoidal Concrete Channel

Proposed Rectangular Concrete Channel

Orthogonal Views of J Street Drain

FIGURE 3.0-4

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would be closed during construction and local traffic detoured around the construction area. Local access for residents would be maintained throughout the project, even if the nearest channel crossing is closed for construction.

It should be noted that construction will take place from within the District's easement with the potential of the work area extending beyond the easement in the southern area near the lagoon. Figure 3.0-5 shows the proposed construction staging areas for the southern end of the drain construction. The staging areas located northeast of Perkins Road and west of the downstream terminus of J Street Drain are currently vacant, and were previously disturbed. Vertical shoring will occur along the west side, adjacent to the Surfside III Condominiums. In addition, the current fence, which does not coincide with the property boundary, will be removed during construction and relocated west to the property line at the end of the project. Incursions into private property would allow the project to proceed without the need for extensive shoring of the excavations, therefore reducing the potential for noise and vibration impacts to the adjacent areas. Any disruptions to private property are required to be repaired and/or replaced at the end of the project under agreement between the District and the property owner.

The initial construction activities include installation of groundwater dewatering wells, a coffer dam, and channel flow bypass. The groundwater dewatering wells are expected to be approximately 15 to 20 feet deep, and placed along the work area of the J Street Drain. These wells would be installed and removed as construction moves upstream. Once installed, these wells would be attached to temporary pumps to extract groundwater for discharge into the Perkins Drain. The groundwater will be tested in accordance with the requirements of the Regional Water Quality Control Board (RWQCB) prior to placement into Perkins Drain. If the pumped groundwater is determined to be acceptable, it would then be allowed to be discharged. This will ensure that no surface water contamination would result from dewatering.

The electric power to run these pumps could be supplied from the existing Hueneme Drain Pump Station during Phase 1 construction. The rate of groundwater pumping would be at the discretion of the project contractor, though it is recommended that the groundwater level should be two feet below the construction work area.

A coffer dam will be placed across the channel at the south end of the construction area. The coffer dam will block tidal flow into the work area. Figures 3.0-6 through 3.0-9 illustrate the proposed coffer dam. Fish seining will take place to capture and relocate the endangered tidewater goby, as well as any additional native fish, first outside the proposed coffer dam work area and later, after the coffer dam is in place, to areas directly downstream of the coffer dam. Block nets would be installed immediately upstream and downstream of the proposed coffer dam site to isolate it, and all native fish relocated beyond the downstream net before coffer dam installation begins. This work will be conducted by approved, qualified biologists who will verify that all fish have been removed from the work area prior to the start of further construction.

The channel flow bypass will be a diversion installed to allow for any channel flow to bypass the construction area and enter the Perkins Drain. In addition, the Hueneme Drain Pump Station could pump water from the Hueneme Drain across the J Street Drain to the Perkins Drain during construction at the south end of Phase I.

Once the initial construction activities of installation of groundwater wells, coffer dam, and channel bypass are completed, fish remaining within the channel section upstream of the coffer dam can be relocated and demolition can begin. Demolition will initially start with adjacent fencing removal and landscape removal if necessary. After the permanent fencing is removed, temporary fencing will be installed along adjacent properties to limit access to the work area and ensure public safety. Demolition will consist of utilizing heavy equipment to break up and remove the concrete from the existing drain.

Access to the area south of Hueneme Road will be from Hueneme Road via the District maintenance road on the east side of the drain. The contractor may decide to use the drain itself as an access way after entering the District right-of-way at Hueneme Road. The concrete will be broken on site for transport and either trucked to a concrete recycling facility at this point or taken to one of the staging areas (Figure 3.0-5) to grind the concrete further before it is transferred to the recycling facility (as required by Ventura County ordinances).

After the concrete is removed, existing soil will be excavated to the appropriate dimensions for safe shoring (if necessary) and proper installation of subdrains and forms for the new drain. The excavated material will be removed by the contractor and hauled away from the site via a City-approved haul route (which is dependant on the ultimate location secured by the contractor). Some soils may remain on site for backfilling once the new drain is installed. Materials, including subdrain materials, reinforcing bar, and the concrete for the new drain will be delivered to the site via the approved access route from Hueneme Road. The work will only occur during hours approved by the City of Oxnard, which are anticipated to be from 7 am to 7 pm on weekdays.

Once each phase of the new drain is complete, the permanent perimeter fencing will be reinstalled. Any landscaping damaged outside of District easement on private property, will be replaced. Where the adjacent property is owned by the City, the landscaping will be replaced by the City under agreement with the District. Maintenance of the adjacent landscaping is the responsibility of the local jurisdiction once the materials are installed.

3.6 MAINTENANCE

It is anticipated that maintenance of the reconstructed drain will be similar to the existing maintenance activities. In order to programmatically address District maintenance activities, a Final Program Environmental Impact Report (EIR) for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program was certified in May 2008. The Environmental Protection Measures for the Ongoing Routine Operations and Maintenance (O&M) Program proposed by the District aim to reduce the current administrative process to comply with agreements and permits necessary for the maintenance activities at the District's facilities. Currently, many of the District's facility maintenance activities occur in drainages, watercourses, creeks, basins, and water bodies where such activities are regulated by several state and federal agencies. Typical maintenance activities include sediment removal and vegetation control to maintain capacity within the facility. The modification to the bed, bank, and/or vegetation in a natural drainage (and certain man-made drainages) is regulated by the California Department of Fish and Game (CDFG) under Section 1600 et seq. of the Fish and Game Code.

Such modifications require a Streambed Alteration Agreement. Activities that result in the discharge of dredged or fill material in watercourses (such as bank stabilization and excavation) are also regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). Issuance of a 404 permit also requires a 401 Water Quality Certification by the RWQCB.

Prior to this EIR and the subsequent permits required for this project, the District acquired the above agreements and permits on an as-needed basis for individual maintenance activities and facilities. With the O & M program, the District seeks authorization for the entire maintenance program, reducing District and permitting agency administrative efforts, and providing a more comprehensive and effective basis for protecting environmental resources. Consequently, utilizing the results of the environmental analyses in that Program EIR, the District requested and obtained long-term permits and approvals with durations of five years or more that would include all regulated activities, include a streamlined administrative approval process, and provide predictability and certainty on environmental protection measures.

Source: ESRI; 2006 | \\G:\Projects\75217 J Street\map docs\mxd\EIR\Staging Area.mxd | Last Updated : 10-28-09

Potential Construction Staging Area

FIGURE 3.0-5

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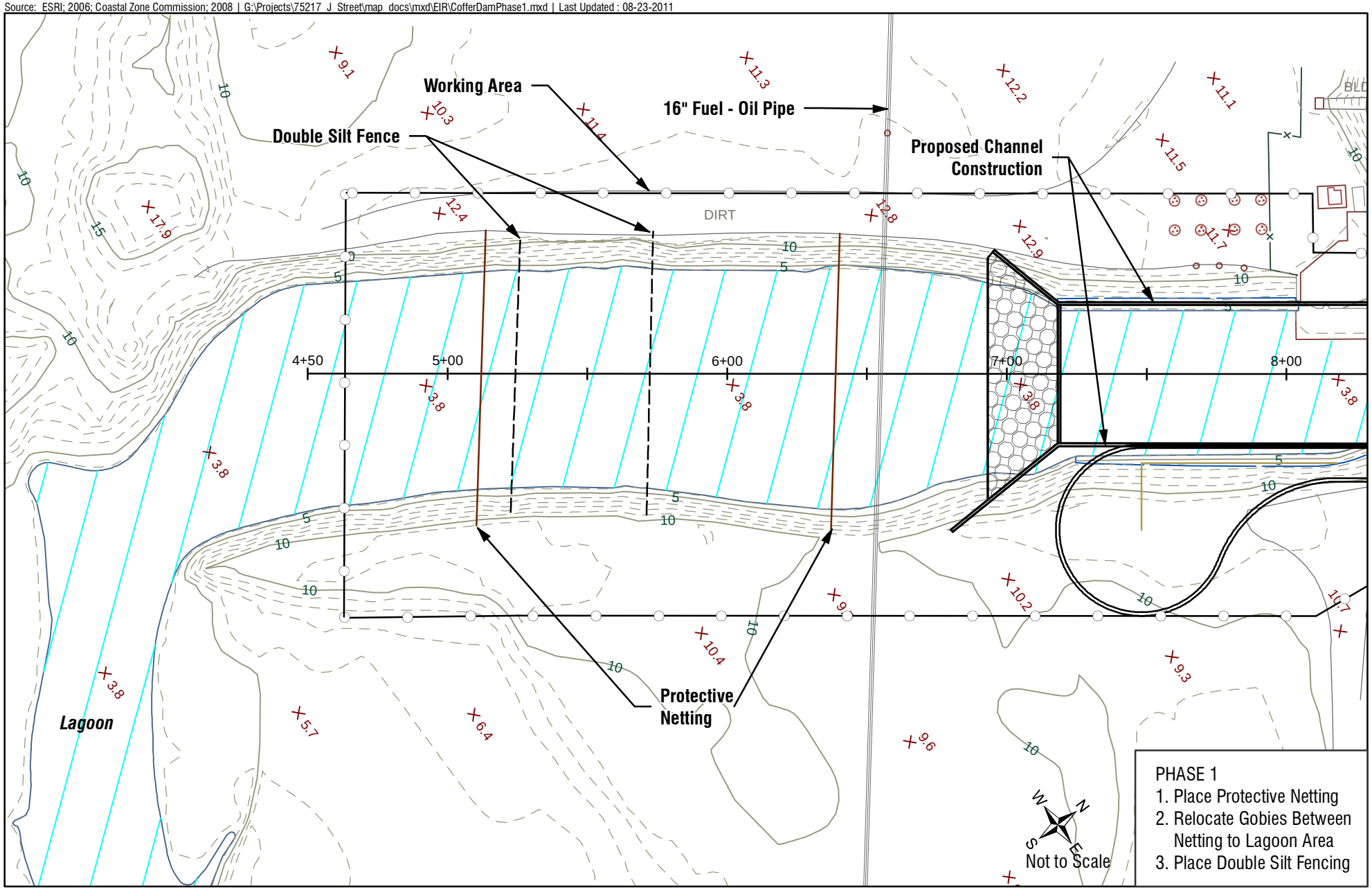
Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\EIR\CofferDamPhase1.mxd | Last Updated : 08-23-2011



Coffer Dam Construction - Phase 1

FIGURE 3.0-6

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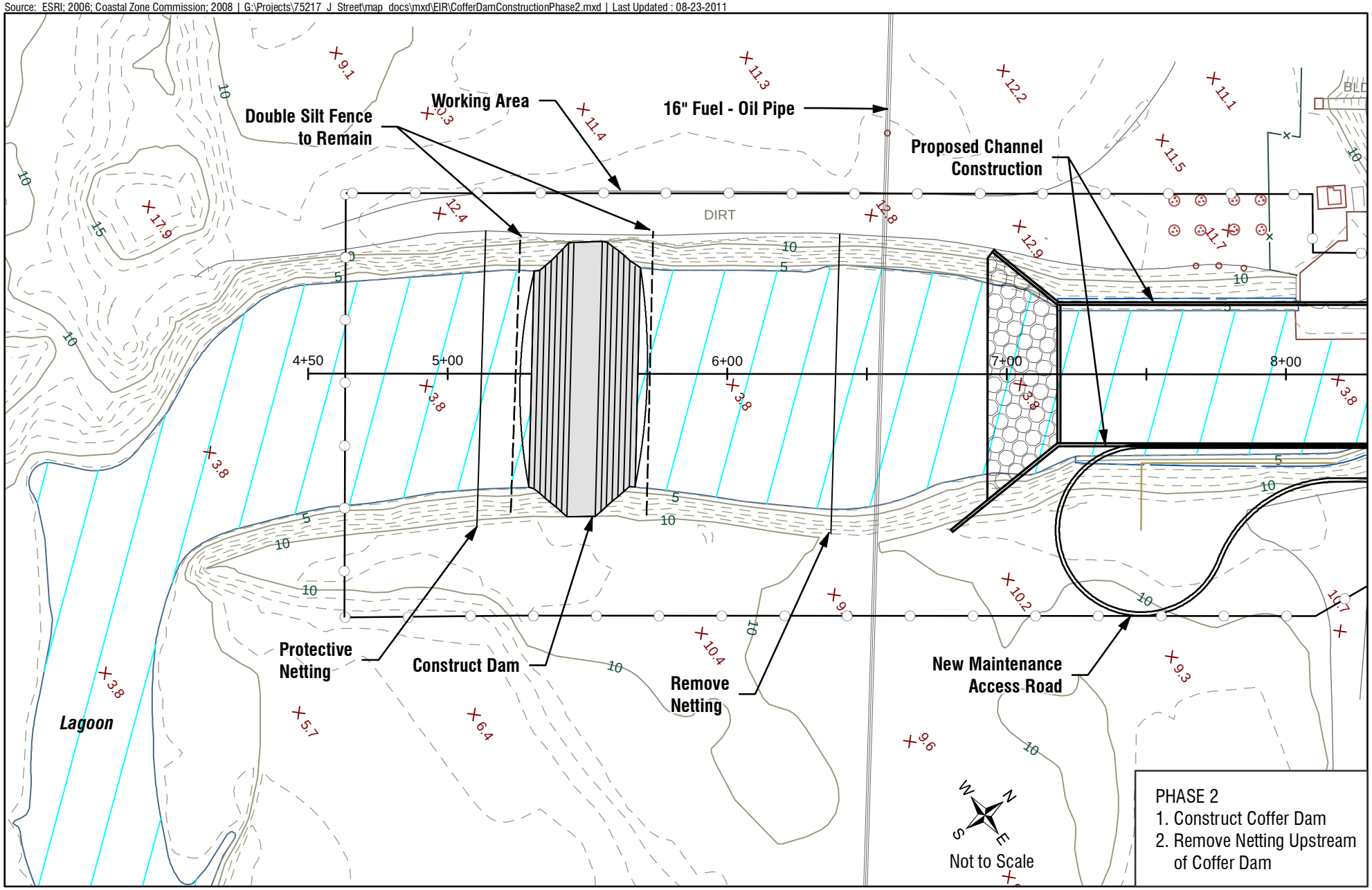
Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\EIR\CofferDamConstructionPhase2.mxd | Last Updated : 08-23-2011



Coffer Dam Construction - Phase 2

FIGURE 3.0-7

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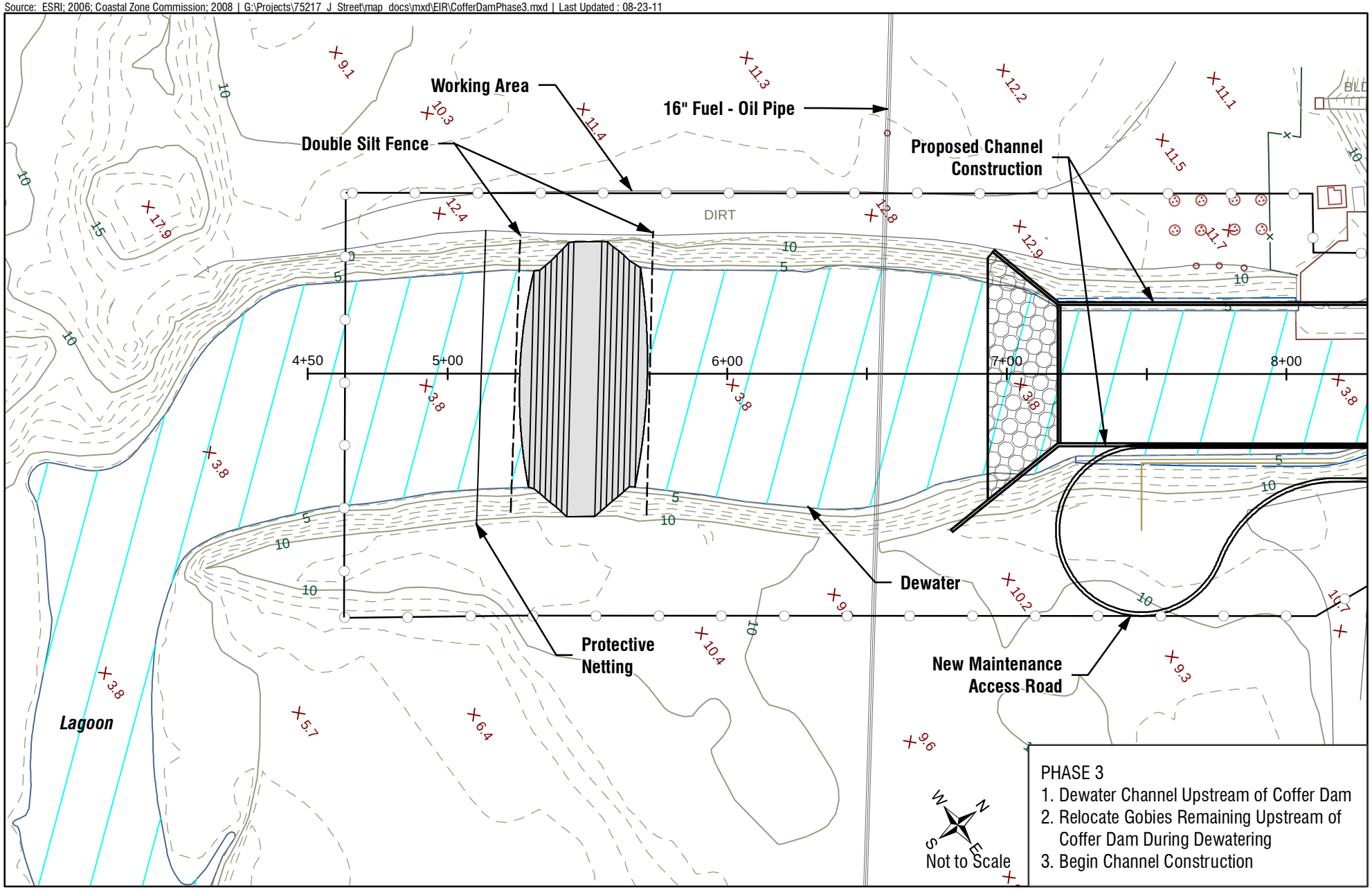
Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\EIR\CofferDamPhase3.mxd | Last Updated : 08-23-11



Coffer Dam Construction - Phase 3

FIGURE 3.0-8

HDR
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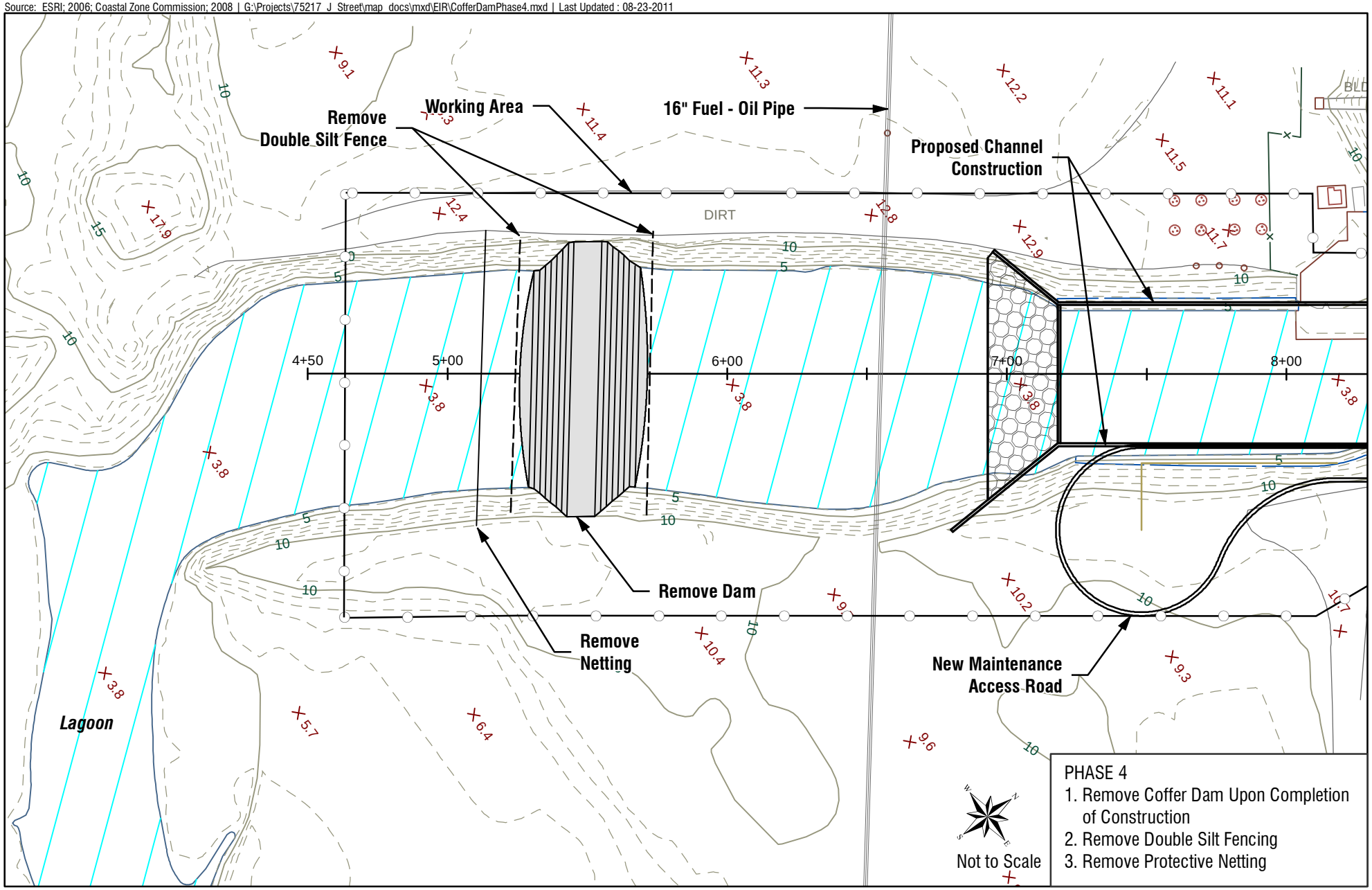
Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\EIR\CofferDamPhase4.mxd | Last Updated : 08-23-2011



Coffer Dam Construction - Phase 4

FIGURE 3.0-9

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In order to acquire long-term permits, the District has committed to incorporating various environmental protection measures into its ongoing maintenance program that would reduce incidental effects of the maintenance program on the environment and meet the requirements of the state and federal permitting agencies. The environment protection measures are called environmental Best Management Practices (BMPs). These BMPs have been carried forward in to this EIR.

The Program EIR evaluated the impacts of the proposed environmental BMPs on water resources, biological resources, and hydraulic hazards. In addition, the EIR identified the cumulative environmental impacts of the proposed project. The information on cumulative impacts was considered by the District Board of Directors when taking action on the proposed environmental BMPs. The ongoing maintenance program is an activity that is statutorily and categorically exempt from environmental review under the California Environmental Quality Act (CEQA). Incorporation of the BMPs into the current ongoing routine maintenance program represents a discretionary action by the District, and as such, is subject to the environmental review requirements of CEQA.

The District submitted applications to the USACE, CDFG, and RWQCB for long-term agreements and permits. The Draft Program EIR was used by the state and federal permitting agencies in their consideration of issuing long-term permits to the District. The Streambed Alteration Agreement and 401 Water Quality Certification were issued (the 404 permit is still pending) subsequent to the certification of the Final Program EIR and the Board of Directors' approval of the environmental BMPs.

Relation to J Street Drain Project

J Street Drain is classified as a District linear facility with open channel, outlet, and box culverts. The drain with its concrete lining is defined as improved channel. The Program EIR details the existing maintenance activities in place for linear facilities and improved channels. Maintenance activities associated with the proposed J Street Drain would be similar to the activities currently taking place for the existing drain maintenance, and would include the following:

Category A: Channel and Debris Basin Activities

During the operation of J Street Drain, channel maintenance activities would include physical removal or "cleanout" of sediments, vegetation, rock, and trash that accumulate in the channel and culverts. These activities maintain the proper operation of flood control facilities as sediment and debris accumulation reduces conveyance capacity and increases the risk of overbank flooding. The District's maintenance supervisors make a case-by-case determination considering the amount of material relative to the channel cross section, the risk of accumulated sediment or debris creating a blockage, and the ability of future flows to mobilize and remove the sediment naturally. These maintenance activities are conducted by the Operations and Maintenance Division of the District using loaders, truck cranes, dump trucks, excavators, and hand crews. The method of channel cleanout varies depending upon the type of channel, the nature and amount of material to be removed, and access to the channel. At most sites, sediments are removed from the channel bottom using an excavator or a truck crane (with clamshell or drag line) working from the top of the bank. Maintenance also includes cleaning all concrete lined channels at least once a year prior to the winter season to remove all sediment, algae, undesirable vegetation, and trash in accordance with the provisions of the NPDES Stormwater Permit issued to the District by the RWQCB (Board Order No. R4-2010-0108; NPDES Permit No. CAS004002, adopted on July 8, 2010, by the RWQCB, Los Angeles Region, pursuant to Division 7 of the California Water Code).

The upstream portion of J Street Drain is lined with concrete and cleanout of sediments occurs throughout the year on an as-needed basis. However, the NPDES permit (Ventura County Municipal Stormwater

NPDES Permit No. CAS004002; Board Order No. R4-2010-0108) restricts these activities to the period April 15 to October 1. For the downstream inundated portion of the concrete drain, cleanout occurs after the lagoon breaches in the fall, winter, and spring months, October 1 to April 1, or as required. No cleanouts are performed in the earthen portion of the drain.

Category C: Access Road Work Activities

The District maintains access roads associated with facilities on an as-needed basis. Most of the access roads have a compacted gravel surface that needs periodic resurfacing due to normal deterioration from use and from erosion. There is currently an access road from Hueneme Road that may require repair during the operation of the proposed project.

Category D: Facilities Maintenance & Reconstruction Activities

This maintenance category includes a wide variety of work that occurs throughout the year on an as needed basis. After the construction of J Street Drain, future facility repairs may be necessary to maintain the channel. Facilities deteriorate over time and may require repair or reconstruction, particularly after a winter with high flood flows. In general, the same types of materials are used for the repair or replacement, and the footprint of the repairs is similar to the original condition. Various types of heavy equipment are used, including loaders, excavators, concrete trucks, cranes, and dump trucks. Work is typically conducted from both the top of the banks and the channel, depending upon the site conditions. The amount of earthwork depends on the extent of the required repair and depth of erosion.

Repair work under this category does not include expansion of the facilities, which would constitute a new capital project that would be planned and designed independently of the maintenance program.

Category E: Storm Related Activity

During the winter season, District personnel are continually monitoring flow conditions in channels and inspecting facilities. The activities in this category include inspections and identification of problems. Work conducted during storm events is usually not routine maintenance, but instead, is considered emergency activity. The nature, scope, and extent of emergency actions cannot be predicted but could range from minor actions (clearing a storm drain outlet) to major (repair of eroded bank threatening a road or structure under flood flow conditions). Emergency projects are authorized separately.

Maintenance activities associated with the proposed J Street Drain would be similar to the activities currently taking place for the existing drain maintenance. Therefore, no new impacts would result from the proposed drain maintenance activities during project operation. As the Program EIR BMPs would apply to the existing District maintenance activities, the same BMPs would apply to the operation/ maintenance activities of the proposed project. Nevertheless, the environmental discussion of this EIR will include operational maintenance discussion and associated BMPs per the District's Ongoing Routine Operations and Maintenance Program for informational purposes.

3.7 BEACH ELEVATION MANAGEMENT PLAN

The Ormond Beach Lagoon inlet normally remains in a semi-closed condition due to sand accretion on Ormond Beach, but during most winters it breaches naturally to allow free outflow during storms and some high tides. These events do not drain the lagoon entirely, as urban runoff and high tides contribute fresh and salt water flows. To date, there has been one instance of the inlet remaining closed during a

minor storm event and causing upstream flooding; this took place on January 18, 2010. This event flooded the OWWTP, which was at risk of releasing untreated sewage effluent into the surrounding waterways, roads, and residential properties due to electrical failure of inundated equipment. To prepare for the reoccurrence of the combination of the outlet being closed, the lagoon water surface ~~being~~ potentially rising above a high threshold level, and a storm being forecast, a BEMP has been developed as part of the proposed J Street Drain project. The BEMP defines a maximum safe beach height, and provides for a coordinated response to groom the sand berm at a pre-specified location ~~immediately~~ within three days prior to a predicted storm event. The purpose of the BEMP is to protect the lives and well-being of the communities and industrial facilities along J Street Drain and Ormond Beach Lagoon by maintaining downstream water levels below a predetermined safe elevation.

The BEMP is a guideline to assist the District in responding to the potential flood threat caused by persistence of the sand berm during potentially damaging storm events of varying magnitudes. It should be noted that the BEMP would be implemented when conditions warrant, which may be more than once annually, to avoid an emergency. Therefore, implementation of the BEMP would constitute a new maintenance activity associated with operation of the proposed project.

The lead role of the District in flood emergency avoidance is aided by the County's Flood Warning System and by its Automated Local Evaluation in Real Time (ALERT) system. The Flood Warning System provides advance weather forecasts. ALERT is a ~~flood warning~~ hydrologic data collection and recording system for Ventura County developed by the National Weather Service (NWS) of the National Oceanic and Atmospheric Administration (NOAA) that has been in operation since 1979. ALERT provides reliable rainfall and flow information for determination of storm magnitude. ALERT will be used as the primary source for rainfall and storm event data in the BEMP. The District water level gauge(s) in the J Street Drain will be primarily used to monitor water surface elevation to help determine whether the lagoon is currently connected to the ocean (lagoon is empty) or closed off by the beach sand berm (lagoon is full).

Grooming Criteria

Normal Ormond Beach Lagoon conditions result in a natural breaching of the sand berm before the lagoon water elevation reaches its highest recorded elevation of about 7.5 feet NGVD (9.9 feet NAVD). This has resulted in the sand berm naturally breaching each year, typically in the early months of the fall rainy season. The sand berm naturally breaches during this time because increased drainage from seasonal storm water raises the lagoon water level sufficiently above sea level prompting a breach. The breach closes as sand blows and washes in, and freshwater drainage diminishes. The condition that would initiate the BEMP is a combination of the following three threshold conditions. The BEMP realistically coordinates the grooming response with sensitivity to environmental resources.

The BEMP threshold conditions are:

1. The Ormond Beach Lagoon is fully enclosed by the Ormond Beach sand berm (i.e., the berm has not breached, and the lagoon is full), and
2. The Ormond Beach sand berm elevation adjacent to the lagoon is observed to be above 6.5 NGVD (8.9 feet NAVD) , and
3. A 72-hour prediction of a storm event of any magnitude affecting the watershed is received, which would likely cause the designed capacity of the J Street Drain to be exceeded if the lagoon water surface elevation cannot overtop the observed adjacent beach sand elevation.

Any one of the above conditions alone may not trigger initiation of the BEMP. All three conditions must occur simultaneously to enact the BEMP.

Grooming Procedure

The grooming would be performed by a tracked dozer designated by the O&M Deputy Director in coordination with the District Director or his/her designee. Once the O&M Deputy Director determines that the BEMP threshold criteria have been met, the dozer shall be pre-positioned at the south side parking lot of Port Hueneme Beach Park. As soon as the BEMP is enacted, the dozer operator accompanied by District environmental staff would move the dozer to the designated beach grooming location, and shave the sand berm down to the maximum safe beach elevation. The dozer access path to the groom location would be the same as the one currently used by lifeguards from Port Hueneme Beach Park. Access to the beach from this point would avoid the nesting sites used by California least terns and western snowy plovers in 2008 (Davenport 2008). The grooming width would measure approximately100 feet parallel to the coastline. The removed sands would be placed on the beach adjacent to the groomed area. The grooming procedure would be completed within several hours, including removal of equipment from the beach. The designated grooming area would be permanently marked with rods driven deep into the sand. Elevation markings would be depicted on the rods. The grooming location would be coordinated with USFWS to limit potential impact to habitat areas.

During the grooming operation, the work site would be secured by the District to prevent interruption by or injury of the general public. Members of the Ventura County Sheriff Department or lifeguards, as well as their designees, may assume responsibility for the protective duty.

4.1 VISUAL RESOURCES

This section focuses on impacts to scenic areas and features. During the course of the Initial Study process, it was determined that the project would not have an impact on a scenic highway. Therefore, this specific issue area within the topic of visual resources is not analyzed further in the Environmental Impact Report (EIR). The Initial Study is included in Appendix A of the EIR.

4.1.1 Environmental Setting

4.1.1.1 Existing Conditions

Regional Setting

The County of Ventura is located in Southern California, and is bordered by the County of Santa Barbara to the north and County of Los Angeles to the south and east. Topography is relatively flat in the Oxnard Plains, bounded by the Santa Monica Mountains, the Santa Susana Mountains, and Oak Ridge to the east, the Topatopa Mountains and Camarillo Hills to the north, the Santa Clara River Valley to the northeast and the Pacific Ocean to the south and west.

Regional access to the area is provided by the Ventura Freeway (US-101), which is the principal east-west route through the County of Ventura. The Santa Paula Freeway (SR-126) runs from US-101 in Ventura to Interstate 5 (I-5) in Santa Clarita, which is also an east-west route. These freeways are located north and northeast of the project site. Pacific Coast Highway, or State Route 1 (SR-1), is known locally as Oxnard Boulevard in the City of Oxnard and extends in a northwesterly fashion from the County of Los Angeles. At Wooley Road, the direction of SR-1 changes from northwest to north and joins US-101 in Oxnard approximately five miles inland from the coast.

Local Setting

The J Street Drain is an existing concrete lined, trapezoidal, stormwater drain comprised of an area of approximately 328,000 square feet and ranges from 55 feet wide below Hueneme Road and 20 feet wide below Redwood Street. The northern portion of the drain (9,400 feet) is located between the north and southbound lanes of J Street within the City of Oxnard and near the City of Port Hueneme. The extent of the drain is from north of Redwood Street, to south beyond Hueneme Road, and into the Ormond Beach Lagoon. Major features of the area include the Ormond Beach and the Ormond Beach Lagoon. Prominent visual resources in the project area include hillsides and ridgelines from mountains and the Pacific Ocean.

Surrounding land uses, shown on Figure 4.1-1, along J Street north of Hueneme Road consist mainly of residential development of varying densities and Bubbling Springs Community Park at Bard Road and J Street. The land use features located in the downstream area (south of Hueneme Road) include Surfside III Condominiums, Channel Islands Self Storage, Hueneme Drain Pump Station, Oxnard Wastewater Treatment Plant (OWWTP), and Ormond Beach Lagoon.

Viewsheds

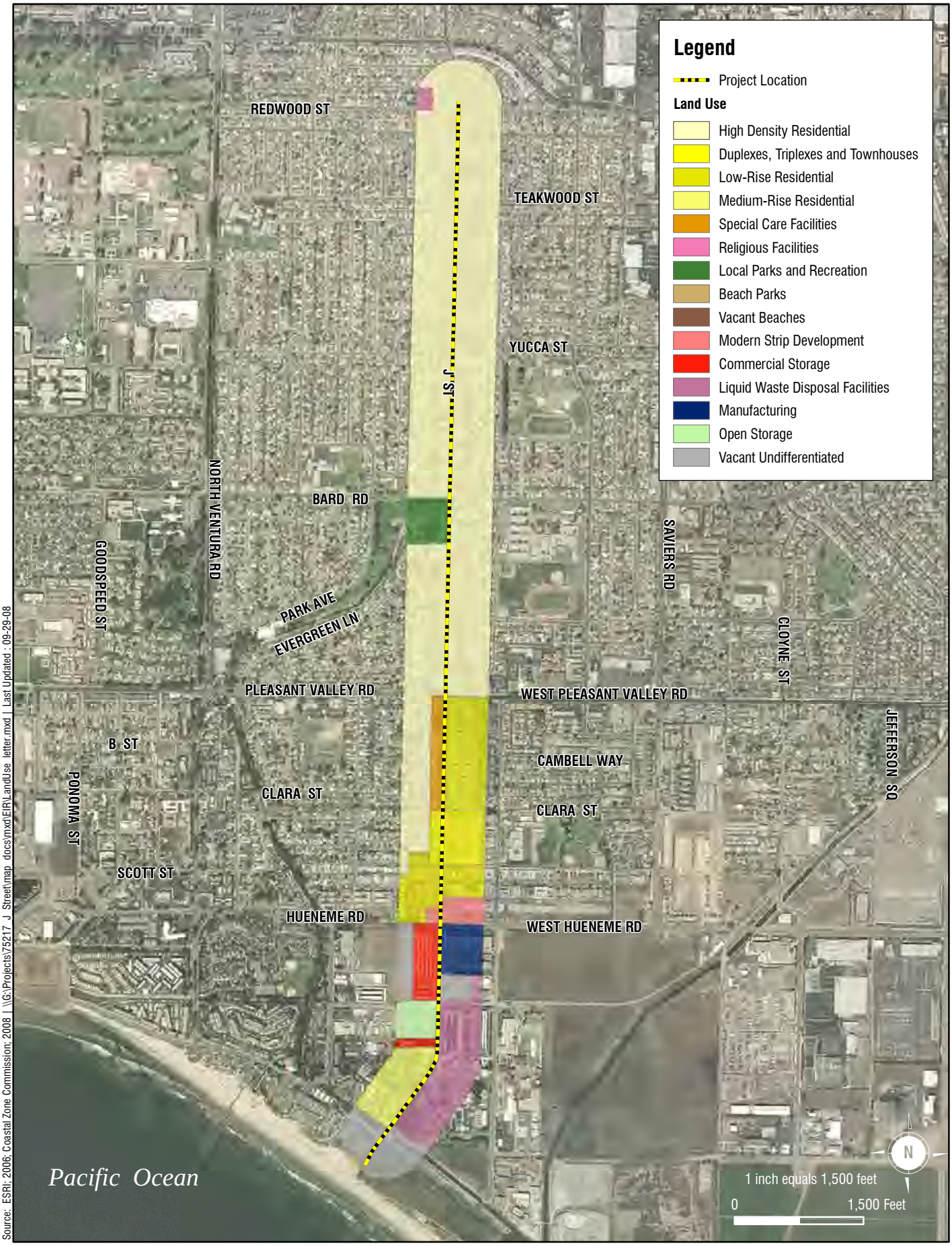
Land uses generally considered to be sensitive in terms of views include homes, recreational areas, and designated scenic roads. The following description identifies sensitive viewers in proximity to the J Street Drain project area. Viewer responses to visual changes were inferred from a variety of factors including

viewer exposures, type of viewer, number of viewers, duration of view, and viewer activities. Viewer exposure includes distance and viewing angle. The project area has three primary viewsheds.

J Street and Redwood Street

The J Street Drain begins just north of the Redwood Street crossing. At this location, there is chain link fencing along both sides of the drain that is clearly visible to surrounding land uses as depicted in Photograph 1. South of the street crossing, the open drain is contained by a six-foot fence with a maintenance gate at the northbound side of J Street. At J Street and Redwood Street, the views available to the residents and motorists include distant mountains and other residences to the north, J Street and other residences to the south, and fencing fronted with oleander bushes, to the east/west or facing J Street Drain.

Photograph 1 – Views into J Street Drain at Redwood Street from northbound J Street



Source: ESRI; 2006; Coastal Zone Commission; 2008 | \\G:\Projects\75217 J Street\map docs\mxd\EIR\LandUse letter.mxd | Last Updated : 09-29-08

Land Use

FIGURE 4.1-1

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J Street and Yucca Street, J Street and Bard Road, J Street and Clara Street

Views along the J Street Drain south of Redwood Street would be very similar as the area to the north. The area is relatively flat with no prominent visual features. Photographs 2, 3, and 4 are typical for the area. Views include distant mountains and other residences to the north, J Street and other residences to the south, and fencing fronted with oleander bushes with intermittent trees planted along the drain to the east/west, or facing J Street Drain. The trees include ash, Brazilian peppertree, eucalyptus, and Mexican fan palm.

Photograph 2 – View to the south near Yucca Street and southbound J Street

Photograph 3 – View to the north near Bard Road and southbound J Street

Photograph 4 – View to the south near Bard Road and southbound J Street

J Street and Hueneme Road

At the intersection of J Street and Hueneme Road, both northbound and southbound lanes end. To the south of the Hueneme Road intersection, the District maintenance road and the drain are fenced off, as shown in Photographs 5 and 6. In this area, south of Hueneme Road, the drain is bordered by residential developments to the east and Channel Island Storage to the west extending to the Ventura County Railroad (VCRR) crossing. Past the railroad crossing, J Street Drain is bordered by OWWTP to the east and Surfside III condominiums and Hueneme Drain Pump Station to the west. Residents near Hueneme Road have views of J Street, J Street Drain fencing, and distant mountains to the north, to the east/west or facing J Street Drain, the open drain and minimal vegetation and trees, and to the south, downstream views of open channel and trees, as seen in Photograph 6.

For the residents at Surfside III Condominiums, views include Ormond Beach to the south and the Pacific Ocean to the south and southwest in the distance. Ormond Beach Lagoon is not visible from many residences due to the Hueneme Drain Pump Station, OWWTP, and the orientation of some condominiums which block the views immediately to the southeast. Figure 4.1-2 shows an aerial photograph of the J Street Drain and surrounding area. As shown in Figure 4.1-2, a row of shrubs, mainly myoporum, and eucalyptus trees along the northeast boundary of the Surfside III property shields condominium residents on the east-facing sides of Buildings 15, 16, and 17 and users of the park immediately east of these buildings from views of the J Street Drain and the OWWTP east of the J Street Drain. Residents in Building 7, located nearest to the proposed project in the vicinity of the OWWTP, are shielded from the industrial view by a 100-foot-long section of approximately 14-foot-tall mesh-screen chain link fence on the west edge of the OWWTP property. This fence screens the view of the OWWTP maintenance yard. The remainder of the OWWTP south of the maintenance yard is screened by trees and shrubs along the plant's west property boundary. Sparser vegetation along the east boundary of the Surfside III property from Building 7 southward forms an inconsistent visual barrier, and residents in Buildings 6 and 7 are able to see the J Street Drain from their dwellings.

Source: SCAG 2005; ESRI; 2006; Coastal Zone Commission; 2008 | \\G:\Projects\75217_J Street\map docs\mxd\EIR\Figure4 1 2 SurfsideIII.mxd | Last Updated : 08-05-09

Surfside III Property

FIGURE 4.1-2

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Photograph 5 – View of Drain at Hueneme Road

Photograph 6 – View to the south at Hueneme Road and J Street

Photograph 7 – View of Ormond Beach Lagoon near Hueneme Drain Pump Station

Scenic Areas and/or Features

The County of Ventura defines a Scenic Resource as a natural physical feature that is aesthetically pleasing (Ventura County 2011). There are no County-designated Scenic Resource Areas in the project area.

4.1.2 Regulatory Setting

Ventura County General Plan

Resources Chapter

Scenic Resources

The scenic resources of Ventura County, especially the coastline, within the viewshed of the County's lakes, and along designated State and County Scenic Highways, are of considerable value both in providing a pleasurable environment for local citizens and in stimulating tourism. Coastline resources are discussed in the Coastal Area Plan.

Conservation of scenic resources is most critical where the resources will be frequently and readily viewed, as from a highway, or where the resource is particularly unique. Ventura County has identified the viewsheds of lakes and other scenic areas as may be identified by an area plan, as being worthy of special protection via identification as Scenic Resource Areas.

The goals, policies and programs which apply to scenic resources, with the exception of Policy 1.7.2-2 addressing Scenic Resource Areas, include:

- Goals
  1. Preserve and protect the significant open views and visual resources of the County.
  2. Protect the visual resources within the viewshed of State and County designated scenic highways, lakes and other scenic areas as may be identified by an area plan.
- Policies
  1. Discretionary development which would significantly degrade visual resources or significantly alter or obscure public views of visual resources shall be prohibited unless no feasible mitigation measures are available and the decision-making body determines there are overriding considerations.

City of Oxnard General Plan

Local Coastal Program (LCP)

The City has an adopted Local Coastal Program (LCP) consisting of a Coastal Land Use Plan and Coastal Zoning Regulations and Maps. The Coastal Zone boundary extends generally 1,000 yards inland from the sea and is shown on the Jurisdictional Boundaries Map (Figure 3.0-1).

The Coastal Zone has been divided into four planning areas: McGrath/Mandalay Beach, Oxnard Shores, Channel Islands and Ormond Beach. Recreational uses are predominant in the McGrath/Mandalay area; urban residential uses are concentrated in the Oxnard Shores area. The Channel Islands area contains the Channel Islands Harbor. The Ormond Beach area is separated from the rest of the City's Coastal Zone by the City of Port Hueneme. Any amendment to the Coastal Land Use Plan would require approval by the Coastal Commission.

Local Coastal Policies

All new development in the coastal zone shall be designed to minimize impacts on visual resources of the area. Particular care should be taken in areas of special quality, such as those identified in the LCP.

Height Restriction as defined in the City Zoning Ordinance shall be used to avoid blocking views.

Conservation Element Policies

Scenic Resources

The beaches and coastline are recognized as Oxnard's primary natural scenic resources. Good views to the offshore Channel Islands also exist. The sand dunes south of Fifth Street and south of Wooley Road, the lower dunes in the Mandalay Beach State Park north of Fifth Street, and the Ormond Beach dunes and wetlands are all recognized as scenic visual resources. The Coastal Mountains behind the City provide scenic views from areas within the City.

City of Port Hueneme General Plan

Local Coastal Program

The City of Port Hueneme's LCP exists as an amendment to the existing General Plan and discusses the allowable land uses and applicable coastal resource issues for the planning areas within the City's coastal zone. The LCP continues to be implemented as the primary planning document for the coastal zone. Consistent with the coastal act's basic goal to "protect, maintain, and, where feasible, enhance and restore" the coastal zone, the Port Hueneme LCP identifies attainable goals and objectives specifically related to local conditions. The current LCP acts as the baseline for the revised program included as part of this General Plan Update.

The land use goals in the LCP are the same as those stated in the General Plan which is the basis upon which the City's LCP has been developed.

To these fundamental General Plan goals, the LCP adds the following objectives as shown below:

- To maximize public opportunities for coastal access and recreation in a manner which protects natural resource areas from overuse, maintains public safety needs and respects the rights of private property owners.
- To protect, encourage and, where feasible, provide for increased recreational opportunities, including low and moderate cost facilities, within and adjacent to beach and harbor areas through both public and private development.

Coastal Subarea: Area A Hueneme Beach Park

The proposed project is located within the City's Coastal Subarea of Area A, Hueneme Beach Park , which contains specific development policies as well as land uses consistent with such policies.

LCP Land Use: The Beach Master Plan establishes long-term priorities and design guidelines with respect to the programming of capital improvements over an unspecified time frame. Accordingly, the Hueneme Beach Master Plan is hereby incorporated by reference into this LCP and shall heretofore serve as the City's formal policy framework within which all future actions in Area A must be consistent.

Within this context, the following specific development policy shall apply:

- Because the viewshed at Hueneme Beach Park is an important public resource, improvements to the park shall not interfere with public enjoyment of views of the beach and ocean.

Applicable State Coastal Zone Policy within Area A

Coastal Visual Resources and Special Communities

Coastal Act Section 30251

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually

degraded areas. New development in highly scenic areas, such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government, shall be subordinate to the character of its setting.

4.1.3 Significance Thresholds

Significance thresholds are addressed according to the thresholds set forth by the County of Ventura Initial Study Assessment Guidelines (adopted April 26, 2011), County of Ventura Administrative Supplement to the State *CEQA Guidelines*, County of Ventura General Plan (last amended April 6, 2010), and the State *CEQA Guidelines*.

According to the County of Ventura Threshold Criteria, implementation of the proposed project would result in a significant impact upon visual resources if the project would cause any of the following to occur:

- Is located within an area that has a *scenic resource* that is visible from a public viewing location; and,
- Would physically alter the *scenic resource* either individually or cumulatively when combined with recently approved, current, and reasonably foreseeable future projects; or
- Would substantially obstruct, degrade, or obscure the *scenic vista*, either individually or cumulatively when combined with recently approved, current, and reasonably foreseeable future projects. A *scenic vista* is a *viewshed* that includes *scenic resources*. A *viewshed* is the area that is visible from a *public viewing location*.
- Any project that is inconsistent with any of the above policies of the Ventura County General Plan *Goals, Policies and Programs* or policies of the applicable Area Plan.

Additionally, implementation of the proposed project would result in a significant impact upon aesthetics and visual resources, as defined in Appendix G of the *CEQA Guidelines*, if the project causes any of the following:

- Substantial adverse effects on a scenic vista; and/or
- Substantial degradation of the existing visual character or quality of the site and its surroundings.

4.1.4 Project-Level Impact Analysis

Located Adjacent to a Publicly Viewed Scenic Resource and Physically Alter the Scenic Resource

Construction

Scenic resources available at the project site include views of the Ormond Beach Lagoon and the Pacific Ocean from Ormond Beach and the Port Hueneme Beach Park and Pier. Construction of the project would temporarily change the visual environment due to the placement of construction equipment and traffic signs in the project area and construction staging area. Also, a temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community (see mitigation measure Noise-2 in Section 4.6). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-30. While the construction equipment, traffic signs, and noise control barrier would be a visual distraction for a temporary period, it would not be characterized as degrading a visual resource. Additionally, the equipment and noise control

barrier would not significantly alter or obscure views from public locations, as Ormond Beach and Port Hueneme Beach Park would remain completely accessible to the public throughout construction, equipment and noise barriers would not be placed on the beaches, and views of the Pacific Ocean and the Lagoon would not be completely blocked during construction. A 40-foot-long portion of the lagoon, a scenic resource, would be graded to form an earthen ramp transitioning from the deepened concrete channel to the existing lagoon bottom elevation. Rock riprap protection would be placed horizontally ~~on~~ beneath the earthen ramp at the end of and at the same elevation as the concrete drain bottom ~~would be covered with earth~~. Upon completion of construction, this ramp would be under water most of the year, except when the lagoon water breaches the sand berm. When the lagoon is empty, this ramp would appear as a gradual four-foot change in bed elevation to viewers standing on the adjacent banks. This minor change in bottom elevation would not be a substantial physical alteration to the scenic value of the lagoon. It is anticipated that during the first few natural lagoon breaching events following Phase 1 construction, the movement of water (tidal and drain flow) and sediment would create an equilibrium elevation with the channel transition area, between the end of the concrete channel and the Ormond Beach Lagoon annual breach location. When this occurs, the rock riprap may become visible when the lagoon is empty. This would not be a substantial physical alteration to the scenic value of the lagoon. Therefore, impacts are less than significant.

Operations

The proposed project does not include project features along the length of the drain or at the drain outlet that would degrade visual resources or significantly alter or obscure public views. Future maintenance activities would be similar to and would occur with the same frequency as existing maintenance. Therefore, implementation of the J Street Drain project would not result in substantial adverse effects to visual resources or public views and impacts would be less than significant.

Beach Elevation Management Plan

The Beach Elevation Management Plan (BEMP) would be implemented periodically and would only have equipment on the beach for a few hours at a time, during each management event. The few hours are all that is necessary to groom the berm to maintain the appropriate elevation to allow for natural breaching of the berm during storm events. The sand removed from the grooming location would be smoothed over the adjacent beach in a manner that would avoid creating a tall berm. The relocated sand would be quickly reconfigured by wave and wind action. Because it is a short and temporary time period, and a scenic resource such as the beach would not be substantially altered, impacts would be less than significant.

Substantially Obstruct, Degrade, or Obscure a Scenic Vista?

Construction

Construction of the project would result in temporary visual change due to construction equipment and traffic signage associated with construction activities. However, the construction equipment, noise barriers, and traffic signs would not be placed on the beaches and would not completely block ocean or lagoon views from public viewing areas but would be a visual distraction for the short period of construction. Therefore, impacts would be less than significant.

Operations

Scenic vistas available from public locations at or near the project site include views of the Ormond Beach Lagoon and the Pacific Ocean from Ormond Beach, Port Hueneme Beach Park, and Port Hueneme Pier. The proposed project does not include project features along the length of the drain or at the drain outlet that would interfere with views of these scenic vistas from public locations. Future maintenance activities would be similar to and would occur with the same frequency as existing maintenance. Therefore, implementation of the J Street Drain project would not result in substantial adverse effects to a scenic vista and a less than significant impact has been identified.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would only have equipment on the beach for a few hours. The few hours are all that is necessary to groom the berm to maintain the appropriate elevation to allow for natural breaching of the berm during storm events. The sand removed from the grooming location would be smoothed over the adjacent beach in a manner that would avoid creating a tall berm. The relocated sand would be quickly reconfigured by wave and wind action. Because it is a short and temporary time period, and a scenic vista would not be substantially obstructed, degraded, or obscured, there is a less than significant impact for this issue area.

Substantial Adverse Effects on a Scenic Vista and Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings?

Construction

Construction of the project would result in temporary visual change due to construction activities. However, the construction equipment, noise barriers, and traffic signs would not completely block ocean or lagoon views but would be a visual distraction for the short period of construction. Therefore, impacts to a scenic vista would be less than significant.

The proposed project would include the removal of existing fencing and oleander bushes between Hueneme Road and Redwood Street during construction. The fencing would be replaced; however, the oleander bushes would not be replaced by the District. Any replacement of oleander bushes along J Street Drain would be the responsibility of the City of Oxnard. This replacement is pending an agreement with the City. The existing oleander bushes provide screening of the chain linked fence along the drain for the residences on both sides of J Street. Additionally, for the pedestrians, cyclists and motorists along this portion of J Street, the oleander bushes provide a visual buffer for the fence and the drain itself. Without replanting the bushes, existing visual character and quality along the drain would be degraded.

Vertical shoring would occur near the Surfside III property, therefore, large shrubs and overhanging tree limbs within the district right-of-way would be removed, but vegetation on Surfside III property would remain in place except for plants whose root systems would be compromised during the process. Such vegetation would need to be removed for the safety of workers and residents. Trees and shrubs along the east boundary of J Street Drain property would remain in place, as construction would affect an existing maintenance road that is devoid of vegetation. Removal of trees and shrubs would expose views of the OWWTP and the J Street Drain to residents along the east side of Buildings 15, 16, and 17 and people visiting the adjacent park (see Figure 4.1-2). The J Street Drain would become more visible to residents in Buildings 6 and 7, however this would not create a substantial change as the drain is currently visible due to sparser vegetation along the eastern property boundary in these areas. The above impacts would be greater if the trenching method is used. Vertical shoring would require less vegetation removal, thus

resulting in a lesser impact. Nonetheless, either method would result in degradation of the existing visual character and quality at the project area, resulting in a significant impact. Mitigation measure Noise-2 requires a temporary noise control barrier to be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during construction. This noise control barrier will also provide visual screening along the eastern boundary of the Surfside III property to shield Building 6 and seven residents from views of the J Street Drain during construction. Mitigation Measure VIS-4 would require installation of a permanent 10- to 12-foot-tall fence with vinyl screening along the OWWTP and District property boundary to shield Surfside III residents from views of the OWWTP. With ~~this~~ these mitigation measures, this impact would be less than significant.

Operations

Scenic vistas available at the project site include views of the Ormond Beach Lagoon and the Pacific Ocean. The proposed project does not include project features along the length of the drain or at the drain outlet that would interfere with views of these scenic vistas. Views of these scenic vistas are not available to residents north of Hueneme Road. Additionally, direct views of these scenic vistas are also not available to residents south of Hueneme Road. Only viewers on or adjacent to Ormond Beach would have unobstructed views of both Ormond Beach Lagoon and the Pacific Ocean. Future maintenance activities would be similar to and would occur with the same frequency as existing maintenance. The impact to a scenic vista is less than significant.

The proposed project would include the removal of existing fencing and oleander bushes between Hueneme Road and Redwood Street during construction. The fencing would be replaced; however, the oleander bushes would not be replaced by the District. Any replacement of oleander bushes along J Street Drain would be the responsibility of the City of Oxnard. This replacement is pending an agreement with the City. The existing oleander bushes provide screening of the chain linked fence along the drain for the residences on both sides of J Street. Additionally, for the pedestrians, cyclists and motorists along this portion of J Street, the oleander bushes provide a visual buffer for the fence and the drain itself. Without replanting the bushes, existing visual character and quality along the drain would be degraded. Loss of vegetation along the Surfside III property during construction would also cause continued visual impacts during operations. Therefore, implementation of the J Street Drain project would result in degradation of the existing visual character and quality at the project area. This impact is significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would only have equipment on the beach for a few hours. The few hours are all that is necessary to groom the berm to maintain the appropriate elevation to allow for natural breaching of the berm during storm events. The sand removed from the grooming location would be smoothed over the adjacent beach in a manner that would avoid creating a tall berm. The relocated sand would be quickly reconfigured by wave and wind action. Beach grooming would not result in substantial adverse effects to a scenic vista or in substantial degradation of the existing visual character or quality of the site and its surroundings and impacts are less than significant.

Consistency with Ventura County General Plan Goals, Policies and Programs

Construction

As mentioned above, construction of the proposed project would include the removal of existing fencing and oleander bushes between Hueneme Road and Redwood Street during construction. The fencing would be replaced; however, the oleander bushes would not be replaced by the District. Any replacement

of oleander bushes along J Street Drain would be the responsibility of the City of Oxnard. This replacement is pending an agreement with the City.

~~In addition, t~~Trenching near the Surfside III buildings during construction would result in the removal of approximately 110 trees and shrubs of various sizes and species (including 25 eucalyptus trees with a diameter at breast height (DBH) of at least 12 inches) from both J Street Drain and Surfside III properties. ~~If t~~ The District has instead opted for vertical shoring rather than trenching near the Surfside III property, with the result that large shrubs and overhanging tree limbs within the district right-of-way would be removed, but vegetation on Surfside III property would remain in place except for plants whose root systems would be compromised during the process. Such vegetation would need to be removed for the safety of workers and residents. Trees and shrubs along the east boundary of J Street Drain property would remain in place, as construction would affect an existing maintenance road that is devoid of vegetation. Removal of trees and shrubs would expose views of the OWWTP and the J Street Drain to residents along the east side of Buildings 15, 16, and 17 and people visiting the adjacent park (see Figure 4.1-2). The J Street Drain would become more visible to residents in Buildings 6 and 7; however, this would not create a substantial change as the drain is currently visible due to sparser vegetation along the eastern property boundary in these areas. The above impacts would be greater if the trenching method is used. Vertical shoring would require less vegetation removal, thus resulting in a lesser impact. Nonetheless, either method would result in degradation of the existing visual character and quality at the project area.

Construction of the project would be inconsistent with the scenic resources' goals, polices and programs in the Ventura County General Plan. However, construction impacts would be temporary and mitigation measure Noise-2 requires a temporary noise control barrier to be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during construction. This noise control barrier will also provide visual screening along the eastern boundary of the Surfside III property to shield Building 6 and seven residents from views of the J Street Drain during construction. In addition, Mitigation Measure VIS-4 would require installation of a permanent 10- to 12-foot-tall fence with vinyl screening along the OWWTP and District property boundary to shield Surfside III residents from views of the OWWTP. With ~~this~~ these mitigation measures, this impact would be less than significant.

Operations

The proposed project would include the removal of existing fencing and oleander bushes between Hueneme Road and Redwood Street during construction. The fencing would be replaced; however, the oleander bushes would not be replaced by the District. Any replacement of oleander bushes along J Street Drain would be the responsibility of the City of Oxnard. This replacement is pending an agreement with the City. The existing oleander bushes provide screening of the chain linked fence along the drain for the residences on both sides of J Street. Additionally, for the pedestrians, cyclists and motorists along this portion of J Street, the oleander bushes provide a visual buffer for the fence and the drain itself. Without replanting the bushes, existing visual character and quality along the drain would be degraded. Loss of vegetation along the Surfside III property during construction would also cause continued visual impacts during operations. Therefore, implementation of the J Street Drain project would result in degradation of the existing visual character and quality at the project area. The project would also be inconsistent with the scenic resources' goals, polices and programs in the Ventura County General Plan; therefore; this impact is significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would only have equipment on the beach for a few hours. The few hours are all that is necessary to groom the berm to maintain the appropriate elevation to allow for natural breaching of the berm during storm events. The sand removed from the grooming location would be smoothed over the adjacent beach in a manner that would avoid creating a tall berm. The relocated sand would be quickly reconfigured by wave and wind action. Beach grooming would not result in substantial degradation of the existing visual character or quality of the site and its surroundings. Implementation of the BEMP would not conflict with the scenic resources' goals, polices and programs in the Ventura County General Plan. Impacts are less than significant.

4.1.5 Cumulative-Level Impact Analysis

No significant project level impacts were identified for the BEMP phase of the project. Therefore, the cumulative impact analysis focuses on the construction and operational phases of the project, which would have the potential to contribute to a cumulative impact. The BEMP phase of the project would not contribute to a cumulative impact.

Located Adjacent to a Publicly Viewed Scenic Resource and Physically Alter the Scenic Resource

Construction

Construction of the proposed project would not result in alteration or degradation of scenic resources or significantly alter or obscure public views. When construction of the proposed project is considered with the cumulative projects, no cumulative impact is identified for this issue area. As shown on Figure 2.0-3, the majority of the cumulative projects are not located within the same viewshed as the project. The only projects adjacent to the proposed project are the Cuesta Del Mar affordable housing, J Station Elimination, Water Pipeline 1, and Water Pipeline 2 projects. The J Station Elimination, Water Pipeline 1, and Water Pipeline 2 projects would not be characterized as substantially blocking or obscuring a view as they would be underground pipelines. The Cuesta Del Mar affordable housing project is planned as a three-story, 6,080-square-foot multifamily building with seven apartments. The affordable housing project is located in an existing residential area north of Hueneme Road and would not obstruct the significant scenic resources in the project area, which include the Pacific Ocean and Ormond Beach Lagoon. Therefore, no cumulative impacts are identified for this issue area.

Operations

No significant project level impact was identified for this project. Therefore, no cumulative impacts would occur.

Substantially Obstruct, Degrade, or Obscure a Scenic Vista?

Construction

It is anticipated that there would be temporary visual change due to the placement of equipment, noise barriers, and traffic signage associated with project construction. Four of the cumulative projects, Cuesta Del Mar affordable housing, J Station Elimination, Water Pipeline I, and Water Pipeline 2, share the same viewshed as the project. However, these projects are either completed, currently under construction, scheduled to begin construction in March 2012, or approved, and it is unlikely that construction of those

projects and the proposed project would be simultaneous. In addition, three are underground pipeline projects that would not have adverse effects on a scenic vista, as they would not have above-ground components. The Cuesta Del Mar affordable housing project is planned as a three-story, 6,080-square-foot multifamily building with seven apartments. The affordable housing project is located in an existing residential area north of Hueneme Road and would not obstruct the significant scenic vista in the project area, which includes the Pacific Ocean and Ormond Beach Lagoon. Therefore, no cumulative impact is identified.

Operations

No significant project level impact was identified for this project. Therefore, no cumulative impacts would occur.

Substantial Adverse Effects on a Scenic Vista and Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings?

Construction

The project would result in temporary visual change due to construction activities. However, the construction equipment, noise barriers, and traffic signs would not completely block ocean or lagoon views but would be a visual distraction for the short period of construction. The project would degrade the existing visual character of the project site surroundings due to the loss of mature oleander bushes, large shrubs, and eucalyptus trees which provide a visual buffer. In review of the cumulative projects considered in this analysis, only four, the Cuesta Del Mar affordable housing, J Station Elimination, Water Pipeline 1, and Water Pipeline 2 projects, are located adjacent to the drain and would have the potential to add to a cumulative contribution. These projects are either completed, currently under construction, scheduled to begin construction in March 2012, or approved and it is unlikely that construction would be concurrent with the proposed project. Therefore, no cumulative impact is identified for these issue areas.

Operations

The proposed project would degrade the existing visual character of the project site surroundings due to the loss of mature oleander bushes, large shrubs, and eucalyptus trees which provide a visual buffer. In review of the cumulative projects considered in this analysis, only three, the J Station Elimination, Water Pipeline 1, and Water Pipeline 2 projects, intersect the drain and would have the potential to add to a cumulative contribution. However, the pipeline projects would be constructed below ground within the Ventura County Railroad or Hueneme Road right-of-ways, which are not vegetated. Therefore, no cumulative impacts would occur.

Consistency with Ventura County General Plan Goals, Policies and Programs

Construction

Construction of the proposed project would not result in degradation of visual resources or significantly alter or obscure public views. When construction of the proposed project is considered with the cumulative projects, no cumulative impact is identified for this issue area. As shown on Figure 2.0-3, the majority of the cumulative projects are not located within the same viewshed as the project. The only projects adjacent to the proposed project are the Cuesta Del Mar affordable housing, J Station Elimination, Water Pipeline 1, and Water Pipeline 2 projects. The J Station Elimination, Water Pipeline 1,

and Water Pipeline 2 projects would not be characterized as substantially blocking or obscuring a view as they would be underground pipelines. The Cuesta Del Mar affordable housing project is planned as a three-story, 6,080 square-foot multifamily building with seven apartments. The affordable housing project is located in an existing residential area north of Hueneme Road and would not obstruct any significant viewshed such as the Pacific Ocean or Ormond Beach Lagoon. Therefore, no cumulative impacts are identified for this issue area.

Operations

Implementation of the J Street Drain project would result in degradation of the existing visual character and quality at the project area, due to the removal of the oleander bushes and fence. As shown on Figure 2.0-3, the majority of the cumulative projects are not located within the same viewshed as the project. The only projects adjacent to the proposed project are the Cuesta Del Mar affordable housing, J Station Elimination, Water Pipeline 1, and Water Pipeline 2 projects. The J Station Elimination, Water Pipeline 1, and Water Pipeline 2 projects would not be characterized as substantially blocking or obscuring a view as they would be underground pipelines. The Cuesta Del Mar affordable housing project is planned as a three-story, 6,080-square-foot multifamily building with seven apartments. The affordable housing project is located in an existing residential area north of Hueneme Road and would not obstruct any significant viewshed such as the Pacific Ocean or Ormond Beach Lagoon. Therefore, no cumulative impacts are identified for this issue area. ~~The project would also be inconsistent with the scenic resources' goals, polices and programs in the Ventura County General Plan; therefore; a significant impact is identified~~.

4.1.6 Mitigation Measures

VIS-1 The District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard. Landscaping shall be replaced incrementally, within six months of completion of each project phase.

~~Within six months of project completion, the District shall provide landscaping to replace the oleander bushes removed along J Street Drain between Hueneme Road and Redwood Street by agreement with the City of Oxnard~~.

VIS-2 Any tree or large shrub removed from the Surfside III property during construction would be replaced at a 1:1 ratio.

VIS-3 During construction, temporary privacy screening would be placed along the northeast boundary of the Surfside III property to shield residents from views of the construction site and of the OWWTP.

VIS-4 Prior to construction a 10- to 12-foot-tall fence with green vinyl screening will be installed along the portion of the District and Oxnard Wastewater Treatment Plant property line that is not currently fenced.

VIS-5 Although night construction is not anticipated, in the event that it becomes necessary, all lighting shall be shielded to prevent illumination of residences.

4.1.7 Significance After Mitigation

Implementation of the proposed project would result in less than significant project-level and cumulative-level impacts for all aesthetic issue areas with the exception of the substantial degradation of the existing visual character or quality of the site and surroundings. The removal of oleander bushes along the drain and the potential removal of several trees and large shrubs due to trenching or vertical shoring would result in substantial project-level visual change. Mitigation measure VIS-1, which will be required as a condition of project approval, will require replacement of the removed oleander bushes with suitable replacement landscaping. As this landscaping matures, it will replace the existing visual buffer that the oleander bushes provide and would reduce the operational impact to below a level of significance. Mitigation measure VIS-2 would require the replacement of the removed trees and large shrubs within the Surfside III property at 1:1 ratio and would reduce the operational impact to below a level of significance. Mitigation measure VIS-3 would require temporary visual screening and would reduce construction phase impacts below a level of significance. Mitigation Measure VIS-4 would require permanent visual screening and would further reduce construction phase impacts below a level of significance.

4.1.8 Response to Notice of Preparation Comments

During the Notice of Preparation (NOP) comment period, the City of Oxnard sent a letter that suggested that the drain design include mitigation options to improve the aesthetic appearance of the drain from the pedestrian level. As identified above in Section 4.1.6, mitigation measure VIS-1 is proposed to replace oleander bushes along J Street Drain. This would improve the aesthetic appearance of the drain since pedestrians would have views of oleander bushes rather than a concrete-channel. During the DEIR preparation phase, a Surfside III resident expressed concern about loss of vegetation that currently screens views of the OWWTP. Mitigation measures VIS-2 and VIS-3 are proposed to replace the existing Surfside III vegetation removed by the project and to provide temporary screening of construction site and OWWTP views during construction.

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4.2 BIOLOGICAL RESOURCES

The following documents were used in the preparation of this section and are located in Appendix D of this Environmental Impact Report (EIR):

Biological Technical Report: J Street Drain Project. Ventura County, California. Prepared by HDR Engineering, Inc. July 2008 (Revised September 2011).

Jurisdictional Wetland Delineation Report: J Street Drain Project. Ventura County, California. Prepared by HDR Engineering, Inc. July 2008 (Revised September 2011).

Light-Footed Clapper Rail, Western Snowy Plover, and California Least Tern Surveys: J Street Drain Project, Ventura County, California. Prepared by Davenport Biological Services. August 2008.

Western Snowy Plover Breeding Survey, Ormond Beach, California: 2009 Season. Prepared by Cynthia Hartley for the California Department of Fish and Game. September 2009.

California Least Tern Breeding Survey, Ormond Beach, Ventura County: 2009 Season. Prepared by Reed V. Smith for the California Department of Fish and Game. September 2009.

Western Snowy Plover Breeding Survey, Ormond Beach, California: 2010 Season. Prepared by Cynthia Hartley for the California Department of Fish and Game. September 2010.

California Least Tern Breeding Survey, Ormond Beach, Ventura County: 2010 Season. Prepared by Reed V. Smith for the California Department of Fish and Game. September 2010.

4.2.1 Environmental Setting

A baseline biological field survey of the project site was conducted by HDR Senior Biologist Shannon Allen and HDR Assistant Biologist Allegra Simmons on April 28, 2008, between the hours of 0830 to 1700, and on April 29, 2008 between the hours of 0830 to 1750. All accessible areas of the property were directly examined in the field. The purpose of the survey was to identify and delineate existing and adjacent vegetation communities, potential wildlife habitats, and locate and map (if detected), any sensitive biological resources. All vascular plants and vertebrate animals encountered during this field effort were documented. Vegetation communities were mapped in situ using an aerial photograph and direct observation. Due to the size and orientation of the project area, it was necessary to divide the project into northern and southern survey areas. The northern survey area consists primarily of the existing J Street Drain, which is a concrete-lined channel, beginning at Redwood Street and continuing south to Hueneme Road. The southern survey area includes everything within the project area south of Hueneme Road.

A California Natural Diversity Database (CNDDB) search was conducted as part of the background research for the parcels that intersect the proposed alignment. Several sensitive wildlife species are known to occur within the project area, including the California least tern, snowy plover, and tidewater goby. The CNDDB search did not identify any sensitive botanical species as occurring within the project area;

however, several are known to occur within the general vicinity of the site. These include Ventura marsh milk-vetch and salt marsh bird's-beak.

HDR conducted a jurisdictional wetland delineation within the boundaries of the project site. The jurisdictional wetland delineation meets the requirements of the following regulatory agencies: U.S. Army Corps of Engineers (USACE) (including the Unified Federal Method for Wetland Delineation (1987) and Arid West Supplement), California Department of Fish and Game (CDFG), Regional Water Quality Control Board (RWQCB), and California Coastal Commission (CCC). The purpose of the jurisdictional wetland delineation is to determine areas that may be subject to federal and state wetland regulation and permitting.

Should project construction result in measurable impacts to resources determined to be within the jurisdiction of the USACE, RWQCB, and/or CDFG, one or more of the following permitting documents may be required:

- A USACE Individual Permit pursuant to Section 404 of the federal Clean Water Act (CWA) (1990, as amended), or qualification under a Nationwide Permit pursuant to Section 404 of the CWA;
- Clean Water Certification in compliance with the California Porter-Cologne Water Quality Control Act as defined by the state RWQCB or federal CWA Section 401 Certification requirements;
- A Section 1600-Series Streambed Alteration Agreement (SAA) from the CDFG in compliance with CDFG Fish and Game Code; and/or,
- Coastal Zone Management Act, Coastal Development Permit.
- A Section 7 Biological Opinion and Take Permit from the U.S. Fish and Wildlife Service (USFWS) in compliance with the Federal Endangered Species Act. Consultation with the USFWS would be initiated by USACE, the federal nexus agency.
- A Section 2081 Incidental Take Permit from the CDFG in compliance with the California Endangered Species Act.

In order to assess and delineate the onsite wetland resources, Shannon Allen and Allegra Simmons (Certified Wetland Delineators) examined habitats to determine drainage features and wetlands connectivity. All potential wetland areas were measured in terms of presence/absence of hydrology, hydrophytic vegetation, and indicators for hydric soil. Transects and test pits were established in accordance with the Unified Federal Method for Wetland Delineation (USACE 1987) to measure and assess these wetland indicators. The delineation followed protocol requiring the use of the recently instated *Regional Supplement to the USACE Wetland Delineation Manual: Arid West*.

Within the survey area, four transects were conducted to delineate jurisdictional boundaries. For each transect, three to four test pits were dug and analyzed using the supplemental arid west form to establish jurisdiction of potential wetlands onsite. In addition, soil cores were used to identify changes in soil composition, which helped to establish wetland boundaries between soil pits.

The project site ranges in elevation from approximately 24 feet above mean sea level (AMSL) at the northern end of the project boundary to three feet AMSL at the southern end within the Ormond Beach Lagoon (Figure 4.2-1). Sandy portions of the lagoon are approximately eight feet AMSL, with the

Source: ESRI; 2006 | G:\Projects\75217 J Street\map docs\mxd\EIR\BTRProjectSite.mxd | Last Updated : 08-15-2011

Project Survey Area

FIGURE 4.2-1

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surrounding lagoon channel ranging from four to six feet deep. Beach elevation ranges from approximately eight feet AMSL along the north to sea level at the south.

The project proposes an access route onto the beach to allow periodic grooming of the sand berm blocking the lagoon outlet before potential storm events. The location of the access would follow the same pathway that lifeguards and beach maintenance vehicles currently use on a daily basis to reach the groomed portion of the beach. Although the route is disturbed from daily use, it occurs adjacent to potentially sensitive habitat. As outlined in the Project Description, Section 3.0 of this EIR, any implementation of the Beach Elevation Management Plan (BEMP)would include monitoring of nearby sensitive habitats by a qualified biologist. The biologist would ensure that direct impacts to sensitive habitats are avoided to the maximum extent practicable. In addition, a biological resource assessment would be conducted following grooming activity in order to determine the extent of direct impacts, if any, to biological resources. If direct impacts are identified, appropriate mitigation would be prescribed and presented to the applicable resource agencies for concurrence, if necessary. Coordination with agencies and implementation of any proposed mitigation are stipulations of the BEMP and are considered project design features.

4.2.1.1 Existing Conditions

Vegetation Communities

Vegetation types or plant communities are assemblages of plant species that usually coexist in the same area. The classification of vegetation communities is based upon the life form of the dominant species within that community and the associated flora. Currently, the project site supports 53 plant species within the following seven vegetation communities: coastal brackish marsh (CBM), southern coastal salt marsh (SCSM), open water (OW), southern foredunes (SFD), eucalyptus woodland (EW), disturbed habitat (DH), and urban developed (UD) (Figures 4.2-2 and 4.2-3). Table 4.2-1 summarizes vegetation community acreages.

Table 4.2-1. Summary of Vegetation Communities Within the Survey Area

Habitat Type	Existing Acreage
Coastal Brackish Marsh	2.98
Disturbed Habitat	6.76
Urban/Developed 32.44	
Eucalyptus Woodland	1.18
Open Water	2.27
Southern Coastal Salt Marsh	8.26
Southern Foredune	2.6
Total	56.49

Coastal Brackish Marsh (Holland Code #52200)

CBM is generally located at the interior edges of coastal bays, estuaries, lagoons, and adjacent to salt marshes. CBM areas are dominated by dense coverage of perennial, emergent, herbaceous monocots up to six feet tall. Within the project survey area, CBM is restricted to the Ormond Beach Lagoon. The dominant indicators in this area include cattails, saltgrass, and American tule. The marsh supports large stands of cattails and tules with pockets of open water. The habitat is considered medium to high quality; however, the area is frequently used by pedestrians and dogs, and shows evidence of homeless encampments.

Southern Coastal Salt Marsh (Holland Code #52120)

SCSM is a highly productive, salt-tolerant vegetation community that forms a low density herbaceous cover. A majority of the species in the community are active in the summer and dormant in the winter. This vegetation community is found along sheltered inland margins of bays, lagoons, and estuaries, which are subject to regular tidal inundation by salt water.

The northern survey area is developed and has no SCSM. The southern survey area is predominantly SCSM with indicators that include saltgrass, alkali heath, and beach bur. The vegetation community is considered medium to high quality.

Open Water (Holland Code #13100)

OW is usually associated with areas such as bays, lagoons, salt marsh, freshwater marsh, and areas that receive high amounts of moisture. These areas generally lack emergent vegetation.

The northern survey area does not contain OW. The southern survey area has several large areas of OW. These are generally located within the southern portion of the J Street channel and Ormond Beach Lagoon. OW is also associated with a manmade canal located along the northern and northwestern boundary of the lagoon. OW also occurs within the central portion of the CBM. The OW is medium quality habitat.

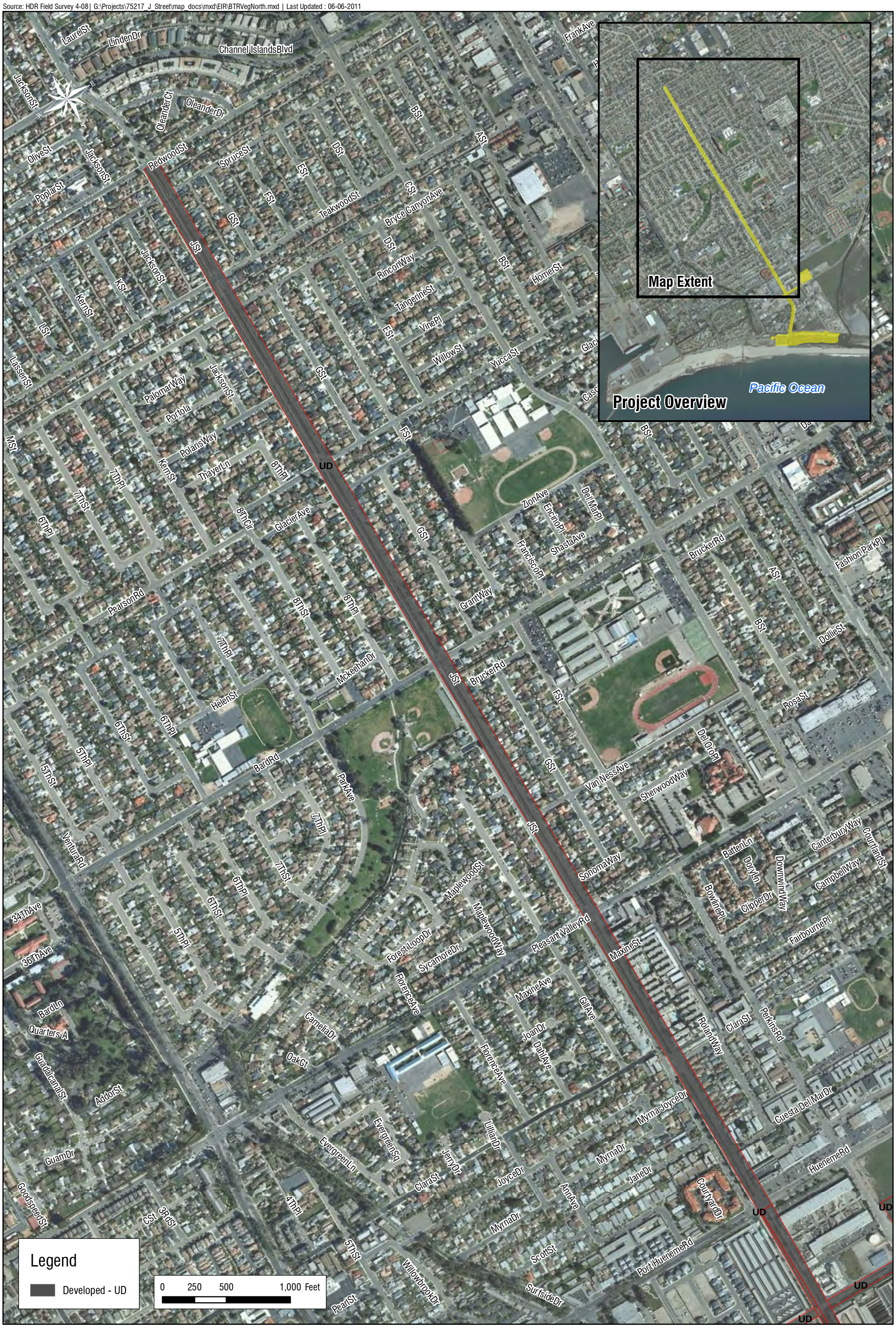
Southern Foredune (Holland Code #21230)

Similar to active coastal dunes, SFD have relatively favorable conditions that allow for the establishment of plants, which reduce the amount of blow sand and partially stabilize the dunes. Groundwater is generally more available for SFD than for active coastal dunes, which allows support of vegetative cover.

The northern survey area does not contain SFD. In the southern survey area, several patches of vegetation qualify as SFD. These are specifically located along the northern and northwestern boundaries of the Ormond Beach Lagoon, southwest of the J Street Drain terminus. Indicators in this community include beach bur, beach suncup and in some areas, salt grass and non-native Indian sweet clover. The northwestern SFD is high quality while the northern patches are of a more disturbed nature as a result of frequent foot traffic and would be considered medium quality.

Based upon aerial photographs, it appears that SFD may occur near the BEMP access route. However, vegetation in this area was not mapped during the biological surveys conducted for the proposed project. Biological field surveys conducted for the proposed project focused on potential impacts to biological resources within the proposed alignment for the J Street Drain.

Source: HDR Field Survey 4-08 | G:\Projects\75217_J_Street\map_docs\mxd\EIR\BTRVegNorth.mxd | Last Updated : 06-06-2011



Northern Survey Area - Vegetation

FIGURE 4.2-2

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Source: HDR Field Survey 4-08; Google Earth 2008 | G:\Projects\75217_J_Street\map_docs\mxd\EIR\BTRVegSouth.mxd | Last Updated : 08-15-2011

Southern Survey Area - Vegetation

FIGURE 4.2-3

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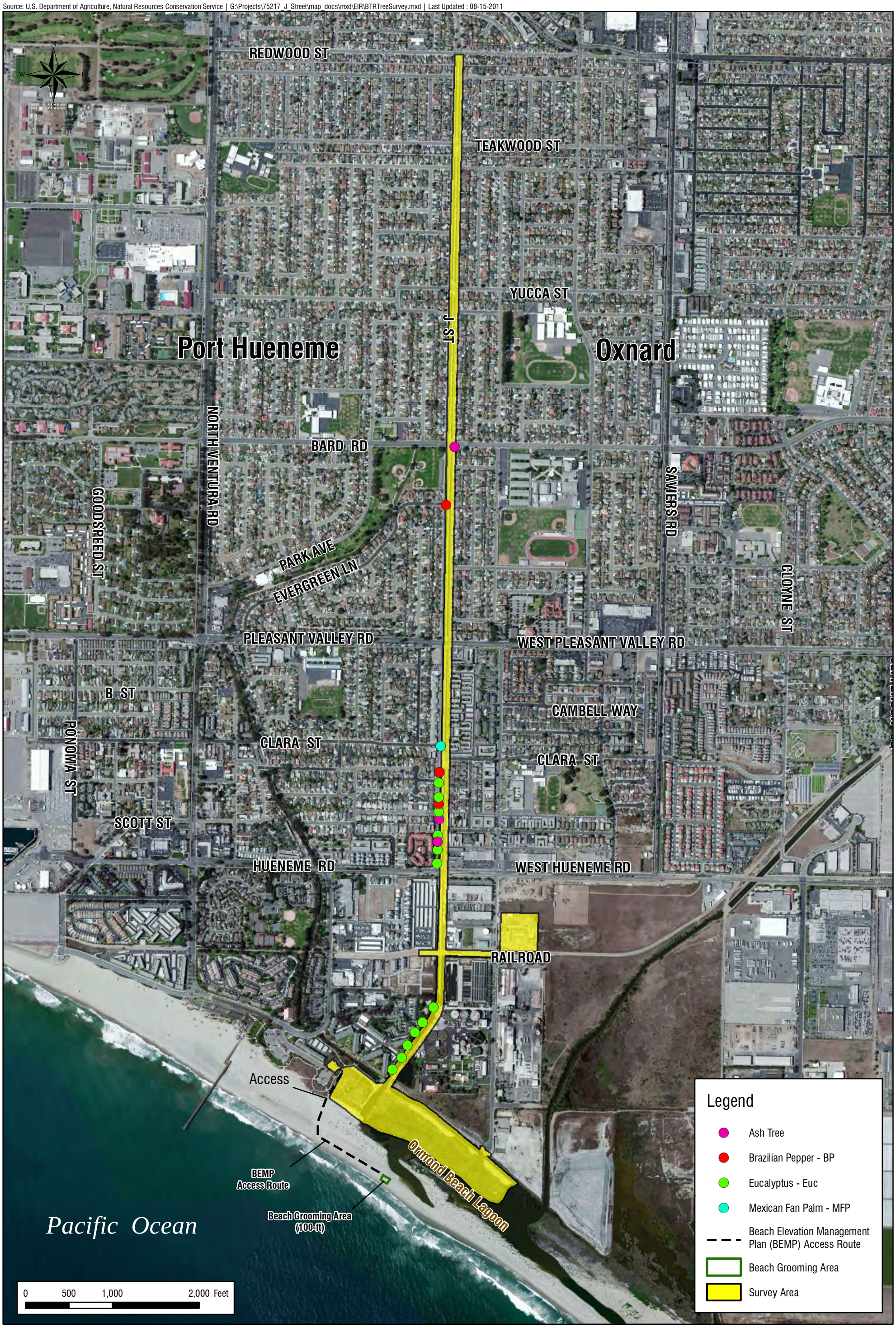
Source: U.S. Department of Agriculture, Natural Resources Conservation Service | G:\Projects\75217_J_Street\map_docs\mxd\EIR\BTRTreeSurvey.mxd | Last Updated : 08-15-2011



Tree Locations

FIGURE 4.2-4

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Eucalyptus Woodland (Holland Code #11100)

EW is usually associated with landscaped areas around homes or roadways. The primary indicator in EW is eucalyptus, which is a nonnative tree species from Australia. The understory is sparse and mostly dominated by leaf litter and weedy species including brome grasses and tocalote.

The northern survey area has several large eucalyptus trees which line the concrete channel. However, these single individuals do not qualify as woodland and are not mapped as such. Instead, these are identified on the tree map (Figure 4.2-4). Within the southern survey area, two relatively small patches of EW line the existing J Street channel. These EW patches occur on the east and west sides of the J Street Drain south of Hueneme Road. EW is considered medium quality vegetation as it provides potential roosting and nesting habitat for raptors despite its non-native origin.

Disturbed Habitat (Holland Code #11300)

DH is defined as areas of native vegetation that have been impacted by grading, dumping, or any other human related impact that disturbs the vegetation. DH occurs primarily along the eastern border and in the southwestern portion of the southern survey area. This area has been disturbed primarily by the use of motor vehicles, which has promoted the growth of invasive weedy species such as brome grasses, hottentot fig, and Mediterranean mustard. Disturbance in portions of these areas has resulted in compaction of the soils. Past dredging efforts within the canal in the Ormond Lagoon have resulted in the disposal of fill dirt in the northwestern portion of the lagoon. This accumulation of fill dirt has raised the elevation of the site, thereby changing the access to groundwater for native marsh plant species. Consequently, this area has been replaced by weedy species such as Mediterranean mustard, and Indian sweet clover. This vegetation is considered low quality.

Urban/Developed (Holland Code #12000)

The entire northern survey area is located amongst UD land uses, including streets, residences, and businesses. The project alignment located within the northern survey area consists of a concrete lined channel, also considered UD. Within the southern survey area, UD occurs as the continuation of J Street channel. This habitat generally consists of weedy and ornamental plant species, such as bromes and oleander. UD does not occur within the lagoon portion of the survey area. These UD areas have no biological resource value.

Botanical Species

Fifty-three vascular plant species were observed during the survey. The plants detected are representative of CBM, SCSM, SFD, and DH, and are relatively common in this area. Sensitive plant species were not observed within the project area during the general biological survey and are not expected to occur on the site. A list of the plant species observed during the survey is included as Appendix B of the Biological Technical Report (Appendix D of this document).

Wildlife Species

Twenty-six wildlife species were observed during the survey, either directly or as a result of signs of occupancy (tracks, scats, etc.). The fauna observed on site are representative of CBM, SCSM, SFD, and DH. Protocol surveys were conducted for sensitive species, including the California least tern, western snowy plover, and light-footed clapper rail. Sensitive species detected on or adjacent to the site are discussed below.

The Project Completion Report (2007) prepared for the Hueneme Pump Station Reconstruction Project identified several fish species known to inhabit the Ormond Beach Lagoon and J Street Drain. These species include: tidewater goby, topsmelt, sailfin molly, California killifish, staghorn sculpin, striped mullet, common carp, western mosquitofish, goldfish, green sunfish, long-jawed mudsucker, rainwater killifish, and crayfish. The tidewater goby is the only sensitive fish species known to occur within or in the vicinity of J Street Drain. During the HDR general biological survey, no fish species were identified.

Several species of migratory birds were observed during the general biological survey, specifically within the southern survey area. However, during the general biological survey, nesting and foraging raptors were not observed. Within the lagoon portion of the project area, open space provides foraging habitat for raptors. Along the project alignment, larger individual trees would provide nesting habitat for raptors.

Sensitive Vegetation Communities

Vegetation communities (habitats) are generally considered "sensitive" if: (a) they are considered rare within the region by various agencies including USFWS, CDFG, and other local agencies; (b) if they are known to support sensitive animal or plant species; and/or (c) they are known to serve as important wildlife corridors. Sensitive habitats are typically depleted throughout their known ranges, or are highly localized, and/or fragmented. The project survey area contains four sensitive vegetation communities: CBM, SCSM, OW, and SFD in accordance with definitions (a) through (c) discussed above.

Sensitive Botanical Species

Sensitive plants include any and all those listed by USFWS and CDFG, candidates for listing by the USFWS and CDFG, and those considered sensitive by the CDFG and/or the California Native Plant Society (CNPS). Sensitive plants also include the categories of rare and narrow endemic. A summary of the potential sensitive species that could occur in the survey areas are provided in Appendix D. During the general biological survey no sensitive plant species were identified on the project site; however, potential habitat occurs on site for both the Ventura marsh milk vetch and salt marsh bird's beak. These two plant species are found in coastal dunes, marshes, and swamps and require well drained soils in areas with high water tables. The well drained sandy soils of the lagoon area and adjacent sand dunes combined with the high water table provide potential habitat for both species.

Within Ventura County, several tree species are considered sensitive and are protected by the Ventura County Tree Ordinance. Although the City of Oxnard does not have a specific tree protection ordinance, a general tree survey was conducted to identify and map individual trees occurring within/adjacent to the project area (Figure 4.2-4). Four tree species were identified within/adjacent to the project area and include ash, Brazilian peppertree, various eucalyptus, and Mexican fan palm (Appendix D), none of which are native to the project area.

Sensitive Wildlife Species

Sensitive animals are species or subspecies listed as threatened, endangered, or being evaluated (proposed) for listing by the USFWS and by the CDFG, and/or are considered sensitive by the CDFG. A sensitive designation includes those listed as rare or of "Special Concern," and includes a number of migratory bird species protected under the Migratory Bird Treaty Act (MBTA). A CNDDB search identified the following sensitive wildlife species with the potential to occur within the J Street Drain area: California least tern, snowy plover, light-footed clapper rail, and tidewater goby. In addition, over

60 brown pelicans were observed using the lagoon during the general survey. These species are also discussed in Appendix D.

Belding's Savannah Sparrow

Federal Status: Candidate
State Status: Endangered

Belding's savannah sparrow is a year-round species that occurs within the SCSM of Southern California from Goleta in Santa Barbara County south to El Rosario, Baja California, Mexico. SCSM dominated by pickleweed (*Salicornia* sp.) characterize Belding's savannah sparrow nesting habitat. Belding's savannah sparrow forages on the succulent buds of pickleweed, females use the twigs for nest building, and males use the plant as song perches. Tidal influence is required to maintain salt marsh vegetation and hydrology in order to keep upland plants and birds from replacing Belding's savannah sparrow and its habitat. Breeding territories can be very small and nesting birds may be clumped together in a near colonial fashion due to the limited availability of suitable pickleweed stands.

Given the number and timing of survey activities, Belding's savannah sparrow should have been detected if it was breeding within the survey area. However, Belding's savannah sparrow was not identified within the project area during any of the biological field surveys conducted for the proposed project. Therefore, this species is not expected to occur within the project area.

California Brown Pelican

Federal Status: Formerly Endangered, Delisted December 17, 2009
State Status: Formerly Endangered, Delisted June 3, 2009

The California brown pelican is a warm weather species that thrives near coasts and on islands. They generally use the rocky islands along the California coast for their nest sites. These islands typically feature steep, rocky slopes with little vegetation, and they must be without terrestrial predators or human disturbances. Nearby high quality marine habitat is also essential. Roosting and resting, or "loafing," sites where brown pelicans can dry their feathers and rest without disturbance are also important. Brown pelicans build large, bulky nests on the ground or in bushes.

Brown pelicans were commonly observed bathing in the lagoon and roosting on the sand spit that separates Ormond Lagoon from the Pacific Ocean. In May, three to five brown pelicans were observed in this area. By mid June, the number of brown pelicans had grown to more than 60 birds. Given the location of this site near Anacapa Island (a major nesting area for this species), the number of brown pelicans using this area should be anticipated to increase.

California Least Tern

Federal Status: Endangered
State Status: Endangered

Between San Francisco Bay and San Diego Bay, the California least tern is anticipated to occur throughout the coastal zone of California. California least terns commonly forage in coastal wetlands, bays, and near the surf zone. Additionally, the species has been observed foraging in fresh water along southern California rivers such as the Santa Margarita and San Luis Rey. This species nests on coastal sandy bare areas (e.g., beaches, sand bars, and salt flats).

A focused California least tern survey was conducted in the southern survey area (Appendix D). During the survey, California least terns were not observed nesting within the project survey area. Due to the existing heavy disturbance occurring within the project survey area (i.e., pedestrian traffic, domestic animals), it is unlikely that California least terns would attempt to nest there. However, California least terns were identified using the dune habitat located south of the project survey area and across the lagoon (Figure 4.2-5). Nests with un-hatched eggs were observed within the dune habitat adjacent to the project survey area. The entire lagoon, including the project survey area, is heavily used by foraging California least terns that are feeding nestlings and fledglings. California least terns that nest at Ormond Beach typically arrive in early to mid-May, and all summer residents and migrating terns leave the area by late August to mid-September. California least terns forage over Ormond Beach Lagoon and the ocean immediately offshore during their seasonal migrations and during breeding. CDFG-sponsored breeding surveys in 2009 and 2010 (Appendix D) documented successful nesting southeast of the Ormond Beach Lagoon. The nearest nests were south of the lagoon, approximately 600 feet southeast of the J Street Drain. In 2009, 44 nests were initiated and 33 of these hatched. In 2010, 48 nests were documented, of which 35 hatched.

Western Snowy Plover

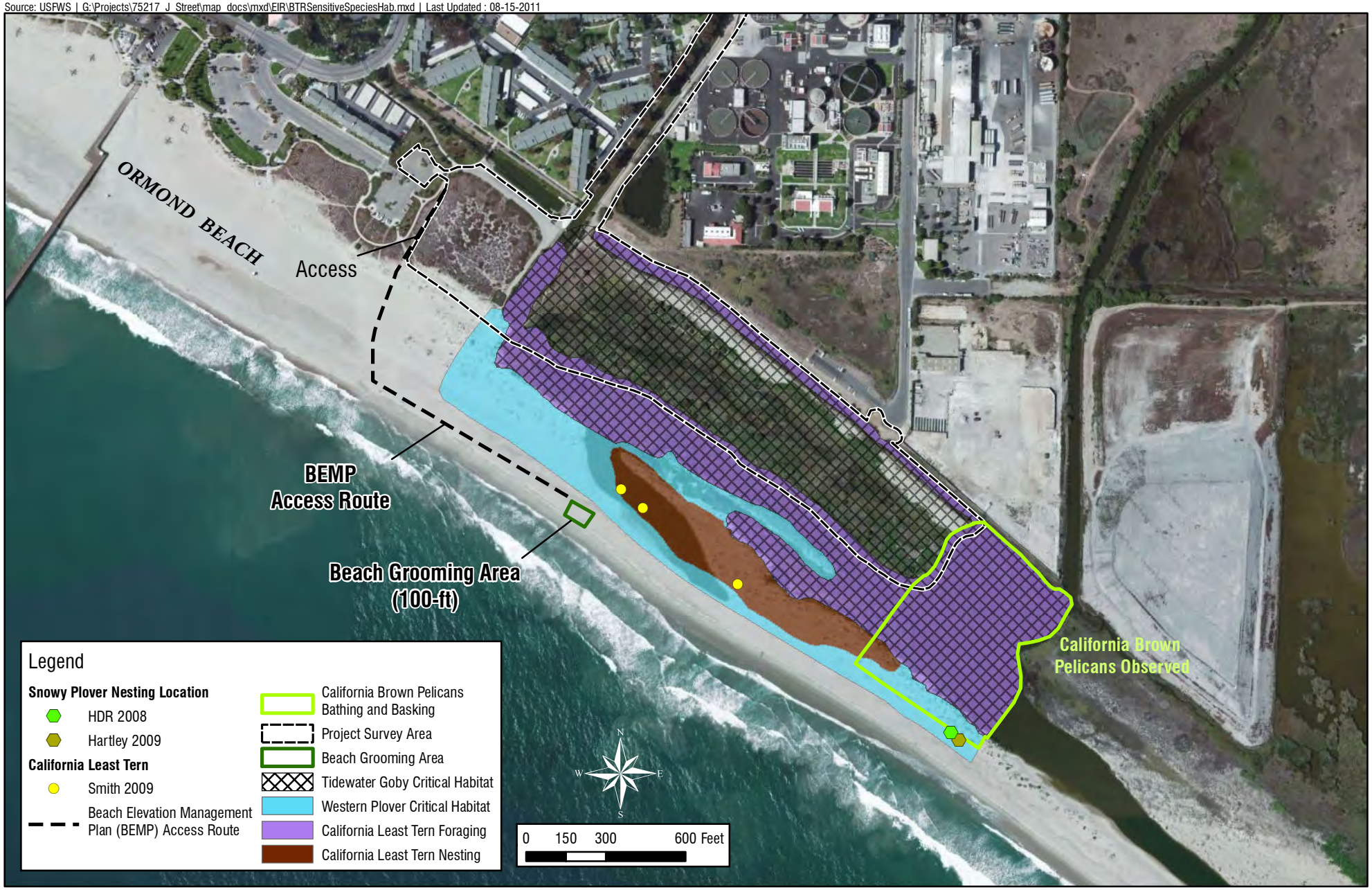
Federal Status: Threatened
State Status: None

The western snowy plover breeds along the west coast from Washington to Baja California, Mexico, including some inland localities. Western snowy plovers inhabit sandy beaches, mud flats, and saltpans. They nest in the upper reaches of beaches, flats, and pans above the ordinary high water mark. Western snowy plovers are year-round residents along the coasts, though they may exhibit both migratory and non-migratory characteristics.

Based on information in the CNDDB, nesting western snowy plovers have been documented adjacent to Ormond Lagoon. A general nesting area of western snowy plovers is located approximately 1.5 miles southwest of Port Hueneme. Other nesting western snowy plovers have been documented just north of the inlet to the Channel Island Harbor, four miles southwest of Oxnard. Breeding season surveys of Ormond Beach were conducted in 2009 and 2010 (Appendix D). In 2009, 33 nests were recorded, of which 18 successfully hatched. All of the nests, except one, were located east of the lagoon. The nearest nest was approximately 1,800 feet southeast of the J Street Drain. In 2010, 27 nests were recorded, of which 19 successfully hatched. All of these nests were located east of the lagoon in the vicinity of the Reliant power plant. Ten nests were located northwest of the plant, 12 nests were on the southeast side, and five nests were found in the salt panne east of the plant.

Suitable habitat for western snowy plover occurs within and adjacent to the southern survey area. In 2005, the USFWS designated critical habitat for the plover at Ormond Beach (CA-19B subunit). Ormond Beach is located west and adjacent to the project survey area. However, in 2005 USFWS removed a portion of Ormond Beach from the critical habitat designation for the plover. Specifically, the area removed from critical habitat extends from the J Street Drain north to the southern jetty of Port Hueneme due to the heavily disturbed nature of the area (Figure 4.2-5). Western snowy plovers are known to use Ormond Beach to breed and forage generally from Arnold Road to the Perkins Road estuary, which is adjacent to the eastern project survey boundary. A focused survey was conducted for this species on the project site by Davenport Biological Consulting in 2008 and none were identified within the project survey area. The absence of nesting plover within the project survey area is likely due to heavy disturbance occurring within the lagoon area (i.e., pedestrian traffic, domestic animals). Nesting plovers were observed adjacent to the project survey area on the southeast side of the Ormond Beach Lagoon.

Source: USFWS | G:\Projects\75217_J_Street\map_docs\mxd\EIR\BTRSensitiveSpeciesHab.mxd | Last Updated : 08-15-2011



Critical Habitat and Observed Sensitive Wildlife Species

FIGURE 4.2-5

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Light-footed Clapper Rail

Federal Status: Endangered
State Status: Endangered

Suitable habitat for the rail occurs within most of the coastal fresh and saltwater marshes of central to southern California, including the project site. Although most records of this species occur within chord grass and pickleweed dominated marshes, this species also uses cattail and bulrush dominated freshwater and brackish marshes.

The migratory behavior of clapper rails is poorly known; most populations of clapper rails are considered non-migratory. However, populations located in the northeast are largely migratory. The light-footed clapper rail is apparently a non-migratory resident of coastal salt and freshwater marshes. Still, dispersal movements of up to 21 kilometers have been documented. Therefore, some flexibility in mobility should be anticipated for the light-footed clapper rail. Flexibility in movement between suitable sites is also supported by the presence of just one subspecies of clapper rail from Santa Barbara County, California to San Quintine Bay, Baja California, Mexico.

The Ormond Beach Lagoon has never been monitored for this species. The closest monitored population of light-footed clapper rails occurs at Point Mugu. From 2000 to 2007, the population of rails at Point Mugu has ranged between seven and 17 individuals. Pair status remains unknown at Point Mugu. A protocol survey for the light-footed clapper rail was conducted within the southern survey area between April 2008 and June 2008. Although suitable nesting and foraging habitat for the species occurs within the project survey area (Figure 4.2-6), none were observed during the protocol survey.

Tidewater Goby

Federal Status: Endangered (Recommended for down-listing to threatened in *Tidewater Goby (Eucyclogobius newberryi) 5-Year Review: Summary and Evaluation*, prepared by USFWS, September 2007)
State Status: Species of Special Concern

The tidewater goby is endemic to California and is typically found in coastal lagoons, estuaries, freshwater tributaries, and marshes with relatively low salinities. The areas occupied by tidewater gobies "are dynamic environments that are subject to considerable fluctuations on a seasonal and annual basis," exhibiting sediment accumulation, sediment scour, and variable water levels within a single season (USFWS 2008). Its habitat is characterized by brackish shallow lagoons (one to two meters) and lower stream reaches where the water is fairly still but not stagnant. Tidewater gobies enter marine environments if sandbars are breached during storm events. The species' tolerance of high salinities likely enables it to withstand the marine environment, allowing it to colonize or reestablish in lagoons and estuaries following flood events.

Historically, the tidewater goby occurred in at least 110 California coastal lagoons from Tillas Slough near the Oregon border to Agua Hedionda Lagoon in northern San Diego County. The southern extent of its distribution has been reduced by approximately eight miles. The species is currently known to occur in about 85 locations, although the number of sites fluctuates with climatic conditions. Today, the most stable populations are in lagoons and estuaries of intermediate sizes (two to 50 hectares) that have remained relatively unaffected by human activities. The decline of the tidewater goby can be attributed primarily to urban, agricultural, and industrial development in and surrounding the coastal wetlands and alteration of habitats from seasonally closed lagoons to tidal bays and harbors. Some extirpations are

believed to be related to pollution, upstream water diversions, and the introduction of exotic fish species, most notably sunfishes and black basses. These threats continue to affect some of the remaining populations of tidewater gobies. Tidewater gobies have recently been observed in Mugu Lagoon, Ventura County, from which this species was previously presumed extirpated due to degraded water quality. Stable tidewater goby populations have persisted over time in other waterbodies (e.g., Santa Clara River, Ventura County).

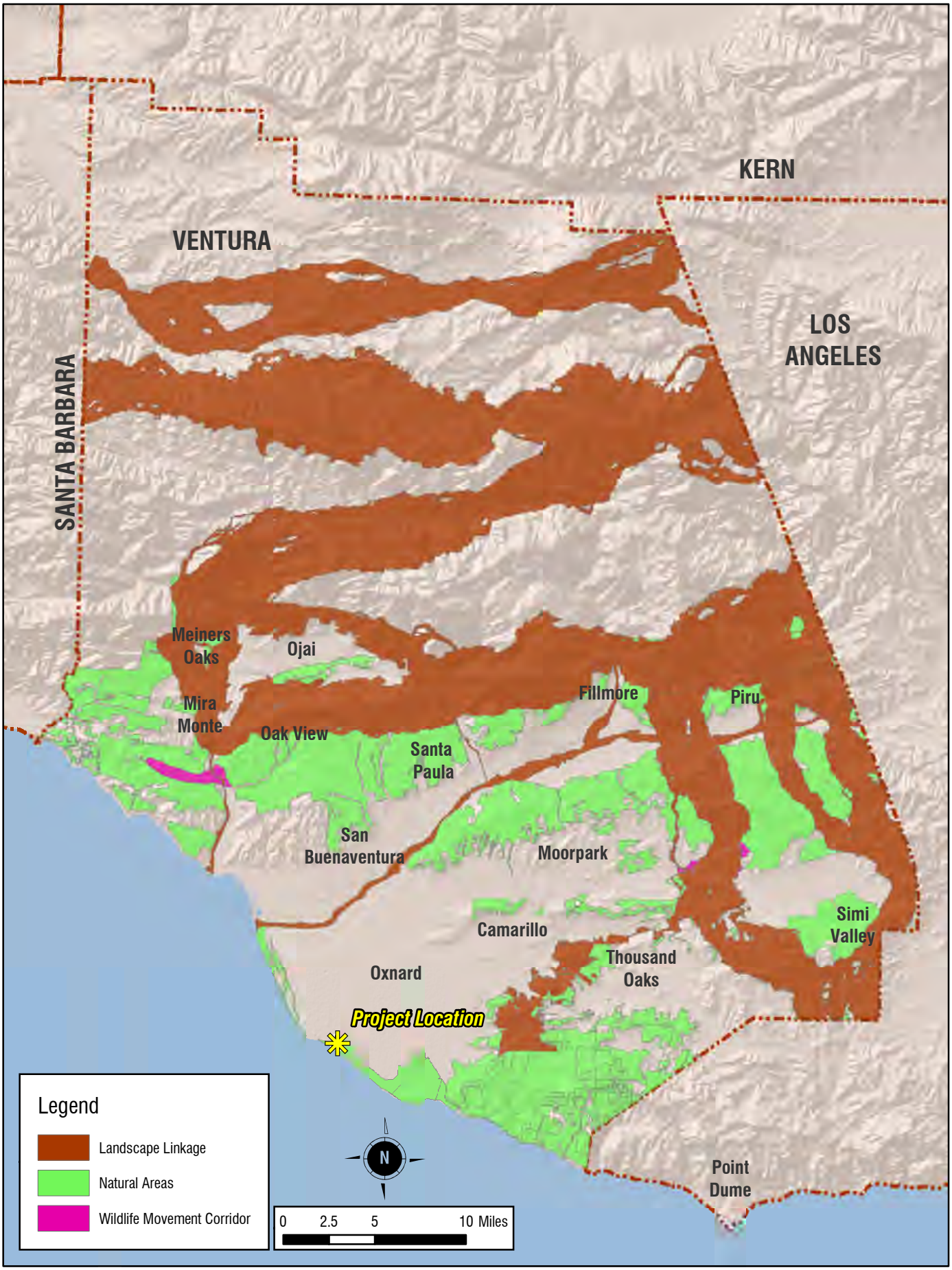
The Ormond Beach Lagoon is designated as critical habitat for the tidewater goby. The USFWS recovery plan for tidewater goby identifies that the species has occupied this area as recently as 2004. The southernmost portion of the project, located at the outlet of J Street Drain to the lagoon, occurs within the critical habitat (Figures 4.2-5 and 4.2-9). This species was observed in J Street Drain, adjacent to the Hueneme Drain Pump Station, during reconstruction of the pump station in 2005 and 2006.

Although the concrete substrate of J Street Drain is not suitable for spawning, gobies appear to use the downstream portion of the channel to forage. Spawning would occur in the lagoon adjacent to the existing concrete channel, where tidewater gobies could burrow into deep sands (Entrix 2007). Reproduction for this species peaks in late May to July and again in late summer through early fall (Chris Dellith, USFWS, meeting on August 2, 2011), however spawning has been observed throughout the year with the exception of December (USFWS 2008).

Jurisdictional Waters and Wetlands

According to the Jurisdictional Wetland Delineation Report prepared for the proposed project, the northern survey area does not support the appropriate indicators to be considered a federal or state jurisdictional wetland. The area consists primarily of a concrete-lined drain that did not support any water flows at the time of survey. Additionally, the northern survey area is not within the CCC Coastal Zone and, therefore, would not fall under CCC jurisdiction. Because the northern survey area consists of a dry concrete-lined drain outside of the CCC Coastal Zone, a wetland delineation was not performed for this area. However, because the northern survey area connects to traditional navigable waters (the Pacific Ocean), this portion of the J Street Drain potentially qualifies as waters of the U.S. under the federal Clean Water Act. Additionally, due to the less restrictive nature of the CDFG and CCC requirements, more areas generally qualify as state jurisdictional areas and federal jurisdictional areas are also considered state jurisdictional areas. Therefore, the channel portion of the northern survey area may also qualify as state waters.

The southern survey area, identified as the area from Hueneme Road south to the Pacific Ocean, consists of an existing concrete-lined drain and a portion of the Ormond Beach Lagoon. Within Ormond Beach Lagoon, the dominant vegetation community consists of SCSM and smaller amounts of CBM. Water was identified in the concrete-lined drain within the southern survey area at the time of survey. Because these flows periodically connect to traditional navigable waters (the Pacific Ocean), this portion of the J Street Drain is identified as waters of the U.S. by the federal Clean Water Act. Additionally, the results of transect and test pit analysis indicated that federal jurisdictional wetlands are located within the southern survey area (Figure 4.2-7); however, these areas are outside of the project boundaries. Table 4.2-2 shows the total acreage of federal wetlands and waters of the U.S. within the survey area. Further, Table 4.2-3 shows the total acreage of state jurisdictional areas within the survey area.



Source: First Source; Ventura County Planning Department| G:\Projects\75217_J_Street\map_docs\mxd\EIR\BTRWildlifeMovements.mxd | Last Updated : 12-29-08

Wildlife Movement Areas

FIGURE 4.2-6

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Source: First Source; HDR Wetland Delineation; Google Earth 2008 | \\hdrm-G:\Projects\75217_J_Street\map_docs\mxd\EIR\WeltandSouthResults.mxd| Last Updated : 02-12-09

Southern Survey Area - Jurisdictional Wetlands

FIGURE 4.2-7

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Table 4.2-2. USACE Jurisdictional Areas

	Jurisdictional Area
Waters of the U.S. (acres) - Concrete Channel	7.90
Waters of the U.S. (acres) - Natural Substrate	2.73
Wetlands (acres)	6.83
Total Jurisdictional Areas	17.46

Source: Jurisdictional Wetland Delineation Report, HDR 2009.

Table 4.2-3. CDFG and CCC Jurisdictional Areas

	Jurisdictional Area
Waters of the State – Concrete Channel	7.90
Waters of the State – Natural Substrate	2.73
CDFG Wetlands	10.92
CCC Jurisdictional Areas[1] (acres) 15.73	
Total State Jurisdictional Areas (acres)	21.55

Source: Jurisdictional Wetland Delineation Report, HDR 2009.
[1] CDFG and CCC jurisdictional area totals include USACE wetland and waters of the U.S. acreages. Also, the CCC jurisdictional area is contained within the CDFG wetlands and waters of the State.

It should be noted that a small area west of the drain outlet was superficially surveyed for any potential indicators of wetlands. This area is not part of the Ormond Beach Lagoon nor would it be affected by the proposed project. Due to the disturbed nature of this area, no potential indicators were present and, therefore, this area was not included within the wetland delineation. However, vegetation communities have been identified to disclose the condition of the area.

Wildlife Dispersal Corridor or Linkages

No regional biological corridors or linkages were identified within the project alignment (Figure 4.2-6). Therefore, no identified corridors or linkages would be impacted by project implementation. However, the lagoon portion of the project area is considered a natural area by the Ventura County General Plan. This natural area, consisting of coastal wetlands and lagoons, provides shelter, foraging, and nesting areas for birds, fish, mollusks, crabs, seals, and other marine organisms and plants (Ventura County General Plan, Section 1.5). The Ormond Beach Lagoon and adjacent dune/beach area is a staging area for migratory birds, such as the California least tern, killdeer, and black-necked stilt. In addition, the Lagoon could provide a potential local corridor for tidewater goby as they are known to disperse to other lagoons during major storm events if their current lagoon is breached. Therefore, a small amount of wildlife dispersal corridor/linkage could be impacted by project implementation.

4.2.2 Regulatory Setting

The following is a description of federal, state, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process.

Federal Endangered Species Act (16 USC §1531-1544)

The federal Endangered Species Act (ESA) provides protection for endangered and threatened species and requires conservation of designated species' critical habitats. An "endangered" species is a species in danger of extinction throughout all or a significant portion of its range. A "threatened" species is one that is likely to become "endangered" in the foreseeable future without further protection. Other special-status species include "proposed," "candidate," and "species of concern." Proposed species are those that have been officially proposed in the Federal Register for listing as threatened or endangered. Candidate species are those for which sufficient information is available to propose listing as endangered or threatened. "Species of concern" are species for which not enough scientific information has been gathered to support a listing proposal, but which still may be appropriate for listing in the future after further study. A "delisted" species is one whose population has reached its recovery goal and is no longer in jeopardy.

The federal ESA is administered by the USFWS and National Marine Fisheries Service (NMFS). Under the ESA, it is prohibited to take, harm, or harass species listed as threatened or endangered by the USFWS. A permit for taking a federally listed threatened or endangered species may be obtained either through Section 7 consultation (where the proposed action requires approval of a federal agency) or Section 10(a) (i.e., where the proposed non-federal action requires development of a Habitat Conservation Plan [HCP]). Both cases require consultation with the USFWS and/or NMFS, which ultimately issues a final opinion determining whether the federally listed species will be adversely impacted by a proposed project.

Fish and Wildlife Coordination Act (16 USC §661-667E)

The Fish and Wildlife Coordination Act of March 10, 1934, authorized the Secretaries of Agriculture and Commerce to assist and cooperate with federal and state agencies to protect, rear, stock, and increase the supply of game and fur-bearing animals, and to study the effects of domestic sewage, trade wastes, and other polluting substances on wildlife. Amendments to the Act require consultation with the USFWS, NMFS, and state agencies responsible for fish and wildlife resources for all proposed federal undertakings and non-federal actions needing a federal permit or license that would impound, divert, deepen, or otherwise control or modify a stream or water body, and to make mitigation and enhancement recommendations to the involved federal agency.

Migratory Bird Treaty Act (16 USC §703-712)

The MBTA provides special protection for migratory families of birds (i.e., those avian species that winter south of the U.S. but breed within the U.S.) by regulating hunting or trade. The Act prohibits anyone to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 Code of Federal Regulations (CFR) 10, including feathers or other parts nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). "Take" includes any disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young). Such activity is potentially punishable by fines and/or imprisonment. The use of families as opposed to individual species within the Act means that numerous non-migratory birds are extended protection under the MBTA. Most nesting birds are covered by the MBTA.

Executive Order 13112: Invasive Species

The purpose of this Executive Order is to prevent the introduction and control the spread of invasive plant and animal species. This law prohibits the federal government from authorizing or funding actions that

may cause or promote the introduction and/or spread of invasive species unless the agency has determined that the action's benefits clearly outweigh potential harm caused by invasive species; and that all feasible and prudent measures will be taken to minimize risk of harm. This Executive Order also requires federal agencies to consult with the Invasive Species Council, consistent with the Invasive Species Management Plan.

Executive Order 11990: Protection of Wetlands

Executive Order 11990 directs that federal agencies will provide leadership and will take action to minimize destruction, loss, or degradation of wetlands associated with: (1) acquisition, management, and disposition of federal land and facilities; (2) federally funded or assisted construction and improvement; and, (3) federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

Clean Water Act (33 USC §1251-1376)

The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to jurisdictional waters (including wetland/riparian areas) of the United States must obtain a state water quality certification that the discharge complies with other provisions of CWA. The RWQCBs administer the certification program in California.

Section 402 is regulated by the U.S. Environmental Protection Agency (USEPA) and establishes a permitting system for the discharge of any pollutant (except dredge or fill material) into waters of the United States. It establishes a framework for regulating municipal and industrial storm water discharges under the National Pollutant Discharge Elimination System (NPDES) program. The RWQCBs also administer the NPDES permits for construction activities and operations.

Section 404 establishes a permit program administered by the USACE regulating the discharge of dredge or fill material into waters of the United States, including wetlands, and jurisdictional non-wetland waters. The USACE has permit authority derived from Section 404 of the CWA (33 CFR Parts 320-330). The permit review process includes an assessment of potential adverse impacts to wetlands and streambed habitats and determination of any required mitigation measures. As a condition of the 404 permitting process, a 401 Water Quality Certification or waiver is required from the RWQCB. Where federally listed species may be affected, a Section 7 consultation with the USFWS under the federal ESA is required. Compliance with Section 106 of the National Historic Preservation Act must also be met through coordination with the State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP), and other interested parties.

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the federal ESA and is administered by the CDFG. State lead agencies are required to consult with CDFG to ensure that any action it undertakes is not likely to jeopardize the continued existence of any state listed endangered, threatened, or candidate plant and animal species. The take of a state endangered species is approved in a manner similar to that of the federal act, with a take permit being granted through Section 2081 of the CESA. Early consultation is emphasized to avoid potential impacts to sensitive species and to develop appropriate mitigation planning to offset project caused losses of listed species populations and their essential habitats. In addition to listed species, the CDFG also maintains a list of "Species of Special Concern," including species whose breeding populations in California may face local extirpation. To

avoid future listing of these Species of Special Concern as endangered or threatened, the CDFG recommends consideration of these species (although they do not as yet carry legal status) during analysis of the impacts of proposed projects.

California Fish and Game Code, §1600 et. seq.

The CDFG Code §1600 requires any person, state or local government agency or public utility proposing a project that may impact a river, stream or lake to notify the CDFG. In addition, to protect state listed species under the CESA, the CDFG also has surface water jurisdiction to protect wildlife values and native plant resources associated with waters of the State. CDFG requires a Section 1601 SAA for work that may impact waters of the State. Required conditions within the SAA are intended to address potentially significant adverse impacts within CDFG jurisdictional limits.

Ventura County General Plan

The following goal and policies included in the Ventura County General Plan are applicable to biological resources associated with the proposed project site:

Goal

Preserve and protect significant biological resources in Ventura County from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats, wetland habitats, coastal habitats, wildlife migration corridors, and locally important species/communities.

Policies

1. Discretionary development which could potentially impact biological resources shall be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures.
2. Discretionary development shall be sited and designed to incorporate all feasible measures to mitigate any significant impacts to biological resources. If the impacts cannot be reduced to a less than significant level, findings of overriding considerations must be made by the decision-making body.
3. Discretionary development that is proposed to be located within 300 feet of a marsh, small wash, intermittent lake, intermittent stream, spring, or perennial stream (as identified on the latest USGS 7 minute quad map), shall be evaluated by a County approved biologist for potential impacts on wetland habitats. Discretionary development that would have a significant impact on significant wetland habitats shall be prohibited, unless mitigation measures are adopted that would reduce the impact to a less than significant level; or for lands designated "Urban" or "Existing Community", a statement of overriding considerations is adopted by the decision-making body.
5. The California Department of Fish and Game, the U.S. Fish and Wildlife Service, National Audubon Society and the California Native Plant Society shall be consulted when discretionary development may affect significant biological resources. The National Park Service shall also be consulted regarding discretionary development within the Santa Monica Mountains or Oak Park Area.
6. Based on the review and recommendation of a qualified biologist, the design of road and floodplain improvements shall incorporate all feasible measures to accommodate wildlife passage.

Ventura County General Plan Coastal Area Plan

As a component of its General Plan, Ventura County has prepared and adopted a Coastal Area Plan to guide development actions near coastal resources. The following policies are applicable to biological resources associated with the proposed project site:

7. §30231 – The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, preventing depletion of groundwater supplies and substantial interference of ground water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.
8. §30233 (a) – The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects and shall be limited to the following:
    - Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
9. §30240 (a) – Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

City of Oxnard General Plan

The following policies included in the City of Oxnard General Plan Open Space/Conservation Element are applicable to biological resources associated with the proposed project site:

10. The City should encourage the preservation and enhancement of the wetlands in the Ormond Beach and Mugu Lagoon.
11. Sensitive habitat areas are to be designated as permanent open space on the Land Use Map.
12. The City should limit the recreational activities in open space areas with sensitive habitats to those activities that have minimal impact on sensitive habitats.
13. The City should consider setting aside nature preserves that encompass sensitive habitat areas and provide areas for educational and research purposes.

City of Oxnard Local Coastal Program

The City has an adopted Local Coastal Program consisting of a Coastal Land Use Plan and Coastal Zoning Regulations and Maps. The Coastal Zone boundary extends generally 1,000 yards inland from the sea. The Coastal Zone has been divided into four planning areas: McGrath/Mandalay Beach, Oxnard Shores, Channel Islands and Ormond Beach. Recreational uses are predominant in the McGrath/ Mandalay area; urban residential uses are concentrated in the Oxnard Shores area. The Channel Islands area contains the Channel Islands Harbor. The Ormond Beach area is separated from the rest of the City's Coastal Zone by the City of Port Hueneme, and is currently an industrial area. Further details and existing land use designations and policies are contained in the Coastal Land Use Plan.

City of Port Hueneme General Plan

The following policy included in the City of Port Hueneme General Plan Conservation/Open Space/ Environmental Resources Element is applicable to biological resources associated with the proposed project site:

Policy 1-2: Consider marine resources in coordination with state and federal agencies.

City of Port Hueneme Local Coastal Plan

The California Coastal Act is intended to protect the natural and scenic qualities of the California coastal zone. The coastal zone includes both Coastal Program land and water area. Approximately one-half of Port Hueneme's land area lies within the California coastal zone. Over half of the City area within the zone is part of the U.S. Naval Construction Battalion Center (USNCBC). Except for USNCBC property, the area within the coastal zone is subject to the California Coastal Act.

Port Hueneme's current Local Coastal Plan (LCP) was certified by the CCC in 1998. The LCP exists as an amendment to the existing General Plan and discusses the allowable land uses and applicable coastal resource issues for the planning areas within the City's coastal zone. The LCP continues to be implemented as the primary planning document for the coastal zone. Consistent with the coastal act's basic goal to "protect, maintain, and, where feasible, enhance and restore" the coastal zone, the Port Hueneme LCP identifies attainable goals and objectives specifically related to local conditions. The current LCP acts as the baseline for the revised program included as part of this General Plan Update.

4.2.3 Significance Thresholds

Significance thresholds are addressed according to the thresholds set forth by the County of Ventura 2011 Initial Study Assessment Guidelines, County of Ventura *Administrative Supplement to the State CEQA Guidelines*, County of Ventura General Plan, and the state *CEQA Guidelines*.

According to the County of Ventura Threshold Criteria and *CEQA Guidelines*, implementation of the proposed project would result in a significant impact upon biological resources if the project causes any of the following:

- Directly or indirectly reduce a species' population, reduce a species' habitat, increase habitat fragmentation, reduce or degrade a sensitive plant community, or restrict reproductive capacity of a species;
- Result in the direct reduction of or a substantial indirect impact to waters or wetland habitat. All waters and wetlands are considered important resources to Ventura County. Potentially significant impacts include vegetation removal, grading, flow obstruction/diversion, change in velocity/siltation/flow volume/runoff rate, fill placement, structure placement, road crossing construction, culvert/ underground pipe placement, disruptions to wetland/riparian plant communities, and interference with the hydrologic regime;
- In accordance with the State Coastal Act and the County's Local Coastal Program, virtually any direct reduction of, or indirect impact to, a coastal habitat, including riparian habitats, coastal dunes, beaches, or other sensitive natural communities, could be considered significant;
- Substantially interfere with the use of a migration corridor by fish or wildlife. This could occur through elimination of native vegetation, erection of physical barriers, habitat isolation, or

intimidation of fish or wildlife via introduction of noise, light, development, or increased human presence;

- Determination by a qualified biologist on a case-by-base basis that locally important species/communities are significantly impacted;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Ventura County *Initial Study Assessment Guidelines* were updated in April 2011. The thresholds of significance for biological resources were amended to provide for more detailed explanation for determining project impact significance; however, the general thresholds as outlined above are still applicable. The update to the thresholds does not change the project-level impact analysis below.

4.2.4 Project-Level Impact Analysis

Impacts assessed to biological resources from the project include direct and indirect impacts. Direct impacts are those that affect the biological resources such that those resources are not expected to recover to their pre-impacted state (e.g., permanent development of a site through grading and building of structures). Direct impacts may be considered temporary or permanent (e.g., the installation of a pipeline is considered a direct and temporary impact, whereas the construction of a building is considered a direct and permanent impact). Indirect impacts occur secondary to the project's direct impacts, such as changes in general plant composition due to loss of substrate or other factors that may affect resources such as noise, dust, and lighting. Indirect impacts may be considered temporary or permanent depending upon the situation; for example, the dust or noise levels associated with the construction of the new building is considered an indirect and temporary impact, whereas the support functions of a structure (such as the parking lot), would have indirect and permanent impacts such as lighting and storm water runoff.

Directly or indirectly reduce species population, reduce species habitat, increase habitat fragmentation, reduce or degrade a sensitive plant community, or restrict reproductive capacity of a species?

Construction

Vegetation Communities/Habitats

The majority of the proposed J Street Drain project consists of urban developed land (UD). Within the northern survey area, the J Street Drain is a concrete lined channel with surrounding residential and commercial development. Project construction within the northern survey area would occur entirely within the concrete-lined channel, which is developed (Figure 4.2-8). Therefore, no impacts to sensitive vegetation communities within the northern survey area would occur during construction. However, the southern survey area supports four sensitive vegetation communities: CBM; SCSM; OW; and SFD. One sensitive vegetation community, OW, would be temporarily, directly impacted by project construction (Figure 4.2-9 and Table 4.2-4).

Table 4.2-4. Project Impacts to Vegetation Communities

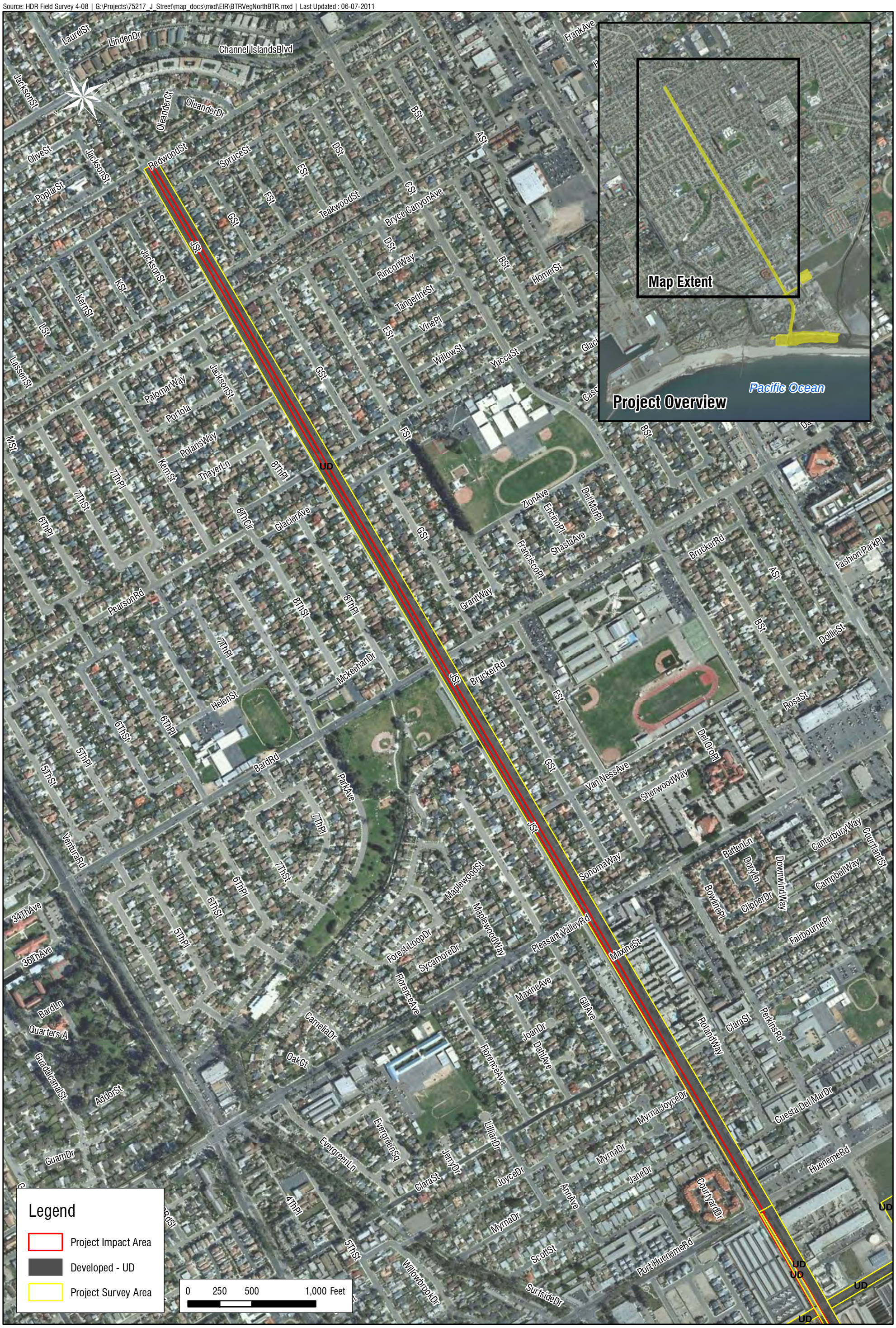
Habitat Type	Existing Acreage Within the Survey Area	Project Impacts (acres)
Coastal Brackish Marsh (CBM)	2.98	0.0
Disturbed Habitat (DH)	6.76	0.54
Urban/Developed (UD)	32.44	6.73
Eucalyptus Woodland (EW)	1.18	0.13
Open Water (OW)	2.27	1.80
Southern Coastal Salt Marsh (SCSM)	8.26	0.0
Southern Foredune (SFD)	2.6	0.0
Total	56.49	9.20

Construction activities associated with the proposed project would block tidal flow into the J Street Drain as the drain is deconstructed, excavated, and re-lined with concrete. This would essentially temporarily eliminate the OW habitat within the J Street Drain since the area would have to be dry during construction activities. EW located on the west side of the J Street Drain and within the southern survey area would be removed during construction activities. EW located on the eastern side of the J Street Drain would not be impacted by the proposed project. The impacted area of EW is located within the City of Port Hueneme. Impacts to EW are not considered significant since the habitat is nonnative and is not considered sensitive, threatened, or endangered by the CDFG or the USFWS. Construction activities located within the lagoon portion of the project area would result in an impact to OW. Impacts to OW habitat would be considered significant and require mitigation. Disturbed habitat (DH) areas are not considered sensitive; therefore, impacts to this vegetation community would be less than significant. However, since construction activities would occur within and immediately adjacent to sensitive habitat, indirect impacts to OW, CBM, SFD, and SCSM would occur. Indirect impacts include disturbance associated with significant noise levels and increased intrusion of workers/equipment. These indirect impacts are considered significant and mitigation is required.

Sensitive Botanical Species

Two sensitive botanical species have the potential to occur on site: Ventura marsh milkvetch and saltmarsh bird's beak. Appropriate habitat occurs within the southern survey area of the project site within the SFD located along the northeastern boundary of the lagoon and in the northwestern corner of the project survey area. Construction of the proposed project would not impact SFD within the project survey area. In addition, during the general biology survey (conducted during the growing season), these species were not observed on site. The Ventura marsh milkvetch is a perennial species and would have been detected at the time of the survey. There were no species of saltmarsh bird's beak observed during the survey. Therefore, construction of the proposed project would not result in an impact to sensitive plant species and no mitigation is required.

Source: HDR Field Survey 4-08 | G:\Projects\75217_J_Street\map_docs\mxd\EIR\BTRVegNorthBTR.mxd | Last Updated : 06-07-2011



Project Impacts - Northern Vegetation Communities

FIGURE 4.2-8

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Source: HDR Field Survey 4-08; Google Earth Aerial 2008; | G:\Projects\75217_J_Street\map_docs\mxd\EIR\BTRveg_impacts.mxd | Last Updated : 08-15-2011

Project Impacts - Southern Vegetation Communities

FIGURE 4.2-9

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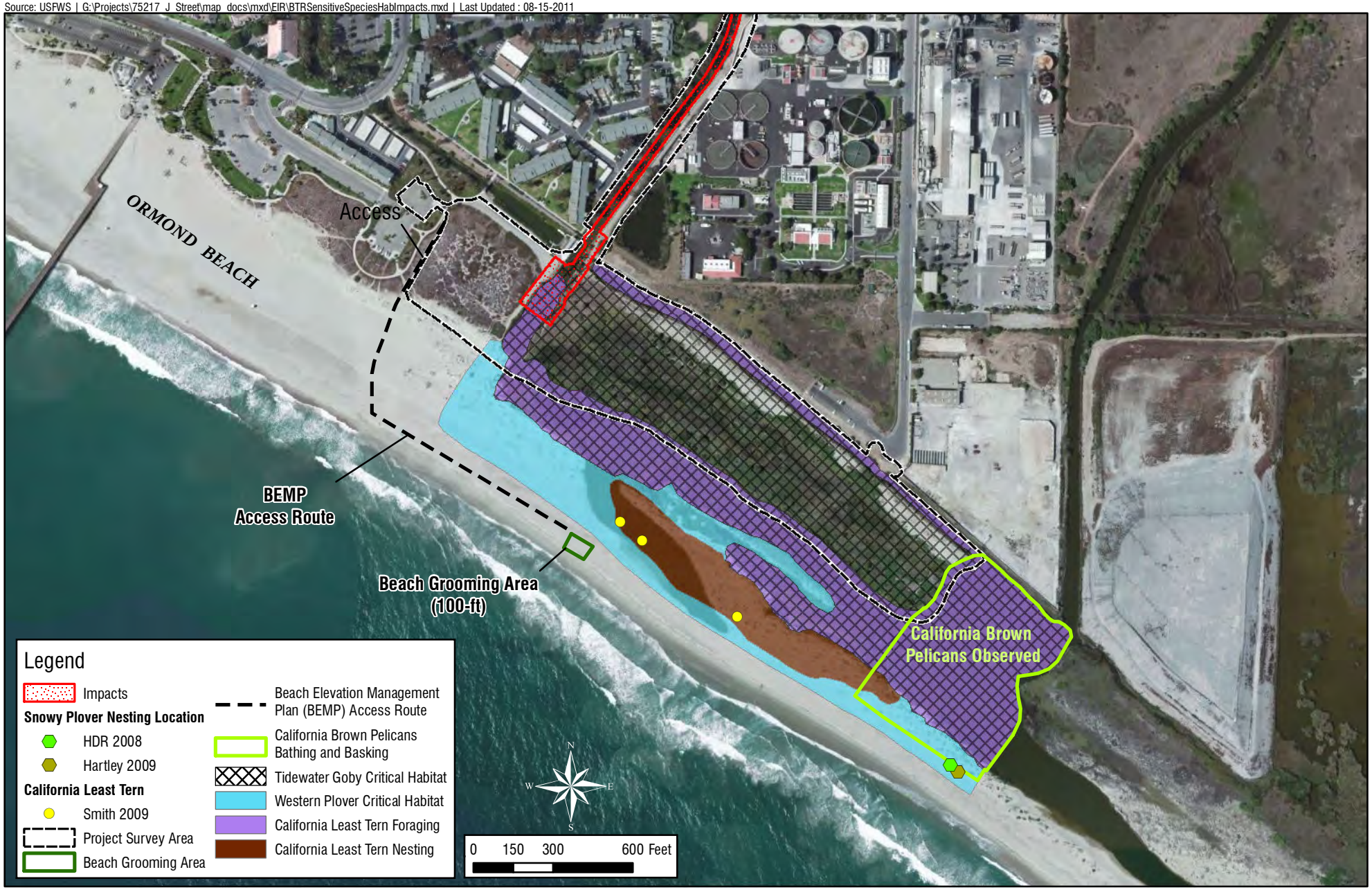
Source: USFWS | G:\Projects\75217_J_Street\map_docs\mxd\EIR\BTRSensitiveSpeciesHabImpacts.mxd | Last Updated : 08-15-2011



Project Impacts to Critical Habitat and Observed Sensitive Wildlife Species

FIGURE 4.2-10

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Sensitive Wildlife Species

Belding's Savannah Sparrow

Despite the presence of SCSM, no Belding's savannah sparrows were observed within the project area during any of the biological field surveys conducted for the proposed project. Given the number and timing of survey activities, Belding's savannah sparrow should have been detected if it was breeding within the survey area. Since no Belding's savannah sparrows were identified during the survey, the proposed project is not anticipated to substantially affect the species. Impacts would be less than significant.

California Brown Pelican

During the general biological survey, the California brown pelican was observed foraging, basking, and bathing within the general vicinity of the southern survey area of the project site. However, suitable nesting habitat for the species does not occur within the project area. Therefore, impacts to nesting brown pelicans would not occur and impacts to this species would be considered less than significant.

California Least Tern

A focused California least tern survey was conducted within the southern survey area by Davenport Biological Services (August 2008), and CDFG sponsored breeding surveys of the Ormond Beach Area were conducted in 2009 and 2010. Potential nesting and foraging habitat for the California least tern occurs on site. However, the proposed project would not impact potential tern nesting habitat due to the distance between the potential nesting habitat and the project impact area (Figure 4.2-10). Additionally, although suitable habitat for this species occurs within the southern survey area, the species was not observed nesting on site during the protocol survey. Therefore, direct impacts to potential tern habitat would be less than significant.

Foraging habitat for the California least tern occurs within the project survey area. Should construction occur within the breeding season, indirect impacts (i.e., construction noise, lighting, etc.) to the species may occur. Approximately 0.31 acres of foraging habitat for the California least tern occurs within the project area. Dewatering of the work area upstream of the coffer dam during the breeding season would temporarily remove a small portion of the total foraging habitat during Phase I construction (Figure 4.2-10). In addition, sediment eroded as a result of construction activities may enter the lagoon and potentially increase the turbidity of the water. This would significantly impact the ability of California least terns to forage in the lagoon. Therefore, impacts to the California least tern foraging habitat would be considered significant and require mitigation.

Western Snowy Plover

Suitable habitat for the western snowy plover occurs within the southern survey area, as determined during focused surveys for the species conducted by Davenport Biological Services (August 2008), and breeding surveys sponsored by CDFG in 2009 and 2010. Construction of the proposed project would not impact SFD located on site, which is considered potential plover nesting habitat. In addition, a focused survey was conducted for the species and none were observed on site or within the project survey area. The absence of plover within the project survey area, and specifically within onsite SFD, may be attributed to the frequency of human disturbance. Therefore, direct impacts to potential plover habitat would be less than significant. However, nesting plovers were observed adjacent to the survey area to the

east and project construction could result in temporary indirect impacts to the species. These impacts are considered significant and, therefore, mitigation is required.

Light-footed Clapper Rail

Suitable habitat for the light-footed clapper rail occurs within the southern survey area. However, the species was not observed within or adjacent to the project survey area during protocol surveys conducted by Davenport Biological Services (August 2008). Impacts to the light-footed clapper rail would not occur due to project construction.

In addition, a large population of California ground squirrels (*Spermophilus beecheyi*) inhabits the southern tip of the project site. California ground squirrels may prey on the eggs and chicks of ground nesting birds such as light-footed clapper rails. The suitable nesting area is also degraded due to the presence of exotic invasive plants (e.g., sweet clover, crab grass, and ice-plant). These influences have reduced the size of suitable habitat for the light-footed clapper rail within the project survey area. Therefore, although suitable habitat for the light-footed clapper rail occurs in the project survey area, due to low quality of this habitat and the potential for predation, it is not anticipated that the light-footed clapper rail would utilize this habitat.

Tidewater Goby

Suitable tidewater goby habitat occurs within the southern survey area at the outlet of J Street Drain to the lagoon. The Ormond Beach Lagoon has been designated as critical habitat for the federally endangered tidewater goby. The northern survey area consists of a concrete channel and does not qualify as suitable goby habitat. In the southern survey area, the project proposes to install a cofferdam within the lagoon. This area would be drained and used in the construction of the southern portion of the drain, the 40-foot sand ramp, and for the construction work area. The ramp would begin at the terminus of the concrete drain and would serve as a transition between the newly constructed drain and the natural substrate of the lagoon. Natural sand substrates are used by gobies for burrowing during breeding. The drained portion of the lagoon, including the 40-foot ramp, would occur within potential burrowing habitat for the tidewater goby and, therefore, would directly impact designated critical habitat for the species (Table 4.2-5 and Figure 4.2-10). In addition, tidewater gobies have been observed in J Street Drain adjacent to the Hueneme Drain Pump Station. Although this area, which is concrete-lined, does not support reproduction, the species can forage there.

Table 4.2-5. Project Impacts to Tidewater Goby Critical Habitat

Tidewater Goby Critical Habitat	Existing Acres in Survey Area	Project Impacts
On site	18.1	0.57[1]

[1] Impacts to tidewater goby habitat would be temporary.

The project could directly impact tidewater gobies as a result of construction in areas where the species is known to occur. Impacts to goby critical habitat would be temporary within the confines of the cofferdam (including the sand ramp) and would eventually return to a more natural state as influenced by tidal movement and other lagoon conditions. Temporary loss of foraging areas within the existing concrete-lined channel (not designated as critical habitat) would also occur during construction. Erosion of soils or other materials into the lagoon during construction may increase water turbidity, which would result in an impact to goby foraging. If coffer dam construction and site dewatering occurs during the peak breeding

periods of late spring/early summer and late summer/early fall, the project could adversely affect active burrows and eggs. Any impacts to tidewater goby and its habitat, including foraging and critical habitat, are considered significant. Therefore, project construction would result in significant impacts and mitigation is required.

Raptor Habitat, Nesting, and Foraging

Although nesting or foraging raptors were not observed during the general biological survey, potential nesting and foraging habitat occur within the project area (e.g., EW). A portion of EW is located along the west side of the existing drain in the southern survey area. This woodland would be removed during construction activities. Should migratory birds, including raptors, occupy or nest in the EW during construction, a significant impact would result. In addition, several species of migratory birds were observed nesting and foraging within the lagoon portion of the project survey area. Although the impact associated with the removal of the trees is less than significant because EW is not a native or sensitive habitat, the consequential impacts to migratory birds, including raptors, would be considered significant. Thus, mitigation is required to reduce impacts to migratory birds to below a level of significance. Additionally, noise generated from construction activities due to project implementation could exceed acceptable noise levels set by the USFWS and may result in an indirect impact to nesting migratory birds. Therefore, indirect impacts to nesting migratory birds, including raptors, would be considered significant and mitigation is required.

Operation

Vegetation Communities/Habitats

Operation of the proposed project entails the functioning of the J Street Drain with increased capacity and some maintenance activities. Therefore, operational activities are not anticipated to impact vegetation communities or habitats because the drain, a concrete-lined channel, would generally function as it does under existing conditions and no new impacts would result from the increased drain capacity. Some maintenance activities, such as sediment removal and vegetation control, have the potential to result in operational impacts to the OW habitat found in the southern survey area. However, best management practices (BMPs) established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program would be implemented to avoid significant impacts. Specifically, BMP-2, as described in Table 1.9-1 in Section 1.0 of this DEIR, requires measures to prevent downstream water quality impacts (e.g., to open water habitat) during concrete channel cleaning. BMP-3 requires stabilization of temporary stockpiles during channel cleanouts to prevent migration of sediments into the channel. BMP-15 requires the District to mitigate/replace native wetland or riparian vegetation removed from areas adjacent to the facility. Implementation of BMP-2, BMP-3, and BMP-15 would preclude significant impacts to vegetation communities/habitats associated with maintenance activities.

Furthermore, the modification of the bed, bank, and/or vegetation in a natural drainage (and certain man-made drainages) is regulated by the CDFG under Section 1600 et seq. of the Fish and Game Code. Such modifications require an SAA, which would preclude impacts to vegetation communities without appropriate mitigation. Additionally, activities that result in the discharge of dredged or fill material in watercourses (such as bank stabilization and excavation) are also regulated by the USACE under Section 404 of the CWA. Issuance of a 404 permit also requires a 401 Water Quality Certification by the RWQCB. Approval and issuance of a 404 permit and 401 Water Quality Certification would ensure that vegetation communities/habitats are not significantly impacted by the function of the J Street Drain. The CDFG, USACE, and RWQCB are public agencies committed to protecting and preserving natural

resources. The proposed project is required from a regulatory standpoint to coordinate and comply with the regulations and policies of these agencies. Therefore, by coordinating with the CDFG, USACE, and RWQCB and complying with applicable regulations and District Operations and Maintenance BMPs, operational impacts to vegetation communities/habitats would be less than significant.

Sensitive Botanical Species

Although two sensitive botanical species, the Ventura marsh milkvetch and saltmarsh bird's beak, have the potential to occur within the SFD habitat on site, these species were not observed at the time of the general biological survey. Therefore, it is not anticipated that operation of the proposed project would impact sensitive botanical species.

Sensitive Wildlife Species

Belding's Savannah Sparrow

No Belding's savannah sparrows were observed in the project area during any of the biological field surveys conducted for the proposed project. Therefore, no operational impacts are anticipated. Impacts would be less than significant.

California Brown Pelican

Suitable nesting habitat for the California Brown Pelican does not occur within the project area. Therefore, it is not anticipated that function of the drain or associated maintenance activities would impact this species. Operational impacts would be less than significant.

California Least Tern

Due to the distance between the J Street Drain and the potential California least tern nesting habitat, it is not anticipated that operation of the proposed project would impact nesting California least terns (Figure 4.2-10). However, maintenance activities such as sediment removal and vegetation control have the potential to occur within California least tern foraging habitat. These maintenance activities may indirectly impact California least tern by creating noise, light, and disturbance resulting from human presence. However, BMPs have been proposed in the Final Program EIR for the Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program adopted by the District in May 2008. Specifically, BMP-4, as described in Table 1.9-1 in Section 1.0 of this DEIR, requires that a qualified biologist conduct nesting bird surveys prior to maintenance activities near riparian habitat. BMP-8 and BMP-22 further require surveys before maintenance activities, along with implementation of avoidance measures, and relocation as needed. These measures also require the District to consult with CDFG and USFWS on appropriate avoidance and relocation measures if California least terns are observed in or near the work area during pre-maintenance surveys. Consultation shall occur prior to conducting any work that would affect this species. Implementation of BMP-4, BMP-8, and BMP-22 would preclude indirect impacts associated with maintenance activities. Therefore, indirect impacts are considered less than significant.

Western Snowy Plover

Although suitable habitat for the western snowy plover occurs in the vicinity of the project impact area, no plovers were observed during the time of survey on site or within the project survey area. The absence

of plover may be attributed to the frequency of human disturbance. Therefore, because no western snowy plovers were observed on site, operational impacts would be less than significant.

Light-footed Clapper Rail

No light-footed clapper rails were observed on site at the time of survey. The potential habitat within the project survey area is of low quality and puts nesting birds, such as the light-footed clapper rail, at risk of predation by California ground squirrel. Therefore, light-footed clapper rail is not anticipated to occur in the project area. Operational impacts would be less than significant.

Tidewater Goby

Suitable habitat for the tidewater goby occurs within the project area. Upon completion of construction activities, it is not anticipated that any other impacts to tidewater goby would occur. It should be noted that the deepening of the channel (by approximately four feet) would change the existing water levels in the lagoon. However, the lagoon is a dynamic system where the water levels fluctuate. The natural sandy substrate of the lagoon bottom would be replaced on the dewatered earthen lagoon bottom, including the transition ramp, upon completion of construction, restoring tidewater goby breeding habitat prior to operations. Similar to existing conditions, maintenance activities such as sediment removal and vegetation control have the potential to impact tidewater gobies and their foraging habitat at the south end of J Street Drain. However, BMPs have been proposed in the Final Program EIR for the Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program adopted by the District in May 2008 that would be implemented in the J Street project. Specifically, BMP-8 and BMP-22, as described in Table 1.9-1 in Section 1.0 of this DEIR, require surveys before maintenance activities, along with implementation of avoidance measures, and relocation as needed. These measures also require the District to consult with CDFG and USFWS on appropriate avoidance and relocation measures if tidewater gobies are observed in or near the work area during pre-maintenance surveys. Consultation shall occur prior to conducting any work that would affect this species. Implementation of BMP-8 and BMP-22 would preclude direct and indirect impacts associated with maintenance activities. Therefore, operational impacts to tidewater goby are anticipated to be less than significant.

Raptor Habitat, Nesting, and Foraging

Several species of migratory birds were observed nesting and foraging within the lagoon portion of the project survey area. Indirect impacts such as noise, light, and the presence of humans resulting from maintenance activities may disturb migratory birds. However, BMPs have been proposed in the Final Program EIR for the Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program adopted by the District in May 2008. Specifically, BMP-4, as described in Table 1.9-1 in Section 1.0 of this DEIR, requires that a qualified biologist conduct nesting raptor surveys prior to maintenance activities near riparian habitat. Implementation of BMP-4 would preclude indirect impacts associated with maintenance activities. Therefore, indirect impacts are considered less than significant.

Beach Elevation Management Plan

Vegetation Communities/Habitats

The access route to, and on, the beach for periodic sand berm grooming activities would follow the same pathway that lifeguards and beach maintenance vehicles use on a daily basis to reach the beach. It should be noted that the BEMP access route and grooming location would only be used periodically to groom the

sand berm to a specific maximum height in advance of a storm event, as specifically defined in Section 3.6 of the EIR. While BEMP access is anticipated to follow the established route used daily by lifeguard patrol vehicles, this route occurs adjacent to potentially sensitive habitat. Should grooming activities occur within the established route, it is anticipated that potentially significant impacts may occur to sensitive vegetation communities. However, in the event that the BEMP is implemented, a qualified biologist would be on site to monitor activities and avoid impacts to sensitive vegetation communities to the greatest extent feasible. Vegetation communities located within the grooming location were not mapped during the general biological survey; however, the selected location would coincide with that established during an emergency grooming event conducted in October 2010. This location consisted of open sandy beach, as did the access route (Figure 4.2-10). By following past practice, sensitive dune habitat would be avoided. Grooming would require advance coordination and potential permitting with the CCC, CDFG, Los Angeles RWQCB, USACE, and USFWS. BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program (see discussion of Operations Impacts above) to protect biological resources, including sensitive plant communities, would be implemented during the BEMP as they are during existing operations and maintenance activities. Therefore, impacts to sensitive vegetation communities would be less than significant.

Sensitive Botanical Species

The potential for sensitive plant species to occur along the BEMP access route and grooming location is low due to the frequent disturbance in the area. Should grooming activities occur within the established route, it is anticipated that less than significant impacts would occur to sensitive botanical species. If the BEMP were to be implemented, a qualified biologist would be on site to monitor activities and direct workers around potential sensitive botanical species to the greatest extent feasible. Direct impacts would be unlikely, as the access route and grooming location would coincide with open sandy beach. Grooming would require advance coordination and potential permitting with the CCC, CDFG, Los Angeles RWQCB, USACE, and USFWS. BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program (see discussion of Operations impacts above) to protect biological resources, including sensitive plants, would be implemented during the BEMP as they are during existing operations and maintenance activities. Therefore, impacts to sensitive botanical species would be less than significant.

Sensitive Wildlife Species

Belding's Savannah Sparrow

The access route to the grooming location would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the beach. During the general biological survey conducted by HDR, the BEMP access area was not surveyed as it is outside of the project survey area. However, observations of portions of this area were made opportunistically during the focused California least tern and western snowy plover survey (Appendix D) conducted for the project. No Belding's savanna sparrows were identified during the surveys. Nonetheless, in the event the BEMP would be activated, a qualified biologist would be on site to monitor activities and avoid impacts to habitat that could support Belding's savannah sparrow to the greatest extent feasible. Therefore, implementation of the BEMP is not anticipated to affect Belding's savannah sparrow. Impacts would be less than significant.

California Brown Pelican

The BEMP access route and grooming location occur adjacent to known basking habitat for the California brown pelican. Therefore, potentially significant impacts to the California brown pelican would occur as a result of BEMP implementation. If the BEMP were to be activated, impacts would occur over a brief period of time, as work near the basking habitat would be completed and equipment removed within a few hours. In addition, a qualified biologist would be on site to monitor activities and avoid impacts to potential brown pelicans to the greatest extent feasible. Any direct impacts to the species would require assessment after the grooming, as detailed in the BEMP. This includes coordination and potential permitting with the CCC, CDFG, Los Angeles RWQCB, USACE, and USFWS. Grooming would require advance coordination and permitting. BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program (see discussion of Operations impacts above) to protect biological resources, including brown pelicans and their habitat, would be implemented during the BEMP as they are during existing operations and maintenance activities. Therefore, impacts to California brown pelican would be less than significant.

California Least Tern

The BEMP access route and grooming location occur adjacent to nesting and foraging habitat for the California least tern. Therefore, potential impacts to the California least tern habitat would occur as a result of BEMP implementation. California least terns nest south of the project, near the Reliant power plant, in a loose colony numbering about 60 pair. They forage in the lagoon and offshore. Occasionally, three to five pair nest between the lagoon and the shore. In the event of BEMP implementation, work would occur in the fall or winter, during the storm season. California least tern would not be directly impacted because this species is absent from the project area between mid-September and early May. By October, they have migrated out of the area. A qualified biologist would be on site to monitor activities and avoid impacts to potential California least tern nesting habitat. Grooming would require advance coordination and potential permitting with the CCC, CDFG, Los Angeles RWQCB, USACE, and USFWS. BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program (see discussion of operations impacts above) to protect biological resources, including least terns and their habitat, would be implemented during the BEMP as they are during existing operations and maintenance activities. Therefore, impacts to California least tern would be less than significant.

Western Snowy Plover

The BEMP access route and grooming location occur within designated critical habitat for the western snowy plover. However, this route and grooming location will avoid all nesting sites used by the western snowy plover in 2008, 2009, and 2010. The snowy plovers nest in dune areas that are lightly vegetated. The main breeding area is near the Reliant power plant where about 30 pair regularly nest. One to four nests are found each year in the dunes between the lagoon and the shoreline. Plovers nest from April to September. Unlike the terns, they also winter in the area. Throughout the year they forage by running along the beach above the waterline in search of insects. The BEMP would be implemented during the rainy season and is not likely to overlap with the WSP breeding season. Therefore, direct impacts to the WSP nests are not anticipated as a result of BEMP implementation. In the event the BEMP would need to be activated, impacts would occur over a brief period of time, as work in or near suitable habitat would be completed and equipment removed within a few hours. A qualified biologist would be on site to monitor activities and avoid impacts to western snowy plovers to the greatest extent feasible. Impacts to potential nest sites (lightly vegetated dunes) would be avoided by ensuring that grooming occurs exclusively on

open sandy beach. Grooming would require advance coordination and potential permitting with the CCC, CDFG, Los Angeles RWQCB, USACE, and USFWS. BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program (see discussion of Operations impacts above) to protect biological resources, including western snowy plovers, would be implemented during the BEMP as they are during existing operations and maintenance activities. Therefore, impacts to western snowy plover would be less than significant.

Light-footed Clapper Rail

The BEMP access route and grooming location would occur within beach habitat. These areas are not located within potential nesting and foraging habitat for the light-footed clapper rail. Therefore, no impacts to the light-footed clapper rail would occur as a result of BEMP implementation.

Tidewater Goby

The Ormond Lagoon is designated critical habitat for the tidewater goby; the surrounding beach habitat is not critical habitat. Natural breaching of the lagoon into the Pacific Ocean occurs during winter storm events when the lagoon level rises and heavy surf combine to overtop the beach sand between them. Although gobies may be washed into the ocean, the main population persists in the lagoon. Mechanical breaching of the lagoon under non-winter storm conditions is considered "take" of tidewater gobies by USFWS and would be a significant impact under CEQA.

In January 2010, the beach berm rose to an elevation such that water in the lagoon did not overtop the berm and instead flowed northward flooding the upstream residential and commercial/industrial properties, including the OWWTP. To avoid this public health and safety problem in the future, the BEMP was developed. Periodic grooming (grading via mechanical equipment) to reduce the elevation of the sand berm would occur when the sand berm height exceeds a target safe elevation above which flooding of the properties to the north would occur. Beach grooming was selected instead of lagoon breaching to mimic natural conditions and avoid direct impacts to tidewater gobies. Under a grooming regime, the lagoon would breach under natural conditions when storm water runoff and heavy surf cause the lagoon water surface elevation to exceed the groomed berm height.

To avoid direct impacts to tidewater gobies and their habitat, the BEMP access route and beach grooming activities would occur within beach habitat. A qualified biologist would be on site to monitor activities and ensure potential impacts to tidewater gobies are avoided to the greatest extent feasible by directing equipment away from the lagoon edge and monitoring the height of the berm. In addition, BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program (see discussion of Operations impacts above) to protect biological resources, including tidewater gobies, would be implemented during the BEMP as they are during existing operations and maintenance activities.

Implementation of the BEMP would avoid take of tidewater gobies, resulting in a less than significant impact under CEQA. BEMP approval by the CCC, CDFG, Los Angeles RWQCB, USACE, and USFWS would occur concurrent with or subsequent to approval of this EIR, and followed by appropriate permitting.

USFWS Consultation

On February 3, 2010, the District met with Chris Dellith of the USFWS. Aspects of the project affecting tidewater goby were discussed. It was determined that breaching the lagoon would be disruptive to

nesting birds and could cause take of gobies. Instead, an emergency response plan that would manage the sand berm height but avoid breaching directly was preferable. Such an event should only occur during the winter rains which are outside of the avian breeding season.

Coordination with agencies and implementation of BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program are stipulations of the BEMP and are considered project design features. Therefore, when considered in combination with the avoidance of direct lagoon breaching, impacts to tidewater goby would be less than significant.

Raptor Habitat, Nesting, and Foraging

The BEMP access route and grooming location would occur within beach habitat. Work would be limited to a few hours duration on a single day for each grooming event. This area has little to no vegetation or trees that would support migratory birds, including raptors. The access route is anticipated to use the established lifeguard patrol route, which is used daily by lifeguard patrol vehicles. Daily use of the patrol route would make the area unlikely to support any nesting or foraging migratory birds. Therefore, implementation of the BEMP would result in less than significant impacts to migratory birds, including raptors.

Result in the direct reduction of, or a substantial indirect impact to, waters or wetland habitat?

Construction

The wetland delineation performed for the proposed project identified USACE wetlands east of, but not within, the project impact area (Figure 4.2-11). During project construction, there is potential for temporary indirect water quality impacts to occur to wetlands downstream of the project site. This impact is considered potentially significant and mitigation is required.

The proposed improvements to the J Street Drain would impact state/federal jurisdictional areas, including waters of the U.S. (Table 4.2-6 and Figure 4.2-11). These areas do not exhibit the characteristics of wetland habitat, as defined by the Ventura County Initial Study Assessment Guidelines and the federal Clean Water Act; however, because the CDFG, CCC, and USACE take jurisdiction over these areas, impacts are discussed in conjunction with wetlands. Improvements to the J Street Drain would include removing the existing concrete channel, lowering the elevation of the drain, modifying the contour of the drain to a rectangular configuration, and replacing existing concrete lining and rock riprap. As a result of these improvements, temporary construction-related impacts would occur to federal waters of the U.S and waters of the state. Specifically, reconstruction of the existing concrete channel would impact 7.90 acres of federal and state jurisdictional areas; however, because the channel is concrete-lined under existing conditions, impacts within the existing channel are considered less than significant. Additionally, construction activities would temporarily impact the natural substrate of the lagoon (0.29 acre) through the installation of a cofferdam within the lagoon and the subsequent pumping/draining of ground and lagoon water from the construction/work area. Impacts to the natural substrate of the lagoon are considered significant and require mitigation.

Impacts to federal wetlands and/or waters of the U.S. would require consultation with USACE to obtain a Section 404 Permit and associated Section 401 Water Quality Certification via the RWQCB. Impacts to state jurisdictional areas would also trigger the need for a 1600-series SAA with CDFG and Clean Water Certification pursuant to the Porter-Cologne Act or CWA. Similarly, any impacts to CCC jurisdictional areas would require a Coastal Zone Development Permit from the CCC under the Local Coastal Program.

Table 4.2-6. Project Impact to Federal/State Jurisdictional Areas

Federal/State Jurisdictional Areas	Existing Acres (Project Survey Area)	Temporary Project Impacts[2]
Federal Wetlands	6.83	0.0
Federal waters of the U.S. and waters of the State – Concrete Channel	7.90 7.90	
Federal waters of the U.S. and waters of the State – Natural Substrate	2.73 0.29	
CDFG Wetlands[1]	10.92 0.0	
CCC Jurisdictional Areas[1]	15.73 4.81	[1]
Total	n/a	8.19[3]

[1] CDFG and CCC jurisdictional area totals include USACE wetland and waters of the U.S. acreages.
[2] Project impacts to state and federal jurisdictional areas would be temporary.
[3] Mitigation for project impacts to jurisdictional areas would be satisfied through 1:1 restoration of temporarily impacted waters.

Operation

Upon completion of construction activities, the J Street Drain would function generally as it does under existing conditions, but with greater capacity. As identified above, the new channel would effectively replace the existing channel with the same habitat functions and values. Maintenance activities would occur as they do under existing conditions and would not result in new impacts. In addition, BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program would be implemented to avoid significant impacts to wetland habitat. Specifically, BMP-2, as described in Table 1.9-1 in Section 1.0 of this DEIR, requires measures to prevent downstream water quality impacts during concrete channel cleaning. BMP-3 requires stabilization of temporary stockpiles during channel cleanouts to prevent migration of sediments into the channel and downstream wetlands. BMP-15 requires the District to mitigate/replace native wetland or riparian vegetation removed from areas adjacent to the facility. Implementation of BMP-2, BMP-3, and BMP-15 would preclude significant impacts to wetland habitats associated with maintenance activities. Therefore, operation of the proposed project is anticipated to result in a less than significant operational impact to wetland habitat.

Beach Elevation Management Plan

The BEMP access route would occur within the existing lifeguard patrol route which is used daily. A wetland delineation was not conducted in this area. In the event of BEMP activation, a qualified biologist would be on site to monitor activities and ensure impacts to wetlands are avoided by limiting all work to open sandy beach areas. Therefore, impacts to wetlands resulting from implementation of the BEMP would be less than significant.

Source: HDR Wetland Delineation; Google Earth 2008 | G:\Projects\75217_J_Street\map_docs\mxd\EIR\WetlandSouthImpacts_v2.mxd| Last Updated : 08-15-2011

Project Impacts - Federal/State Jurisdictional Areas

FIGURE 4.2-11

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In accordance with the State Coastal Act and the County's Local Coastal Program, virtually any direct reduction of, or indirect impact to, a coastal habitat, including riparian habitats or other sensitive natural communities, could be considered significant?

Construction

As discussed above in the analysis regarding impacts to wetlands, construction of the proposed project would result in temporary impacts to federal waters of the U.S. and state jurisdictional areas within the Coastal Zone. However, neither reconstruction of the existing concrete-lined channel nor the creation of a temporary transition ramp and replacement of 0.05 acres of rock riprap would permanently reduce the extent of existing coastal riparian habitat. Indirect impacts to adjacent coastal habitats may occur during construction through degradation of water quality (e.g., erosion leading to increased turbidity).This impact is considered significant and mitigation is required.

Operation

Operation of the proposed project would occur in generally the same manner as under existing conditions, but with a greater drain capacity. Additionally, maintenance activities would occur as they do under existing conditions and would not result in a new impact. In addition, BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program would be implemented to avoid significant impacts to coastal habitat. Specifically, BMP-2, as described in Table 1.9-1 in Section 1.0 of this DEIR, requires measures to prevent downstream water quality impacts (e.g., to open water habitat) during concrete channel cleaning. BMP-3 requires stabilization of temporary stockpiles during channel cleanouts to prevent migration of sediments into the channel and downstream wetlands. BMP-15 requires the District to mitigate/replace native wetland or riparian vegetation removed from areas adjacent to the facility. Implementation of BMP-2, BMP-3, and BMP-15 would preclude significant impacts to coastal habitats associated with maintenance activities. Therefore, operation of the proposed project would result in a less than significant impact to coastal habitat.

Beach Elevation Management Plan

The BEMP access route and grooming location are located within coastal habitat. In the event of BEMP activation, a qualified biologist would be on site to monitor activities and avoid impacts to coastal habitat by limiting all work to open sandy beach areas. Sands removed from the grooming location would be smoothed evenly over adjacent sandy beach, outside of the surf zone, in a manner that would blend with adjacent topography. In addition, BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program would be implemented to avoid impacts to coastal habitat. Therefore, impacts to coastal habitat resulting from implementation of the BEMP would be less than significant.

Substantially interfere with the use of a migration corridor by fish or wildlife. This could occur through elimination of native vegetation, erection of physical barriers, or intimidation of fish or wildlife via introduction of noise, light, development, or increased human presence?

Construction

No regional biological corridors or linkages were identified within the project alignment. Therefore, no identified corridors or linkages would be impacted by construction of the proposed project. However, the Ormond Beach Lagoon and adjacent dune/beach area may be a staging area for migratory birds.

Additionally, the Lagoon could provide a potential local corridor for tidewater goby. Therefore, construction of the proposed project would potentially impact the movement of these species. Impacts are considered significant and mitigation is required.

Operation

Operation of the J Street Drain upon completion of construction activities is anticipated to occur as it does under existing conditions, with the same habitat functions and values. Therefore, operation of the drain is not anticipated to interfere with the use of a migration corridor by fish or wildlife. However, maintenance activities associated with the operation of the proposed project have the potential to temporarily impact migratory birds that may be using Ormond Beach Lagoon as a staging area as well as tidewater goby. BMPs established in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program would be implemented to avoid significant impacts to a migration corridor. These impacts are considered less than significant.

Beach Elevation Management Plan

The BEMP access route would occur within coastal habitat, which is not considered a migration corridor or linkage. Movement of existing tidewater gobies into the Pacific Ocean is known to occur naturally when lagoon water is released to the Pacific Ocean, permitting transfer of individuals between Ormond Lagoon, Mugu Lagoon, Santa Clara River estuary, Ventura River estuary, and other coastal water bodies. This transfer encourages greater genetic diversity within the species and provides opportunities for recolonization of suitable but unoccupied habitats. This has occurred recently at Mugu Lagoon, where tidewater gobies were previously known to be extirpated (Personal Communication, Chris Dellith, July 27, 2011). Therefore, because the BEMP access route and Ormond Beach Lagoon are not considered migration corridors or linkages, and BEMP grooming would facilitate natural breaching and tidewater goby movement during periods of storm water inflow, implementation of the BEMP and grooming of the lagoon would not adversely impact fish and wildlife movement. Impacts would be less than significant.

Determination by a qualified biologist on a case-by-base basis that locally important species/ communities are significantly impacted?

Construction

Please see the analysis above regarding direct and indirect impacts related to reduction in species population, reduction in species habitat, and restriction of reproductive capacity of species. No other locally important species or communities would be significantly impacted by construction of the proposed project.

Operation

Please see the analysis above regarding direct and indirect impacts related to reduction in species population, reduction in species habitat, and restriction of reproductive capacity of species. No other locally important species or communities would be significantly impacted by operation of the proposed project.

Beach Elevation Management Plan

Please see the analysis above regarding direct and indirect impacts related to reduction in species population, reduction in species habitat, and restriction of reproductive capacity of species. No other locally important species or communities would be significantly impacted by implementation of the BEMP.

Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Construction

The cities of Oxnard and Port Hueneme do not have local policies or ordinances protecting biological resources. Although some EW habitat would be removed during construction activities, these trees are not protected under any local ordinance or policy. Therefore, construction of the proposed project would not conflict with a local policy or ordinance. No impact would result.

Operation

Operation of the proposed project would not conflict with any local policy or ordinance protecting biological resources because none exist. Biological resources in the City of Oxnard are protected by the City of Oxnard General Plan and Local Coastal Program. The proposed project would be consistent with both the General Plan and Local Coastal Program. No impact is identified.

Beach Elevation Management Plan

Implementation of the BEMP would not result in any conflicts with a local policy or ordinance protecting biological resources because none exist. Biological resources in the City of Oxnard are protected by the City of Oxnard General Plan and Local Coastal Program. The proposed project would be consistent with both the General Plan and Local Coastal Program. No impact is identified.

Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Construction

The cities of Oxnard and Port Hueneme have not adopted individual habitat conservation plans. Habitat conservation in these cities is regulated by the respective General Plans and any state requirements, such as the California Coastal Act, which requires cities to prepare Local Coastal Programs/Plans. By coordinating construction activities to the satisfaction of the CDFG, USACE, and RQWCB, and by obtaining a Section 404 Permit and associated Section 401 Water Quality Certification, construction of the proposed project would not conflict with the City of Ventura County General Plan Coastal Area Plan, the City of Oxnard General Plan, the City of Oxnard Local Coastal Program, the City of Port Hueneme General Plan, or the City of Port Hueneme LCP. Impacts would be less than significant.

Operation

Upon completion of construction activities, operation of the proposed project would occur as it does under existing conditions, with the same habitat values and functions. Additionally, maintenance activities would occur as they do under existing conditions and would not result in new impacts.

Therefore, operation of the proposed project would not conflict with any General Plan or LCP applicable to the project site. No impact would result.

Beach Elevation Management Plan

The BEMP access route and grooming location occur within coastal habitat. However, this area is used daily by lifeguards and beach maintenance vehicles. Implementation of the BEMP is not anticipated to conflict with any plans that protect the coastal habitat. The BEMP is intended to prevent significant impacts associated with flooding and may work with the General Plans and LCPs applicable to the project site. No adverse impacts to the applicable plans are anticipated with implementation of the BEMP. Impacts would be less than significant.

4.2.5 Cumulative-Level Impact Analysis

Directly or indirectly reduce species population, reduce species habitat, or restrict reproductive capacity of a species?

Construction

Vegetation Communities/Habitats

Construction of the proposed project would result in significant project-level impacts to OW habitat. Additionally, significant indirect impacts would occur to CBM, SFD, and SCSM. These impacts, in conjunction with cumulative projects, have the potential to result in a cumulative construction impact to vegetation communities/habitats as cumulative projects are constructed concurrent with the proposed project. Since these vegetation communities only occur within coastal habitat, only cumulative projects within the coastal zone have the potential to contribute to a cumulative impact to vegetation communities/habitats. Projects in the coastal zone, as defined by the CCC, are subject to stringent development regulations, including the City of Oxnard Local Coastal Program and the City of Port Hueneme LCP. These plans are certified by the CCC to protect resources in the coastal zone, including OW, CBM, SFD, and SCSM. Development projects in the coastal zone are required to comply with these programs and cannot be carried forward without this requirement. Additionally, during construction, cumulative projects are subject to implementing a Stormwater Pollution Prevention Plan (SWPPP) to prevent polluted runoff from entering storm drains and ultimately the Pacific Ocean. Therefore, cumulative projects are not anticipated to substantially impact OW during construction. Therefore, by maintaining consistency with the City of Oxnard Local Coastal Program and the City of Port Hueneme LCP, and by implementing project-specific SWPPPs, cumulative impacts to OW would be less than significant.

Sensitive Botanical Species

No sensitive botanical species were identified on the project site at the time of survey. Therefore, project-level impacts would be less than significant. Because no sensitive botanical species were identified on site, despite the presence of suitable habitat, the proposed project would not substantially contribute to a cumulative impact. Cumulative impacts to sensitive botanical species are considered less than significant.

Sensitive Wildlife Species

California Brown Pelican

Suitable nesting habitat for the California brown pelican does not occur within the project area. Therefore, the proposed project would not contribute to a cumulative impact to the California brown pelican. Cumulative impacts would be less than significant.

California Least Tern

The proposed project, in conjunction with cumulative projects, has the potential to substantially degrade California least tern nesting habitat during construction activities. However, project-level impacts associated with the proposed project would be temporary and would not substantially affect the California least tern in the long-term. Additionally, California least tern was not observed nesting within the proposed project boundaries at the time of survey. The construction of cumulative projects is not anticipated to impact the California least tern because none are located within the coastal zone, with the exception of the Advanced Purification Facility and a portion of Water Pipeline 2. However, these projects are either currently or soon to be under construction, and therefore would not coincide with construction of the proposed project. The J Station Elimination project is within the coastal zone, but was completed before the J Street Drain project and did not affect least tern habitat. Therefore, cumulative construction-related impacts to the California least tern would be less than significant.

Western Snowy Plover

Suitable habitat for the western snowy plover occurs within the project area; however, no individuals were observed at the time of survey. Nesting plovers were observed adjacent to the project area and indirect project-level impacts were considered significant. If construction of cumulative projects occurs concurrent with construction of the proposed project, there is potential for cumulative construction-related impacts to western snowy plover to occur. However, due to the distance between the proposed project and cumulative projects, the proposed project would not substantially contribute to an indirect, construction-related cumulative impact. Cumulative impacts would be less than significant.

Light-footed Clapper Rail

No light-footed clapper rails were observed on site at the time of survey despite the presence of suitable habitat. Therefore, the proposed project is not anticipated to contribute to a significant cumulative construction-related impact. Cumulative impacts would be less than significant.

Tidewater Goby

Cumulative construction-related impacts to tidewater goby are not anticipated due to the distance between cumulative projects and the lagoon. Additionally, implementation of site-specific SWPPPs would prevent construction-related runoff from cumulative projects from impacting the proposed project site. Therefore, cumulative construction-related impacts to tidewater goby would be less than significant.

Raptor Habitat, Nesting, and Foraging

Implementation of the proposed project, in conjunction with cumulative projects, is not anticipated to result in significant construction-related cumulative impacts to migratory birds, including raptors. Although the proposed project would result in project-level impacts to potential migratory bird and raptor

nesting habitat (EW), this impact would not contribute to a significant cumulative impact since cumulative projects are not expected to impact nesting habitat. If cumulative projects would impact potential migratory bird habitat, avoidance measures would be implemented per the MBTA and a substantial cumulative impact would be avoided. Therefore, since the proposed project would not contribute to a significant cumulative level impact, construction-related cumulative impacts would be less than significant.

Operation

Vegetation Communities/Habitats

Operation of the proposed project, in conjunction with operation of cumulative projects, is not anticipated to result in a significant cumulative impact to vegetation communities/habitats due to the distance between the proposed project and cumulative projects. Any runoff from cumulative projects would be regulated by an NPDES permit, which would preclude the potential for cumulative projects to impact OW habitat associated with the proposed project. In addition, future maintenance activities would essentially be identical to current activities. Cumulative operational impacts would be less than significant.

Sensitive Botanical Species

Operation of the proposed project would not impact sensitive botanical species since the function of the drain would remain the same and maintenance activities would not result in new impacts. Also, no sensitive botanical species were identified on site during surveys. Therefore, the proposed project would not contribute to a cumulative impact to sensitive botanical species and impacts would be less than significant.

Sensitive Wildlife Species

California Brown Pelican

Operation of the proposed project, in conjunction with cumulative projects, is not anticipated to result in a cumulative impact to the California brown pelican. The drain would function as it does under existing conditions, but with greater capacity, and maintenance activities would not result in new impacts. Therefore, cumulative impacts would be less than significant.

California Least Tern

Operation of the proposed project, in conjunction with cumulative projects, is not anticipated to result in a cumulative impact to the California least tern. The drain would function as it does under existing conditions, but with greater capacity, and maintenance activities would not result in new impacts. Therefore, cumulative impacts would be less than significant.

Western Snowy Plover

No western snowy plovers were observed in or near the J Street Drain at the time of survey despite the presence of suitable habitat. Also, maintenance activities would be the same as existing practice and would not result in new impacts. Therefore, the proposed project would not contribute to a significant cumulative operational impact to western snowy plover. Cumulative impacts would be less than significant.

Light-footed Clapper Rail

No light-footed clapper rails were observed on the project site at the time of survey. Therefore, the proposed project would not contribute to a cumulative operational impact to the light-footed clapper rail. Cumulative impacts to the light-footed clapper rail would be less than significant.

Tidewater Goby

The proposed project, in conjunction with cumulative projects, is not anticipated to result in a significant cumulative operational impact to the tidewater goby. Any runoff from cumulative projects, all of which are located upstream of areas occupied by tidewater gobies, would be regulated by an NPDES permit and this would preclude substantial volumes of polluted runoff from impacting tidewater goby habitat. Cumulative impacts would be less than significant.

Raptor Habitat, Nesting, and Foraging

Operation of the proposed project and cumulative projects is not anticipated to result in significant impact to migratory birds, including raptors, since the drain would function as it does under existing conditions and maintenance activities would not result in new impacts. Therefore, cumulative operational impacts would be less than significant.

Beach Elevation Management Plan

Vegetation Communities/Habitats

The BEMP is anticipated to be used periodically and equipment would be located on site for only a few hours. In addition, the BEMP route would follow that used daily during lifeguard patrols. The grooming area would be located on open sandy beach. The limited time frame is all that is necessary to groom the beach to a safe elevation. Since this impact would be a very short and temporary period of time, and sensitive habitat would be avoided, a less than significant cumulative impact to vegetation communities/habitats is identified.

Sensitive Botanical Species

No sensitive botanical species occur within the BEMP access route or the grooming location. Therefore, the proposed project would not contribute to a significant cumulative impact. No cumulative impact is identified for implementation of the BEMP.

Sensitive Wildlife Species

The BEMP is anticipated to be used periodically and equipment would be located on site for only a few hours. The limited time frame is all that is necessary groom the beach to a safe elevation. Additionally, the grooming area would be located on open sandy beach and none of the cumulative projects would occur within habitat used by sensitive wildlife species. Since this impact would occur over a very short and temporary period of time, would avoid sensitive habitat, and would occur outside the breeding season, a less than significant cumulative impact to sensitive wildlife species is identified.

Result in the direct reduction of, or a substantial indirect impact to, waters or wetland habitat.

Construction

Due to the distance between the proposed project and cumulative projects, it is not anticipated that a significant cumulative impact to waters or wetlands would result during construction. No cumulative projects would be constructed at Ormond Beach Lagoon or are expected to substantially affect other waters or wetlands and, therefore, cumulative construction-related impacts would be less than significant.

Operation

Due to the distance between the proposed project and cumulative projects, it is not anticipated that a significant cumulative impact to waters or wetlands would result during operation, as the project level impact is less than significant and other projects are not expected to cause adverse operational effects to waters or wetlands. Also, no cumulative projects are located at Ormond Beach Lagoon. Therefore, cumulative operation-related impacts would be less than significant.

Beach Elevation Management Plan

The BEMP is anticipated to be used periodically and equipment would be located on site for only a few hours. The limited time frame is all that is necessary to groom the beach to a safe elevation. In addition, this activity would encourage the natural breaching that occurs annually during the storm season. Since this impact would be a very short and temporary period of time, and would not adversely affect existing waters or wetlands, a less than significant cumulative impact to wetlands is identified.

In accordance with the State Coastal Act and the County's Local Coastal Program, virtually any direct reduction of, or indirect impact to, a coastal habitat, including riparian habitats or other sensitive natural communities, could be considered significant?

Construction

Due to the distance between the proposed project and cumulative projects, it is not anticipated that a significant cumulative impact to coastal habitat would result during construction. No cumulative projects would be constructed within the coastal zone concurrent with the proposed project. Therefore, cumulative construction-related impacts would be less than significant.

Operation

No cumulative projects are located within coastal habitat. Therefore, no cumulative operational impacts to coastal habitat would occur.

Beach Elevation Management Plan

The BEMP is anticipated to be used periodically and equipment would be located on site for only a few hours. The limited time frame is all that is necessary to groom the beach to a safe elevation, encouraging natural seasonal breaching in response to storm flow. Since this impact would be a very short and temporary period of time, a less than significant cumulative impact to coastal habitat is identified.

Substantially interfere with the use of a migration corridor by fish or wildlife. This could occur through elimination of native vegetation, erection of physical barriers, or intimidation of fish or wildlife via introduction of noise, light, development, or increased human presence?

Construction

The proposed project and cumulative projects are not anticipated to result in a significant cumulative impact to the use of a migration corridor during construction. No cumulative projects would impact Ormond Beach Lagoon and, therefore, the movement of tidewater goby and migratory birds would not be affected. Cumulative construction-related impacts would be less than significant.

Operation

Operation of cumulative projects would not impact Ormond Beach Lagoon. Therefore, the proposed project would not contribute to a significant cumulative operational impact to wildlife movement. Cumulative impacts would be less than significant.

Beach Elevation Management Plan

The BEMP is anticipated to be used periodically and equipment would be located on site for only a few hours outside the breeding season. The limited time frame is all that is necessary to groom the beach to a safe elevation, encouraging natural seasonal breaching in response to storm flow. Natural breaching would allow movement of tidewater gobies from Ormond Lagoon to other coastal waterbodies. Since this impact would be a very short and temporary period of time, would ultimately facilitate natural tidewater goby movement, and would not interfere with least tern migration, a less than significant cumulative impact to migration corridors is identified.

Determination by a qualified biologist on a case-by-base basis that locally important species/communities are significantly impacted?

Construction

As identified above, cumulative impacts to vegetation communities, sensitive botanical species, and sensitive wildlife species would be less than significant. No other locally important species or communities would be affected and cumulative construction-related impacts would be less than significant.

Operation

As identified above, cumulative impacts to vegetation communities, sensitive botanical species, and sensitive wildlife species would be less than significant. No other locally important species or communities would be affected and cumulative operational impacts would be less than significant.

Beach Elevation Management Plan

As identified above, cumulative impacts to vegetation communities, sensitive botanical species, and sensitive wildlife species would be less than significant. No other locally important species or communities would be affected and cumulative impacts from the BEMP would be less than significant.

Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Construction

The cities of Oxnard and Port Hueneme do not have local policies or ordinances protecting biological resources. Therefore, cumulative construction-related impacts would be less than significant.

Operation

The cities of Oxnard and Port Hueneme do not have local policies or ordinances protecting biological resources. Therefore, cumulative operational impacts would be less than significant.

Beach Elevation Management Plan

The cities of Oxnard and Port Hueneme do not have local policies or ordinances protecting biological resources. Therefore, cumulative impacts resulting from the BEMP would be less than significant.

Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Construction

Construction of the proposed project would not conflict with any local, regional, or state habitat conservation plan or any land use plan intended to preserve habitat. Therefore, the proposed project would not contribute to a cumulative impact. Cumulative construction-related impacts would be less than significant.

Operation

Operation of the proposed project would not conflict with any local, regional, or state habitat conservation plan or any land use plan intended to preserve habitat. Therefore, the proposed project would not contribute to a cumulative impact. Cumulative operational impacts would be less than significant.

Beach Elevation Management Plan

Implementation of the BEMP would not conflict with any local, regional, or state habitat conservation plan or any land use plan intended to preserve habitat. Therefore, implementation of the BEMP would not contribute to a cumulative impact. Cumulative impacts would be less than significant.

4.2.6 Mitigation Measures

Vegetation Communities/Habitat

To mitigate for direct and indirect impacts to sensitive vegetation communities, the proposed project shall implement the following mitigation measure:

BIO-1 During construction, the sensitive vegetation communities adjacent to the project alignment shall be flagged as Environmentally Sensitive Areas (ESA) and construction fencing shall be

installed to avoid indirect impacts to these areas. Staging areas shall be identified during construction for lay down areas, equipment storage, etc., to avoid indirect impacts to the ESA. Biological monitoring shall occur during construction activities to prevent indirect impacts. Temporarily disturbed OW habitat, which falls under CDFG, USACE, and RWQCB jurisdiction, would be restored at a 1:1 ratio upon completion of construction. OW habitat restoration shall include replacement on the lagoon bottom of the top 12 inches of original soil to ensure suitable conditions for tidewater gobies and benthic fauna.

Botanical Species

Implementation of the project would not result in impacts to sensitive botanical species. Therefore, no mitigation is recommended.

Wildlife Species

BIO-2 To prevent a decrease in the foraging success of California least terns, temporary construction fencing ("snow fencing") shall be installed surrounding the project site to delineate the construction footprint.

BIO-3 To prevent a decrease in the nesting and foraging success of the California least tern and western snowy plover, phase 1 construction activities adjacent to California least tern and western snowy plover habitat shall occur outside of the breeding season (March to September) to the extent feasible. If construction activities must occur during the breeding season, Phase 1 project initiation through coffer dam installation shall be completed before May 1 to avoid direct impacts to foraging terns. In addition, a preemptive nesting bird survey shall be conducted by a qualified biologist to determine if any nesting terns or plovers are located near proposed activities. If nesting birds are found, all construction activities shall be prohibited within a 300-foot buffer area surrounding the nest location during the breeding season until the young have fledged. The qualified biologist shall ensure that the buffer area is appropriately defined with flagging and/or other means of suitable identification. The District shall consult with USFWS and CDFG in the event that nesting California least terns or western snowy plover are observed within 500 feet of the project area. If no nesting birds are found, construction activities could be conducted during the breeding season without restriction.

BIO-4 To prevent a decrease in the foraging success of California least terns and tidewater goby, silt fencing shall be installed prior to project construction between the project area and waters of Ormond Lagoon. For project activities within waters of Ormond Lagoon, dual silt fencing shall be installed around each work area to prevent/decrease the clouding of water within the lagoon as a result of potential runoff.

BIO-5 To avoid impacts to tidewater goby eggs, Phase 1 project initiation through coffer dam installation shall be completed before May 1, as the peak breeding season for this species extends from late spring through early summer, and again in late summer through early fall. Prior to the installation of the temporary cofferdam, a Section 10 (a)(1) (a) permitted tidewater goby biologist shall capture and relocate gobies to appropriate habitat located outside of the project area. The temporary cofferdam shall remain in place throughout construction activities south of Hueneme Road to prevent tidewater goby from entering the construction area from the lagoon. The biologist shall also be present during and after dewatering to ensure all gobies and other native fish are relocated to the lagoon prior to

construction. A suitable number of biologists working under the supervision of the permitted biologist shall be present during and immediately after the dewatering phase to ensure that all gobies are detected. In addition, the surface water pumps installed for the dewatering of the work area shall be screened (less than five mm mesh size). A permitted tidewater goby biologist shall also be required to relocate any tidewater goby that may enter the work area from upstream.

BIO-6 Although night construction is not anticipated, in the event that it becomes necessary, all lighting will be shielded to prevent illumination of the beach.

Raptor Habitat, Nesting, and Foraging

Although compliance with MBTA does not require compensation for the removal of nesting trees during construction, the implementation of VIS-2 requires replacement of all trees removed during shoring. This consists of those eucalyptus trees and large shrubs removed along the Surfside III property at the south end of the project site. The following measure is also proposed to protect nesting birds/raptors:

BIO-7 In order to avoid conflicts with the federal MBTA, if construction is proposed during the migratory bird nesting season, a preconstruction survey shall be conducted by a qualified biologist for the eucalyptus woodland and Ormond Beach Lagoon/marsh area located within the project footprint. The breeding season is defined as February 15 to September 15. If nesting birds/raptors are found, all construction activities shall be prohibited within a 300-foot impact avoidance buffer area surrounding the nest location during the breeding season. In consultation with CDFG and/or USFWS, the buffer area may be reduced in the case of bird species/individuals accustomed to urban disturbance. The qualified biologist shall ensure that the avoidance buffer area is appropriately defined with flagging and/or other means of suitable identification. If no nesting birds/raptors are found, construction (including tree removal) could be conducted during the breeding season. Trees may be removed outside of the breeding season without restriction.

Wetlands

Temporary indirect impacts to waters and wetlands would be mitigated through measures that protect water quality, including BIO-4 and WQ-1 through WQ-4.

Jurisdictional areas

Temporary direct impacts to impacts to Waters of the U.S. and Waters of the State would be mitigated through BIO-1, which would restore OW habitat upon completion of construction.

4.2.6.1 Ventura County Watershed Protection District Best Management Practices

The Ventura County Board of Supervisors adopted the Ventura County Watershed Protection District (District) Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project No. 80030 in May 2008. The final document includes Best Management Practices (BMPs) that will be added to the District's Maintenance Activity Guidelines. The Operation and Maintenance Division staff will be responsible for ensuring the proper implementation of the BMPs on a routine, year-round basis. The Division staff will also be responsible for ensuring compliance with all permit conditions, conducting or employing qualified personnel for any required pre-

project site surveys or inspections, updating the Activity Guidelines sheets, instructing crews on BMPs, overseeing certain BMP implementation, documenting the implementation of the BMPs, and conducting any agency coordination.

The following BMPs will be implemented to minimize impacts during operation:

- *Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning.* The removal of sediments, vegetation, algae, and trash from fully lined improved channels for purposes of NPDES storm water permit compliance shall include measures to prevent the discharge of silt-laden water or pollutants to downstream unimproved channels with soft bottoms (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000). These measures may include temporary downstream silt barriers (sand bags, straw bales, in-channel materials), silt fences, upstream diversion, etc. Per Section 401 Water Quality Certification requirements, a Water Diversion Plan would be needed for water diversion activities.
- *Location of Temporary Stockpiles.* Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.
- *Survey for Habitat Prior to Routine Maintenance Work.* Prior to routine maintenance and repair activities performed within or adjacent to an earthen or earthen bottom channel or in-channel structure during the period 1 March to 1 August, a District biologist or consulting biologist shall determine if suitable habitat is present for riparian-dependent breeding birds in or within 400 feet of the work area. Suitable habitat is generally defined as dense or moderately dense willow or mulefat scrub or woodland with sufficient density and vegetative structure to support nesting and foraging.
    - Prior to routine maintenance and repair activities performed within or adjacent to an earthen or earthen bottom channel or in-channel structure that would disrupt foraging or nesting of raptors during the period 1 February to 1 August, a District biologist or consulting biologist shall survey the 400 feet radius around the project site for raptor nest initiation or occupation.
    - Channel cleanout shall be postponed to 1 August if such habitat is present in the work area or within 200 feet of the work area, or until nestlings have fledged if the District determines that riparian bird or raptor nesting is occurring in the habitat area. This restriction does not apply if the nesting birds are house sparrows, house finches, crows, cowbirds, or other common upland species or introduced species. If any federally or state listed birds are found nesting within the 200 or 400 feet survey radius, the District shall consult with CDFG for the applicability of this restriction.
- *Avoid Disturbance to Native Beach or Wetland Species.* The District shall avoid areas of beach dune vegetation when accessing storm drain outlets at the beach with vehicles for routine maintenance. The removal of native beach or wetland plants that are located at or near the beach outlet shall be minimized. Prior to the removal of obstructive sand or vegetation from a beach outlet, qualified District personnel shall determine if suitable habitat (i.e., a brackish waterbody)

is present at the outlet for tidewater gobies, and if the species is present. In addition, qualified District personnel shall determine if suitable habitat is present along the vehicle access route across the beach for foraging or nesting snowy plovers and California least terns. If any of these sensitive species are present at the storm drain outlet or along the access route, the District will either postpone the routine maintenance work until these species are no longer present, or follow avoidance and/or relocation procedures approved by U.S. Fish and Wildlife Service (USFWS). This BMP shall not apply if there is a threat of a storm and the outlet is plugged. The District shall contact CDFG and USFWS when California least terns, snowy plover, or tidewater gobies are observed during the pre-project surveys for consultation.

- *Aquatic Pesticide BMPs.* The District shall follow the most up-to-date BMPs and the monitoring and reporting requirements in the District's NPDES Stormwater Quality Management Plan (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000, available at http://vcstormwater.org/documents/workproducts/ stormwater_quality_mangement_plan.pdf) when applying herbicides to channels and basins. The District shall also follow BMPs in the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides (included in Appendix I).
- *Leave Patches of Vegetation in Channel Bottom.* The District shall minimize vegetation removal or reduction from earthen or earthen bottom channels to the least amount necessary to achieve the specific maintenance objectives for the reach. Vegetation removal in the channel bottom shall be conducted in a non-continuous manner, allowing small patches of in-channel vegetation to persist provided it will not adversely affect conveyance capacity.
- *Leave Herbaceous Wetland Vegetation in Channel Bottom.* Consistent with the maintenance objectives, the District shall avoid removal or reduction of emergent herbaceous wetland vegetation on the channel bottom that is rooted in or adjacent to the low flow channel or a pond in order to provide cover for aquatic wildlife. This same type of vegetation shall be protected during the removal of taller obstructive woody vegetation on the channel bottom.
- *Avoid Road Base Discharge.* The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.
- *Mitigate/Replace Temporary Impacts to Habitat.* For repair of in-channel structures and features that results in the temporary disturbance of native wetland or riparian vegetation adjacent to the facility, the District shall restore native wetland or riparian vegetation in the affected work areas after the repair or reconstruction work. Restoration shall include planting or seeding native plants that were present prior to the work and/or are compatible with existing riparian vegetation near the work area. The District shall prepare a restoration plan for each repair project that specifies the limits of restoration, planting mix and densities, performance criteria for survival and growth, and at least a three-year maintenance and monitoring procedures. Restoration sites shall be located outside the limits of the repaired structure. If no suitable restoration site is available near the work area or the creation of a restoration area near the work area would conflict with flood control needs, the District shall select another location on District right-of-way in close proximity. If suitable restoration sites are not available, the District shall provide funds to a third party (public agency or non-profit organization) to implement the required mitigation in the same watershed as the impact. Habitat restoration under this BMP shall only occur if the affected areas support native wetland or riparian vegetation; no restoration is required for barren areas or areas dominated by non-native plants. The District shall submit all habitat restoration plans to CDFG prior to implementation.

- *Concrete Wash-Out Protocols.* The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.
- *Water Diversion Guide.* Water diversion activities undertaken as part of routine repair and maintenance operations in improved and unimproved channels as well as debris basins shall follow the BMP guidance established as the Water Diversion Guide incorporated into the Final Program EIR addressing Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program, adopted by the District in May 2008.
- *Implementation of Integrated Pest Management.* The District shall inspect its critical and non-critical facilities regularly to document and identify the presence or absence of ground squirrels. The District shall develop and implement an Integrated Pest Management (IPM) program that identifies tolerance level, control thresholds and approved rodent control methods and/or combinations of methods at each District facility. Rodent control methods implemented at each facility shall be applied as needed and as appropriate for site conditions and the season. Methods implemented shall minimize potential primary and secondary hazards to non-target species. The District shall maintain a preventative IPM program with zero tolerance for ground squirrels for its critical facilities where failure would impact public safety. When rodent control becomes necessary at non-critical facilities, the District shall choose applicable, cost-effective treatment method(s) from the District's IPM program. Treatment options considered for each site shall include: trapping, habitat modification, alternative construction methods and materials, use of raptors, clean and rodenticide-treated bait stations, broadcast diphacinone and zinc phosphide with or without carcass collection, and other methods. As part of an ongoing monitoring program to determine the effectiveness of the squirrel control program, the District shall maintain uniform inspection records for each facility and all control efforts. The District shall conduct a staff training program that covers the IPM program including rodent issues, inspection and monitoring requirements, and treatment options.
- *Avoid Spills and Leaks.* The District shall ensure that all equipment operating in and near a watercourse, or in a basin, is in good working condition and free of leaks. No equipment maintenance or refueling shall occur in a channel or basin bottom. Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse. In addition, all maintenance crews working with heavy equipment shall be trained in spill containment and response.
- *Biological Surveys in Appropriate Habitat Prior to Vegetation Maintenance.* Prior to any sediment removal, vegetation control (by herbicide application, mowing, or discing), or repair work in earthen or earthen bottom channels and basins that contain native aquatic, riparian, or wetland habitats suitable for sensitive fish and wildlife species, the District shall conduct appropriate field investigations to determine if any threatened, endangered, or sensitive species are present. If such species are determined to be present in or in close proximity to the work areas, the District shall reschedule the work when the species are not present. If it is necessary to conduct the work while the species are present or in proximity to the work areas, the District shall develop other avoidance or relocation measures in consultation with the CDFG, USFWS, or

National Oceanic and Atmospheric Administration (NOAA) Fisheries prior to conducting the work. If the work could affect state or federally listed species or their habitat, the District would employ avoidance or relocation measures approved by USFWS, NOAA Fisheries, or CDFG, as appropriate, for the maintenance program. This measure includes protection for the following threatened, endangered, or sensitive species that could occur at maintenance sites: tidewater goby, southern steelhead, trout, unarmored threespine stickleback, California redlegged frog, arroyo toad, least Bell's vireo, southwestern willow flycatcher, arroyo chub, southwestern pond turtle, two-striped garter snake, Cooper's hawk, sharp-shinned hawk, yellow warbler, yellow breasted chat, purple marlin, tri-colored blackbird, and long-eared owl.

4.2.7 Significance After Mitigation

Incorporation of the identified mitigation measures would reduce all potentially significant impacts to OW and other sensitive habitats, sensitive wildlife species, wetlands, jurisdictional areas, and nesting birds/raptors to below a level of significance. Specifically, mitigation measure BIO-1 would ensure that construction fencing is installed and sensitive vegetation communities are flagged to avoid direct and indirect impacts. By delineating sensitive areas, construction activities would be located and staged to avoid potential impacts. Similarly, implementation of mitigation measure BIO-2 would delineate adjacent California least tern foraging habitat to ensure it is not impacted by construction activities. Additionally, by implementing mitigation measure BIO-3, California least terns and western snowy plovers that may be foraging or nesting on or near the project site during the breeding season would be avoided during construction and maintenance activities. This would prevent any decline in foraging or nesting success for these species. Further, implementation of BIO-4 would result in the installation of silt fencing to prevent sediment and silt from degrading California least tern and tidewater goby habitat and impairing foraging success. BIO-4 in combination with WQ-1 through WQ-4 would also prevent indirect impacts to wetlands downstream of the project site by preventing degradation of their water quality. To further avoid impacts to tidewater goby, implementation of BIO-5 would install a temporary cofferdam and relocate any gobies that may be within the construction area. By constructing a coffer dam and relocating individuals, the tidewater goby population would be maintained to the greatest extent feasible. Although night construction is not anticipated, in the event that it becomes necessary, mitigation measure BIO-6 would ensure that all lighting will be shielded to prevent illumination of the beach. Additionally potential impacts to raptor and migratory bird nesting habitat would be avoided by implementing mitigation measure BIO-7 and conducting preconstruction surveys within EW habitat. By determining the presence/absence of migratory birds prior to construction activities, active nests can be avoided during construction and the nesting success of migratory birds would not be impacted. VIS-2 also ensures replacement of nesting trees removed during construction. Impacts to the natural substrate within federal and state jurisdictional areas would be reduced through implementation of mitigation measure BIO-1. Mitigation measure BIO-1 requires restoration of OW habitat upon completion of construction. Therefore, implementation of mitigation measures BIO-1 through BIO-7 would reduce impacts to biological resources to below a level of significance.

4.2.8 Response to Notice of Preparation Comments

During the Notice of Preparation (NOP) comment period, the CDFG sent a comment letter identifying stressors within the project area and requesting that a hydraulic model of the Ormond Beach Lagoon be prepared to assess potential biological impacts resulting from the proposed project. Additionally, the comment letter requests that the EIR include a full assessment of potential impacts to flora and fauna in the project area, a range of alternatives to the proposed project, and appropriate mitigation measures. The CDFG identified that a CESA permit and SAA may be required and recommended a 100-foot buffer be

established between the outside edge of the riparian zone and each side of the J Street Drain. In response, a Biological Technical Report, Jurisdictional Wetland Delineation Report, and a focused bird survey report were prepared for the proposed project to assess impacts to biological resources. These reports are included as Appendix D of the EIR. As discussed in this section, the proposed project would result in potentially significant impacts to OW habitat, the California least tern, western snowy plover, tidewater goby, migratory birds, wetlands, and federal and state jurisdictional areas. However, with incorporation of mitigation measures BIO-1 through BIO-7, WQ-1 through WQ-4, and VIS-2, potentially significant impacts would be reduced to below a level of significance. Additionally, Section 5.0 of the EIR discusses a range of alternatives to the proposed project. This includes alternatives to the design of the channel and beach outlet. As discussed in Section 5.0, the range of alternatives would result in a similar level of impacts to biological resources as the currently-proposed project, with the exception of the No Project alternatives which would not impact biological resources. In compliance with the CDFG, the project applicant would apply for an SAA, in addition to a USACE Individual Permit, a Clean Water Certification, and a Coastal Development Permit, to regulate activities associated with the proposed project. With implementation of mitigation measure BIO-4, the proposed project is not anticipated to result in the take of any species protected under the CESA. Therefore, a CESA permit would not be required for the proposed project. No riparian habitat occurs within 100 feet of the project impact area; therefore, the existing conditions of the project area act as a natural buffer.

Also during the NOP comment period, the Ventura Audubon Society sent a letter requesting that the EIR include clarification regarding the Dike System Alternative and the Natural System Alternative and an analysis of impacts to California least tern, western snowy plover, and Belding's savannah sparrow. In response, the Dike System Alternative and the Natural System Alternative are discussed in detail in Section 5.0 of the EIR. Additionally, this section includes a discussion of potential impacts to California least tern, western snowy plover, and Belding's savannah sparrow. As discussed, the proposed project would result in potentially significant impacts to California least tern and western snowy plover. These impacts would be reduced to below a level of significance through implementation of mitigation measures BIO-1 through BIO-4. The proposed project would not result in significant impacts to Belding's savannah sparrow.

The State Coastal Conservancy also sent a comment letter during the NOP comment period expressing concern over potential impacts to tidewater goby and sensitive bird species resulting from project alternatives. In response, Section 5.0 of the EIR discusses potential impacts to tidewater goby resulting from project alternatives.

The County of Ventura Resource Management Agency requested during the NOP comment period that the EIR discuss potential impacts to special status species, wetland habitat, and coastal habitat. As discussed in this section, the proposed project would result in potentially significant impacts to special status species, including California least tern, western snowy plover, tidewater goby, and migratory birds. These impacts would be reduced to below a level of significance through implementation of mitigation measures BIO-1 through BIO-7. Additionally, this section identifies that the proposed project would result in temporary significant impacts to OW habitat. These impacts would be reduced through implementation of mitigation measure BIO-1. Temporary indirect impacts to wetlands would be reduced through implementation of BIO-4 and WQ-1 through WQ-4. No other sensitive habitats would be significantly impacted by the proposed project.

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4.3 WATER RESOURCES AND HYDRAULIC HAZARDS

This section addresses the relationship of regional and local watersheds/drainage, coastal processes, hydrology, and water quality within the project area. In particular, the relationship of the Ormond Beach Lagoon and potential project impacts is addressed. Additionally, the following documents were used in the preparation of this section and are included as technical appendices to this Environmental Impact Report (EIR):

Coastal Processes Assessment at Ormond Lagoon and Beach Memo. Prepared by HDR Engineering, Inc. March 2008 (Appendix C).

J Street Drain/Ormond Beach Lagoon Coastal Engineering Report. Prepared by HDR Engineering, Inc. November 2008 (Appendix C).

Sedimentation Study for the J Street Drain and Oxnard Industrial Drain Report. Prepared by HDR Engineering, Inc. March 2008 (Appendix C).

J Street Drain Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon. Prepared by HDR Engineering, Inc. August 2011 (Appendix C).

Ormond Beach Lagoon Sand Berm Management Technical Memo. Prepared by HDR Engineering, Inc. August 2011 (Appendix C).

Inland Flooding Study. Prepared by HDR Engineering, Inc. August 2011 (Appendix C).

~~*Groundwater Modeling Summary for the J Street Drainage Improvement Project, Oxnard, California*~~ *Hydrogeology Study Summary: J Street Drainage Improvement Project, Oxnard, California*. MU Hydrogeological and Environmental Services. ~~August~~ December 2011 (Appendix K).

4.3.1 Environmental Setting

4.3.1.1 Existing Conditions

Climate

The climate of the project area is mild during summer when high temperatures tend to be around 60° Fahrenheit (F) and cool during winter when temperatures tend to be around 50°F. The warmest month of the year is August with an average maximum temperature of 73.9°F, while the coldest month of the year is December with an average minimum temperature of 45.3°F. Average annual rainfall in the project area is 15.6 inches per year. Rainfall is concentrated during the winter months. The wettest month of the year is February with an average rainfall of 3.9 inches.

Hydrologic Setting

The Ventura County Watershed Protection District (District) is divided into six separate watersheds: Ventura River, Santa Clara River, Calleguas Creek, Malibu Creek, Cuyama River, and Coastal Creeks. The project area is located south of the Santa Clara River within the Santa Clara River Watershed and west of the Calleguas Creek Watershed (Figure 4.3-1). According to the Los Angeles Regional Water

Quality Control Board (LARWQCB) Basin Plan, the project area is located in the Oxnard Hydrologic Subarea, which is part of the Oxnard Plain Hydrologic Area of the Santa Clara-Calleguas Hydrologic Unit.

Generally, surface water resources in the project vicinity include the Santa Clara River, Mugu Lagoon, Port Hueneme, the Channel Islands Harbor, the Mandalay Bay Canal System, McGrath Lake, and the Ormond Beach Lagoon.

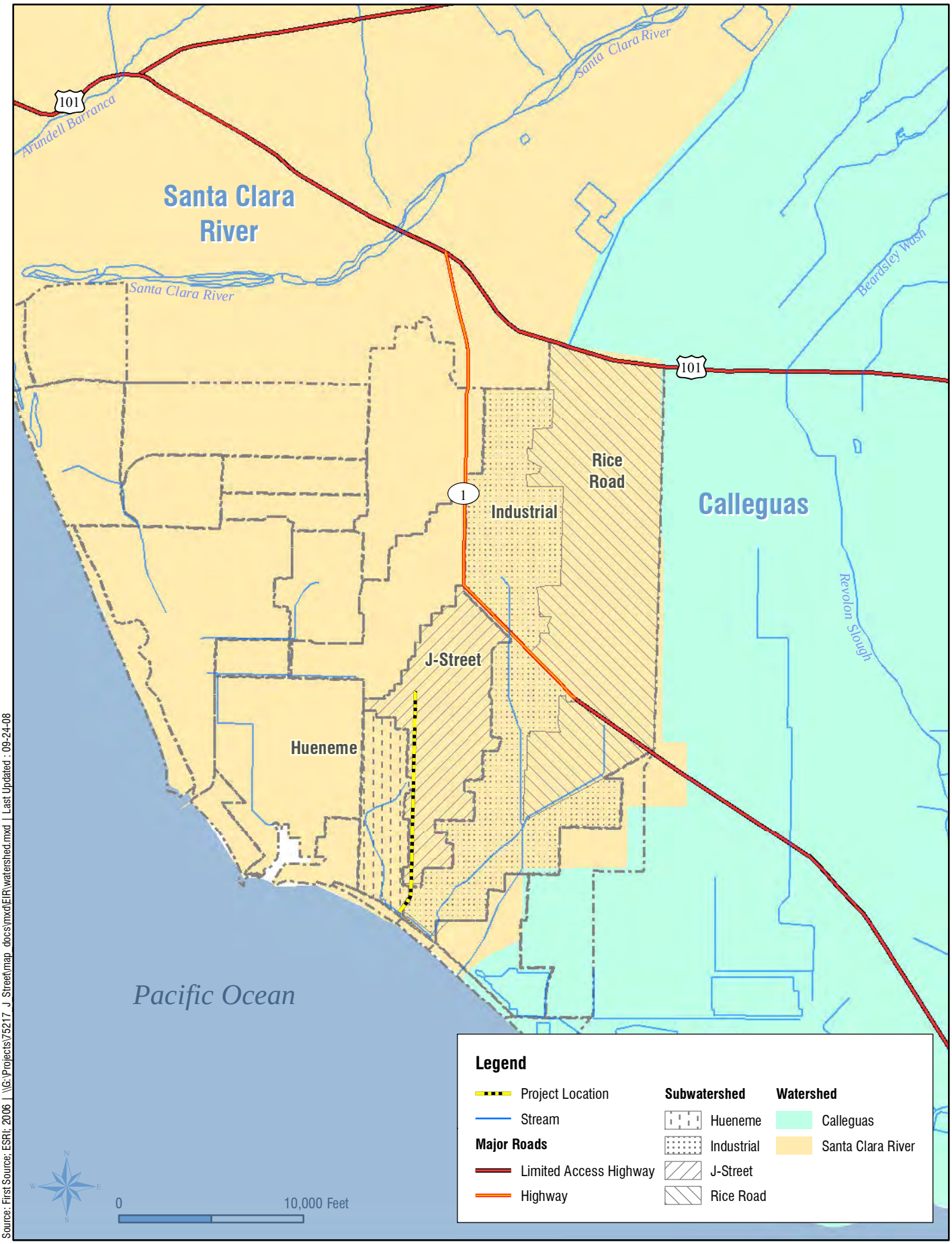
Ormond Beach Lagoon

The Ormond Beach Lagoon is a complex collection of wetland, freshwater, estuarine, and marine habitats. The Basin Plan for the LARWQCB lists the beneficial uses of waterways in the region. Beneficial uses designated for Ormond Beach include: Industrial, Naval, Power, Recreation, Marine, Wildlife, Migratory/Endangered Species, and Shellfish. The Ormond Beach Lagoon beneficial uses are: Recreation, Estuary, Wildlife, Migratory/Endangered species, and Wetlands. Man-made drainage improvements of the nearby OID, Hueneme Drain, and J Street Drain caused a second small lagoon to develop near the end of the J Street Drain. Eventually, the two small lagoons became hydraulically connected and grew to the current configuration.

Under current conditions, the lagoon receives inflow throughout the year from the Hueneme Drain (pumped to the J Street Drain), J Street Drain, and OID. Water levels in the lagoon rise during the winter, and the sand berm on the beach that formed the lagoon may be breached due to the combined hydraulic head from stormwater flows and the erosion of the upper beach sand dunes from winter wave action. During the summer, wave actions do not erode the sand dunes, and as such, the lagoon remains impounded. Water levels in the lagoon during the summer and fall are controlled by a combination of base flows from Hueneme Drain and OID, evaporation, and seepage to and from the ocean through the beach sand.

Prior to 1992, the District mechanically breached the sand berm of the lagoon to lower water levels in the lagoon that caused backwater flooding in the J Street Drain and the OID. The District continued these practices on an as needed basis to drain the Ormond Lagoon and maintain a safe water level in the respective drains. District maintenance staff recall breaching the sand barrier up to a dozen times during the spring and summer seasons, but normally, mechanical breaching occurred four to six times per year. However, regulatory agencies were concerned that breaching of the sand berm and draining the lagoon was adversely affecting fish populations and degrading foraging habitat for sea and shorebirds, Further, several sensitive species of birds, including the California Least tern and snowy plover, nest at the sparsely vegetated dunes at Ormond Beach and utilize the aquatic fauna (mostly fish and invertebrates) present in the drains and lagoon area as a primary food source.

In response to agency concerns, in 1992 the District agreed to cease the mechanical breaching of the sand barrier to prevent potential harm to sensitive species and habitat. Cessation of this action resulted in the expansion of the lagoon and created a deep water condition in the J Street Drain and OID. At this time, the water levels in the lagoon are not actively managed. However, on January 18, 2010, the District breached the lagoon near its northwest corner under emergency regulatory authorizations from the U.S. Army Corps of Engineers (USACE), LARWQCB, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and California Coastal Commission (CCC). Breaching occurred in response to flooding and imminent electrical failure of the Oxnard Waste Water Treatment Plant (OWWTP). Electrical failure would have resulted in catastrophic release of untreated sewage to adjacent residential, commercial, and sensitive ecological areas (lagoon and Pacific Ocean). The International Paper Plant also sustained losses during this flood event, and Perkins Road was impassable.



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Watershed Area Map

FIGURE 4.3-1

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In October 2010, the District obtained emergency authorizations to reduce the height of the beach sand berm because the lagoon water surface elevation was observed to be high, some flooding had been reported in the Surfside III community parking areas nearest the J Street Drain, and an impending storm had been forecast. The District groomed the sand berm to 6 inches above the lagoon water surface elevation on October 18, 2010. The grooming occurred on open sandy beach near the January 2010 breach location, but closer to the ocean. The storm did not generate sufficient runoff to naturally overtop the sand berm. The lagoon breached naturally on October 30, 2010 in response to a subsequent storm event. During the intervening dry period, the lagoon water surface elevation declined slightly as a result of underground seepage through the sand berm.

Lagoon Morphology and Breaching Process

Coastal processes including tidal, wave, and aeolian (wind) sediment transport play an important role in the nature and function of the Ormond Lagoon system, in particular, where the lagoon breaches the beach and opens an outlet to the Pacific Ocean.

Lagoon Geography and Morphology

Historic aerial photography, surveys, and maps reveal that the lagoon is naturally dynamic and that flows from OID, J Street and Hueneme Drains continue to shape the lagoon. Human modifications to upstream hydrology and beach sediment transport have contributed to the formation of the existing lagoon. Lagoon morphology is forced by upstream inflow, waves, tides, aeolian transport, and anthropogenic factors. A lagoon appears to have been historically present as part of the natural drainage system of the now channelized OID. That lagoon did not extend to the limits of the current lagoon between J Street and OID. Before the 2010 emergency breaching and grooming events, the cessation of mechanical breaching after 1992 had contributed to tendency of the lagoon to breach at one location. The breach had tended to form near OID, where the largest volume of flow originates.

Breaching at Ormond Beach Lagoon: Seaward and Landward

Breaching at the Ormond Beach Lagoon is caused by buildup of freshwater originating from J Street, Hueneme and Oxnard Industrial Drains and can be characterized as seaward breaching. The breaching process of coastal lagoon barriers is due to overflow induced by heavy runoff. Once the breach is established and upland discharge has significantly decreased, tidal exchange between the lagoon and ocean acts to maintain the breach. Waves transport sediment onshore and alongshore and the varying tide and wave run-up distribute the sediment along the shoreface. As tidal flow and freshwater runoff in the inlet become insufficient to remove all of the sand being transported by the waves, the breach will begin to close.

Water levels in the lagoon during rain storms are a function of the initial water level, beach conditions (elevation, width), and freshwater inflow. The expected maximum water level in the lagoon is regulated by the lowest beach crest elevation or the height of the sand berm. Though elevation across the sand berms is not uniform in space or constant in time, survey data suggest that the berm reaches its maximum elevation of approximately 11.6 feet National Geodetic Vertical Datum (NGVD) (14 feet North American Vertical Datum [NAVD]) in isolated dunes. Based on aerial surveys and other available data and under typical conditions, a representative elevation for the beach prior to breaching is approximately 7.6 feet NGVD (10 feet NAVD). The VCWPD maintained the berm during a recent emergency at elevation 6.5 feet ± NGVD 1929, 6 inches above the water surface elevation in the lagoon.

A water level gauge was installed by the District near the Hueneme Drain Pump Station in J Street Drain and operated from 2002 to 2005. A gauge was reinstalled in 2011. The data qualitatively indicate that the lagoon water levels generally rise and remain elevated above tidal levels during the summer months from May to September, and then rapidly decrease by 2 to 3 feet following breaches in early fall through the spring.

Water level data indicate that the breaches may form multiple times each year, by stormwater flows or by gradual water level rise. Where the drains meet the lagoon, a water level spike of about 1 foot has been observed just prior to breaching for moderate storm events. During recent breaches, water levels exceeded approximately 9.0 feet (NAVD) before breaching commenced and water level crests during breaching lasted from 30 minutes to a few hours.

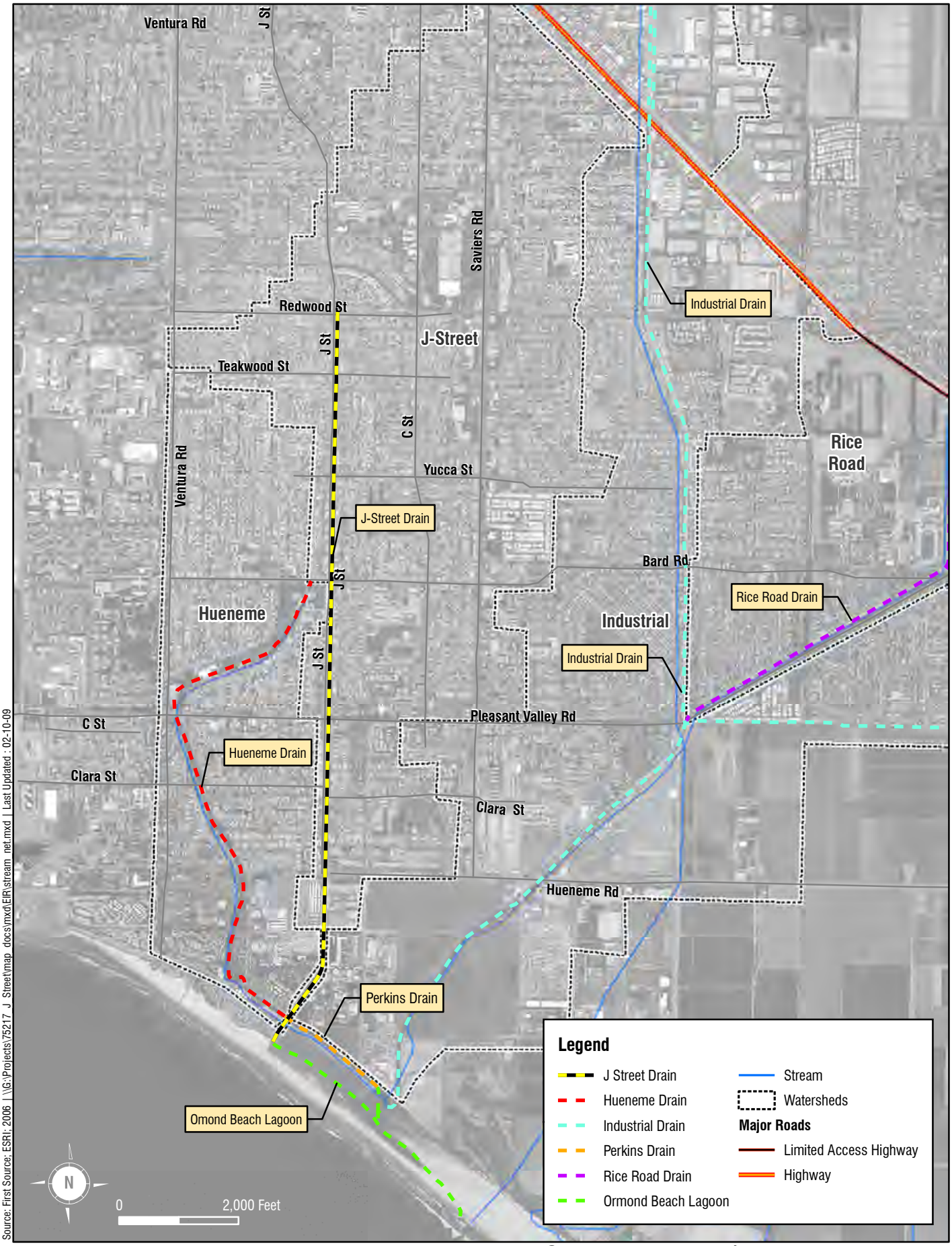
Landward breaching at the lagoon is controlled by the ocean tide and wave conditions. Except at the existing breach area, the water level along the beach must exceed about 7.6 feet NGVD (10 feet NAVD) before landward breaching is likely to occur. This type of breaching would not be affected by the proposed project. There is no record of the tide level exceeding this elevation since the Santa Barbara gauge was installed in 1933. In addition, the highest tide recorded at the Santa Barbara gauge is 7.3 feet NAVD.

Stormwater Drainage

Stormwater runoff occurs when precipitation flows over the ground. Impervious surfaces such as driveways, parking lots, and streets prevent stormwater runoff from naturally soaking into the ground. Stormwater flows over both impermeable and permeable surfaces, collecting and transporting pollutants including pesticides, fertilizers, automobile fluids, yard waste, and soil, into streams, rivers, ponds, wetlands, and along the California coast, ultimately into the Pacific Ocean. These pollutants may cause serious deterioration and degradation of natural resources and habitats.

The City of Oxnard currently uses various storm drain facilities, which are maintained by the Public Works Department and the District flood control channels to handle larger stormwater runoff. In 1979, the City adopted a Master Plan of Drainage "to assist in making prudent decisions regarding flood protection needs." The plan provides for the following needs: inventory existing facilities, define areas with deficiencies, plan needed facilities, and prepare a strategy for financing recommended works of improvement. The existing storm drain network does not have the capacity to accommodate increased runoff produced by full build-out of the 2020 General Plan. Therefore, while developers are required to convey drainage to the storm drain system and pay appropriate fees, storm drain capacity in the main lines may not be adequate. The Master Plan of Drainage provides for the analysis and control of future project-specific drainage, but policies and requirements should be added to ensure that the need for additional system-wide drainage infrastructure will be adequately assessed at the time of each development.

Review of the City of Oxnard Master Plan of Drainage indicates that the City is divided into 17 major watersheds for purposes of hydrologic analysis. Drainage throughout Ventura County is generally to the southwest toward the Pacific Ocean. Primary drainages that transport surface runoff near the project area include the OID, the J Street Drain and the Hueneme Drain (Figure 4.3-2). The OID and J Street Drain watersheds are the primary contributors of runoff to the project area.



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Stream Network/Drainage Facilities

FIGURE 4.3-2

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Hueneme Drain

The Hueneme Drain, also known as the Bubbling Springs Drain, extends through Richard Bard Bubbling Springs Park and forms the center of the Bubbling Springs Recreation corridor in the City of Port Hueneme. The Hueneme Drain is located west of the J Street Drain. From Bubbling Springs Park, it extends south towards the Pacific Ocean and bends east to run parallel to the coastline as the drain nears the ocean. Hueneme Drain is a man-made earthen trapezoidal channel. The banks of the channel are landscaped and maintained as part of the Bubbling Springs Recreation Corridor.

Hueneme Drain is a perennial watercourse, supplied by springs and impounded at the District's Hueneme Drain Pump Station, which periodically pumps the impounded water into the J Street Drain. Water levels in the Hueneme Drain are regulated by the Hueneme Drain Pump Station situated at the terminus of the drain. In the summer, the water is maintained at 1- to 2-foot depths. The pump station has the capacity to convey the 100 year frequency flood flow of 437 cubic feet per second (cfs).

J Street Drain Lower Channel

The J Street Drain is a fully lined concrete channel that ends approximately 50 feet south of the Hueneme Drain Pump Station. The J Street Drain was constructed in the 1950s and lined with concrete in the early 1960s to channel urban runoff into the ocean. The watershed of the J Street Drain totals 1,339 acres (approximately 2 square miles) within Oxnard and Port Hueneme. The average dimensions of the drain in the project area are 40 feet from top-of-bank to top-of-bank, 30 feet across the channel bottom, and four feet in depth. When constructed, the J Street Drain discharged water directly to the ocean by mechanical breaching. Presently, due to beach expansion and the formation of the beach previously described, this drain flows into the Ormond Lagoon. The existing capacity of the J Street Drain is 500-600 cfs, which is less than the 50- and 100-year frequency flood flows of 1,649 and 2,059 cfs, respectively (URS 2005). This drain flow is composed entirely of urban runoff.

Oxnard Industrial Drain (OID)

The OID is a manmade, trapezoidal (at the downstream end) and rectangular concrete channel that extends several miles northeast of the Ormond Beach Lagoon through the City of Oxnard. One other major stormwater channel, the Rice Drain, is a tributary to the OID. The OID was originally built by the Oxnard brothers to drain industrial effluent and sewage. Current inputs to the OID consist of urban and agricultural runoff with some groundwater seepage near the coast where the channel bottom lies below the water table. The VCWPD maintains and regulates discharges to the OID. The OID watershed totals approximately 5,935 acres. In the 1970s, the District began channel improvements, largely the concrete lining upstream of Pleasant Valley Road. Downstream of Pleasant Valley Road, the channel is concrete lined for 4,100 feet and then is unimproved with soft banks and bottom. Presently, the capacity of the OID has been reduced to 2,900 cfs, which is less than the 50- or 100-year frequency flood flows of 4,115 and 4,759 cfs, respectively.

The OID channel is currently rated by the District as having an approximate flow capacity of 2,900 cfs. There are no flow gauges on the OID to provide historic flow data, although in 2004 the District conducted a hydrologic study of existing flow conditions in the OID using the modified rational method (VCRAT). The VCRAT was used to estimate the flowrates based on the area of the OID watershed, runoff characteristics, and historic rainfall.

Perkins Drain

Perkins Drain represents that portion of the historic Oxnard Drain or Hueneme Canal that exists downstream of the Hueneme Drain Pump Station. That portion of this historic drain that exists upstream of the pump station is currently known as the Hueneme Drain. Perkins Drain previously conveyed perennial flows from Bubbling Springs southeast along the coast to Mugu Lagoon. These perennial flows are currently pumped into both J Street Drain and Perkins Drain. Perkins Drain is hydrologically connected to Mugu Lagoon via the wetland area east of the Halaco dump site and a series of agricultural ditches and overland flow.

Flooding

The flood extent shown in Figure 3.0-2a is not currently depicted within Federal Emergency Management Agency (FEMA) Flood Zone A, or the one percent annual chance (previously known as the100-year) flood zone. The one percent annual chance flood has a one percent chance of being equaled or exceeded each year. Thus, the 100-year flood could occur more than once in a relatively short period of time or even within the same month. The 100-year flood has a 26 percent chance of occurring during a 30-year period, the length of many mortgages[1].

Flood zones appear on Digital Flood Insurance Rate Maps (DFIRMs). Property owners within Flood Zone A are federally mandated to purchase flood insurance. The current DFIRMs are based on pre-1984 hydrologic data and hydraulic analyses conducted over 25 years ago (FEMA Flood Insurance Study 06111CV001A for Ventura County, California and Incorporated Areas, Volume 1 of 3, January 20, 2010). Since that time, Ventura County has experienced several years of record rainfall, including 1995, 1998, and 2005 (VCWPD 2009). The DFIRMs are therefore based on data that do not reflect the trend of increasing rainfall since the 1980s. As a result, the District commissioned the 2005 URS study to proactively characterize current conditions and provide adequate flood protection before FEMA initiates a DFIRM update. ~~With c~~ Construction of the proposed project would be the first major step of a proactive effort to protect properties currently threatened with flooding from J Street Drain overflow, as shown on Figure 3.0-2a. ~~would be removed from the 100-year flood plain in time to avoid the need to buy flood insurance.~~ Figure 3.0-2b depicts the Special Flood Hazards Area (SFHA), as mapped by FEMA[2]. These SFHA are related to flooding from wave activity, not from outfall from J Street Drain. Specific SFHA depicted on Figure 3.0-2b includes coastal flooding due to wave action (Zone VE) and coastal flooding due to waves filling up the lagoon.

According to the existing FEMA DFIRMs, the J Street Drain is best defined as an area subject to 100-year flooding with average depths of less than one foot (Zone X). However, as shown in Figure 3.0-2a, the existing J Street Drain's limited capacity along with the backwater effects at the street crossings along the drain may result in flooding at the project area greater than one foot deep during a moderate rain storm larger than a 10-year flood event.

Surface Water Quality

The State Water Resources Control Board (SWRCB), in cooperation with the federal Environmental Protection Agency (EPA) have designated "impaired waters" of the state, which are those water bodies that exhibit evidence of impaired beneficial uses due to pollution. The SWRCB 303(d) Listing Policy sets

[1] http://www.vcfloodinfo.com/index.php/flood-maps-flood-insurance-studies-a-map-changes/digital-flood-insurance-rate-maps-dfirm
[2] DFIRMs 06111C0914E, 06111C0916E, and 06111C0918E dated January 20, 2010.

the rules to identify which waters do not meet water quality standards. These are waters that are too polluted or otherwise degraded to meet the water quality standards outlined in the regional Basin Plan. The law requires that these jurisdictions establish priority rankings for waters on the list and develop Total Maximum Daily Loads (TMDL) for these waters. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards.

With regard to surface water quality, various agricultural, urban and industrial pollutants are discharged into the local watersheds near the project site. Ormond Beach is on the 2006 303(d) list for indicator bacteria, with an estimated affected area extending along approximately 1.6 miles of the beach, which includes the area of Ormond Beach at J Street, OID, and Arnold Road. Currently, a TMDL for bacteria is being developed for Ormond Beach by the LARWQCB, SWRCB, and EPA.

The federal National Pollutant Discharge Elimination System (NPDES) program requires that municipalities and counties with certain population sizes acquire permits for discharges of stormwater from public stormwater systems, and develop a program to reduce stormwater pollution to the "maximum extent practicable." The District, in cooperation with the County of Ventura, the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley, and Thousand Oaks acquired a NPDES municipal stormwater permit in 1994 (Permit CAS063339, Order No. 94-082), which was re-issued in 2000 (Permit CAS004002, Order No. 00-108), and most recently on July 8, 2010 (Permit CAS004002, Order No. R4-2010-0108). Pursuant to the permit, the District has developed a County-wide Stormwater Quality Management Plan that includes programs and Best Management Practices (BMPs) to reduce the discharge of pollutants from the public stormwater system to the maximum extent practicable.

The NPDES municipal stormwater permit requires that trash and debris be removed from open channel storm drains, such as the J Street Drain, "a minimum of once per year before the wet season." The District currently schedules the trash removal from J Street Drain in May of each year, however trash collection downstream of the Ventura County Railroad can only occur as needed after a seasonal breach event (typically sometime between October and February) due to the backup of water from the lagoon. Trash, sediment, and grease in Hueneme Drain, a tributary of J Street Drain, is automatically collected at Hueneme Drain Pump Station and properly disposed off site. The City of Oxnard also manages ongoing trash collection and abatement programs, including a monthly Oxnard City Corps effort at Ormond Beach and the Perkins Road parking lot located north of Ormond Beach Lagoon.

In addition, the new NPDES permit requires installation of trash excluders or similar devices at "catch basins or outfalls to prevent the discharge of trash to the storm drain system or receiving water…in areas defined as Priority A" by mid-2011. Although neither the City of Oxnard nor the City of Port Hueneme have designated J Street drain as Priority A (catch basins consistently generating the highest volumes of trash), some of its tributary storm drains within the City of Oxnard fall into this category. The District and Cities of Oxnard and Port Hueneme have begun planning an approach to capturing trash and debris before it reaches Ormond Beach Lagoon and the Pacific Ocean. This effort is concurrent with but separate from the J Street Drain capacity improvement project.

Groundwater

The Oxnard Plain Groundwater Basin underlies the majority of this region. This basin has approximately 7,800,000 acre-feet of storage and is mostly confined (i.e., covered by an impermeable clay layer). The result is that rain or surface water cannot percolate into the basin. Therefore, groundwater recharge takes place at the margins of the basin where the restricting clay layer is absent.

According to the *Hydrogeology Study Summary: J Street Drainage Improvement Project*, ~~*Groundwater Modeling Summary for the J Street Drainage Improvement Project*~~, groundwater that is in an unconfined condition near J Street Drain is found to have elevations ranging from less than 2 feet below mean sea level (msl) to approximately 17.5 feet below msl at the northern extent of the channel. Groundwater flows generally from north and east (i.e., inland and upland areas) toward the southwest and west (i.e., toward the coast), but in the vicinity of Perkins Road, McWane Boulevard, and the portion of J Street Drain between the Ventura County Railroad and Ormond Beach, groundwater has been observed to flow northward due to an existing drain effect north of the Halaco Site.

There are only a few streams in the Oxnard Plain and most flow only during wet periods and after storms. The Santa Clara River lies to the north of the study area. Annual precipitation over the Oxnard area is approximately 15.6 inches with most of this (nearly 13 inches annually, on average) falling during the four-month period between December and March.

The Oxnard Plain Groundwater Basin consists of five major aquifers. Of these, the Oxnard aquifer is the shallowest and is a major source of domestic and agricultural water in the region. Due to this use, it has been determined that the Oxnard aquifer is being overdrafted at a rate of approximately 12,400 acre-feet per year, and this overdraft has resulted in more than 22 square miles of the aquifer being intruded by seawater. This seawater intrusion area encompasses the entire project site, and where seawater has intruded, the water is not considered suitable for agriculture.

A program has been established to reduce saltwater intrusion into the Oxnard aquifer. As part of this program, Ventura County would pump water from the Fox Canyon aquifer and divert water from the Santa Clara River to recharge ponds located in the Oxnard Forebay Recharge Basin. This method would increase freshwater flows and limit the impact of saltwater intrusion to this groundwater basin.

In addition to the impact of saltwater intrusion, the Oxnard aquifer is also impacted by the percolation of agricultural water. This percolation has increased mineral concentrations, nitrate levels, and levels of total dissolved solids in this groundwater basin. Additional impact potential occurs from urban and industrial uses, improperly abandoned water wells and fuel tanks, and other underground storage tanks. The potential for groundwater contamination is higher in the recharge areas, where the restricting clay cap is absent.

The nearby Halaco superfund site is located approximately 1,500 feet east of the southern portion of the J Street Drain. The Halaco site overlies a groundwater plume that is impacted primarily from past processing of metals at the site. The western portion of the Halaco site is a smelter and the eastern portion is a waste pile. The ~~natural~~ current direction of the groundwater movement beneath the western portion of the Halaco site (i.e., closest to the J Street Drain) is northward ~~toward the shoreline (i.e., southwest) with ultimate discharge into the Pacific Ocean~~. The Halaco superfund site is discussed in greater detail in Section 4.8 of this EIR.

4.3.2 Regulatory Setting

Federal Regulations

Section 404 of the Clean Water Act

Under Section 10 of the Rivers and Harbors Act, the USACE is authorized to regulate the construction of structures and excavation/deposition of material into navigable waters. Under section 404 of the Clean

Water Act (CWA), the USACE is authorized to permit the discharge of dredged or fill materials to "Waters of the U.S." "Waters of the U.S." under Section 404 includes both wetland and non-wetland aquatic habitats with the jurisdictional extent of rivers and streams defined by the ordinary high water mark (OHWM). Section 404 permits can be issued as individual, general or nationwide permits. The proposed project requires a USACE Individual Permit pursuant to Section 404 of the federal CWA (1990, as amended), and/or qualification under a Nationwide Permit pursuant to Section 404 of the CWA.

National Flood Insurance Program

FEMA administers the National Flood Insurance Program (NFIP). In 1985, FEMA completed a flood insurance rate map (FIRM) for Ventura County which identified Special Flood Hazard Areas including the extent of the floodways for the 100-year flood. DFIRMs were issued in 2010, but were based on pre-1984 hydrologic data. To comply with the NFIP, communities must adopt a floodplain management ordinance addressing construction and habitation in flood zones. In California, the California Department of Water Resources provides and encourages communities to adopt the California Model Floodplain Management Ordinance.

State Regulations

Section 401 of the Clean Water Act

Section 401 of the CWA requires Water Quality Certification for activities that may result in discharge into jurisdictional waters (including wetland/riparian areas) of the United States. Water Quality Certification would ensure that discharge complies with the provisions of the CWA. The LARWQCB would administer the certification program for the J Street Drain project.

Sections 301 and 402 of the Clean Water Act

Sections 301 and 402 of the CWA prohibit the discharge of pollutants to "Waters of the U.S.", unless authorized under a NPDES permit. The federal NPDES program was delegated to the State of California on May 14, 1973. Responsibility for implementing the NPDES program rests with the State Water Resources Control Board and the nine RWQCBs. Most individual NPDES permits are issued by the applicable RWQCBs. The stormwater permitting program was developed to address the discharge of pollutants from non-point discharges of stormwater. The State Board and Regional Boards have issued two types of stormwater permits: municipal stormwater permits for urban areas of greater than 100,000 people and statewide general permits applicable to industrial activities and construction. Waste Discharge Requirements are also issued for discharges of groundwater during construction activities.

Section 303 of the CWA

Section 303 of the CWA requires States to make a list of "impaired" waters. Section 303 requires the development of total maximum daily loads (TMDL) for pollutants identified as contributing to impairment of a waterbody. Facilities discharging to Section 303 waters or tributaries may be required to additionally limit discharges of pollutants contributing to the listed impairment. The J Street Drain is tributary to Ormond Beach and Lagoon which are listed as "impaired" for bacteria.

Streambed Alteration Agreements

Sections 1600-1616 of the California Fish and Game Code (effective January 1, 2004) provide the statutes and guidance for the regulation and permitting of impacts to identified categories of State waters under

the Lake and Streambed Alteration Program administered by the California Department of Fish and Game.

Categories of State waters and the types of regulated activities are described in Section 1602 of the Code. In general, the streambed alteration agreement is intended to protect fish and wildlife resources associated with riparian wetland habitat. A permit fee is assessed for each project and is tied to total project costs.

RWQCB - Ventura County Stormwater Permit and Management Plan

The Ventura Countywide Stormwater Quality Management Program (VCSQMP) was established in 1994 to satisfy the requirements of Section 402 of the CWA. Implementation of the VCSQMP was established under the Ventura County Municipal Stormwater permit (NPDES Permit No. CASOO4002 issued July 27, 2000, and reissued July 8, 2010). The VCWPD serves as the Principal Co-Permittee for the permit and coordinates countywide permit activities; the development of materials; and the planning and implementation of plans, including conducting water quality sampling, analysis, and data evaluation on behalf of all of the co-permittees. Other co-permittees include the other 10 incorporated cities within Ventura County, including the City of Oxnard.

The Ventura County Stormwater Management Plan (SMP) represents and defines the requirements of the Ventura Countywide SQMP. The SMP contains nine programs for the management of stormwater. Programs applicable to the proposed project include; Section 3, Industrial Commercial Businesses, Section 4, Land Development, and Section 5, Construction Sites. The proposed project would implement BMPs from the SMP to minimize impacts during construction.

Ventura County

Ventura County Stormwater Ordinance

The Ventura County Stormwater Ordinance (Ordinance No. 4142) prohibits the discharge of non-stormwater discharges into County stormwater facilities and seeks to reduce pollutants in stormwater to the maximum extent practicable.

Stormwater Ordinance Requirements for Construction. This ordinance requires owners to comply with the State construction general stormwater permit prior to being issued a grading permit for construction activity. The construction general stormwater permit will require the preparation of a Stormwater Pollution Prevention Plan (SWPPP).

Ventura County Floodplain Management Ordinance

The Ventura County Board of Supervisors adopted the Ventura County Flood Plain Management Ordinance (Ordinance 3741) on September 3, 1985. That ordinance was amended, then repealed and replaced with the current Floodplain Management Ordinance (Ordinance 3841) on February 2, 1988. Ordinance 3481 was subsequently amended on March 21, 1989 (Ordinance 3890), June 27, 1989 (Ordinance 3902), and October 9, 1990 (Ordinance 3954).

The District implements the Flood Plain Management Ordinance on behalf of Ventura County to ensure compliance with NFIP. The ordinance addresses the risks of development within the floodplain and includes a list of prohibited discharges, exemption procedures and requirements for construction and permitting.

Encroachment Permit

The District authority over jurisdictional channels is established by Watershed Protection Ordinance No. WP-1, adopted January 12, 2010. Ordinance WP-1 repeals Ventura County Flood Control District Ordinance Nos. FC-1, FC-3, FC-15, FC-18, FC-20, FC-21, FC-22, FC-23, FC-26, FC-27, FC-29, and FC 3937. Additional policies have adopted the District Hydrology and Design manuals which designate the requirements for flood control facility design. The purpose of Ordinance WP-1 is "to protect life and property from flood and storm waters within or overflowing the banks of watercourses under District control."

Laterals and side-drains contributing runoff to the jurisdictional channels (redline channels) are under the jurisdiction of the appropriate city. However, the agency having jurisdiction over the affected lateral or side-drain connections to jurisdictional channels must obtain a District Encroachment and/or Watercourse Permit (encroachment permit) and provide sufficient information and engineering studies to show that the connection does not negatively impact the conveyance capacity of the jurisdictional channel. It is not anticipated that this project would include any new connections, only the existing ones reconnected.

Fox Canyon Groundwater Management Agency (FCGMA)

The FCGMA manages and protects both confined and unconfined aquifers within several groundwater basins underlying the southern portion of Ventura County. The FCGMA is an independent special district, separate from the County of Ventura or any City government. It was created by the California Legislature in 1983 to oversee Ventura County's groundwater resources. The FCGMA has jurisdiction over the Fox Canyon Aquifer which covers an area of approximately 185 square miles and includes the Oxnard Plain Forebay and the Oxnard Plain Pressure Basins that underlie most of the City of Oxnard. The Fox Canyon aquifer supplies more than half of the water needs for 0.7 million residents in the cities of Ventura, Oxnard, Port Hueneme, Camarillo, and Moorpark, plus the unincorporated communities of Saticoy, El Rio, Somis, Moorpark Home Acres, Nyeland Acres, Leisure Village, Point Mugu and Montalvo. The proposed project would involve dewatering and discharge of groundwater.

City of Oxnard

The City of Oxnard guidelines will govern specific development concerns such as storm sewers and drainage. The City of Oxnard also retains responsibility for the following:

- Maintains storm drain system with channel capacities less than 500 cfs
- Collects water quality data
- Provides potable water to inhabitants
- Provides wastewater services to inhabitants
- Acts as floodplain manager for areas inside City boundaries

Master Plan of Drainage

To mitigate flood hazards, the City of Oxnard in 1979 adopted a Master Plan of Drainage and became a member of the NFIP. Chapter 35 of the Oxnard City Code contains the Floodplain Management Ordinance for the City of Oxnard. The Floodplain Management Ordinance states the requirements for development in areas subject to flooding. Any new development is required, through conditions of approval, to eliminate flooding problems as identified by the NFIP.

The City of Oxnard Department of Public Works is responsible for developing the City of Oxnard Master Plan of Drainage. The original Master Plan of Drainage was developed and implemented in 1979. The Oxnard Master Plan of Drainage was revised and re-issued in October 2003. The Oxnard Master Plan of Drainage contains criteria for street drainage and construction. Storm drain systems must be designed with adequate capacity to convey a 10- year 24-hour frequency storm. Sumps must be designed for a 50-year 24-hour storm event and provided with an emergency overflow escape path. Building finish elevations must be above the 100-year flood level. The proposed project would increase J Street Drain capacity to accommodate 100-year flood flow.

City of Oxnard 2020 General Plan

Open Space/Conservation Element

The City of Oxnard General Plan Open Space/Conservation Element contains the following policies applicable to stormwater and groundwater resources in Section C — Natural Resources:

- The City shall support updating the "208" Wastewater Control Plan to control urban and non-urban runoff.
- The City should endeavor to maintain a minimal dependence on Basin 4A groundwater and support the policies of the local groundwater management agency (FCGMA) to protect, enhance, and replenish the aquifers underlying the Oxnard Plain.

Safety Element City of Oxnard

General Plan Safety Element contains the following policies applicable to flood hazards in Section C, Flooding:

- As a condition of approval, the City shall continue to require any new development to mitigate flooding problems identified by the National Flood Insurance Program.
- The Flood Control District should require subdividers to dispose of drainage water originating within their subdivisions and all drainage water originating above their subdivisions that is concentrated by the construction of the subdivision by: 1) conducting the water to the natural water course draining the subdivision; or 2) discharging the water at the edge of their subdivisions and obtaining easements from downstream owners of the land over which the water will flow to the water course. Subdividers are required to construct the above works and such other works as will protect their subdivisions from damage by water and dedicate them to the County of Ventura Flood Control District (now known as the Ventura County Watershed Protection District) for red line channels.
- The City shall continue to provide information to the Federal Emergency Management Agency to ensure that Flood Insurance Rate Maps which cover Oxnard are updated periodically to address changing flood conditions brought about by urban developments.

Public Facilities Element

The Public Facilities Element of the City of Oxnard 2020 General Plan includes the Goals, Objectives, and Policies necessary to provide public facilities and services adequate to serve existing and future development within the City's Urban Service Area. The following objectives are stated as part of this Element:

- Ensure adequate sanitary sewer and wastewater treatment plant capacity to accommodate existing and future development.
- Provide adequately sized storm drain systems to accommodate existing and future needs.

City of Port Hueneme

The City of Port Hueneme General Plan Conservation/Open Space/Environmental Resource element includes the following goals and policies for water resources:

- Preserve existing water resources.
- Coordinate with the Fox Canyon Ground Water Management Agency to preserve groundwater supplies.
- Protect and enhance natural qualities of riparian habitat (i.e. Bubbling Springs Creek).

Ventura County

Surface and Groundwater Quantity and Quality Goals

1. Inventory and monitor the quantity and quality of the County's water resources.

2. Effectively manage the water resources of the County by adequately planning for the development, conservation and protection of water resources for present and future generations.

3. Maintain and, where feasible, restore the chemical, physical and biological integrity of surface and groundwater resources.

4. Ensure that the demand for water does not exceed available water resources.

6. Promote reclamation and reuse of wastewater for recreation, irrigation and to recharge aquifers.

Surface and Groundwater Quantity and Quality Policies

1. Discretionary development which is inconsistent with the goals and policies of the County's Water Management Plan (WMP) shall be prohibited, unless overriding considerations are cited by the decision-making body.

2. Discretionary development shall comply with all applicable County and State water regulations.

3. The installation of on-site septic systems shall meet all applicable State and County regulations.

4. Discretionary development shall not significantly impact the quantity or quality of water resources within watersheds, groundwater recharge areas or groundwater basins.

5. Landscape plans for discretionary development shall incorporate water conservation measures as prescribed by the County's Guide to Landscape Plans, including use of low water usage landscape plants and irrigation systems and/or low water usage plumbing fixtures and other measures designed to reduce water usage.

6. The use of the Santa Clara River as a multiple resource (i.e., source of supply for water, concrete aggregates and biological habitat) shall be permitted to continue; with the use of the River as a water resource having priority over all other uses.

7. Out-of-river mining below the historic or predicted high groundwater level in the Del Norte/El Rio (Oxnard Forebay Basin) area may be permitted if the applicant can demonstrate to the satisfaction of the County of Ventura that the excavation activity will not interfere with or affect groundwater quality and quantity.

8. All discretionary development shall be conditioned for the proper drilling and construction of new oil, gas and water wells and destruction of all abandoned wells on-site.

9. New wells in the Oxnard Plain pressure basin shall not be allowed if they would increase seawater intrusion in the Oxnard or Mugu aquifers.

10. All new golf courses shall be conditioned to prohibit landscape irrigation with water from groundwater basins or inland surface waters identified as Municipal and Domestic Supply or Agricultural Supply in the California RWQCB's Water Quality Control Plan unless either: a) the existing and planned water supplies for a Hydrologic Area, including interrelated Hydrologic Areas and Subareas, are shown to be adequate to meet the projected demands for existing uses as well as reasonably foreseeable probably future uses within the area, or b it is demonstrated that the total groundwater extraction/recharge for the golf course will be equal to or less than the historic groundwater extraction/recharge (as defined in the Ventura County Initial Study Assessment Guidelines) for the site. Where feasible, reclaimed water shall be utilized for new golf courses.

Flood Hazard Goals

1. Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from flood hazards.

2. Design and construct appropriate surface drainage and flood control facilities as funding permits.

3. Prevent incompatible land uses and development within floodplains.

Flood Hazard Policies

1. Land use in the regulatory floodway should be limited to open space, agriculture, passive to low intensity recreational uses, subject to the approval of the County Public Works Agency. The floodway's principal use is for safely conveying floodwater away from people and property.

2. Within areas subject to flooding as determined by FEMA on the latest available DFIRMs, the County shall require the recordation of a Notice of Flood Hazard or dedication of a flowage easement with the County Recorder for all divisions of land and discretionary permits.

3. Development proposed with the floodplain shall be designed and built to standards intended to mitigate to the extent possible the impacts from the one percent annual chance storm.

4. The design of structures which are constructed in floodplain areas as depicted on the General Plan Hazards Protection Maps, shall be governed by Federal regulations, specifically Title 44 Code of Federal Regulations Sections 59 through 70, as well as the County Floodplain Management Ordinance and shall

incorporate measures to reduce flood damage to the structure and to eliminate any increased potential flood hazard in the general area due to such construction.

4.3.3 Significance Thresholds

Ventura County *Initial Study Assessment Guidelines* were updated in April 2011. The thresholds of significance for water quality were amended as shown below. However, the update to the thresholds does not change the project-level impact analysis provided in this EIR.

A significant impact to hydrology and/or water quality would be identified if the proposed project is determined to result in any of the following:

Groundwater Quantity

A land use or activity, which could cause a significant adverse impact upon groundwater resources in itself or on a cumulative basis. Threshold criteria include, but are not limited to:

1. Any land use that will directly or indirectly decrease, either individually or cumulatively, the net quantity of groundwater in a basin that is overdrafted or creates an overdrafted groundwater basin, shall be considered to have a potentially significant impact.
2. In groundwater basins that are not overdrafted, or are not in hydrologic continuity with an overdrafted basin, net groundwater extraction that will individually or cumulatively cause the basin(s) to become overdrafted, shall be considered to have a potentially significant impact.
3. In areas where the basin and/or hydrologic unit condition is not well known or documented and there is evidence of overdraft due to declining water levels in a well or wells, any proposed net increase in groundwater extraction from that groundwater basin and/or hydrologic unit shall be considered to cause a significant groundwater quantity impact until such time as reliable studies determine otherwise.
4. Regardless of items 1-3 above, any land use or project which would result in 1.0 acre-feet, or less, of net annual increase in groundwater extraction is not considered to have a significant project or cumulative impact on groundwater quantity.
5. General Plan Goals and Policies - Any project that is inconsistent with any of the policies or development standards relating to *groundwater quantity* of the Ventura County General Plan Goals, Policies and Programs or applicable Area Plan (above), may result in a significant environmental impact. This threshold is not applicable if the project includes a General Plan Amendment (GPA) that would eliminate the inconsistency, and the GPA itself would not have a significant impact on *groundwater quantity* or be inconsistent with any *groundwater quantity* policy or development standard of the General Plan or applicable Area Plan (above).

Groundwater Quality

A land use, or activity, which could cause a significant impact upon groundwater quality in itself or on a cumulative basis. Threshold criteria include, but are not limited to:

1. Any land use proposal that will individually or cumulatively degrade the quality of groundwater and cause groundwater to fail to meet groundwater quality objectives set by the LARWQCB Basin Plan shall be considered to have a potentially significant impact.

2. In cases where the proposed land use impact upon the quality of groundwater is unknown, and there is evidence that the proposed land use could cause the quality of groundwater to fail to meet the groundwater quality objectives set by the LARWQCB Basin Plan, the project shall be considered to have a potentially significant impact until such time as reliable studies determine otherwise.
3. Applicants for land use projects that propose the use of groundwater in any capacity and are located within two miles of the boundary of a former or current test site for rocket engines will be required to test for perchlorate and trichloroethylene (TCE).
4. General Plan Goals and Policies - Any project that is inconsistent with any of the policies or development standards relating to g*roundwater quality* of the Ventura County General Plan Goals, Policies and Programs or applicable Area Plan (above), may result in a significant environmental impact. This threshold is not applicable if the project includes a GPA that would eliminate the inconsistency, and the GPA itself would not have a significant impact on *groundwater quality* or be inconsistent with any *groundwater quality* policy or development standard of the General Plan or applicable Area Plan (above).

Surface Water Quantity

A land use or activity that could cause a significant adverse impact upon surface water resources in itself or on a cumulative basis. Threshold criteria include, but are not limited to:

1. Any project that will increase surface water consumptive use (demand), either individually or cumulatively, in a fully appropriated stream reach as designated by SWRCB or where unappropriated surface water is unavailable, shall be considered to have a significant adverse impact on surface water quantity.
2. Any project that will increase surface water consumptive use (demand) including but not limited to diversion or dewatering downstream reaches, either individually or cumulatively, resulting in an adverse impact to one or more of the beneficial uses listed in the LARWQCB Basin Plan, is considered a significant adverse impact.
3. General Plan Goals and Policies - Any project that is inconsistent with any of the policies or development standards relating to surface water quantity of the Ventura County General Plan Goals, Policies and Programs or applicable Area Plan (above), may result in a significant environmental impact. This threshold is not applicable if the project includes a GPA that would eliminate the inconsistency, and the GPA itself would not have a significant impact on surface water quantity or be inconsistent with any surface water quantity policy or development standard of the General Plan or applicable Area Plan (above).

Surface Water Quality

A land use or activity that could cause a significant adverse impact upon surface water resources in itself or on a cumulative basis. Threshold criteria include, but are not limited to:

1. Any land use or project proposal that is expected to individually or cumulatively degrade the quality of Surface Water causing it to exceed water quality objectives as contained in Chapter 3 of the three Basin Plans.
2. Any land use or project development that directly or indirectly causes stormwater quality to exceed water quality objectives or standards in the applicable MS4 Permit or any other NPDES Permits.

Additionally, implementation of the proposed project would result in a significant impact upon Water Resources and Hydraulic Hazards, as defined in Appendix G of the *CEQA Guidelines*, if the project causes any of the following:

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows; or
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

4.3.4 Project-Level Impact Analysis

Groundwater Quantity

Construction

The construction of the proposed drain would require the installation of dewatering wells, dewatering, and discharge of groundwater back into surface water. This dewatering is necessary to create a relatively dry work area for the excavation and construction activities. The pumped groundwater would be tested for contaminants and if determined to be acceptable it would then be allowed to be discharged into the Perkins Drain, away from the work area. The discharged water is expected to flow from a remnant portion of the Perkins Drain east of the OID that allows runoff from the Ormond Lagoon to flow down the coast and ultimately to a wetland area east of the Halaco dump site with portions of the discharged water percolated back to the aquifer. Therefore, the construction dewatering is not expected to result in the overdraft of groundwater. A less than significant impact would occur in this issue area.

Operation

The operation of the proposed project would not utilize groundwater as a water source. Therefore, the proposed project would not deplete groundwater supplies or interfere substantially with groundwater recharge. Impact is less than significant.

Beach Elevation Management Plan

The Beach Elevation Management Plan (BEMP) is anticipated to be used periodically and would only have equipment on the beach for a few hours. A few hours are all that is necessary to groom the beach. No groundwater supplies are associated with the plan and, therefore, no impacts are anticipated for this issue area.

Groundwater Quality

Construction

The construction of the proposed drain would require the installation of dewatering wells, dewatering, and discharge of groundwater back into surface water. This dewatering is necessary to create a relatively dry work area for excavation and construction activities. The pumped groundwater would be tested for contaminants and, if determined to be acceptable, would be discharged into the Perkins Drain, away from the work area. If the pumped groundwater is determined to be contaminated, the water will be collected and either treated or disposed of according to waste discharge requirements of Order No. R4-2008-0032, General NPDES and Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (adopted by the State Board on June 5, 2008). Additionally, since the project is located near the coast it is expected that much of the groundwater will be highly saline and would not be used for other activities. Because groundwater would be pumped from a shallow aquifer not used for water supply, and would be permitted to percolate back into the shallow aquifer, dewatering is not expected to promote seawater intrusion. Therefore, the above construction impacts on groundwater quality would be less than significant.

According to the ~~Groundwater Modeling~~ *Hydrogeology Study Summary* for J Street Drain (2011), groundwater pumping could cause the Halaco groundwater plume to move approximately ~~300~~ 50 feet toward the project area during construction. This impact would be significant.

Operation

During the operation of the proposed project, the maintenance activities associated with the proposed drain would be similar in frequency to those currently in place. These activities are intermittent and are for maintenance purposes only. The proposed project would not result in new activities that would cause a significant impact to groundwater quality. Operation of the proposed project would not individually or cumulatively degrade the quality of groundwater and cause groundwater to fail to meet groundwater quality objectives set by the LARWQCB. The District's Final Program Environmental Impact Report (EIR) for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain. These BMPs will be incorporated as part of the proposed project for operational activities and will ensure that impacts are less than significant.

Beach Elevation Management Plan

The BEMP is anticipated to be used periodically basis and would only have equipment on the beach for a few hours. Grooming the beach elevation would ensure the lagoon breaches naturally in response to sufficient storm water runoff before adjacent developed properties can become flooded. The BEMP would not result in a significant impact to groundwater quality.

Surface Water Quantity

Construction

The construction of the proposed project would not require surface water and would not result in the overdraft of surface water. Therefore, a less than significant impact is identified for this issue area.

Operations

During the operation of the proposed project, the maintenance activities associated with the proposed drain would be similar in frequency to those currently in place. These activities are intermittent and are for maintenance purposes only. The proposed project would not result in new activities that would cause a significant impact to surface water quantity. The proposed project would not result in increased flow or surface water quantity, but rather accommodates a greater flood flow that would otherwise cause flooding upstream and eventually flow into surrounding surface water bodies. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain. These BMPs will be incorporated as part of the proposed project for operational activities and will ensure that impacts are less than significant.

Beach Elevation Management Plan

The BEMP is anticipated to be used periodically and would only have equipment on the beach for a few hours. Grooming the beach elevation would ensure the lagoon breaches naturally in response to sufficient storm water runoff before adjacent developed properties can become flooded. The BEMP would not change surface water quantity as it would facilitate the natural process of water overtopping the sand berm that allows the seasonal flow of water from the lagoon to the ocean, eliminating flooding upstream. This impact would be less than significant.

Surface Water Quality

Construction

The lagoon is identified as impaired for bacteria and the TMDL for bacteria is being prepared to address the contamination. This TMDL will also indicate the allowable amount of bacteria from all the tributaries of the lagoon. At this time, the TDML has not been identified so there are no water quality standards being violated, however standards will be established in the near future. Since the project is not adding new sources of bacterial water quality impacts there is a less than significant impact for this issue.

Water quality in jurisdictional areas can be adversely affected by surface water runoff and sedimentation during construction. The construction of the proposed project would involve dewatering, demolition, and excavation activities which may result in potential impacts to water quality. Construction of the proposed project would require the use of gasoline and diesel-powered heavy equipment, such as bulldozers, backhoes, water pumps, and air compressors. Chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, glues, and other substances could be utilized during construction. An accidental release of any of these substances could degrade the water quality of the surface water runoff and add pollution into local waterways. Considering the small size of each of the project sites and the small quantities of potential pollutants, the threat of these materials will be minimal.

Discharge of potentially contaminated groundwater to surface water may degrade the water quality of surrounding watercourses and waterbodies. However, pumped groundwater must be tested and if determined to be contaminated, the water must be collected and either treated or disposed of according to waste discharge requirements of Order No. R4-2008-0032, General NPDES and Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (adopted by the State Board on June 5, 2008). Additionally, the installation of dewatering wells may result in erosion or sedimentation

due to exposed soils and sediment removal and dewatering discharges may cause erosion at the discharge point.

Construction of the proposed project could result in short-term erosion and sediment impacts to the watercourses and waterbodies within the project area. Earth-disturbing activities associated with construction would be temporary and would not result in a permanent or significant alteration of natural topographic features that could increase or exacerbate erosion. Temporary erosion impacts during excavation would depend largely on the areas affected and the length of time soils are subject to conditions that would be affected by erosion processes. Although the potential for erosion would be limited, exposure of soil to wind and water during construction would still occur.

The proposed project would require consultation with the USACE to obtain a Section 404 Permit and associated Section 401 Water Quality Certification via the RWQCB. A separate dewatering permit would be obtained from RWQCB. However, discharges of groundwater to surface water are covered under Order No. R4-2008-0032, General NPDES and Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (adopted by the State Board on June 5, 2008). Therefore, the proposed project would need to submit a Notice of Intent (NOI) and comply with the permit requirements including waste discharge requirements (WDR) and implement a monitoring and reporting program.

Finally, the RWQCB issues the Construction General Stormwater Permit which addresses the potential pollutants discharged to stormwater by construction activities. To comply with the permit, a Notice of Intent (NOI) must be submitted to the RWQCB and a SWPPP must be prepared and kept on site. The purpose of the SWPPP is to identify and document appropriate BMP installation to minimize erosion and construction site runoff pollution during the length of construction. Impacts to water quality would be significant unless mitigated.

Operations

During the operation of the proposed project, the maintenance activities associated with the proposed drain would be similar to those currently in place, which would generate intermittent activity for maintenance purposes only and are expected to occur at the existing frequency. The proposed project would not result in new activities that would cause a significant impact to surface water quality. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain. The BMPs will be incorporated as part of the proposed project for operational activities to maintain impacts at the current less than significant level.

Currently, trash enters the channel either directly or as a result of discharge from tributary storm drains, particularly during storm events. The District's Operations and Maintenance Division cleans out the drain north of the Ventura County Railroad annually in May and June, and south of the railroad to the end of the concrete channel as needed after a natural lagoon breach event (typically sometime between October and February). Trash cleanup does not occur in the lagoon to avoid adverse effects to threatened and endangered species. The J Street Drain itself does not generate trash. Enlargement of the channel would not increase the volume of trash that is generated throughout the watershed and discharged to the J Street Drain. This impact is less than significant. Nonetheless, as discussed in Section 4.3.1.1, the District is working with the Cities of Oxnard and Port Hueneme through a separate process (Ventura Countywide Municipal Stormwater Permit compliance) to install a trash collection device in J Street Drain.

Beach Elevation Management Plan

The BEMP is anticipated to be used periodically and would only have equipment on the beach for a few hours. The BEMP is identified to groom the beach sand berm elevation to facilitate natural breaching in response to storm water runoff. During a natural breach condition, surface water from the lagoon would flow into the Pacific Ocean. Beach grooming would not degrade surface water quality, as this work would not occur within surface waters and would be carried out according to BMPs in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project. This impact would be less than significant.

Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Construction

The construction of the drain would be short-term and would not result in any changes to the existing drainage pattern of the project area. Therefore, impacts would be less than significant.

Operation

The natural action of the ocean waves builds up a sand berm on the beach. This sand berm periodically blocks the lagoon outlet, preventing J Street drainage from reaching the ocean and preventing tidal flow from entering the lagoon. Under the BEMP, the District will maintain a safe sand berm elevation (elevation 6.5 feet ± NGVD 1929) near the northwest corner of the lagoon, approximately 800 feet southeast of the J Street drain concrete channel outfall. The improvements to J Street Drain would lower the channel outlet approximately 2.5 feet below the existing channel bottom. Because the existing lagoon bottom elevation is approximately at the same elevation as the end of the existing concrete channel, there is the potential that water will pond for a varying period of time at the point where the lowered concrete channel meets the existing lagoon bottom elevation. To minimize potential effects to threatened and endangered species, there are no plans to excavate within the lagoon beyond the project limits at the drain outlet.

In order to analyze the potential change in sediment transport and erosional characteristics of the project, a *Sedimentation Transport Study* was prepared in August 2011 (HDR). The purpose of the study was to evaluate what storm event (e.g., 2-year, 5-year) would allow a new, lower elevation low-flow channel to form through the lagoon, preventing the "ponding" effect.

Sediment transport modeling identified two threshold conditions at which the lagoon bottom downstream of the proposed J Street Drain concrete channel outfall would flow to maintain positive drainage for the proposed improvements: (1) two consecutive 2-year storm events (not necessarily within the same storm season); or (2) a single 5-year storm event. Either one of these scenarios would create a low-flow channel capable of maintaining positive drainage. The probability of a 2-year storm event in a given year is 50 percent. The probability of two consecutive 2-year storms occurring in any given year is approximately 25 percent. The probability of a 5-year storm occurring in a given year is 20 percent. The probability of a 5-year flood event occurring within a 3-year period is approximately 50 percent.

Additionally, given the proximity of the proposed J Street Drain outfall elevation to mean sea level, tidal cycles have a large impact on sediment transport capacity of the system. In a fully-breached lagoon berm condition, the J Street Drain will likely be inundated twice a day from tidal action. When a berm is

present, the channel is also likely to be inundated to some extent over a long period, from lagoon backwater. Based on the analysis, a total inflowing sediment load potential of 17 tons per year was calculated for J Street Drain and Hueneme Drain. This load is minimal compared to the total load (5,000 tons) leaving the drains in the two consecutive 2-year storm events. Annual inflowing load represented approximately 0.30 percent of the out-flowing storm sediment load. Therefore, the build up of sediment within the lagoon creating a "ponding" effect is considered less than significant. The proposed project would increase the capacity of the existing channel to reduce potential flooding in residential and commercial areas of Oxnard and Port Hueneme.

The proposed project would not result in an increase in erosion or siltation off-site since the sedimentation transport described above is a natural balancing of the system. As sediment is brought in by the ocean, it is also removed. The proposed project would not result in a significant change from the existing erosion potential.

Beach Elevation Management Plan

The BEMP requires the use of mechanical equipment to physically groom the berm to a safe elevation above which lagoon waters could overflow in response to storm runoff. Grooming the beach elevation would ensure the lagoon breaches naturally before adjacent developed properties can become flooded. This would occur periodically prior to a forecast storm event when the sand berm elevation exceeds 6.5 feet elevation (NGVD 1929). It is likely that when the lagoon water surface overtops the groomed beach section, there would be movement of sand from the beach into the surf zone. This would just be the existing beach sand and, therefore, part of the natural beach system of sand transport. Therefore, a less than significant impact is identified.

Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Construction

During construction stormwater would be directed around the project work area, but project construction would not contribute additional surface runoff (groundwater pumps would be turned off during storm events). These temporary diversions would include water flowing through J Street Drain, the Hueneme Drain Pump Station, and the tidal action of water moving further into the lagoon. The contractor would be responsible for setting up the appropriate bypass systems as well as the coffer dam which would keep the tidal water out of the active work area. With these bypasses in place, there would be a less than significant impact.

Operation

Sediment transport modeling illustrated that if a breached berm condition exists for Ormond Beach Lagoon, it is possible for a new low-flow channel to form. This new low-flow channel would effectively lower portions of the lagoon bottom and maintain positive drainage from the J Street Drain outfall to the Pacific Ocean. Both cases of either two consecutive 2-year storm series (although not necessarily within the same storm season) or a single 5-year storm were found to create this low-flow channel. The proposed project would not substantially alter the existing drainage pattern. The proposed project would involve increasing the capacity of the existing channel to reduce potential flooding as illustrated in the *Sedimentation Transport Study* and discussed above. While the proposed drain would not increase the amount of surface runoff, the increased capacity drain would increase the rate of surface runoff entering

the Ormond Beach Lagoon. The J Street Drain is located within a 100-year flood hazard area. The capacity of the existing drain is 500-600 cubic feet per second (cfs), the equivalent of a ten-year flood event. The limited capacity of the drain along with the backwater effects at the street crossings along the drain may result in flooding during a severe rain storm larger than a ten-year flood level flow. Therefore, the proposed drain would reduce flooding in the project area during a storm larger than a ten-year storm. The new low-flow channel would effectively lower portions of the lagoon bottom and maintain positive drainage from the J Street Drain outfall to the Pacific Ocean. The results are based on a breached condition existing throughout the storm hydrograph. Project impacts would be less than significant.

Beach Elevation Management Plan

The BEMP is designed to groom the beach berm when it is observed to exceed 6.5 feet elevation (NGVD 1929) and a storm is simultaneously forecasted for the area. Grooming the beach elevation would ensure the lagoon breaches naturally before adjacent developed properties can become flooded. The intent of the BEMP is to facilitate natural release of the lagoon water in response to storm water inflow before it backs up so far that it overtops the channel and floods adjacent residents and businesses, including the OWWTP. Therefore, the BEMP would not cause flooding on or off site and would in fact reduce it. Therefore, there is no impact identified for this issue area.

Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Construction

During construction earth movement, use of heavy equipment, and placement of concrete within the work area all have the potential to generate polluted runoff. Therefore, this impact is considered significant and would require mitigation.

Operation

The proposed project involves the expansion of capacity for the existing J Street Drain. During operation, the proposed drain would accommodate a 100-year flood flow and decrease backwater effects at the street crossings along the drain that currently result in flooding during a severe rain storm larger than a ten-year flood level flow. However, the proposed project would not result in increased flow, but rather accomodates a greater flood flow and thereby increases the velocity of stormwater runoff entering the lagoon. Therefore, the proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. As standard practice, BMPs identified the District's Operations and Maintenance EIR (listed in Table 1.9-1) are currently and would continue to be implemented to prevent polluted runoff during maintenance activities. This impact is less than significant.

Beach Elevation Management Plan

The BEMP was created to identify the actions necessary to groom the beach elevation. Grooming the beach elevation would ensure the lagoon breaches naturally in response to storm water inflow before adjacent developed properties can become flooded. Therefore, the BEMP would ~~improve~~ reduce the ~~potential~~ flooding potential and no impact is identified for this issue area. In addition, no polluted runoff would be generated during BEMP implementation.

Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No housing is proposed for the project. Existing residential development in the project area is located with in a 100-year flood hazard area. The proposed project would reduce flooding resulting from a 100-year flood flow. Therefore, this impact is less than significant.

Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Construction

During construction runoff would be directed around the work area but this would be a temporary condition. Overall, it is expected that this project would reduce the potential for flooding. Therefore, a less than significant impact is anticipated for this issue area.

Operation

The J Street Drain is located within a 100-year flood hazard area. The proposed project would increase the capacity of the existing channel to reduce potential flooding in residential and commercial areas of Oxnard and Port Hueneme. The existing drain capacity would be increased to accommodate a 100-year flood runoff volume. The expanded capacity of the drain would protect structures located within a 100-year flood hazard area. The new low-flow channel that would develop through the lagoon after two 2-year or one 5-year storm would effectively lower portions of the lagoon bottom and maintain positive drainage from the J Street Drain outfall to the Pacific Ocean. The project would direct flood flows to reduce flooding at the project area; therefore, impacts would be less than significant.

Beach Elevation Management Plan

The BEMP was created to identify the actions necessary to facilitate natural breaching of the lagoon in the event the beach sand berm exceeds elevation 6.5 feet (NGVD 1929). Grooming the beach elevation would ensure the lagoon breaches naturally in response to storm water inflow before adjacent developed properties can become flooded. Therefore, the BEMP would eliminate potential flooding and no impact is identified for this issue area.

Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Construction

The construction activities are expected to redirect local runoff around the work area, but this is anticipated to be a temporary condition. During construction there will be flow bypasses facilities installed so that any runoff would be directed around the site. Therefore, since the construction is a temporary condition, flow bypasses would be adequately sized to convey anticipated runoff volumes without failing, and flow bypasses would not direct runoff toward people or structures, a less than significant impact is expected for this issue area.

Operation

The proposed project would increase the capacity of the existing channel to reduce potential flooding in residential and commercial areas of Oxnard and Port Hueneme. Therefore, impacts would be less than significant.

Beach Elevation Management Plan

The BEMP would reduce the potential for flooding the residential and commercial areas by grooming a 100-foot-wide section of beach near the northwest corner of the lagoon to an elevation of 6.5 feet (NGVD 1929). In the event that subsequent storm runoff raises the lagoon water surface above this level, the lagoon would breach naturally. Therefore, a less than significant impact is identified for this issue area.

4.3.5 Cumulative Impacts

Groundwater Quantity

The construction of the proposed drain would require the installation of dewatering wells, dewatering, and discharge of groundwater back into surface water, where it would ultimately percolate into the ground. The operational phase and implementation of the BEMP would not add to a cumulative impact as they would not impact groundwater quantity. Other cumulative projects considered in this analysis may encounter groundwater during project construction, since they are located in the vicinity of the project. For example, the Water Pipeline 1 and 2 projects would be placing underground pipes in an area that has a high groundwater table. However, the amount of groundwater that would be encountered during these projects would be minimal and would not result in a cumulative impact on groundwater quantity. In addition, this groundwater would likely be discharged to surface water and ultimately percolate into the ground. Therefore, cumulative impacts would be less than significant.

Groundwater Quality

The construction of the proposed drain would require the installation of dewatering wells, dewatering, and discharge of groundwater back into surface water. As discussed in the project-level impact analysis, groundwater would be tested for contaminants and either treated before discharge or properly disposed. Further, the operational phase and the implementation of the BEMP would not impact groundwater quality.

Section 4.8 of the EIR discusses the impacts of dewatering with regards to the Halaco superfund site. Currently, the ~~natural~~ direction of the groundwater movement beneath the western portion of the Halaco site (i.e., closest to the J Street Drain) is northward ~~toward the shoreline (i.e. southwest) with ultimate discharge into the Pacific Ocean~~. The entrainment of metals in groundwater near the J Street Drain project area is considered potentially problematic, in that the contaminated plume could be encountered during construction activity, in which case treatment of the extracted groundwater would be required prior to discharge into the Perkins Drain. A groundwater modeling study was performed to address this potential problem. The maximum expected distance of hazardous material migration from the Halaco Site in response to dewatering is approximately ~~300~~ 50 feet, or less than ~~one fifth~~ four percent of the distance between the Halaco Site and the channel~~, a distance of half the maximum (or 150 feet) is more realistic given the conservative assumptions used in the model (specifically the sure of high hydraulic conductivity, to a depth of 400 feet in the 'maximum' scenario)~~. The cessation of dewatering is expected to halt migration of impacted groundwater toward the channel, and in this situation, the groundwater will resume migrating along the ~~natural~~ pre-project gradient ~~toward the Pacific shoreline where its ultimate discharge will occur with considerable dilution as it discharges slowly in contact with surrounding oceanic water~~. Dewatering at the site ~~would~~ may result in a temporary impact with regards to the potential migration of heavy metals within the ground water plume from the Halaco site. This is considered a significant impact and mitigation is required.

Mitigation measure HAZ-1 identified in Section 4.8 of the EIR requires the use of ~~sheet piling~~ monitoring wells, and possibly injection wells during construction to address this impact. Through numerical modeling, the use of ~~sheet piling~~ injection wells was demonstrated to isolate groundwater from the Halaco Site and prevent migration of groundwater toward the channel. ~~In addition, the use of sheet piling will reduce the overall volume of water required to be withdrawn in order to construct the channel.~~

Surface Water Quantity

Construction

The construction of the proposed drain would require the installation of dewatering wells, dewatering, and discharge of groundwater back into surface water. Construction of the proposed project would result in a less than significant project-level impact to overdraft of surface water. Therefore, a less than significant cumulative impact would result.

Operations

Operation of the proposed project would not utilize surface water as a water source, nor require any water consumption for maintenance purposes beyond existing conditions. Operation of the proposed project would result in a less than significant project-level impact to overdraft of surface water. Therefore, a less than significant cumulative impact would result.

Beach Elevation Management Plan

The BEMP is anticipated to be used periodically and would only have equipment on the beach for a few hours. The BEMP would groom the beach elevation to ensure the lagoon breaches naturally in response to subsequent storm water inflow before adjacent developed properties can become flooded. The BEMP would not change surface water quantity as it would facilitate the natural process of water overtopping the sand berm that allows the seasonal flow of water from the lagoon to the ocean, eliminating flooding upstream. This impact would be less than significant at a project level and would not contribute to a cumulative significant effect.

Surface Water Quality

Construction

Water quality in jurisdictional areas can be adversely affected by surface water runoff and sedimentation during construction. The construction of the proposed project would involve dewatering, demolition, and excavation activities which may result in potential impacts to water quality. None of the cumulative projects would be constructed in the area impacted by the proposed project. Cumulative impacts would be less than significant.

Operations

The proposed project does not include any new land use or activity that would cause a new significant impact to surface water quality. In addition, the District implements water quality BMPs (see Table 1.9-1) during channel maintenance activities, which would continue to be implemented for J Street Drain maintenance activities to prevent water quality impacts. The District would also continue to clean trash out of the J Street Drain, and would install a trash collection device in J Street Drain under the separate Ventura Countywide Municipal Stormwater Permit compliance process. Cumulative impacts are, therefore, less than significant for this issue area.

Beach Elevation Management Plan

The BEMP is anticipated to be used periodically and would only have equipment on the beach for a few hours. Grooming the beach elevation would ensure the lagoon breaches naturally in response to subsequent storm water inflow before adjacent developed properties can become flooded. No impact to water supply quality is expected, as work would not occur within surface waters. Implementation of the BEMP would result in a less than significant project-level impact to surface water quality. Therefore, no cumulative impact would result.

Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Construction

The construction of the drain would be short-term and would involve temporary water diversions that would not result in substantial changes to the existing drainage pattern of the project area. Construction of the proposed project would not result in a project-level impact to the existing drainage pattern. None of the cumulative projects would be constructed in the area impacted by the proposed project. Cumulative impact is less than significant.

Operation

The proposed J Street Drain project would not alter the existing drainage pattern of the site or area. Operation of the proposed project would not result in a project-level impact to the existing drainage pattern. The proposed project would increase the capacity of the existing channel to reduce potential flooding in residential and commercial areas of Oxnard and Port Hueneme. The proposed project would not result in an increase in erosion or siltation off-site since the sedimentation transport described above is a natural balancing of the system. As sediment is brought in by the ocean, it is also removed. This inflow and outflow is considered a natural balancing of the system; therefore, the proposed project would not result in a significant change from the existing erosion potential. Therefore, no cumulative impact would result.

Beach Elevation Management Plan

The BEMP is anticipated to be used periodically and would only have equipment on the beach for a few hours. The BEMP would groom the beach elevation to ensure the lagoon breaches naturally in response to subsequent storm runoff before adjacent developed properties can become flooded. No change to the existing drainage pattern is expected. Implementation of the BEMP would result in a less than significant project-level impact to the existing drainage pattern. Therefore, no cumulative impact would result.

Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Construction

The construction of the drain would be short-term and would involve temporary water diversions that would not result in substantial changes to the existing drainage pattern of the project area. Construction of the proposed project would not result in a significant project-level impact to the existing drainage

pattern. None of the cumulative projects would be constructed in the area impacted by the proposed project. The cumulative impact is therefore less than significant.

Operation

The proposed J Street Drain project would not alter the existing drainage pattern of the site or area. Operation of the proposed project would not result in a project-level impact to the existing drainage pattern. The proposed project would increase the capacity of the existing channel to reduce potential flooding in residential and commercial areas of Oxnard and Port Hueneme. As discussed in the J Street Drain Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon, the lagoon bottom elevation would lower after two 2-year or one 5-year storm events. The new lagoon bottom elevation would coincide with the lowered J Street Drain invert elevation. However, this would not alter the course of the lagoon or result in flooding. The project may increase the rate of surface runoff during less frequent events larger than a 10-year flood. Therefore, a less than significant cumulative impact would result.

Beach Elevation Management Plan

Implementation of the BEMP would result in a less than significant project-level impact to the existing drainage pattern. Therefore, a less than significant cumulative impact would result.

Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Construction

Construction of the proposed project could result in a significant project-level impact by generating polluted runoff, therefore requiring mitigation. However, none of the cumulative projects would be constructed simultaneously with the proposed project. The cumulative impact is less than significant.

Operation

The proposed project involves the expansion of capacity for the existing J Street Drain. During operation, the proposed drain would be able to accommodate a 100-year flood flow and decrease backwater effects at the street crossings along the drain that result in flooding during a severe rain storm larger than a five-year flood level flow. However, the proposed project would not result in increased flow, but rather accomodates a greater flood flow. Therefore, the proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. Operation of the proposed project would result in a less than significant project-level impact to stormwater drainage systems. The cumulative impact is less than significant.

Beach Elevation Management Plan

The BEMP was created to identify the actions necessary to groom the beach in the event the beach sand berm elevation exceeds 6.5 feet (NGVD 1929). Grooming the beach elevation would ensure the lagoon breaches naturally in response to subsequent storm runoff before adjacent developed properties can become flooded. Therefore, the BEMP would improve the flooding potential and no cumulative impact is identified for this issue area.

Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No housing is proposed for the J Street Drain project. Existing residential development in the project area is located with in a 100-year flood hazard area. The proposed project would reduce flooding of existing housing in a 100-year flood along the J Street Drain. The proposed project would not result in a project-level impact associated with 100-year flood hazard. The cumulative impact is less than significant.

Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

The J Street Drain is located within a 100-year flood hazard area. The proposed project would increase the capacity of the existing channel to reduce potential flooding in residential and commercial areas of Oxnard and Port Hueneme. The existing drain would be increased to accommodate 100-year flood runoff volume. The project would direct flood flows to reduce flooding at the project area. Cumulative impacts would be less than significant.

Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

The proposed project would increase the capacity of the existing channel to reduce potential flooding in residential and commercial areas of Oxnard and Port Hueneme. The proposed project would not result in a project-level impact associated with flooding as a result of the failure of a levee or dam. The cumulative impact is therefore less than significant.

4.3.6 Mitigation Measures

Water Quality

Stormwater Pollution Prevention Plan

The District shall submit a completed NOI and obtain a waste discharge identification number to obtain coverage under the NPDES General Permit for Discharges Associated with Construction Activity issued by the SWRCB. The contractor shall submit to the County a SWPPP and monitoring program consistent with SWRCB rules for the construction phase of the project prior to initiating construction.

The SWPPP shall contain the following specific mitigation measures designed to reduce or eliminate construction site runoff pollution:

WQ-1 Construction Site Planning BMPs, including but not limited to:

- The amount of cuts and fills shall be minimized; and
- Temporary and permanent roads and driveways shall be aligned along slope contours. Grading operations shall be phased to reduce the extent of disturbed areas and length of exposure.

WQ-2 BMPs to minimize soil movement include but are not limited to:

- Soil stockpiles shall be contained;

- Stabilized access roads and entrances shall be constructed in the initial phase of construction;
- Tire wash stations, gravel beds, and/or rumble plates shall be installed at site entrance and exit points to prevent sediment from being tracked onto adjacent roadways;
- Sediments and construction materials shall be dry-swept from finished streets the same day they are deposited; and
- Site runoff control structures, such as earth berms, drainage swales, and ditches that convey surface runoff during construction into temporary or permanent sediment detention basins shall be installed and made operational in the initial phase of construction, as necessary.

WQ-3 BMPs to capture sediment include but are not limited to:

- Storm drain inlets shall be protected from sediment-laden runoff with inlet protection devices such as gravel bag barriers, filter fabric fences, block and gravel filters, excavated inlet sediment traps, sand bag barriers, and/or other devices; and
- Sediment shall be removed from dewatering discharge with portable settling and filtration methods, such as Baker tanks or other devices.

WQ-4 Good Housekeeping BMPs include but are not limited to the following requirements:

- All storm drains, drainage patterns, and creeks located near the construction site prior to construction shall be identified to ensure that all subcontractors know their location to prevent pollutants from entering them;
- Washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site; wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands; areas designated for washing functions shall be at least 100 feet from any storm drain, waterbody or sensitive biological resources to the extent feasible; the location(s) of the washout area(s) shall be clearly noted at the construction site with signs; the applicant shall designate a washout area. The wash-out areas shall be shown on the construction and/or grading and building plans and shall be in place and maintained throughout construction;
- All leaks, spills, and drips shall be immediately cleaned up and disposed of properly;
- Vehicles and heavy equipment that are leaking fuel, oil, hydraulic fluid or other pollutants shall be immediately contained and either repaired immediately or removed from the site;
- One or more emergency spill containment kits shall be placed onsite in easily visible locations. Personnel will be trained in proper use and disposal methods;
- Vehicles and heavy equipment shall be refueled and serviced in one designated site located at least 100 feet from the drain to the extent feasible;
- Temporary storage of construction equipment shall be limited to an area approved by the City of Oxnard, and shall be located at least 100 feet from any waterbodies to the extent feasible;

- Dry clean-up methods shall be used whenever possible;
- Exposed stockpiles of soil and other erosive materials shall be covered or contained during the rainy season;
- Trash cans shall be placed liberally around the site and properly maintained;
- All subcontractors and laborers shall be educated about proper site maintenance and stormwater pollution control measures through periodic "tailgate" meetings;
- Roadwork or pavement construction, concrete, asphalt, and seal coat shall be applied during dry weather only; and
- Storm drains and manholes within the construction area shall be covered when paving or applying seal coat, slurry, fog seal, etc.

Halaco Superfund Site

Mitigation measure HAZ-1 presented in Section 4.8 of the EIR would require the use of monitoring wells prior to dewatering activities between the Ventura County Railroad and Ormond Beach to verify the direction of groundwater movement at the time of dewatering. ~~sheet piling~~ If the current drain effect along Perkins Road and McWane Boulevard is no longer observed and it is determined that there is a potential for groundwater migration at the site, the District will install five injection wells at the beach parking area between the J Street Drain and the Halaco Site. ~~on the east side of the drain~~ The injection wells would operate during ~~construction~~ dewatering to address the potential impact associated with groundwater pumping. The use of ~~sheet piling~~ injection wells was demonstrated to isolate groundwater from the Halaco Site and prevent migration of groundwater toward the channel. ~~In addition, the use of sheet piling will reduce the overall volume of water required to be withdrawn in order to construct the channel.~~

4.3.6.1 Ventura County Watershed Protection District Best Management Practices

The Ventura County Board of Supervisors adopted the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project No. 80030 in May 2008. The final document includes BMPs that have been added to the District's Maintenance Activity Guidelines. The Operation and Maintenance Division staff will be responsible for ensuring the proper implementation of the BMPs on a routine, year-round basis. The Division staff will also be responsible for ensuring compliance with all permit conditions, conducting or employing qualified personnel for any required pre-project site surveys or inspections, updating the Activity Guidelines sheets, instructing crews on BMPs, overseeing certain BMP implementation, documenting the implementation of the BMPs, and conducting any agency coordination.

The following BMPs will be implemented to minimize impacts during operation:

- Avoid Channel Work During the Rainy Season. Routine maintenance and repair activities in earthen channels and in channels with soft bottoms and bank protection shall not occur during the rainy season, 1 December to 1 April, to avoid work when water could be present in the drainage due to runoff. Routine maintenance and repair activities may occur during this period if water is absent from the drainage because of low runoff conditions, or activities can be performed without working in flowing water. Work in flowing water during this period may proceed if there are no feasible alternatives and completion of the maintenance work during this time period is critical.

Work in flowing water shall be conducted according to the BMPs established in the Water Diversion Guide attached as Appendix E to this EIR.

- Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning. The removal of sediments, vegetation, algae, and trash from fully lined improved channels for purposes of NPDES storm water permit compliance shall include measures to prevent the discharge of silt-laden water or pollutants to downstream unimproved channels with soft bottoms (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000). These measures may include temporary downstream silt barriers (sand bags, straw bales, in-channel materials), silt fences, upstream diversion, etc. Per Section 401 Water Quality Certification requirements, a Water Diversion Plan would be needed for water diversion activities.
- Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.
- Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.
- Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.
- Avoid Spills and Leaks. The District shall ensure that all equipment operating in and near a watercourse, or in a basin, is in good working condition and free of leaks. No equipment maintenance or refueling shall occur in a channel or basin bottom. Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse.

4.3.7 Significance After Mitigation

With implementation of mitigation measures WQ-1 through WQ-4, HAZ-1, and implementation of appropriate BMPs, water quality impacts would be reduced to below a level of significance. All other issue areas related to water resources and hydraulic hazards would be less than significant.

4.4 AIR QUALITY

This section examines the construction-related and long-term air quality effects that may result from the proposed J Street Drain Project. Greenhouse gas emissions from the project are analyzed in Section 4.12. Scientific Resources Associated prepared an Air Quality Technical Report for the project in July 2011. The Air Quality Technical Report is included as Appendix J of this RDEIR.

4.4.1 Environmental Setting

The Cities of Oxnard and Port Hueneme are located within the South Central Coast Air Basin (Basin or SCCAB) within the Ventura County Air Pollution Control District (VCAPCD), which has jurisdiction over Ventura County. Currently, portions of the Basin have been designated as non-attainment by the U.S. Environmental Protection Agency (USEPA) and the California Air Resource Board (CARB) for ozone and particulate matter (PM_{10}).

Air emissions in the Basin are subject to federal, state, and local rules and regulations implemented through provisions of the federal Clean Air Act (CAA), California Clean Air Act (CCAA), and the rules and regulations of the VCAPCD. Under the provisions of the federal and CCAA, air quality management districts with air basins not in attainment of the air quality standards are required to prepare an Air Quality Management Plan (AQMP). An AQMP establishes an area-specific program to control existing and proposed sources of air emissions so that the air quality standards may be attained by an applicable target date.

Ventura County is designated a severe non-attainment area for the state one-hour ozone standard, and recommended by the CARB as a non-attainment area for the federal eight-hour ozone standard. Table 4.4-1 identifies the number of days exceeding the federal and state ozone standards from 2004 to 2009. Table 4.4-1 also details the maximum one-hour ozone concentrations in Ventura County during this same period. Ventura County is designated a non-attainment area for the state standard for PM_{10} (particulate matter with an aerodynamic diameter of 10 microns or smaller). Table 4.4-1 details the number of violations of the state PM_{10} standard from 2004 to 2009. Ambient levels of other pollutants in Ventura County do not violate state or federal standards.

4.4.1.1 Climate

Air quality is determined primarily by the types and amounts of contaminants emitted into the atmosphere, the size and topography of the local air basin, and the pollutant-dispersing properties of local weather patterns.

The climate of Ventura County is strongly influenced by its proximity to the Pacific Ocean. The Mediterranean climate of the region and coastal influence produce moderate temperatures year round, with rainfall concentrated in the winter months. Daytime summer temperatures in the area average in the high 70s to the low 90s. Nighttime low temperatures during the summer are typically in the high 50s to low 60s, while the winter high temperatures tend to be in the 60s. Winter low temperatures are in the 40s. Annual average rainfall in Ventura County ranges from about 14 to 27 inches, the majority of which falls in winter months.

Table 4.4-1. Air Quality Monitoring Summary at El Rio-Rio Mesa School #2 Air Quality Monitoring Station

Pollutant/Standard	2004	2005	2006	2007	2008	2009
Ozone						
1-Hour > 0.09 ppm (S) (1)	0	0	0	0	0	1
1-Hour > 0.12 ppm (F) (1)	0	0	0	0	0	1
8- Hour > 0.075 ppm (F)	0	0	0	0	0	1
Max 1-Hour Conc. (ppm)	0.084	0.076	0.089	0.089	0.086	0.099
Nitrogen Dioxide						
1-Hour > 0.18 ppm (S) (1)	0	0	0	0	0	0
Max 1-Hour Conc. (ppm)	0.063	0.070	0.050	0.053	0.052	0.051
Respirable Particulates (PM_{10})						
24-Hour > 50 $\mu g/m^3$ (S) (1)	6.5	12.1	24.1	12.2	18.3	12.2
24-Hour > 150 $\mu g/m^3$ (F)	0	0	0	6.1	0	0
Max. 24-Hour Conc. ($\mu g/m^3$))(2)	59.3	54.4	119.1	248.0	79.8	99.9
Ultra-Fine Particulates ($PM_{2.5}$)						
24-Hour > 35$\mu g/m^3$ (F) (1)	0	0	0	3.2	0	0
Max. 24-Hour Conc. ($\mu g/m^3$))(2)	28.5	35.2	29.8	39.9	23.4	19.7

Source: California Air Resources Board. http://www.arb.ca.gov/adam/topfour/topfour1.php
Key: (S) = state standard, (F) = federal standard.
ppm = parts per million, μg/m3 = micrograms per cubic meter.
* = data not available
Notes: (1) Number of days (in fractions) standards were exceeded.
(2) Maxima for periods indicated.

4.4.1.2 Air Pollution Control Efforts

Both the federal and state governments have set health-based ambient air quality standards for the following six pollutants:

- Sulfur dioxide (SO_2);
- Lead (Pb);
- Carbon monoxide (CO);
- Respirable particulate matter (PM_{10});
- Nitrogen dioxide (NO_2); and
- Ozone (O_3)

The federal government has also set standards for $PM_{2.5}$.

Standards for these pollutants have been designed to protect the most sensitive persons from illness or discomfort with a margin of safety. The California standards are more stringent than federal standards, especially in the case of PM_{10} and sulfur dioxide. Table 4.4-2 outlines current federal and state ambient air quality standards and health effects of the criteria air pollutants. Additional information about health effects associated with each pollutant is provided by the VCAPCD.

Table 4.4-2. Air Pollution Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards [2]		
		Concentration[3]	Method[4]	Primary[3], [5]	Secondary[3], [6]	Method[7]
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 hours	0.07 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		35 ug/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 ug/m^3	Gravimetric or Beta Attenuation	15 ug/m^3		
Carbon Monoxide (CO)	8 hours	9 ppm (10 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	—
Nitrogen Dioxide (NO_2)*	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Gas Phase Chemiluminescence	53 ppb (100 µg/m^3) (See footnote 8)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (339 µg/m^3)		100 ppb (188 µg/m^3) (See footnote 8)	None	
Sulfur Dioxide (SO_2)	24 hours	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence	—	—	Ultra Fluorescence; Spectrophotometry (Parasaniline Method)[9]
	3 hour	—		—	0.5 ppm (1300 µg/m^3) (See footnote 9)	
	1 hour	0.25 ppm (655 µg/m^3)		75 ppb (196 µg/m^3) (See footnote 9)	—	—
Lead (Pb) [10]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	—
	Calendar Quarter	—		1.5 µg/m^3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average[11]	—		0.15 µg/m^3		

Pollutant	Averaging Time	California Standards(1)		Federal Standards (2)		
		Concentration(3)	Method(4)	Primary(3), (5)	Secondary(3), (6)	Method(7)
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer–visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70%. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride(10)	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM_{10}, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that the EPA standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.
9. On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations. EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will retain the older pararosaniline methods until the new FRM have adequately permeated State monitoring networks. The EPA also revoked both the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.30 ppm, effective August 23, 2010. The secondary SO_2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA. Note that the new standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the new primary national standard to the California standard the units can be converted to ppm. To directly compare the new primary national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
11. National lead standard, rolling 3-month average: final rule signed October 15, 2008.

Source: California Air Resources Board (09/08/10) (http://www.arb.ca.gov/html/fslist.htm)

mg/m^3= milligrams per cubic meter
ppm = parts per million
µg/m^3 = micrograms per cubic meter
ppb = parts per billion

4.4.1.3 Monitored Air Quality

The VCAPCD monitors air quality throughout the South Central Coast Air Basin. The closest monitoring station to the project area is located at 545 Central Avenue in the City of Oxnard, approximately 8 miles northeast of the proposed project. This monitoring station at Rio Mesa School monitors O_3, PM_{10}, NO_2, and $PM_{2.5}$. Table 4.4-1 summarizes maximum pollutant concentrations and the number of days state and federal standards for ozone, nitrogen dioxide, and particulate matter (PM_{10} and $PM_{2.5}$) were exceeded between 2004 to 2009 at this monitoring station, which is representative of the project area.

The pollutant concentrations may vary from year to year depending on weather conditions and changes in land use patterns. As indicated in Table 4.4-1, NO_2 levels have not exceeded the state standards, ozone levels exceeded state and federal standards one day in 2009, PM_{10} levels have routinely exceeded the state standards, and $PM_{2.5}$ exceeded standards once between 2004 and 2009.

4.4.1.4 Sensitive Receptors

Sensitive receptors are populations that are more susceptible to the effects of air pollution than the general population. Residences, schools, child-care facilities, hospitals, and convalescent homes are examples of such receptors. Sensitive receptors located in or near the vicinity of known air emissions sources are of particular concern.

The existing land uses surrounding the proposed project site include a wastewater treatment facility, residential, manufacturing, park and recreation, commercial, and vacant lots (Figure 4.4-1). The residences along the J Street Drain north of Hueneme Road are approximately 50 feet from the drain; the nearest residences in Surfside III are within 20 feet. Other sensitive land use sites include the Bubbling Springs Community Park located at the corner of Bard Road and J Street and Our Saviour's Preschool and Day Care Center located at 905 Redwood Street, approximately 500 feet from J Street Drain. The following are other potentially sensitive land uses within half-mile from the J Street Drain.

- San Miguel Pre-School - 2400 S. J Street, Oxnard, CA
- Kamala Elementary School - 635 W. Kamala Street, Oxnard, CA
- St. Anthony's Elementary School - 2421 S. C Street, Oxnard, CA
- Sunkist Elementary School - 1400 Teakwood Street, Port Hueneme, CA
- EO Green Junior High School - 3739 S. C Street, Oxnard, CA
- Hueneme High School - 500 W. Bard Road, Oxnard, CA
- Community Memorial Hospital of San Buenaventura - Oxnard, 2921 Saviers Road, Oxnard, CA

Criteria Air Pollutants

The United States Environmental Protection Agency (U.S. EPA) identified six "criteria" pollutants that were found to be the most harmful to human health and welfare. These six pollutants are described below.

Ozone (O_3). O_3 is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. O_3 is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_x). ROG and NO_x are known as precursor compounds for O_3. Substantial ozone production generally requires O_3 precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. O_3 is a

regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO_x under the influence of wind and sunlight. O_3 concentrations tend to be higher in the late spring, summer, and fall, when long sunny days combine with regional air subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds.

Carbon Monoxide (CO). CO is a non–reactive pollutant that is a product of incomplete combustion of organic material, and is mostly associated with motor vehicle traffic, and in wintertime, with wood–burning stoves and fireplaces. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground–level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen–carrying capacity, resulting in reduced levels of oxygen reaching the brain, heart, and other body tissues. This condition is especially detrimental for people with cardiovascular diseases, chronic lung disease, or anemia. CO measurements and modeling were important in the early 1980s when CO levels were regularly exceeded throughout California. However, in more recent years, CO measurements and modeling are not a priority in most California air districts due to the retirement of older vehicles, fewer emissions from new vehicles, and improvements to fuels.

Nitrogen Oxides (NO_x). When combustion temperatures are extremely high, as in aircraft, truck and automobile engines, atmospheric nitrogen combines with oxygen to form various oxides of nitrogen. Nitric oxide (NO) and nitrogen dioxide (NO_2) are the most significant air pollutants generally referred to as NO_x. Nitric oxide is a colorless and odorless gas that is relatively harmless to humans, quickly converts to NO_2, and can be measured. Nitrogen dioxide has been found to be a lung irritant capable of producing pulmonary edema. Inhaling NO_2 can lead to respiratory illnesses such as bronchitis and pneumonia.

Particulate Matter (PM_{10} and $PM_{2.5}$). PM_{10} and $PM_{2.5}$ consists of airborne particles that measure 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, wood burning stoves and fireplaces, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition, construction activities and mining, are more local in nature, while others, such as vehicular traffic and wood burning stoves and fireplaces, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility. Dust comprised of large particles (diameter greater than 10 microns) settles out rapidly and is easily filtered by human breathing passages. This dust is of concern more as a soiling nuisance rather than a health hazard. The remaining fractions, PM_{10} and $PM_{2.5}$, are a health concern particularly at levels above the federal and state ambient air quality standards. $PM_{2.5}$ (including diesel exhaust particles) is thought to have greater effects on health, because these particles are so small and thus are able to penetrate to the deepest parts of the lungs. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health. CARB has estimated that achieving the ambient air quality standards for PM_{10} could reduce premature mortality rates by 6,500 cases per year.

Source: ESRI; 2006; Coastal Zone Commission; 2008 | \\G:\Projects\75217 J Street\map docs\mxd\EIR\LandUseFeature.mxd | Last Updated : 12-24-08

Land Use Features

FIGURE 4.4-1

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ONE COMPANY | *Many Solutions* SM

Sulfur Dioxide (SO_2). SO_2 is a combustion product of sulfur or sulfur–containing fuels such as coal and diesel. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter, and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Lead. Ambient lead concentrations meet both the federal and state standards in the project area. Lead has a range of adverse neurotoxin health effects, and was released into the atmosphere via leaded gasoline products. The phase-out of leaded gasoline in California has resulted in dramatically decreased levels of atmospheric lead.

4.4.2 Regulatory Setting

Federal Clean Air Act

The first comprehensive national air pollution legislation was the federal CAA of 1970. Amendments to the federal CAA occurred in 1977 and required plans for meeting the national health-based standards "as expeditiously as practicable," but no later than December 31, 1982. In 1990, significant amendments occurred to the federal CAA Amendments (CAAA). Under the CAAA, areas that do not meet the federal one-hour ozone standard are classified according to the severity of each area's respective ozone problem. The classifications are Marginal, Moderate, Serious, Severe, and Extreme. Marginal areas are closest to meeting the federal one-hour ozone standard. Extreme areas have the worst air quality problems. In 2002, Ventura County achieved the 1-hour ozone standard for the first time as measured by the " design value, " which is the fourth highest 1-hour ozone concentration averaged over a three-year period (for years 2000-2002, with a design value of 12.4 parts per hundred million [pphm]). A design value is a statistic used to describe the air quality of an area relative to the respective National Ambient Air Quality Standards (NAAQS). Design values are used to classify nonattainment areas and assess progress towards meeting the NAAQS, and for developing clean air strategies. Despite meteorological conditions conducive to ozone formation, Ventura County has continued to meet the federal 1- hour ozone standard. The CAAA contain a number of requirements designed to improve air quality. These include motor vehicle emission limits, pollution controls on industrial facilities, use of low-polluting vehicle fuels, permit and compliance programs, and economic incentives to encourage industries to curtail emissions. In December 2006, the U.S. EPA approved new federal standards for $PM_{2.5}$, and modified the PM_{10} and ozone standards. The 2010 federal standards are presented in Table 4.4-2.

California Clean Air Act

The California Clean Air Act (CCAA) was enacted on September 30, 1988, and became effective January 1, 1989. The purpose of the CCAA is to achieve the more stringent health-based state clean air standards at the earliest practicable date. The state standards are more stringent than the federal air quality standards. Similar to the federal CAA, the CCAA also classifies areas according to pollution levels. Under the CCAA, Ventura County is classified as a severe ozone non-attainment area, and is a state PM_{10} non-attainment area. The CCAA requires attainment of the standards at the earliest practicable date. Further, district-wide air emissions must be reduced at least five percent per year (averaged over three years) for each non-attainment pollutant or its precursors. A district may achieve a smaller average reduction if the district can demonstrate that, despite inclusion of every feasible measure in its air quality plan, it is unable to achieve the five percent annual reduction in emissions. On June 20, 2002, the CARB approved revisions to the PM_{10} annual average standard, and established an annual average standard for $PM_{2.5}$.

Ventura County Air Pollution Control District (VCAPCD)

The VCAPCD has the responsibility to manage air quality and ensure that federal and state ambient air quality standards are achieved and maintained in the Ventura County portion of the South Central Coast Air Basin. This includes monitoring ambient air pollutant levels throughout the County and developing a regional Air Quality Management Plan (AQMP) that identifies actions necessary to reach attainment of the standards, and implements and enforces rules and regulations to improve air quality in the region. Because ozone is a secondary pollutant formed in the atmosphere, volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) are regulated as ozone precursors.

The 1994 VCAPCD AQMP, revised in 1995, was approved by the USEPA in September 1996, and is the current approved AQMP. It includes multiple air pollution control measures to reduce emissions and bring the region into compliance with the federal ozone standard. EPA designated Ventura County as a "moderate" nonattainment area for the 8-hour ozone standard based on Ventura County's ozone levels over the previous three years on June 15, 2004. Moderate ozone nonattainment areas are required to attain the federal 8-hour ozone standard by June 15, 2010. On February 14, 2008, ARB formally requested that EPA reclassify Ventura County to a "serious" 8-hour ozone nonattainment area. This means that Ventura County must meet the federal 8-hour ozone standard by June 15, 2013. VCAPCD has released a Final 2007 AQMP (adopted May 13, 2008), which presents new control measures intended to bring the County into compliance by that date.

The 2007 AQMP also presents the 2003-2005 Triennial Assessment and Plan Update required by the CCAA. The goal of the CCAA is to achieve more stringent health-based state air quality standards at the earliest practicable date. Ventura County is designated a severe nonattainment area under the CCAA and must meet many of the most stringent requirements under this act.

While the Final 2007 AQMP contains some additional local control measures, most of the emissions reductions that Ventura County needs to attain the federal 8-hour ozone standard and continued progress to the state ozone standard will come from the ARB's 2007 SIP. This SIP contains comprehensive emission reduction programs that focus on reducing emissions from mobile sources, consumer products, and pesticides to significantly improve air quality. Based on photochemical modeling and the use of the local and state control measures, Ventura County is projected to attain the federal ozone standard by the required 2013 date.

Rule 55 Fugitive Dust

On June 10, 2008 the Ventura County Air Pollution Control Board adopted new Rule 55. Ventura County does not meet California's health-based air quality standards for airborne particulate matter (PM). On June 28, 2005, the Ventura County Air Pollution Control Board adopted a plan to reduce PM emissions, as mandated by State law (SB656). Rule 55 Fugitive Dust guidelines apply to any operation, disturbed surface area, or man-made condition capable of generating fugitive dust, including bulk material handling, earth-moving, construction, demolition, storage piles, unpaved roads, track-out, or off-field agricultural operations. Under Rule 55, the Board adopted a standards-based rule to reduce the cost of compliance rather than requiring prescribed control methods.

Ventura County General Plan

Section 1.2.1 and 1.2.2 of the Ventura County General Plan include several countywide goals and policies applicable to the project.

Goals

1. Diligently seek and promote a level of air quality that protects public health, safety, and welfare, and seek to attain and maintain the State and Federal Ambient Air Quality standards.

2. Ensure that any adverse air quality impacts, both long-term and short-term, resulting from discretionary development are mitigated the maximum extent feasible.

Policies

1. Discretionary development that is inconsistent with the Air Quality Management Plan (AQMP) shall be prohibited, unless overriding considerations are cited by the decision-making body.

2. The air quality impacts of discretionary development shall be evaluated by use of the Guidelines for the Preparation of Air Quality Impact Analysis.

3. Discretionary development that would have a significant adverse air quality impact shall only be approved if it is conditioned with all reasonable mitigation measures to avoid, minimize or compensate (offset) for the air quality impact. Developers shall be encouraged to employ innovative methods and technologies to minimize air pollution impacts.

5. Development subject to APCD permit authority shall comply with all applicable APCD rules and permit requirements, including the use of best available control technology (BACT) as determined by the APCD.

City of Oxnard

The City of Oxnard General Plan Open Space/Conservation Element contains the following policies regarding air quality within the City.

Policies

6. The City should encourage measures that maintain clean air and water.
7. The City should support anti-pollution measures and seek to control activities and developments that improve air and water quality.
8. The City shall require as a condition of approval for new development, wherever a short-term construction impact to air quality is identified, that dust control procedures and other measures designed to reduce the impact in ambient air quality are implemented.

51. The City of Oxnard shall provide traffic system improvements sufficient to reduce congestion at the congested intersections where CO concentrations may exceed state or federal standards and which would impact sensitive receptors.

53. The City shall require all construction equipment to be maintained and tuned to meet appropriate EPA and CARB emissions requirements. At such time as new emission control devices or operational modifications are found to be effective, such devices or operational modifications shall be required on all construction equipment operating pursuant to City permits.

54. During smog season (May though October), the construction period should be lengthened so as to minimize the number of vehicles and equipment operating at the same time.
55. To minimize dust and air emissions impacts from construction impacts the City shall consider requiring the following as a condition of obtaining permits:
    a. Site dust suppression - including:
        - watering all excavated material to prevent wind erosion while it is on-site or being moved,
        - periodic watering of construction sites or use of APCD approved dust suppression compounds that bind with the surface layers of soil and prevent soil particles from being eroded,
        - controlling the number and activity of vehicles on-site at any given time,
        - seeding areas to be left inactive for a long enough period to secure the soil,
        - limiting the area excavated at any given time,
        - limiting on-site vehicle traffic to 15 miles per hour, and
        - sweeping streets adjacent to the construction site to remove dust caused by the construction activities.
    b. Installing an approved wind measuring device at the construction site and halting dust generating activities during high wind events (winds in excess of 20 miles per hour, averaged over one hour);
    c. Requiring vehicles hauling dirt or other material subject to wind erosion during transportation to be covered or watered down to prevent dust emissions;
    d. Limiting the ground area that is exposed to limit the amount of dust that can be generated in high winds even with no construction activity occurring; and
    e. Requiring construction activities to utilize feasible new technologies to control ozone precursor emissions, as they become available.

City of Port Hueneme General Plan

Air Quality Element

The following goals and policies are intended to improve air quality conditions within the South Central Air Basin Goals and through conformance with the Air Quality Management Policies Plan.

Goal 1: Prevent degradation of regional air quality.

Policy I-I: Cooperate with the VCAPCD in their efforts to implement provisions of the Ventura County Air Quality Management Plan.

Goal 3: Reduce emissions from stationary sources to the greatest extent feasible

Policy 3-1: Support measures adopted by the VCAPCD to reduce pollutants from solvents, including architectural coatings, synthetic solvent dry cleaning, etc.

Policy 3-2: Support technological improvements to improve machinery efficiency.

4.4.3 Significance Thresholds

Section 15002(g) of the *CEQA Guidelines* defines “significant effect on the environment” as “a substantial adverse change in the physical conditions that exist in the area affected by the proposed project.” When an environmental document identifies a significant environmental effect, the government

agency approving the project must make findings as to whether the adverse environmental effects have been substantially reduced or if not, why they were not substantially reduced. A project will have a "potentially significant impact" on air quality if it will:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Expose the public (especially schools, day care centers, hospitals, retirement homes, convalescence facilities, and residences) to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

The Ventura County *Initial Study Assessment Guidelines* (2011) notes that air quality analysis shall use the air quality assessment guidelines as adopted by the VCAPCD. Therefore, the significance of impacts was evaluated based on the guidance in the *Ventura County Air Quality Assessment Guidelines* (VCAPCD 2003), which is an advisory document that provides lead agencies, consultants, and project applicants with a framework and uniform methods for preparing air quality evaluations for environmental documents. The Guidelines recommend specific criteria and threshold levels for determining whether a proposed project may have a significant adverse air quality impact. The Guidelines also provide mitigation measures that may be useful for mitigating the air quality impacts of proposed projects.

The VCAPCD has no thresholds for construction emissions for CO, PM_{10}, or $PM_{2.5}$ in its Guidelines. The only significance thresholds are for reactive organic compounds (ROCs) and nitrogen oxides (NO_x). Table 4.4-3 includes ROC and NO_x thresholds that the VCAPCD has determined will individually jeopardize attainment of the federal one-hour ozone standard, and thus have a significant adverse impact on air quality in Ventura County. However, the VCAPCD guidelines state that ROC and NO_x emissions generated by construction activities do not count toward the significance thresholds below because these emissions are temporary.

Table 4.4-3. VCAPCD Threshold Criteria for Emissions of Criteria Pollutant

Pollutant	Operations Pounds per Day
Reactive Organic Compounds (ROC)	25
Oxides of Nitrogen (NO_x)	25

Source: VCAPCD 2003 Ventura County Air Quality Assessment Guidelines

Because the proposed project impacts occur mainly during construction, the construction thresholds of significance from South Coast Air Quality Management District (Table 4.4-4) will be used to determine the level of significance of the project construction impacts for pollutants other than ROCs and NO_x.

Table 4.4-4. Thresholds of Significance for Air Quality Impacts – SCAQMD

Pollutant	Operational Thresholds of Significance (Pounds per Day)	Construction Thresholds of Significance (Pounds per Day)	CAA Less Than Significant Levels (Tons per Year)
Carbon Monoxide (CO)	550	550	100
Oxides of Sulfur (SO_x)	150	150	100
Particulate Matter (PM_{10})	150	150	100
Particulate Matter ($PM_{2.5}$)	55	55	100

Source: SCAQMD CEQA Air Quality Handbook 1993, 1998, 2002
The $PM_{2.5}$ threshold is based upon the proposed standard identified in the, "Final – Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds", published by SCAQMD in October 2006.

Ozone – Cumulative Impacts Based on Project-Specific AQMP Consistency

A project with emissions of two pounds per day or greater of ROC, or two pounds per day or greater of NO_x that is found to be inconsistent with the AQMP will have a significant cumulative adverse air quality impact. A project with emissions below two pounds per day of ROC, and below two pounds per day of NO_X, is not required to assess consistency with the AQMP. Inconsistent projects are usually those that cause the existing population to exceed the population forecasts contained in the most recently adopted AQMP.

4.4.4 Project-Level Impact Analysis

Conflict with or obstruct implementation of the applicable air quality plan?

An environmental document for a proposed project must address project consistency with the AQMP. Project consistency with the AQMP can be determined by comparing the actual population growth in the City of Oxnard and Port Hueneme with the projected growth rates used in the AQMP. The projected growth rate in population is used as an indicator of future emissions from population-related emission categories in the AQMP. These emission estimates are used, in part, to project the date by which Ventura County will attain the federal ozone standard. The County of Ventura Planning Division maintains an ongoing population tracking system. Therefore, a demonstration of consistency with the population forecasts used in the most recently adopted AQMP should be used for assessing project consistency with the AQMP.

The VCAPCD Clean Air Plan provides a detailed estimate of long-range emissions for the region consistent with regional growth and development plans. The proposed project would not result in increase in population in the project area. The project appears consistent with growth projections identified in the VCAPCD Clean Air Plan.

Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction

The proposed J Street Drain project involves increasing the capacity of an existing drain. The construction of the proposed Drain would result in short-term generation of fugitive dust, construction

equipment exhaust, employee trip emissions, and other construction-related emissions. Off-road equipment that is expected to be used during construction includes: wheel loaders, track dozers, scrapers, excavator with hydraulic hammer, pile driver, motor grader, concrete pump, concrete tucks, dump trucks, and other miscellaneous small equipment.

Implementation of the proposed project would generate construction-related air pollutant emissions from two general activity categories: entrained dust, and vehicle and equipment emissions. Construction vehicle pollutant emission generators would consist primarily of haul truck activities such as earthwork haulage, concrete delivery and other suppliers, graders and pavers, contractor vehicles, and ancillary operating equipment such as diesel-electric generators and lifts. Construction activities that generate particulate matter and dust emissions involve earth-moving activities such as grading, construction, demolition, and trenching, particularly when soil moisture is low and when the wind is blowing. Dust emissions and impacts vary substantially from day to day, depending on the level of activity, the specific operation being conducted, and the prevailing meteorological conditions.

The Air Quality Assessment Guidelines recommend the use of the latest version of the URBEMIS program, which is provided by the CARB. The currently approved program is URBEMIS 2007 9.2.4. This program was used to estimate air pollutant emissions associated with project operation as well as short-term emissions associated with project construction. Tables 4.4-5 to 4.4-8 summarize estimated air pollutant emissions resulting from the four construction phases. In the absence of VCAPCD thresholds in place for CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions, this impacts discussion used SCAQMD emissions thresholds for those criteria pollutants. Additionally, VCAPCD thresholds for ROC and NO_x are included as well. A summary of calculations from URBEMIS model outputs and calculations for the actual concentration for each pollutant are available for review in Appendix D.

Table 4.4-5. Construction Emissions, Phase I (pounds per day)

	Reactive Organic Compounds (ROC)	Oxides of Nitrogen (NO_x)	Carbon Monoxide (CO)	Oxides of Sulfur (SO_x)	Respirable Particulate Matter (PM_{10})	Respirable Particulate Matter ($PM_{2.5}$)
Site Preparation	16.40	138.41	64.04	0.02	31.73	8.85
Excavation	0.63	4.70	3.45	0.00	0.27	0.25
Paving	4.30	27.07	17.77	0.00	2.21	2.04
Total Simultaneous Emissions	21.33	170.18	85.26	0.02	34.21	11.14
SCAQMD Threshold	-	-	550	150	150	55
Exceeds SCAQMD Threshold?	-	-	No	No	No	No
VCAPCD Threshold	25	25	-	-	-	-
Exceeds VCAPCD Threshold?	No	Yes	-	-	-	-

Table 4.4-6. Construction Emissions, Phase II (pounds per day)

	Reactive Organic Compounds (ROC)	Oxides of Nitrogen (NO_x)	Carbon Monoxide (CO)	Oxides of Sulfur (SO_x)	Respirable Particulate Matter (PM_{10})	Respirable Particulate Matter ($PM_{2.5}$)
Site Preparation	13.93	108.48	55.16	0.02	16.49	6.79
Excavation	0.56	4.06	3.40	0.00	0.22	0.20
Paving	3.74	24.05	17.35	0	1.89	1.74
Total Simultaneous Emissions	18.23	136.59	75.91	0.02	18.6	8.73
SCAQMD Threshold	-	-	550	150	150	55
Exceeds SCAQMD Threshold?	-	-	No	No	No	No
VCAPCD Threshold	25	25	-	-	-	-
Exceeds VCAPCD Threshold?	No	Yes	-	-	-	-

Table 4.4-7. Construction Emissions, Phase III (pounds per day)

	Reactive Organic Compounds (ROC)	Oxides of Nitrogen (NO_x)	Carbon Monoxide (CO)	Oxides of Sulfur (SO_x)	Respirable Particulate Matter (PM_{10})	Respirable Particulate Matter ($PM_{2.5}$)
Site Preparation	11.81	83.34	52.16	0.02	23.19	7.42
Excavation	0.47	3.22	3.38	0.00	0.17	0.16
Paving	3.25	20.59	17.01	0.00	1.54	1.42
Total Simultaneous Emissions	15.53	107.15	72.55	0.02	24.9	9.00
SCAQMD Threshold	-	-	550	150	150	55
Exceeds SCAQMD Threshold?	-	-	No	No	No	No
VCAPCD Threshold	25	25	-	-	-	-
Exceeds VCAPCD Threshold?	No	Yes	-	-	-	-

Table 4.4-8. Construction Emissions, Phase IV (pounds per day)

	Reactive Organic Compounds (ROC)	Oxides of Nitrogen (NO_x)	Carbon Monoxide (CO)	Oxides of Sulfur (SO_x)	Respirable Particulate Matter (PM_{10})	Respirable Particulate Matter ($PM_{2.5}$)
Site Preparation	10.44	65.94	50.51	0.02	14.95	5.16
Excavation	0.40	2.47	3.36	0.00	0.13	0.12
Paving	2.82	17.58	16.74	0.00	1.28	1.18
Total Simultaneous Emissions	13.66	85.99	70.61	0.02	16.36	6.46
SCAQMD Threshold	-	-	550	150	150	55
Exceeds SCAQMD Threshold?	-	-	No	No	No	No
VCAPCD Threshold	25	25	-	-	-	-
Exceeds VCAPCD Threshold?	No	Yes	-	-	-	-

As is evident from Tables 4.4-5 to 4.4-8, construction of the proposed project would not result in significant impacts associated with particulate matter emissions. However, the project is required to implement fugitive dust control measures per Rule 55 adopted by VCAPCD on June 10, 2008. The VCAPCD (Rule 55, Fugitive) contains regulations for the control of fugitive dust. Generally, fugitive dust regulations require that all grading surfaces and materials must be wetted, protected, or contained to reduce nuisance from dust. Dust emissions from construction activities would be greatly reduced by implementing fugitive dust control measures.

Construction emissions during the four phases of the J Street Drain project would not exceed SCAQMD or VCAPCD thresholds for construction emissions with the exception of NO_x emissions, which would exceed the VCAPCD threshold of 25 pounds per day. However, due to the temporary, short-term nature of construction emissions, the VCAPCD does not apply the quantitative emissions thresholds for NO_x to construction activities. Nonetheless, the VCAPCD does require that emission reduction measures be implemented during construction to reduce exhaust emissions and fugitive dust generation. This impact is considered less than significant.

Operations

The operation of the proposed project would not generate daily traffic other than trips during maintenance activities. The maintenance activities associated with the proposed project would be similar to those currently in place, which would generate intermittent trips for maintenance purposes only, and are expected to occur at the existing frequency. Therefore, increasing the existing capacity of the drain will not increase ongoing emissions from operation and maintenance of the drain. The District's Final Program Environmental Impact Report for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program contains best management practices (BMPs) for the operational maintenance activities for J Street Drain (see Section 4.4.6.1). These BMPs will be incorporated as part of the proposed project for operational activities to maintain impact at the current less than a significant level.

Beach Elevation Management Plan

The Beach Elevation Management Plan (BEMP) would be implemented periodically and would result in occasional trips to the beach during the rainy season when a storm event is forecast. These trips are expected to be infrequent and would not violate any air quality standards or contribute substantially to an existing or projected air quality violation, and a less than significant impact is identified for this issue area.

Expose the public (especially schools, day care centers, hospitals, retirement homes, convalescence facilities, and residences) to substantial pollutant concentrations?

Construction

Existing sensitive receptors in the project vicinity include residences along the J Street Drain, and Our Saviour's Preschool and Day Care Center. The residences north of Hueneme Road are located as close as 50 feet to the drain, those south of Hueneme Road are within 20 feet of the drain, and the preschool/ daycare center is located approximately 500 feet from the drain. Construction of the proposed project would generate emissions; however, as shown in Table 4.4-5 through 4.4-8, construction emissions are below the significance thresholds for all construction phases for all criteria pollutants with the exception of NO_x, which would exceed thresholds for all phases. However, due to the temporary, short-term nature of construction emissions, the VCAPCD does not apply the quantitative emissions thresholds for NO_x to construction activities. Nonetheless, the VCAPCD does require that emission reduction measures be implemented during construction to reduce exhaust emissions and fugitive dust generation. This represents a less than significant impact.

Operations

The operation of the proposed project would not result in an increase in ongoing maintenance activities over current levels. Therefore no new operations impacts are expected to occur and existing operational conditions remain. The District's Final Program Environmental Impact Report (EIR) for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program contains BMPs for the operational maintenance activities for J Street Drain. These BMPs will be incorporated as part of the proposed project for operational activities to ensure impacts remain less than significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a storm event is forecast. These trips are expected to be infrequent and would not expose the public to substantial pollutant concentrations. Therefore, a less than significant impact is identified for this issue area.

Create objectionable odors affecting a substantial number of people?

Construction

The construction and operation of the proposed project could generate trace amounts of odor-generating substances such as ammonia, carbon dioxide, hydrogen sulfide, methane, dust, organic dust, and endotoxins (i.e., bacteria are present in the dust). However, odor generation impacts from construction are not expected to be significant since any odor generation would be intermittent and would terminate upon

completion of construction activities. Further, these emissions would occur during daytime hours only and would be isolated to the immediate vicinity of the construction site. Therefore, impacts would be less than significant.

Operations

The operation of the proposed project would include maintenance activities similar to those currently in place, which would generate intermittent trips for maintenance purposes only. During the operational phase, on-site residences would not be exposed to odors from the maintenance of the drain. Land uses generally associated with odor complaints include: agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program contains BMPs for the operational maintenance activities for J Street Drain. These BMPs will be incorporated as part of the proposed project for operational activities to ensure impacts remain less than significant.

J Street Drain does not currently generate substantial odors, and the Ventura County Air Pollution Control District has not received complaints regarding odors from the drain; odor complaints near J Street Drain have been filed against industrial sources (Jay Nicholas, Air Quality Specialist, Ventura County Air Pollution Control District, personal communication, September 1, 2011). The proposed project would slightly increase the surface area of standing water near Surfside III by one acre, but would not change the current character of water collecting in the drain. The proposed project therefore is not expected to substantially alter existing conditions.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a storm event is forecast. These trips are expected to be infrequent and would not create objectionable odors affecting a substantial number of people. Therefore, a less than significant impact is identified for this issue area.

4.4.5 Cumulative-Level Impact Analysis

Conflict with or obstruct implementation of the applicable air quality plan?

The proposed project is consistent with growth projections identified in the VCAPCD Clean Air Plan. Nearby programmed related projects that have been approved would also be consistent with those growth projections. Cumulative impacts are less than significant.

Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction

Implementation of the proposed project would generate construction-related air pollutant emissions from two general activity categories: entrained dust, and vehicle and equipment emissions. Construction emissions during the four phases of the project would not exceed the SCAQMD's threshold for construction emissions for all criteria pollutants with the exception of NO_x, which would exceed thresholds for all phases. However, due to the temporary, short-term nature of construction emissions, quantitative emissions thresholds for NOx are not applied to construction activities. The proposed related

projects are not located in the project area except for the Advance Purification Facility, two water pipelines, and one sewer line, which are located near the Phase I portion of the proposed project. The sewer line has been completed. Construction of the Advance Purification Facility and one of the water pipelines is currently underway and would be completed by the time work begins on the J Street Drain. A second water pipeline is scheduled to be under construction by March 2012. Construction of J Street Drain is anticipated to begin in early 2013. Therefore, cumulative impacts are less than significant.

Operations

The operation of the proposed project would not generate daily traffic other than trips during maintenance activities, but these would not be greater than existing trips. The proposed project would not make a contribution to cumulative conditions. Cumulative impacts are less than significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a storm event is forecast. These trips are expected to be infrequent and would contribute to an air quality violation. Therefore, it is not expected that they would contribute to a cumulative air quality impact. Therefore, a less than significant impact is identified for this issue area.

Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

Construction

Implementation of the proposed project would generate construction-related air pollutant emissions from two general activity categories: entrained dust, and vehicle and equipment emissions. Construction emissions during the four phases of the J Street Drain project would not exceed the SCAQMD's threshold for construction emissions for all criteria pollutants with the exception of NO_x, which would exceed thresholds for all phases. However, due to the temporary, short-term nature of construction emissions, quantitative emissions thresholds for NO_x are not applied to construction activities. The proposed related projects are not located in the project area except for the Advance Purification Facility, two water pipelines, and one sewer line which are located near the Phase I portion of the proposed project. The sewer line has been completed. Construction of the Advance Purification Facility and one of the water pipelines is currently underway and would be completed by the time work begins on the J Street Drain. A second water pipeline is scheduled to be under construction by March 2012. Construction of J Street Drain is anticipated to begin in early 2013. Therefore, cumulative impacts are less than significant.

Operations

The operation of the proposed project would include maintenance activities similar to those currently in place. Operation of the proposed project would not result in project-level impacts of criteria pollutant emissions. Cumulative impacts are less than significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a storm event is forecast. These trips are expected to be infrequent. Therefore, it is

not expected that they would contribute to a cumulative air quality impact related to criteria pollutant emissions. Therefore, a less than significant impact is identified for this issue area.

Expose the public (especially schools, day care centers, hospitals, retirement homes, convalescence facilities, and residences) to substantial pollutant concentrations?

Construction

As evident from Tables 4.4-5 to 4.4-8, construction of the proposed project would not result in significant impacts associated with particulate matter, ROC, or CO emissions. Although NO_x emissions would exceed the VCAPCD threshold of 25 pounds per day, these quantitative thresholds are not applied to construction emissions due to their temporary, short-term nature. Nonetheless, the VCAPCD does require that emission reduction measures be implemented during construction to reduce exhaust emissions and fugitive dust generation. In addition, none of the cumulative projects would be constructed simultaneously with the proposed project. Construction operations at the project site would not result in cumulatively significant impacts to nearby sensitive receptors. Impacts would be less than significant.

Operations

The operation of the proposed project would include maintenance activities similar to those currently in place. Operation of the proposed project would not result in substantial project-level increases in pollutant concentrations. Cumulative impacts are less than significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a storm event is forecast. These trips are expected to be infrequent. Therefore, it is not expected that they would contribute to a cumulative air quality impact related to substantial pollutant concentrations. Therefore, a less than significant impact is identified for this issue area.

Create objectionable odors affecting a substantial number of people?

Construction

Any odor impacts from construction would be isolated to the site and occur only during daytime hours. Also, none of the cumulative projects would be constructed simultaneously with the proposed project. Therefore, the proposed project would not contribute to a significant cumulative odor impact and a less than significant cumulative impact is identified.

Operations

Operation of the proposed project would not result in project-level odor impacts, since there would not be any odor emissions, and maintenance would follow existing practices. Therefore, there is no potential for the project to contribute to a cumulative impact. No cumulative impact is identified.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a storm event is forecast. These trips are expected to be infrequent. Therefore, it is

not expected that they would contribute to a cumulative air quality impact related to odor. Therefore, a less than significant impact is identified for this issue area.

4.4.6 Mitigation Measures

AQ-1 VCAPCD recommends the following measures to mitigate ozone precursor emissions from construction motor vehicles:

1. Minimize equipment idling time.
2. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications.
3. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time.
4. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible.

AQ-2

1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.
3. All trucks shall be required to cover their loads as required by California Vehicle Code Section 23114.
4. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to periodic watering, application of environmentally-safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.
5. Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be permanently stabilized or periodically treated to prevent excessive fugitive dust.
6. Signs shall be posted on site limiting traffic on unpaved areas to 15 miles per hour or less.
7. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on site activities and operations from being a nuisance or hazard, either off site or on site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive.
8. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

9. Personnel involved in grading operations, including contractors and subcontractors, shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.
10. Material stockpiles shall be enclosed, covered, stabilized, or otherwise treated as needed to prevent blowing fugitive dust off site.

AQ-3 All project construction and site preparation operations shall be conducted in compliance with all applicable VCAPCD Rules and Regulations with emphasis on Rule 50 (Opacity), Rule 51 (Nuisance), and Rule 55 (Fugitive Dust), as well as Rule 10 (Permit Required).

4.4.6.1 Ventura County Watershed Protection District Best Management Practices

The Ventura County Board of Supervisors adopted the Ventura County Watershed Protection District (District) Final Program Environmental Impact Report for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project No. 80030 in May 2008. The final document includes BMPs that have been added to the District's Maintenance Activity Guidelines. The Operation and Maintenance Division staff will be responsible for ensuring the proper implementation of the BMPs on a routine, year-round basis. The Division staff will also be responsible for ensuring compliance with all permit conditions, conducting or employing qualified personnel for any required pre-project site surveys or inspections, updating the Activity Guidelines sheets, instructing crews on BMPs, overseeing certain BMP implementation, documenting the implementation of the BMPs, and conducting any agency coordination.

The following BMPs will be implemented to minimize air quality impacts during construction and operation:

Air Quality BMPs

The following measures are part of the APCD's Model Fugitive Dust Mitigation Plan and shall be incorporated to maintenance activities as needed to further reduce the District's fugitive dust emissions during grading, excavation, and construction activities.

- The areas disturbed at any one time by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
- Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during earthmoving, grading, and excavation activities.
- All trucks shall be required to cover their loads as required by California Vehicle Code §23114.
- All graded and excavated material, exposed soil areas, including unpaved parking and staging areas, and other active portions of the construction site, including unpaved on site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.
- Graded and/or excavated inactive areas of the construction site shall be monitored by the District's operation and maintenance staff at least weekly for dust stabilization. Soil stabilization

methods, such as water and roll-compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be periodically treated with environmentally-safe dust suppressants.

- During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on site activities and operations from being a nuisance or hazard, either on site or off site. The District staff shall use his/her discretion in conjunction with the APCD in determining when winds are excessive.
- Rumble strips or track out devices shall be installed where vehicles enter and exit unpaved roads onto paved road, or wash off trucks and any other equipment leaving the site.
- All on site construction roads that have a daily traffic volume of more than 50 daily trips shall be stabilized as to minimize transport of earthen material from the site.
- Open material stockpiles shall be roller compacted, periodically watered, or treated with appropriate dust suppressants.
- There shall be at least one qualified District staff on site each work day to monitor the provisions of the Fugitive Dust Mitigation Plan and any other applicable fugitive dust rules, ordinances, or conditions.
- Personnel involved in grading operations shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health Regulations.
- All project construction operations shall be conducted in compliance with all applicable APCD Rules and Regulations with emphasis on Rule 50 (Opacity) and Rule 51 (Nuisance).

4.4.7 Significance After Mitigation

The District shall implement VCAPCD approved measures for construction equipment to minimize NO_x and fugitive dust emissions. As evident from Tables 4.4-5 to 4.4-8, the short-term estimated construction NO_x emissions are approximately 10 to 25 pounds per day above the VCAPCD thresholds. The estimated construction emissions just exceed the VCAPCD thresholds for NO_x and assumes worst-case scenario, however the VCAPCD does not apply these quantitative thresholds to temporary, short-term construction emissions. Nonetheless, mitigation measures AQ-1 and AQ-2 shall be implemented to reduce exhaust and fugitive dust emissions, as required by the VCAPCD. The impact associated with NO_x would be less than significant.

4.4.8 Response to Notice of Preparation Comments

During the Notice of Preparation (NOP) comment period, the VCAPCD sent a comment letter stating that the VCAPCD concurs with the Initial Study and does not anticipate that the proposed project would result in significant air quality impacts. The VCACPD also recommended methods to reduce fugitive dust and particulate matter during construction activities. As identified in Section 4.4.6, above, construction mitigation measures and BMPs identified in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program include measures from the VCAPCD Model Fugitive Dust Mitigation Plan. These mitigation measures and BMPs are included as part of the proposed project and are consistent with the recommendations identified by the VCAPCD.

4.5 TRANSPORTATION AND CIRCULATION

This section discusses transportation and circulation issues associated with the J Street Drain project. This section focuses on potential level of service impacts for the project, pedestrian facilities, bicycle facilities and parking. All other issue areas related to transportation and circulation were determined to be less than significant during the Initial Study process. These issues are not discussed further in the Environmental Impact Report (EIR). Please see Appendix A for the Initial Study.

4.5.1 Environmental Setting

4.5.1.1 Regional Access

The proposed project is located in the City of Oxnard, near the border of the City of Port Hueneme in Ventura County. Regional access to the project area is provided by the Ventura Freeway (US-101) which is the principal east-west route through Ventura County. The Santa Paula Freeway (SR-126) runs from US-101 in Ventura to Interstate 5 (I-5) in Santa Clarita, and is also an east-west route. Local residential and commercial streets provide additional access to the area. From Los Angeles County, Pacific Coast Highway (PCH, State Route [SR] 1) crosses into Ventura County and continues along the coast through Point Mugu State Park to just beyond the park's western boundary. Past Point Mugu, PCH leaves the coast and heads northerly and then northwesterly along the northeastern boundary of Naval Air Station Point Mugu for several miles and continues to Wooley Road in Oxnard. From the South Oxnard railroad grade crossing north of Statham Boulevard in Oxnard to Wooley Road, SR-1 is known locally as Oxnard Boulevard. At Wooley Road the direction of SR-1 changes from northwest to north; however, the Oxnard Boulevard name continues to Vineyard Avenue, SR-232. From Vineyard Avenue, SR-1 continues north as PCH and joins US-101 in Oxnard approximately five miles inland from the coast.

4.5.1.2 Existing Roadway Network

The existing highway and street system in the project area is illustrated in Figure 4.5-1, Project Roadways Map. This section briefly discusses each of the project area's major roadways within the existing freeway and arterial system.

Ventura Freeway

US-101 (the Ventura Freeway) is part of the Ventura County 2020 regional road network (Figure 4.5-2) and is the most important link between the City and the rest of Ventura County and metropolitan Los Angeles. It lies approximately two and one-half miles north of the downtown area. Although it is a north-south highway in the State freeway system, it is aligned in the east-west direction in the vicinity of the City. Within Oxnard, there are five interchanges on the Ventura Freeway; these interchanges are at Oxnard Boulevard (SR-1), Vineyard Avenue, Rose Avenue, Rice Avenue, and Del Norte Boulevard.

US-101 represents the primary regional access facility for the City of Oxnard. In general, US-101 provides adequate capacity to accommodate existing traffic at an acceptable level of service. However, the segment of US-101 west of Vineyard Avenue does not presently operate at an acceptable level of service. As a result, this route segment serves as a bottleneck for regional travel using the US-101 corridor in Ventura County.

With the exception of Vineyard Avenue, the present interchanges on US-101 in the City of Oxnard are substandard. Specifically, the Rice Avenue and Del Norte Boulevard interchanges have substandard

geometrics and/ or do not provide adequate capacity. However, the Rice Avenue/US-101 interchange is currently being reconstructed to increase capacity and the improvements are expected to be complete in 2012.

State Route 1

SR-1, the Pacific Coast Highway (PCH), presently bisects downtown Oxnard. The roadway functions as a four-lane arterial, although some segments have been widened to six lanes. Within the city, SR-1 passes through 15 signalized intersections. In north Oxnard, SR-1 joins the Ventura Freeway. The portion of this route located within southeastern Oxnard and unincorporated Ventura County east of Oxnard forms part of the 2020 regional road network.

Bard Road

This roadway presently serves as a secondary arterial from Saviers Road to Pleasant Valley Road. Bard Road provides east-west access to the City's south-central and southeast neighborhoods, and also serves as a route from the City of Port Hueneme and the Navy's Construction Battalion Center to SR-1.

C Street

This roadway functions as a local arterial from Gonzales Road to Bard Road. Although it does not have a cross-section consistent with the local arterial standard, it functions as one carrying traffic parallel to relatively congested Oxnard Boulevard.

Channel Islands Boulevard

This is a four-lane east-west thoroughfare that provides the principal access to the Channel Islands Harbor and southwest residential areas. Channel Islands Boulevard presently functions as a primary arterial from Harbor Boulevard to Saviers Road, and as a secondary arterial from Saviers Road east to Rice Avenue. A short segment of Channel Islands Boulevard located in unincorporated Ventura County east of the City of Oxnard lies within the 2020 regional road network.

Del Norte Boulevard

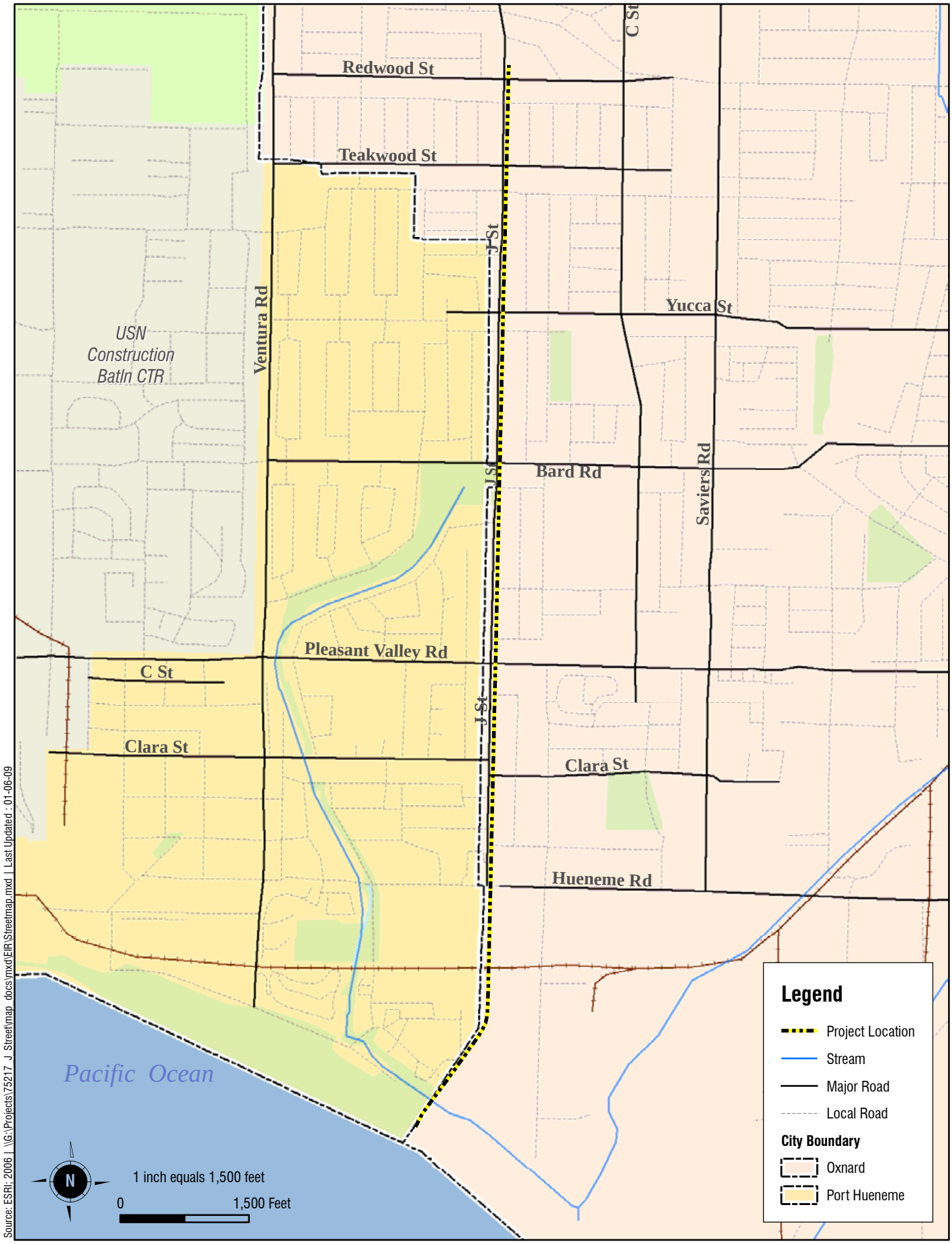
This roadway, completed in 1988, provides access to US-101 from the Northeast Industrial Area. Del Norte Boulevard functions as a secondary arterial from US-101 to Sturgis Road, and as a local roadway from Sturgis Road south to Fifth Street (SR-34).

Emerson Avenue

This local arterial provides access to the Channel Islands Business Center from Rose Avenue and SR-1 via Statham Boulevard. East of Rose Avenue, this roadway functions as a collector street for the Lemonwood neighborhood.

Fifth Street

This thoroughfare is the principal east-west street serving the Central Business District of the City and the mid-City region on both the east and west sides of Oxnard. It is currently designated SR-34 east of Oxnard Boulevard. Fifth Street functions as a secondary arterial except for the segments from Patterson Road to H Street and Oxnard Boulevard to Rose Avenue, which presently function as primary arterials.



Source: ESRI; 2006 | \\G:\Projects\75217 J Street\map docs\mxd\EIR\Streetmap.mxd | Last Updated : 01-06-09

Roadway Map

FIGURE 4.5-1

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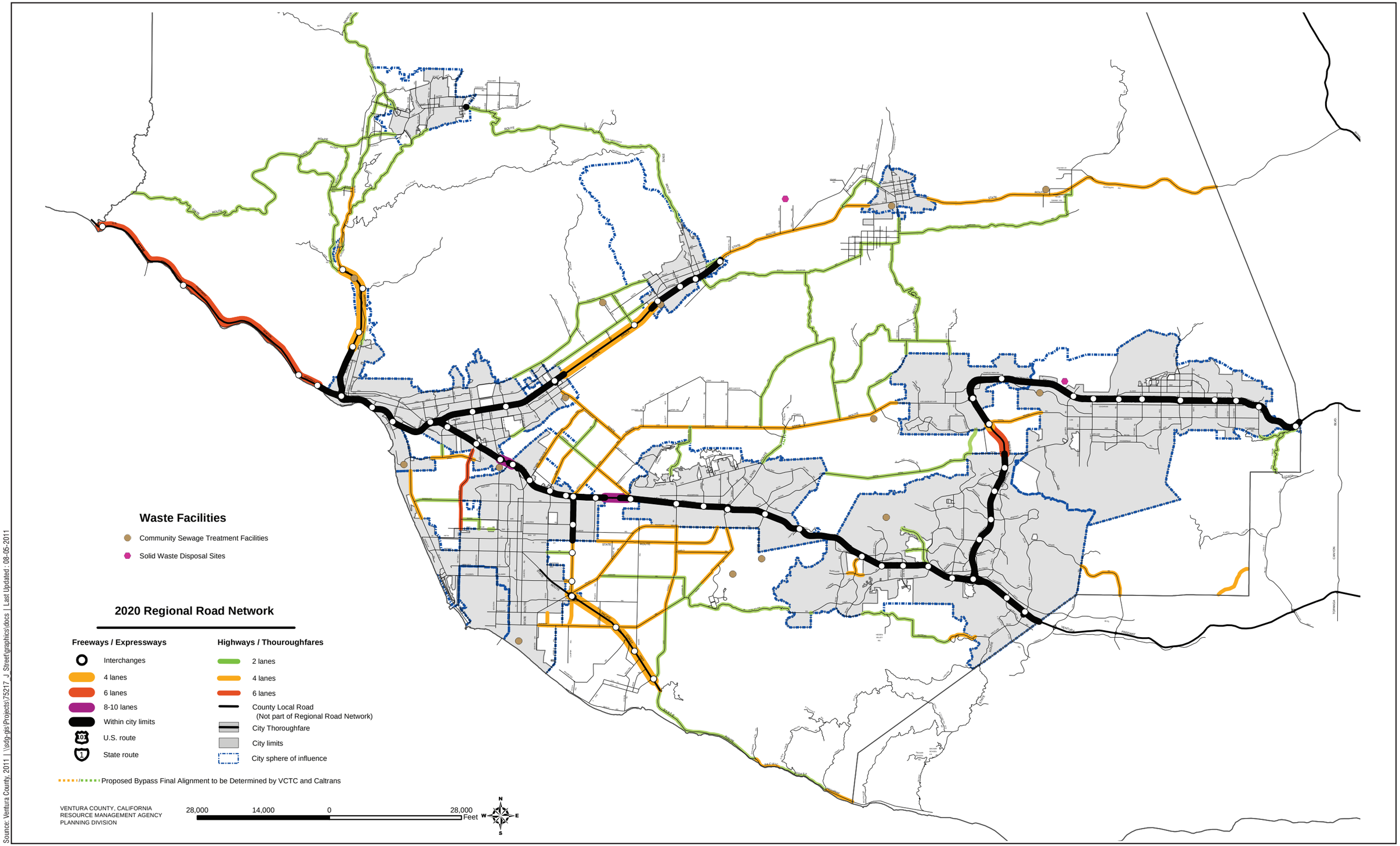

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2020 Regional Road Network

FIGURE 4.5-2

J Street Drain | Ventura County Watershed Protection District | EIR

The portion of this road located within unincorporated Ventura County east of the City of Oxnard forms part of the 2020 regional road network.

Gonzales Road

This road is a main east-west thoroughfare that serves the central and north-central portions of the City of Oxnard. This roadway presently extends from Harbor Boulevard to Rice Avenue. Gonzales Road serves as a local arterial over its length except from Ventura Road to Oxnard Boulevard, where it functions as a primary arterial. The portion of Gonzales Road located within unincorporated Ventura County west of the City of Oxnard forms part of the 2020 regional road network.

Harbor Boulevard

This street follows the shoreline extending from the City of Ventura north of the Santa Clara River at the north and terminating into Channel Islands Boulevard, providing accessibility to the beachfront area. Harbor Boulevard is designated as a scenic drive. It functions as a local arterial north of Fifth Street and as a secondary arterial south of Fifth Street. The portion of Harbor Boulevard located within unincorporated Ventura County from McGrath Lake to the Santa Clara River forms part of the 2020 regional road network.

H Street/J Street

This roadway corridor presently functions as a local arterial from Vineyard Avenue to Channel Islands Boulevard. These roadways, however, do not have cross-sections consistent with the local arterial standard. They provide primary access to Channel Island Hospital and the Oxnard Community Center.

Hueneme Road

In addition to serving as a primary arterial west of Saviers Road, this street serves as the main east-west access route to the Port of Hueneme, the City of Port Hueneme, and the Ormond Beach area. The portion of Hueneme Road located within unincorporated Ventura County east of the City of Oxnard forms part of the 2020 regional road network.

Lombard Avenue

This roadway functions as a local arterial serving a portion of the Northeast Industrial Area.

Oxnard Boulevard

This street is one of the principal entrances to Oxnard. It is also the principal north-south access to the Central Area, and continues southerly through the “Five Points” intersection to southeast commercial and residential areas. Although its development as a commercial strip is a handicap, its location in the center of the City has led to its functioning as a primary arterial. Oxnard Boulevard is currently designated as SR-1 and the State is responsible for operations and maintenance. The portion of Oxnard Boulevard located within southeastern Oxnard and unincorporated Ventura County east of Oxnard forms part of the 2020 regional road network.

Patterson Road

This local arterial, which has a gap at the Oxnard Airport, provides access to residential neighborhoods in the northwest and southwest areas of Oxnard. In addition, Patterson Road provides access to the Oxnard Airport, the City of Port Hueneme and the U.S. Navy Construction Battalion Center. A short segment of Patterson Road located in unincorporated Ventura County immediately north of the Oxnard Airport forms part of the 2020 regional road network.

Pleasant Valley Road

This is a four-lane east-west primary arterial which is one of the major distributors of traffic to the City of Port Hueneme and to the U.S. Navy Construction Battalion Center. It also serves as an access route to the commercial Port of Hueneme. To the east of SR-1, Pleasant Valley Road provides access to the City of Camarillo. The portion of Pleasant Valley Road located within unincorporated Ventura County east of the City of Oxnard forms part of the 2020 regional road network.

Rice Avenue/Santa Clara Avenue

This street provides access to the Nyeland Acres Community, the Northeast Industrial Area and the southeast residential areas. Santa Clara Avenue functions as a local arterial while Rice Avenue presently functions as a secondary arterial. Rice Avenue provides an alternative bypass route to Oxnard Boulevard for through trips. Both Rice and Santa Clara Avenues form part of the 2020 regional road network.

Rose Avenue

This street is the first north-south thoroughfare east of the Union Pacific Railroad. North of US-101, it serves the El Rio Community. South of US-101, it serves the western portion of the Northeast Industrial Area, and the residential area south of the freeway and east of Oxnard Boulevard. As a secondary arterial, Rose Avenue also provides access to the residential area south of Fifth Street and east of the Ventura County Railroad, to the Central Industrial Area, and to the Ormond Beach area. The future extension of Rose Avenue between Sanford Street and Hueneme Road would form part of the 2020 regional road network.

Saviers Road

This primary four-lane north-south arterial provides important access from south Oxnard, Port Hueneme and the Ormond Beach area to downtown Oxnard and US-101. It connects to Oxnard Boulevard and Wooley Road at the “Five Points” intersection.

Ventura Road

This four-lane north-south primary arterial provides access to the west side of the City. To the south, the road serves the City of Port Hueneme, the U.S. Navy Construction Battalion Center and to a lesser degree the current Hueneme Road industrial area. Ventura Road also extends north of Vineyard Avenue, and terminates in the Oxnard Town Center area.

Victoria Avenue

This is an important four-lane north-south arterial street in west Oxnard, which provides a crossing of the Santa Clara River for connection with the County Government Center in east Ventura. The southern

terminus is in the Silver Strand area. The portion of Victoria Avenue extending from Teal Club Road north nearly to US-101 is included in the 2020 regional road network.

Vineyard Avenue

Vineyard Avenue acts as the important connection between US-101 and central Oxnard via Oxnard Boulevard. Between Oxnard Boulevard and the US-101 interchange, Vineyard Avenue is a six-lane divided facility. Northeast of US-101, it is a secondary arterial facility and is also a principal entrance to Oxnard for westbound traffic on US-101. In addition, it provides access to the westerly portion of the El Rio Community; southwest of US-101, Vineyard Avenue serves the northwest community and the area south of the Santa Clara River and north of Gonzales Road. The portion of Vineyard Avenue north of US-101 and extending from Stroube Street north to Los Angeles Avenue is included in the 2020 regional road network.

Wooley Road

This is a major east-west thoroughfare that provides access to the residential community in the southwest portion of the City, to the central area of Oxnard, and to the Central Industrial Area. This road functions as a secondary arterial but is affected by presence of the rail lines of the Ventura County Railway as well as operational limitations of the "Five Points" intersection. The portion of Wooley Road east of the City of Oxnard is included in the 2020 regional road network.

4.5.1.3 Level of Service (LOS)

The quality of traffic operations is characterized using the concept of level of service (LOS). Level of service is defined by a range of grades from A (best) to F (worst). At intersections, LOS "A" represents free-flow conditions with little or no delay. LOS "F" is characterized by extremely unstable flow conditions and severe congestion with volumes at or near the intersection's design capacity. This results in long queues backing up from all approaches to intersections. Table 4.5-1 presents a brief description of each level of service letter grade, as well as the range of delays associated with each grade.

Existing Level of Service

The proposed project is located along J Street from Redwood Street down to the Ormond Beach Lagoon. While Saviers Road, Pleasant Valley Road, and Hueneme Road located within the project vicinity are considered to be major traffic corridors within the City of Oxnard, J Street is not. The Oxnard General Plan Update 2020 Background Report: Level of Service (2006) includes traffic counts that were conducted to determine the level of service at City intersections and identify critical AM and PM peak intersections with deficient LOS (LOS D, E, or F). The intersections between J Street and major traffic corridors within the project area were not identified as having deficient LOS.

4.5.1.4 Existing Circulation System

The circulation system in and around the project area includes several different travel modes in addition to the above roadway network.

Table 4.5-1. Intersection Level of Service Definitions

Level of Service	Description	Signalized Intersection Delay (seconds per vehicle)	Unsignalized Intersection Delay (seconds per vehicle)
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10	≤ 10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles, This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	> l0 and ≤ 20	> l0 and ≤ l5
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	> 20 and ≤ 35	> 15 and ≤ 25
D	Fair operation. Vehicles are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.	> 35 and ≤ 55	> 25 and ≤ 35
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	> 55 and ≤ 80	> 35 and ≤ 50
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable, potential for stop and go type traffic flow.	> 80	> 50

Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington, D.C., 2000.

Oxnard Airport

The Oxnard Airport is located at 1841 West 5th Street in the City of Oxnard, approximately three miles from the project site. The Oxnard Airport lies west of the Central Business District, in an area generally bounded by Teal Club Road to the north, Ventura Road to the east, West Fifth Street to the south and Victoria Avenue to the west. The Oxnard Airport is limited to business and private airplanes, with no scheduled airlines or military aircraft.

Camarillo Airport

The Camarillo Airport is located at 555 Airport Way in the City of Camarillo, approximately 10 miles from the proposed project site. The Camarillo Airport is limited to business and private airplanes, with no scheduled airlines or military aircraft.

Bicycle Facilities

The City of Oxnard is served by approximately 15 miles of designated bike routes, lanes and paths. The City's Bicycle Facilities Master Plan provides a comprehensive plan intended to guide the overall development of a Citywide and regional bicycle system. According to the city Bicycle Facilities Master Plan, J Street has designated bike lanes between Wooley Road and Hueneme Road. Bike lanes are designated by signs and/or markings but are for the exclusive use of bicyclists. At the project portion of J Street, the bike lanes are designated along both sides of the roadway.

Ventura County Railroad

The Ventura County Railroad (VCRR) serves the project area. The VCRR currently extends for 12.09 miles. The railroad serves the industrial areas of south Oxnard, the Port of Hueneme and the U.S. Naval Facilities Expeditionary Logistics Center, which provides asset management on behalf of the Naval Construction Battalion Center or NCBC. The VCRR connects with a Union Pacific Railroad approximately 2 miles northeast of the northern end of the project. The Union Pacific Railroad carries regional freight, Metrolink, and Amtrak traffic. The nearest station is located at the Oxnard Transportation Center.

Transit Services

Transit service in the Oxnard area is provided by South Coast Area Transit (SCAT), created in 1973 by a joint powers merger of the Oxnard and Ventura municipal bus systems. SCAT carries approximately 300,000 passengers each year in the City of Oxnard. Studies and policy development relating to this system are part of the ongoing transit planning process. The City participates in this process, which includes both short- and long-range plans and programs.

Route 3 Southside serves the project area, which starts at the Oxnard Transportation Center, down J Street and C Street to the C Street Transfer Center and loops back along Teakwood Street and Channel Islands Boulevard and up C and J Street to the Oxnard Transportation Center. The bus route does travel along the J Street segment that is within the project site.

Harbors

Port of Hueneme

The Port of Hueneme is the only major deep water commercial harbor between Los Angeles and San Francisco. It is operated by the Oxnard Harbor District, which has taxation boundaries extending from the cities of Ventura on the west to Thousand Oaks on the east. The Port is approximately three miles southwest of downtown Oxnard, and approximately one mile west of the Ormond Beach area. It is served by rail through the facilities of the Ventura County Railroad, with connections to the Union Pacific main coastline railway. Access to the Port of Hueneme was the subject of a recently completed study by the Southern California Association of Governments (SCAG). The study concluded that the port should be served by two designated routes from US-101; the west route would be via Victoria Avenue while the east route would be via Rice Avenue and Hueneme Road. These routes were endorsed by the cities of Oxnard, San Buenaventura and Port Hueneme.

Although located wholly within the City of Port Hueneme, the impact of the port's future development upon the City of Oxnard will be enormous. There has been a dramatic increase in tonnage handled since the expansion and improvement of its facilities in 1972. This increase has led to another expansion program, which is currently underway. Material in support of offshore oil activity moves through the port to production sites in the Santa Barbara Channel. Numerous other products, such as automobiles and produce, are shipped into and out of the port. As manufacturing increases in the Oxnard area, manufactured goods are expected to become an increasingly significant part of the port's total cargo movement.

Pedestrian Routes

Within the project area, pedestrian travel constitutes a very small portion of total urban travel. Existing pedestrian routes at the project site are along J Street, which ends at Hueneme Road. To the south of the J Street and Hueneme Road intersection, the District maintenance road and the drain are fenced off. At the south end of the project, Ormond Beach serves as a recreational pedestrian route.

Private Roads

The District maintenance road is located to the south of the J Street and Hueneme Road intersection.

Off Street Parking

Existing parking at the project site is currently available along J Street and side streets in the project area.

4.5.2 Regulatory Setting

City of Oxnard General Plan

The Circulation Element addresses all the available travel modes within the City of Oxnard and seeks to create a system that coordinates their operation to the greatest degree possible. The following are the City's circulation policies and goals:

Development Policies

A. Goals

1. A transportation system that supports existing, approved and planned land uses throughout the City while maintaining a level of service "C" on all streets and at all intersections.

B. Objectives

1. Minimize conflicts between automobiles, bicycles and pedestrians.
2. Reduce congestion at major intersections within the City of Oxnard.
5. Achieve a level of service "C" on all City roads where feasible, subject to necessary environmental review.
9. Provide a Citywide system of safe, efficient and attractive bicycle routes for commuter, school and recreational use.

C. Policies

The Circulation Element policies are intended to guide the City so that both governmental and private activities contribute to meeting the goals and objectives of the Circulation Element. As such, the policies act as the linkage between the broader goals and objectives and the specific implementation programs.

Level of Service

To determine whether the addition of project-generated trips at a study intersection results in a significant impact, the City of Oxnard has established the following thresholds of significance:

A significant impact occurs at a study intersection when the addition of project-generated trips causes the peak-hour level of service of the study intersection to change from acceptable operation (LOS A through C) to deficient operation (LOS D through F).

A significant impact occurs at a study intersection when the addition of project-generated traffic increases the volume to capacity ratio (V/C) ratio by two percent or more (> 0.020) at an intersection that was already rated LOS C through F.

City of Port Hueneme General Plan

The Circulation/Infrastructure Element from City of Port Hueneme General Plan includes circulation goals, policies, and implementation to provide a safe, effective, and efficient transportation system for the city.

> ***Goal I:*** Provide a comprehensive transportation system for the movement of persons and goods with maximum safety, efficiency, and convenience, and with a minimum of delay and cost.
>
> ***Policy 1-1:*** Reduce existing congestion at critical intersections, including Channel Islands Boulevard and Ventura Road, and Ventura Road and Bard Road.
>
> ***Goal 2:*** Provide a balanced roadway system which will provide adequate accessibility to existing and future land uses with minimum impact on residential neighborhoods.
>
> ***Policy 2-1:*** Encourage the routing of through traffic to designated arterial streets and discourage thru traffic in residential neighborhoods.
>
> ***Policy 2-2:*** Monitor through traffic intrusion in residential neighborhoods, and where necessary, implement strategies to reduce through traffic impacts.

4.5.3 Thresholds of Significance

Ventura County Initial Study Guidelines

Ventura County *Initial Study Assessment Guidelines* were updated in April 2011. The thresholds of significance for transportation were amended as shown below. However, the update to the thresholds does not change the project-level impact analysis provided in this EIR.

Public Roads and Highways – Level of Service

Roadway Segments

Minimum Acceptable LOS: Minimum Level of Service for road segments within the Regional Road Network (Figure 4.2.3 of the Public Facilities and Service Appendix of the Ventura County General Plan) and the Local Road Network (all other County maintained roads) is shown Table 4.5-2:

Table 4.5-2. Ventura County Minimum Acceptable Level of Service for Roadway Segments

Case	Minimum LOS	Description
a	LOS D	All County thoroughfares and state highways within the unincorporated area of the County, except as provided in case b.
b	LOS E	1. State Route 33 between the end of the Ojai freeway and the City of Ojai. 2. State Route 118 between Santa Clara Avenue and the City of Moorpark. 3. State Route 34 (Somis Road) north of the City of Camarillo. 4. Santa Rosa Road between Camarillo city limit line and Thousand Oaks city limit line. 5. Moorpark Road north of Santa Rosa Road to Moorpark city limits line.
c	LOS C	All County maintained local roads.
d	Varies	The LOS prescribed by the applicable city for all state highways, city thoroughfares, and city maintained local roads located within that city, if the city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County, pertaining to development in the city that would individually or cumulatively affect the LOS of state highways, county thoroughfares and county-maintained local roads in the unincorporated area of the County.
e		County LOS standards are applicable for any City that has not adopted its own standards or has not executed a reciprocal agreement with the County pertaining to impacts to County roads.

Note: At any intersection between two roads, each of which has a prescribed minimum acceptable LOS, the less stringent LOS of the two shall be the minimum acceptable LOS of that intersection.

Project Specific Impacts: A significant adverse project specific traffic impact is assumed to occur on any road segment if any one of the following results from the project:

a. If the project would cause the existing LOS on a roadway segment to fall to an unacceptable level as defined in Table 4.5-2.

b. If the project will add one or more peak-hour trips (PHT) to a roadway segment that is currently operating at a less than-acceptable LOS as defined in Table 4.5-2.

A potentially significant adverse cumulative traffic impact is assumed to occur on any road segment if any one of the following results from the project:

a. If the project will add one or more PHT to a roadway segment that is part of the regional road network and the roadway segment is currently operating at an unacceptable LOS as defined in Table 4.5-2.

b. If the project will add 10 or more PHT to a roadway segment which is part of the regional road network and is projected to reach an unacceptable LOS as defined in Table 4.5-2 by the year 2020.

Intersections

Changes in Level of Service: Potentially Significant project-specific changes in LOS at intersections on the Regional Road Network are shown in Table 4.5-3.

Table 4.5-3. Threshold of Significance for Changes in Level of Service at Intersections

Intersection LOS (Existing)	Increase in V/C* or Trips Greater Than
LOS A	0.20
LOS B	0.15
LOS C	0.10
LOS D	10 PHTs**
LOS E	5 PHTs**
LOS F	1 PHT**

*Volume/Capacity Ratio is the ratio between the existing or projected volume of traffic using a transportation facility and the capacity of that facility.
**To critical movements (highest combination of left and opposing through/right-turn PHT movements).

Project Specific Impacts to Intersections: A significant adverse project specific traffic impact is assumed to occur at an intersection on the Regional Road Network if the project will change the V/C ratio or add PHT to impacted intersections that exceed the thresholds established in Table 4.5-3.

Cumulative Impacts to Intersections: A potentially significant adverse cumulative traffic impact is assumed to occur at any intersection if any one of the following results from the project:

a. The project will add one or more PHT to the critical movements at an intersection that is part of the regional road network and which is currently operating at an unacceptable LOS as defined in Table 4.5-2 by the year 2020.

b. The project will add 10 or more PHT to an intersection that is part of the regional road network, which is projected to operate at an unacceptable LOS defined in Table 4.5-2 by the year 2020.

Pedestrian/Bicycle Facilities

Demand for New or Expanded Facilities: Projects that generate or attract pedestrian/ bicycle traffic volumes meeting requirements for protected highway crossings or pedestrian and bicycle facilities may have a significant impact. Pedestrian overcrossings, traffic signals and bikeways are examples of these types of facilities.

*Existing and Planned Facilities***:** A project that will cause actual or potential barriers to existing or planned pedestrian/bicycle facilities may have a significant impact.

Off-Street Parking

Any project that generates additional vehicle trips during the construction or operation phases would have an impact on off-street parking. For the construction phase, if there is sufficient space on-site to park construction vehicles, then the project would have a less-than-significant impact. Conversely, if there would not be sufficient space onsite to accommodate construction vehicles, then the significance must be determined on a case-by-case basis.

For the operation phase, if the project includes parking that meets the Zoning Ordinance requirements, then the project would have a less-than-significant impact. Conversely, if the project does not meet the Zoning Ordinance parking requirements, then significance must be determined on a case-by-case basis.

4.5.4 Project-Level Impact Analysis

Public Roads and Highways - Level of Service

Roadway Segments

Would the project cause the existing LOS on a roadway segment to fall to an unacceptable level as defined in Table 4.5-2?

Construction

Traffic impacts from the construction phase of the proposed project would be relatively short-term and intermittent involving road closures and detours which would temporarily impact motorists (delay and inconvenience), businesses (other uses) along the corridor, and impacts on emergency response operations. The intermittent road closures would include the streets that intersect with J Street in the project area with the exception of Pleasant Valley Road and Hueneme Road. Because the proposed project would be constructed in phases of approximately 3,000 to 4,000 linear feet segments, road closures would not require motorist detour. J Street, Pleasant Valley Road, and Hueneme Road would remain open during all construction phases with intermittent lane closures. On J Street, access to residential and commercial uses fronting J Street would remain open during construction. Motorists traveling along Pleasant Valley Road and Hueneme Road would likely experience delays during lane closures.

The proposed construction would involve excavation and backfill of soils as well as demolition and recycling of existing concrete. Haul trucks will be used to transport excess soil and concrete to designated local landfills and recycling locations, respectively. During the building of the drain, supplies and construction equipment would also be transported to the work area and construction staging area as well. It is anticipated that no more than three haul trucks would be on site for loading at one time and approximately 30 to 45 trips per day or five to six trips per hour are expected to occur. Typically, five to six haul trips would not be considered a significant number of trips; however, one or more of these trips would likely occur during peak hour and may cause LOS of roadway segments in the project vicinity to fall to an unacceptable level. The haul truck trips are expected to result in delays and congestion at the project intersections. The intermittent road closures and haul truck trips during construction may disrupt traffic flow and cause delays, increasing traffic congestion. A significant impact is identified for this issue.

Operations

The operation of the proposed project would result in maintenance activities similar to those currently in place which would generate intermittent trips for maintenance purposes only; therefore, no new transportation impacts would occur. The District's Final Program Environmental Impact Report (EIR) for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains Best Management Practices (BMPs) for the operational maintenance activities for J Street Drain; these BMPs will be incorporated as part of the proposed project for operational activities to result in less than significant impacts. Therefore, the operation of the proposed project would not result in substantial increase in traffic causing impact to existing traffic load or capacity of the street system.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in infrequent trips to the beach. Trips associated with BEMP implementation would be one or two District vehicles and a dozer. This would not represent a significant amount of traffic. There is a less than significant impact for this issue area.

Would the project add one or more peak hour trips to a roadway segment that is currently operating at less than-acceptable LOS as defined in Table 4.5-2?

Construction

As mentioned above, the intersections between J Street and major traffic corridors within the project area were not identified as having deficient LOS. However, during construction, the project would generate five to six haul trips per hour. One or more of these trips would likely occur during peak hour and travel through roadway segments in the project vicinity that are currently operating at less-than-acceptable LOS as defined in Table 4.5-1. The intermittent road closures and haul truck trips during construction may disrupt traffic flow and cause delays, increasing traffic congestion. A significant impact is identified for this issue.

Operations

The operation of the proposed project would result in maintenance activities similar to those currently in place which would generate intermittent trips for maintenance purposes only; therefore, no new operational traffic impacts would occur. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain, these BMPs will be incorporated as part of the proposed project for operational activities to result in less than significant impacts. Therefore, the operation of the proposed project would not result in a substantial increase in traffic causing an impact to the existing traffic load or capacity of the street system. The proposed project would not add 10 or more ADT or contribute 1 percent or more of the total project ADT to a roadway that is currently operating at a less than acceptable LOS as defined in Table 4.5-1.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in infrequent trips to the beach. Trips associated with BEMP implementation would be one or two District vehicles and a dozer. This would not represent a significant amount of traffic. There is a less than significant impact for this issue area.

Intersections

Would the project change the V/C ratio or add PHT to impacted intersections within the regional road network that exceed the thresholds established in Table 4.5-3?

Construction

As mentioned above, the intersections between J Street and major traffic corridors within the project area were not identified as having deficient LOS. Additionally, J Street is not part of the Regional Road Network (Ventura County General Plan Public Facilities and Services Appendix, Last Amended November 15, 2005, Figure 4.2.1). However, the proposed construction would involve excavation and backfill of soils as well as demolition and recycling of existing concrete. Haul trucks will be used to

transport excess soil and concrete to designated local landfills and recycling locations, respectively. During the building of the drain, supplies and construction equipment would also be transported to the work area and construction staging area as well. It is anticipated that no more than three haul trucks would be on site for loading at one time and approximately 30 to 45 trips per day or five to six trips per hour are expected to occur. Typically, five to six haul trips would not be considered a significant number of trips; however, one or more of these trips would likely occur during peak hour and may change the existing V/C ratio of intersections within the regional road network, such as those along Hueneme, Pleasant Valley, or Rice Roads. The haul truck trips may result in delays and congestion at the project intersections. The haul truck trips during construction may disrupt traffic flow and cause delays, increasing traffic congestion. A potentially significant impact is identified for this issue.

Operations

The operation of the proposed project would result in maintenance activities similar to those currently in place which would generate intermittent trips for maintenance purposes only; therefore, no new operational traffic impacts would occur. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain, and these BMPs will be incorporated as part of the proposed project for operational activities to result in less than significant impacts. Therefore, the operation of the proposed project would not result in a substantial increase in traffic causing an impact to the LOS at intersections within the regional road network. This impact is less than significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in infrequent trips to the beach. Trips associated with BEMP implementation would be one or two District vehicles and a dozer. This would not represent a significant amount of traffic. There is a less than significant impact for this issue area.

Pedestrian/Bicycle Facilities

Would the project generate or attract pedestrian/bicycle traffic volumes meeting requirements for protected highway crossings or pedestrian and bicycle facilities? Would the project cause actual or potential barriers to existing or planned pedestrian/bicycle facilities?

Construction

The project would replace an existing undersized flood control facility and would therefore not create a new land use attracting more pedestrian/bicycle traffic. The construction phase of the proposed project would involve road closures and detours along the drain corridor. Both Pleasant Valley Road and Hueneme Road would remain open during all construction phases with intermittent lane closures. The project boundary will be limited to the channel/street right-of-way except at the outlet to the lagoon. At the outlet, the work area will extend 300 feet past the Hueneme Drain Pump station and 50 feet southeast of the easterly right-of-way. According to the City of Oxnard Bicycle Facilities Master Plan, bike lanes are designated on J Street between Wooley Road and Hueneme Road. At the project portion of J Street, the bike lanes are designated along both sides of the roadway. During the construction phase of the drain, construction activities would potentially interfere with designated bike lanes as bike lanes will be closed on J Street, although general vehicular access along J Street would still be maintained. Cyclists along J Street would experience detours that may not be designated bike lanes. Additionally, pedestrians may also experience detours when sidewalks may not be available. This represents a significant impact.

Operations

The operation of the proposed project would result in maintenance activities similar to those currently in place, which would generate intermittent trips for maintenance purposes only. Such activities would not impact pedestrian or bicycle facilities. Therefore, no impact is identified for this issue area.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in infrequent trips to the beach. Trips associated with BEMP implementation would be one or two city vehicles and a dozer. This would not represent a significant amount of traffic. Implementation of the BEMP would not impact pedestrian or bicycle facilities.

Off-Street Parking

Construction

North of Hueneme Road, existing on-street parking (parking within the public street right-of-way) at the project site is currently available along J Street and side streets in the project area. Because this area consists primarily of single-family residences, off-street parking (parking outside the public street right-of-way) is typically in the form of driveways and garages. This off-street parking would remain available to residents throughout project construction.

The construction of the proposed project would not result in a substantial demand for parking by construction workers for the J Street project. Workers would park either in the project work area or in on-street spaces. During road closures, on-street parking spaces along J Street would be temporarily unavailable. However, on-street spaces on cross streets or other nearby parallel streets would not be affected. The proposed project would be constructed in phases of approximately 3,000 to 4,000 linear-foot segments; road closures would not result in substantial loss of available spaces. Because the existing land uses within the project area are mostly residential with private off-street parking spaces, on-street spaces are typically available. Given the continued availability of off-street parking throughout construction, the demand for on-street parking during construction from construction workers, equipment materials deliveries, etc. is not expected to result in inadequate off-street parking for the existing residents in the project area north of Hueneme Drain. Therefore, a less than significant impact is identified for construction phases 2 through 4.

J Street ends at Hueneme Road, and on-street parking is not present south of this point. However, if the District employs the trenching technique to construct the drain between Buildings 6 and 7 of the Surfside III property, approximately 30 off-street parking spaces would fall within the temporary work area. These spaces would be unavailable to Surfside III residents during construction of phase 1 of the project. Therefore, a significant impact to off-street parking would result during phase 1 construction.

Operations

The operation of the proposed project would result in maintenance activities similar to those currently in place which would generate intermittent trips for maintenance purposes only; therefore, there would be no new parking demand during operation. Therefore, it is not anticipated that implementation of the J Street Drain project would result in impacts to off-street parking and a less than significant impact is identified.

Beach Elevation Management Plan

BEMP would be implemented periodically and would only have equipment on the beach for a few hours. Implementation of the BEMP would not require off-street parking. There is a less than significant impact for this issue area.

4.5.5 Cumulative-Level Impact Analysis

Roadway Segments

Would the project add one or more PHT to a roadway segment that is part of the regional road network and the roadway segment is currently operating at an unacceptable LOS as defined in Table 4.5-2?

Would the project add ten or more PHT to a roadway segment which is part of the regional road network and is projected to reach an unacceptable LOS as defined in Table 4.5-2 by the year 2020?

As mentioned above, the intersections between J Street and major traffic corridors (Pleasant Valley Road and Hueneme Road) within the project area were not identified as having deficient LOS. Traffic impacts from the construction phase of the proposed project would be relatively short-term and intermittent involving road/lane closures and detours which would temporarily impact motorists (delay and inconvenience), businesses (other uses) along the corridor, and impacts on emergency response operations. J Street, Pleasant Valley Road, and Hueneme Road would remain open during all construction phases with intermittent lane closures. While project construction impacts would be temporary, traffic impacts have the potential to temporarily contribute to the exceedance of the level of service standard established by the City of Oxnard at the project intersections. This represents a significant cumulative traffic impact during construction. Less than significant impacts would occur as a result of operation and BEMP implementation.

Intersections

Would the project add one or more PHT to the critical movements at an intersection that is part of the regional road network and which is currently operating at an unacceptable LOS as defined in Table 4.5-2 by the year 2020?

Would the project add ten or more PHT to an intersection that is part of the regional road network, which is projected to operate at an unacceptable LOS defined in Table 4.5-2 by the year 2020?

As mentioned above, the proposed construction would involve excavation and backfill of soils as well as demolition and recycling of existing concrete. Haul trucks will be used to transport excess soil and concrete to designated local landfills and recycling locations, respectively. During the building of the drain, supplies and construction equipment would also be transported to the work area and construction staging area as well. While the construction impacts would be short-term and temporary, they have the potential to temporarily add PHT to intersections within the regional road network (e.g., along Hueneme, Pleasant Valley, or Rice Roads) currently operating or projected to operate at an unacceptable LOS. The haul truck trips may result in delays and congestion at the project intersections. The haul truck trips during construction may disrupt traffic flow and cause delays, increasing traffic congestion. A potentially significant impact is identified for this issue. Less than significant impacts would occur as a result of operation and BEMP implementation.

Pedestrian/Bicycle Facilities

Construction

The construction phase of the proposed project would involve road closures and detours along the drain corridor. Construction of the drain would potentially interfere with designated bike lanes when lanes are closed on J Street though access along J Street would be maintained. Due to the distance of cumulative projects from the proposed project and the fact that they would not be constructed simultaneously, cumulative impacts would be less than significant.

Operations

The operation of the proposed project would result in maintenance activities similar to those currently in place, which would generate intermittent trips for maintenance purposes only. Such activities would not impact pedestrian or bicycle facilities. The proposed project would not contribute to a significant cumulative impact and a significant cumulative impact would not result. No impact is identified.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in infrequent trips to the beach. Trips associated with BEMP implementation would be one or two District vehicles and a dozer. This would not represent a significant amount of traffic. Therefore, the BEMP would not contribute to a significant cumulative impact. No impact is identified.

Off-Street Parking

Construction

A significant project-level impact to off-street parking was identified for phase 1 of the project, at the Surfside III property. No cumulative projects have been proposed along the Surfside III property. Therefore, cumulative impacts to off-street parking would be less than significant.

Operations

Operation of the proposed project would occur as it currently does under existing conditions. Therefore, there would be no new parking demand generated by the proposed project during operation. The proposed project would not contribute to a significant cumulative impact and a significant cumulative impact would not result. No impact is identified.

Beach Elevation Management Plan

The BEMP is anticipated to be used periodically and would only have equipment on the beach for a few hours. There would be no need for off-street parking. Therefore, the BEMP would not contribute off-street parking demand and a cumulative impact would not result.

4.5.6 Mitigation Measures

Project- and Cumulative-Level Traffic Impacts and Pedestrian/Bicycle Facility Impacts

TR-1 The District shall prepare a construction worksite traffic control plan and submit it to the County, ~~and,~~ cities, Gold Coast Transit, Oxnard School District, Oxnard Union High School District, and Hueneme School District for review and approval prior to soliciting bids for the construction contract. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours, protective devices and traffic controls (such as barricades, cones, flagmen, lights, warning beacons, temporary traffic signals, warning signs), access to abutting properties, provisions for pedestrians and bicycles, and provisions to maintain emergency access through construction work areas. The contractor shall comply with this plan.

TR-2 The Contractor shall coordinate with emergency service providers (police, fire, ambulance and paramedic services) to provide advance notice of any lane closures, construction hours and changes to local access and to identify alternative routes where appropriate.

TR-3 To preserve parking for residents during phase 1 construction, the District shall employ vertical shoring techniques along the Surfside III property where open trenching would result in the temporary removal of off-street parking spaces.

4.5.6.1 Ventura County Watershed Protection District Best Management Practices

The Ventura County Board of Supervisors adopted the Ventura County Watershed Protection District (District) Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project No. 80030 in May 2008. The final document includes Best Management Practices (BMPs) that will be added to the District's Maintenance Activity Guidelines. The Operation and Maintenance Division staff will be responsible for ensuring the proper implementation of the BMPs on a routine, year-round basis. The Division staff will also be responsible for ensuring compliance with all permit conditions, conducting or employing qualified personnel for any required pre-project site surveys or inspections, updating the Activity Guidelines sheets, instructing crews on BMPs, overseeing certain BMP implementation, documenting the implementation of the BMPs, and conducting any agency coordination.

The following BMPs will be implemented to minimize impacts during operation:

- If maintenance activities would result in substantial vehicle trips on a roadway with unacceptable LOS at peak hours, maintenance staff should either choose an alternate route or conduct vehicle trips off peak hours. In addition, District staff shall avoid stacking of maintenance trucks on public roads during maintenance activities. The minimum acceptable LOS for road segments and intersections within the County Regional Road Network and Local Road Network shall be as follows:
    - LOS D for all County thoroughfares and federal highways and state highways in the unincorporated area of the County, except as otherwise provided below;
    - LOS E for SR-33 between the northerly end of the Ojai Freeway and the City of Ojai, Santa Rosa Road, Moorpark Road north of Santa Rosa Road, and SR-34 north of the City of Camarillo;

- LOS C for all County-maintained local roads; and
- The LOS prescribed by the applicable city for all federal highways, state highways, city thoroughfares and city-maintained local roads located within that city, if the city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County respecting development in the city that would individually or cumulatively affect the LOS of federal highways, state highways, County thoroughfares and County-maintained local roads in the unincorporated area of the County.

4.5.7 Significance After Mitigation

Implementation of mitigation measures TR-1 through TR-3 would reduce the impact to roadway level of service, pedestrian and bicycle facilities, and off-street parking due to intermittent lane closures as well as potential project- and cumulative-level impacts to below a level of significance.

4.5.8 Response to Notice of Preparation Comments

During the Notice of Preparation (NOP) comment period, the City of Oxnard sent a comment letter requesting that impacts to the J Street bike path be examined and stating that the City supports an analysis of a covered box culvert with a bike lane within landscaping. As discussed in the preceding analysis, the construction of the proposed project would potentially interfere with designated bike paths along J Street. Cyclists on J Street may experience detours that may not be designated bike lanes. However, impacts to bike paths would be temporary during construction activities. Additionally, since bike paths along J Street are located on the outer edge of the roadway, impacts would likely be minimal as construction occurs on the drain in the center of the roadway. An analysis of the impacts associated with a covered box culvert is included in Section 5.0, Alternatives, of this document. As discussed, a covered box culvert with landscaping would be a more expensive alternative to the proposed project.

The City of Oxnard also commented that construction impacts related to parking and truck deliveries be fully evaluated and that circulation impacts along J Street and all intersecting streets be evaluated after drain improvements. The preceding analysis includes a discussion of impacts related to parking and truck haul trips (including deliveries and debris removal). As identified above, the proposed project has the potential to degrade LOS at intersections and roadway segments during construction activities. Mitigation measures TR-1 and TR-2 have been proposed to reduce these impacts to below a level of significance. Additionally, upon completion of drainage improvements, circulation impacts along J Street and all intersecting streets are anticipated to be less than significant since the drain would function generally as it does under existing conditions.

The County of Ventura Transportation Department requested that the project applicant submit the proposed truck route for the project to the Department and that trucks be covered during hauling. As indicated in mitigation measures TR-1 and TR-2, a TCP would be prepared and submitted to the County for review and approval prior to any construction work. Additionally, as identified in Section 4.4, Air Quality, of this document, trucks would be covered during hauling to prevent flying debris, fugitive dust, and particulate matter.

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4.6 NOISE AND VIBRATION

This section evaluates the potential project- and cumulative-level noise impacts associated with the implementation of the J Street Drain Project.

4.6.1 Environmental Setting

Noise is generally defined as unwanted sound. Noise can result in speech interference and disrupt activities at home and work, including sleep patterns and recreational pursuits. The long-term effects of excessive noise exposure are physical, as well as psychological. Physical effects may include headaches, nausea, irritability, constriction of blood vessels, changes in heart and respiratory rate, and increased muscle tension.

4.6.1.1 How Sound is Measured

Sound levels are expressed on a logarithmic scale of decibels (abbreviated as dB), in which a change of ten units on the decibel scale reflects a ten-fold increase in sound energy. A ten-fold increase in sound energy roughly translates to a doubling of perceived loudness.

In evaluating human response to noise, acousticians compensate for the response of people to varying frequency or pitch components of sound. The human ear is most sensitive to sounds in the middle frequency range used for human speech, and is less sensitive to lower and higher-pitched sounds. The "A" weighting scale is used to account for this sensitivity; thus, most community noise standards are expressed in decibels on the "A"-weighted scale, abbreviated dB(A). Zero on the decibel scale is set roughly at the threshold of human hearing. Sound levels of common sounds in the environment include office background noise at about 50 dB(A); human speech at 10 feet at about 60 to 70 dB(A); cars driving by at 50 feet at 65 to 70 dB(A); trucks at 50 feet at 75 to 80 dB(A); and aircraft overflights directly overhead a mile from the runway at about 95 to 100 dB(A).

4.6.1.2 Noise Sensitive Land Uses

Noise sensitive land uses include residences, schools, churches, libraries, daycare facilities, hospitals, and similar users; although sensitivity varies by time of day (see Table 4.6-1). These land uses are common in an urban environment and occur within the J Street Drain Project area. The existing land uses surrounding the proposed project site include a wastewater treatment facility, residential, a nursing home, manufacturing, park and recreation, a church, commercial, and vacant lots. The residences along the J Street Drain north of Hueneme Road are approximately 50 feet from the drain. Buildings 6 and 7 of the Surfside III condominiums, located immediately north of the Pump Station, are noise sensitive receptors approximately five feet from the temporary work area's west boundary. Hospitals and quasi-residential nursing homes are considered sensitive 24 hours a day. When in use, schools, churches, and libraries are considered sensitive from the hours of 7:00 a.m. to 10:00 p.m. Residential land uses are considered sensitive from the hours of 7:00 p.m. to 7:00 a.m. (*Ventura County Initial Study Assessment Guidelines,* April 26, 2011; *County of Ventura Construction Noise Threshold and Criteria Plan,* November 2005).

Table 4.6-1. Land Use Noise Compatibility Guidelines

Land Use Category	Hourly Equivalent Noise Level (L_{eq}) 55 60 65 70 75 80 85	Nature of the Noise Environment where the L_{eq} level is
Residential - Low-Density Single-Family, Duplex, Mobile Homes		Below 55 dB Relatively quiet suburban or urban areas, no arterial streets within 1block, no freeways within ¼ mile
Residential – Multiple Family		
Transient Lodging – Motels, Hotels		
Schools, Libraries, Churches, Hospitals, Nursing homes		55-65 dB Mostly somewhat noisy urban areas, near but not directly adjacent to high volumes of traffic
Auditoriums, Concert Halls, Amphitheaters		
Sports Arenas, Outdoor Spectator Sports		65-75 dB Very noisy urban areas near arterials, freeways or airports
Playgrounds, Neighborhood Parks		
Golf Courses, Riding Stables, Water Recreation, Cemeteries		75+ dB Extremely noisy urban areas adjacent to freeway or under airport traffic patterns
Office Buildings, Business, Commercial and Professional		
Industrial, Manufacturing, Utilities, Agriculture		

Normally Acceptable
Specified land use is satisfactory, based on the assumption that any buildings are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable
New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Normally Unacceptable
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in design.

Clearly Unacceptable
New construction or development should generally not be undertaken.

Source: State of California Governor's Office of Planning and Research 2003, EDAW 2007

Other sensitive land use sites include the Bubbling Springs Community Park located at the corner of Bard Road and J Street and Our Savior's Preschool and Day Care Center located at 905 Redwood Street, ~~approximately~~ within 500 feet from J Street Drain. The following are other potentially sensitive land uses within one-half mile from the J Street Drain:

- San Miguel Pre-School – 2400 S. J Street, Oxnard, CA
- Kamala Elementary School – 635 W. Kamala Street, Oxnard, CA
- St. Anthony's Elementary School – 2421 S. C Street, Oxnard, CA
- Sunkist Elementary School – 1400 Teakwood Street, Port Hueneme, CA
- EO Green Junior High School – 3739 S. C Street, Oxnard, CA

- Hueneme High School – 500 W. Bard Road, Oxnard, CA
- Community Memorial Hospital of San Buenaventura-Oxnard – 2921 Saviers Road, Oxnard, CA

4.6.1.3 Existing Noise

Noise sources are classified in two forms: (1) point sources, such as stationary equipment; and (2) line sources, such as a roadway with a large number of pass-by sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6.0 dB(A) for each doubling of distance from the source to the receptor at acoustically "hard" sites and 7.5 dB(A) at acoustically "soft" sites. Sound generated by a line source typically attenuates at a rate of 3 dB(A) and 4.5 dB(A) per doubling distance, for hard and soft sites, respectively. Sound levels can be attenuated by man-made or natural barriers. A "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt or concrete surfaces, and very hard-packed soils. An acoustically "soft" or absorptive site is characteristic of unpaved, vegetated ground. For example, a 60 dB(A) noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dB(A) at 100 feet from the source and 48 dB(A) at 200 feet from the source. A noise level generated over an acoustically "soft" site would attenuate from 60 dB(A) noise level measured at 50 feet from a point source to be 52.5 dB(A) at 100 feet from the source and 45 dB(A) at 200 feet from the source.

The existing land uses surrounding the proposed project site include a wastewater treatment facility, residential, manufacturing, a nursing home, park and recreation, a church, commercial, and vacant lots. ~~The~~ Downstream of Hueneme Road, the existing noise level for the residential development along J Street Drain in the City of Oxnard would approximate a "quiet suburban area" from Table 4.6-2, which is about 40 dB(A). Along J Street (north of Hueneme Road), the Oxnard General Plan Noise Model measured the existing weekday peak-hour noise level, as measured 100 feet from the street centerline, at 65 dB(A) L_{eq} (Appendix F, City of Oxnard 2030 General Plan Draft Program Environmental Impact Report, February 2009).

Table 4.6-2. Typical Noise Levels

Common Outdoor Noise Sources	Noise Level (dB(A))	Common Indoor Noise Sources
	110	Rock band
Jet fly-over at 100 feet	100	
Gas lawnmower at 3 feet	90	
Diesel Truck going 50 mph at 50 feet	80	Garbage disposal at 3 feet
Noisy urban area (daytime)		
Gas lawnmower at 100 feet	70	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
Quiet urban area (daytime)	50	Dishwasher in next room
Quiet urban area (nighttime)	40	Theatre, large conference room (background) (nighttime)
Quiet suburban area		
	30	Library
Quiet rural area (nighttime)		Bedroom at night, concert hall (background)
	20	
	10	
Threshold of human hearing	0	Threshold of human hearing

Source: California Department of Transportation

4.6.2 Regulatory Setting

City of Oxnard

Development Policies

Noise problems in the Oxnard community can be mitigated through the 2020 General Plan and particularly the Noise Element. Mutually compatible goals and objectives provide a general framework for future efforts to achieve a quiet environment.

A. Goals

A quiet environment for the residents of Oxnard.

B. Objectives

1. Provide acceptable noise levels for residential and other noise-sensitive land uses consistent with State guidelines.
2. Protect noise sensitive uses from areas with high ambient noise levels.
3. Integrate noise considerations into the community planning process to prevent noise/land use conflicts.

C. Policies

1. The City should encourage land uses that are not noise sensitive in areas that are permanently committed to noise producing land uses, such as transportation corridors.
2. The City should promote maximum efficiency in noise abatement efforts through intergovernmental coordination and public information programs.
3. Educational institutions should be located in areas where students and teachers can perform without distraction from noise.
4. The City shall promote, where feasible, alternative sound attenuation measures other than the traditional wall barrier. These may include berms, a combination of berms and landscaping, or locating buildings away from the roadway or other noise source.
5. Municipal policies shall be consistent with the Ventura County Airport Land Use Commission's adopted land use plan.
6. Proposed development projects shall not generate more noise than that classified as "satisfactory," as determined by the noise compatibility standards, on nearby property. Project applicants shall reduce or buffer the noise generated by their projects.
7. The City shall prohibit the development of noise-sensitive land uses within the Oxnard Airport 65 dB(A) Community Noise Equivalent Level (CNEL) contour.
8. The City shall continue to enforce State Noise Insulation Standards for proposed projects in suspected high noise environments. The Planning Division shall notify prospective developers that, as a condition of permit issuance, they must comply with noise mitigation measures, which are designed by an acoustical engineer. No building permits will be issued without City staff approval of the acoustical report/design.
9. The City shall establish noise referral zones along existing or proposed major transportation routes. Proposed development within these zones should be evaluated for noise impacts.

10. Preparation of the Ormond Beach Specific Plan shall include acoustical analysis to determine potential impacts from Point Mugu NAS and Air National Guard facility.
11. Noise contour maps and tables shall be utilized as a guide to future land use decisions.

Implementation Measures

1. Adopt State of California noise-compatible land use criteria.
2. Develop and adopt a noise ordinance.
3. Enforce State Noise Insulation Standards.
4. Update noise standards and criteria at least every five years to reflect new developments in the area of noise control.
5. Rezone property within the Oxnard Airport area to nonresidential and non-sensitive land uses that are consistent with the "Airport Compatible" designation of the Land Use Element.
6. Establish noise referral zones along existing or proposed major transportation routes.
7. Work with the California Department of Transportation to develop a highway noise mitigation program for the Route 101 corridor (Ventura Freeway).

City of Oxnard Noise Ordinance

The City of Oxnard also has adopted a Noise Ordinance (Article XI Sections 7-180 through 7-194 of the Municipal Code) that incorporated the standards shown in Table 4.6-3.

Table 4.6-3. Exterior Noise Level Standards

Sound Zone	Type of Land Use	Allowable Exterior Sound Level	
		7:00 a.m. to 10:00 p.m.	10:00 p.m. to 7:00 a.m.
I	Residential	55 dB(A)	50 dB(A)
II	Commercial	65 dB(A)	60 dB(A)
III	Industrial	70 dB(A)	70 dB(A)
IV	As identified in Figure IX-2 of the 2020 General Plan		

The noise levels specified above for the identified uses are not to be exceeded by more than 30 minutes in an hour. The Ordinance includes various adjustments, both up and down, for these limits based on duration and quality of the noise.

For transportation noise sources, noise impacts are commonly described in terms of the potential for annoyance. The potential significance of changes in cumulative noise exposure for such sources is frequently evaluated based upon data reviewed by the Federal Interagency Committee on Noise (FICON). Table 4.6-4 summarizes the FICON recommendations.

Table 4.6-4. Significance of increases in Cumulative Noise Exposure for Transportation Noise Sources

Ambient Noise Level Without Project (L dn or CNEL)	Significant Impact
<60 dB	5.0 dB or more
60-65 dB	3.0 dB or more
>65 dB	1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON), as applied by Brown-Buntin Associates, Inc.

Section 7-188(D) of the Municipal Code exempts from the provisions of Article XI "sound sources associated with or created by construction, repair, remodeling or grading of any real property or during authorized seismic surveys, provided the activities occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, including Saturday.

City of Port Hueneme

Noise Element

The following goals and supporting policies emphasize Goals and Policies for noise reduction through increased public and private awareness of noise sources, including mobile and stationary sources. By incorporating noise concerns into land use planning, mitigating measures and noise reduction will be implemented and attained.

Goal 1: Protect the Public's Health and Welfare From Adverse Noise Levels.

Policy 1-1: To the extent feasible, record and improve noise conditions in the local environment through the active, ongoing efforts of the City in coordination with other government agencies.

Policy 1-2: Increase public input on environmental noise issues, and establish a program for the monitoring and abatement of local noise sources.

Goal 2: Identify Mobile Noise Sources Affecting the Community, and Establish Effective Noise Abatement Measures.

Policy 2-1: Prohibit through truck traffic in noise-sensitive areas, such as the four school sites located in Port Hueneme.

Policy 2-2: Minimize through vehicular traffic in the City's residential areas.

Policy 2-4: Enforce the State Motor Vehicle noise standards for cars, trucks, and motorcycles.

Goal 3: Improve the Noise Environment of the Community Through Sensitive Planning and Development Practices.

Policy 3-1: Incorporate sound attenuation measures in residential developments where outdoor ambient noise levels exceed 65 CNEL.

Policy 3-2: Incorporate ambient noise level considerations into land use decisions involving schools, hospitals, and similar noise-sensitive uses.

Policy 3-3: Ensure all new developments provide adequate sound insulation or other protection from existing and projected noise sources.

Policy 3-4: Utilize the development approval process to assure that buildings are sited and traffic circulation systems designed to minimize the impact of noise-generating activities on noise-sensitive land uses.

Policy 3.8: Ensure that equipment, machinery, fan, and air conditioning noise does not exceed specified levels, established in the City's Noise Ordinance.

Article III Public Health and Safety

Chapter 5 Noise Control

Division 2. Designated Noise Zones

3429 Assignment of Noise Zones

Receiving properties are assigned to Designated Noise Zones as follows:

(a) Designated Noise Zone I: Noise Sensitive Properties.
(b) Designated Noise Zone II: Residential Properties.
(c) Designated Noise Zone III: Commercial Properties.
(d) Designated Noise Zone IV: Industrial Properties.

3430 Noise Zones--Exterior Noise Levels

The following Exterior Noise Levels, unless otherwise specifically indicated, shall apply to all receiving properties within a Designated Noise Zone for the purpose of establishing Noise Level Limits in Section 3431 below:

Designated Zone	Time Intervals	Exterior Noise Levels
• Zone I Noise Sensitive Properties	7 a.m.-10 p.m.	55
	10 p.m.-7 a.m.	50
• Zone II Residential Properties	7 a.m.-10 p.m.	55
	10 p.m.-7 a.m.	50
• Zone III Commercial Properties	Anytime	65
• Zone IV Industrial Properties	Anytime	75

3431 Noise Level Limits

Unless otherwise provided in this Article, no person shall operate or cause to be operated any source of sound at any location within the City, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level when measured on any receiving property to exceed the following Noise Level Limits or more restrictive standards established elsewhere in this Code:

(a) The Exterior Noise Levels for that land use, as specified in Section 3430 above, for a total period of more than thirty minutes in any consecutive sixty minutes; or

(b) The Exterior Noise Levels plus 5 dB for a total period of more than fifteen minutes in any consecutive sixty minutes; or

(c) The Exterior Noise Levels plus 10 dB for a total period of more than five minutes in any consecutive sixty minutes; or

(d) The Exterior Noise Levels plus 15 Db for a total period of more than one minute in any consecutive sixty minutes; or

(e) The Exterior Noise Levels plus 20 dB for any period of time.

3432 Ambient Noise Level in Excess of Noise Level Limit

If the ambient noise level exceeds that permissible for any of the Noise Level Limits, the Noise Level Limit shall be increased in 5 dB increments as appropriate to encompass or reflect said ambient noise level.

3439 Construction of Buildings and Structures

Between the hours of 7 p.m. of one day and 7 a.m. of the next, Monday through Saturday, and no earlier than 9 a.m. or later than 6 p.m. on Sunday and federal holidays, no person adjacent to or within any residential zone in the city shall operate power construction equipment or tools or perform any outside construction or repair work on buildings or structures, or operate any pile driver, steam shovel, pneumatic hammer, steam or electric hoist, or other construction device so as to create any noise which exceeds the noise level limits of this Article. The performance of emergency work is exempt from the provisions of this Section.

4.6.3 Significance Thresholds

Ventura County Initial Study Guidelines (2011)

Ventura County *Initial Study Assessment Guidelines* were updated in April 2011. Any project that produces noise in excess of the standards for noise in the Ventura County General Plan Goals, Policies, and Programs (Section 2.16) or the applicable Area Plan has the potential to cause a significant noise impact. Noise-generating uses that either individually or when combined with other recently approved, pending, and probable future projects, exceeds the noise thresholds of General Plan Noise Policy 2.16.2-1(4) are considered to have a potentially significant impact.

The General Plan (Section 2.16.2-1 of the Goals, Policies and Programs) establishes the following threshold criteria; above which significant noise impacts would be anticipated:

(1) Noise sensitive uses proposed to be located near highways, truck routes, heavy industrial activities and other relatively continuous noise sources shall incorporate noise control measures so that:

a. Indoor noise levels in habitable rooms do not exceed CNEL 45.

b. Outdoor noise levels do not exceed CNEL 60 or L_{eq}1H of 65 dB(A) during any hour.

(2) Noise sensitive uses proposed to be located near railroads shall incorporate noise control measures so that:

a. Guidelines a. and b. above are adhered to.

b. Outdoor noise levels do not exceed L10 of 60 dB(A).

(3) Noise sensitive uses proposed to be located near airports:

a. Shall be prohibited if they are in a CNEL 65 or greater, noise contour.

b. Shall be permitted in the CNEL 60 to CNEL 65 noise contour area only if means will be taken to ensure interior noise levels of CNEL 45 or less.

(4) Noise generators proposed to be located near any noise sensitive use shall incorporate noise control measures so that outdoor noise levels at the noise receptor do not exceed:

a. L_{eq}1H of 55 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.

b. L_{eq}1H of 50 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 7:00 p.m. to 10:00 p.m.

c. L_{eq}1H of 45 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m.

This standard is not applicable to increased traffic noise along any of the roads identified within the 2010 Regional Roadway Network (Figure 4.2.3) of the Public Facilities Appendix of the Ventura County General Plan. In addition, State and federal highways, all railroad line operations, aircraft in flight, and public utility facilities are noise generators having Federal and State regulations that preempt local regulations.

(5) Construction noise shall be evaluated and, if necessary, mitigated in accordance with the County Construction Noise Threshold Criteria and Control Plan:

a. Daytime Construction – Daytime (7:00 a.m. to 7:00 p.m. Monday through Friday, and from 9:00 a.m. to 7:00 p.m. Saturday, Sunday, and local holidays) generally means any time period not specifically defined as a more noise-sensitive time period. The daytime construction noise threshold criteria are given in Table 4.6-5 below. Depending on project duration, the daytime noise threshold criteria shall be the greater of the fixed L_{eq}(h) limit (which includes non-construction evening and nighttime noise) or the measured ambient L_{eq}(h) plus 3 dB. These criteria only apply to the noise-sensitive receptors that are sensitive to noise impacts during the daytime, as shown in Table 4.6-6 below.

Table 4.6-5. Daytime Construction Activity Noise Threshold Criteria (NTC)

Construction Duration Affecting Noise-Sensitive Receptors	Noise Threshold Criteria shall be the greater of these noise levels at the nearest receptor area or 10 feet from the nearest noise-sensitive building	
	Fixed L_{eq}(h), dB(A)	Hourly Equivalent Noise Level (L_{eq}), dB(A)[1,2]
0 to 3 days	75	Ambient L_{eq}(h) + 3 dB
4 to 7 days	70	Ambient L_{eq}(h) + 3 dB
1 to 2 weeks	65	Ambient L_{eq}(h) + 3 dB
2 to 8 weeks	60	Ambient L_{eq}(h) + 3 dB
Longer than 8 weeks	55	Ambient L_{eq}(h) + 3 dB

1. The instantaneous L_{max} shall not exceed the NTC by 20 dB(A) more than 8 times per daytime hour.
2. Local ambient L_{eq} measurements shall be made on any mid-week day prior to project work.

Table 4.6-6. Noise-Sensitive Receptors

Receptor Description	Typical Sensitive Time Period
Hospitals, Nursing Homes (quasi-residential)	24 hours
Single-Family and Multi-Family Dwellings (residential)	Evening/Night
Hotels/Motels (quasi-residential)	Evening/Night
Schools, Churches, Libraries (when in use)	Daytime/Evening

b. Evening Construction – Evening hours (7:00 p.m. to 10:00 p.m.) are more noise-sensitive time periods. Therefore, evening construction noise threshold criteria differ from the daytime criteria. Overall project construction noise, for the noise-sensitive hours specified, shall not exceed the noise threshold criteria listed in Table 4.6-7, at the nearest noise-sensitive receptor area or 10 feet from the façade of the nearest noise-sensitive building. These criteria apply to all noise-sensitive receptors shown in Table 4.6-6 above.

Table 4.6-7. Evening Construction Activity Noise Threshold Criteria

Receptor Location	Evening Noise Threshold Criteria shall be the greater of these noise levels at the nearest receptor area or 10 feet from the nearest noise-sensitive building	
	Fixed L_{eq}(h), dB(A)	Hourly Equivalent Noise Level (L_{eq}), dB(A)[1,2]
Residential	50	Ambient L_{eq}(h) + 3 dB

1. The instantaneous L_{max} shall not exceed the NTC by 20 dB(A) more than 6 times per evening hour.
2. Hourly evening local ambient noise measurements shall be made on a typical mid-week evening prior to project work.

c. Nighttime Construction – Nighttime hours (10:00 p.m. to 7:00 a.m. Monday through Friday, and from 10:00 p.m. to 9:00 a.m., Saturday, Sunday, and local holidays) are the most noise-sensitive time periods. Therefore, nighttime and holiday construction noise threshold criteria differ from the daytime and evening criteria. Overall project construction noise, for the noise-sensitive hours specified, shall not exceed the noise threshold criteria listed in Table 4.6-8 below, at the nearest noise-sensitive receptor area or 10 feet from the façade of the nearest noise-sensitive building. These criteria only apply to the noise-sensitive receptors that are sensitive to noise impacts during the nighttime shown in Table 4.6-6 above.

Table 4.6-8. Nighttime Construction Activity Noise Threshold Criteria

Receptor Location	Nighttime Noise Threshold Criteria shall be the greater of these noise levels at the nearest receptor area or 10 feet from the nearest noise-sensitive building	
	Fixed L_{eq}(h), dB(A)	Hourly Equivalent Noise Level (L_{eq}), dB(A)[1,2]
Residential, Live-in Institutional	45	Ambient L_{eq}(h) + 3 dB

1. The instantaneous L_{max} shall not exceed the NTC by 20 dB(A) more than 4 times per nighttime hour.
2. Hourly nighttime local ambient noise measurements shall be made on a typical mid-week night prior to project work.

d. Maximum Construction Noise – In addition, the construction-related, slow response, instantaneous maximum noise (L_{max}) shall not exceed the noise threshold criteria by 20 dB(A) more than eight times per daytime hour, more than six times per evening hour and more than four times per nighttime hour.

Discretionary development which would be impacted by noise or generate project related noise which cannot be reduced to meet the above standards, shall be prohibited. This policy does not apply to noise generated during the construction phase of a project if a statement of overriding considerations is adopted by the decision-making body in conjunction with the certification of a final Environmental Impact Report (EIR).

The impact of the proposed project related to noise may be considered significant if it would exceed the following Standards of Significance, in accordance with Appendix G of the *CEQA Guidelines* and the CEQA Handbook:

- Expose people to or generate noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies;
- Expose people to or generate excessive ground-borne vibration or ground-borne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in exposure of people residing or working in the project area to excessive noise levels if the project is located within an area covered by an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport; or
- Result in exposure of people residing or working in the project area to excessive noise levels if the project is located in the vicinity of a private airstrip.

Vibration Thresholds – Construction

The Ventura County Initial Study Assessment Guidelines (2011) state that any project that either individually of when combined with other recently approved, pending, and probable future projects, including construction activities involving blasting, pile-driving, vibratory compaction, demolition, and drilling or excavation which exceed the threshold criteria provided in Section 12.2 of the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment* (2006), is considered to have a potentially significant impact.

Per the FTA, construction vibration should be assessed quantitatively in cases where there is significant potential for impact from construction activities. Such activities include blasting, pile-driving, vibratory compaction, demolition, and drilling or excavation in close proximity to sensitive structures and the recommended procedure for estimating vibration impact from construction activities is as follows:

Damage Assessment

- Select the equipment and associated vibration source levels at a reference distance of 25 feet from Table 4.6-9.
- Make the propagation adjustment according to the following formula (this formula is based on point sources with normal propagation conditions):

  $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

  where: PPV (equip) is the peak particle velocity in in/sec of the equipment adjusted for distance

  PPV (ref) is the reference vibration level in in/sec at 25 feet from Table 4.6-9

  D is the distance from the equipment to the receiver.
- Apply the vibration damage criteria as shown in Table 4.6-10.

Table 4.6-9. Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate L*v* (1) at 25 ft.
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Clam Shovel Drop (slurry wall)		0.202	94
Hydromill (slurry wall)	In Soil	0.008	66
	In Rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

(1) RMS velocity in decibels (VdB) re 1 micro-inch/second

Table 4.6-10. Construction Vibration Damage Criteria

Building Category	PPV (in/sec)(1)	Approximate L*v* (2)
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

(1) PPV = peak particle velocity
(2) RMS velocity in decibels (VdB) re 1 micro-inch/second

Annoyance Assessment

- If desired for consideration of annoyance or interference with vibration-sensitive activities, estimate the vibration level L*v* at any distance D from the following equation and apply the vibration impact criteria for General Assessment for vibration-sensitive sites (Table 4.6-11):

  $L_v(D) = L_v(25\ ft) - 30\log(D/25)$

Table 4.6-11. Ground-Borne Vibration (GBV) Impact Criteria for General Assessment

Land Use Category	GBV Impact Levels (VdB re 1 micro-inch/sec)		
	Frequent Events(1)	Occasional Events(2)	Infrequent Events(3)
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB4	65 VdB4	65 VdB4
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

(1) "Frequent Events" is defined as more than 70 vibration events of the same source per day
(2) "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
(3) "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day.
(4) This criterion limit is based on levels acceptable for most moderately sensitive equipment such as optical microscopes.

The criteria for environmental impact from ground-borne vibration and noise are based on the maximum root-mean-square (rms) vibration levels for repeated events of the same source. The criteria presented in Table 4.6-11 account for variation in project types as well as the frequency of events.

4.6.4 Project-Level Impact Analysis

Would the project conflict with any of the thresholds for noise identified in the General Plan as identified in Section 4.6.3 of the EIR related to the development of noise sensitive land uses?

The project does not propose any noise sensitive land uses. The project is the construction and operation of a drain as well as implementation of a Beach Elevation Management Plan (BEMP). These are not considered noise sensitive uses as defined in Table 4.6-6. Therefore, no impact is identified for this issue area.

Would the project generate noise located near any noise sensitive uses in a manner that would exceed the thresholds identified in Section 4.6.3 of the EIR?

Construction

Noise impacts from the construction phases of the proposed project would be relatively short-term and intermittent and would be a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the noise generating activities. The proposed project construction would not involve evening or nighttime construction activity. Daytime construction would not occur within 500 feet of a hospital, ~~nursing home~~, school, ~~church~~, or library. There is a senior home, Shoreline Care Center, located adjacent to the proposed project site at 5225 South J Street. Our Saviour's Evangelical Lutheran Church is located approximately 275 feet west of the

project site, at 905 Redwood Street. The above Ventura County outdoor noise thresholds would apply during the construction of J Street Drain. As shown in Table 4.6-5, the applicable noise threshold for construction longer than eight weeks is the greater of 55 dB(A) L_{eq}(h) or Ambient L_{eq}(h) + 3 dB. As discussed in Section 4.6.1.3 above, the existing ambient noise level along J Street is 65 dB(A) L_{eq}(h). Thus, the daytime noise threshold along J Street is 68 dB(A) L_{eq}(h).

The project boundary will be limited to the channel/street right-of-way except at the outlet to the lagoon. At the outlet, the work area will extend 300 feet past the pump station and 50 feet southeast of the easterly right-of-way. Off-road equipment that is expected to be used during construction includes: wheel loaders, track dozers, scrapers, excavator with hydraulic hammer, pile driver, motor grader, concrete pump, concrete tucks, dump trucks, and other miscellaneous small equipment. However, detailed construction equipment and associated activities have not been identified. The Society of Automotive Engineers has developed standardized procedures for measuring reference noise levels for the certification of mobile and stationary construction equipment. Typical 50-foot reference noise levels from representative pieces of construction equipment are listed in Table 4.6-12.

The major noise producing construction activities within the project area would likely be pile driving (Phase 1 only), pavement breaking, demolition, excavation, earth moving, and haul trucking. The equivalent sound level (L_{eq}) as it relates to construction activity depends on several factors including machine power, the manner of operation and the amount of time the equipment is operated over a given time period. The information provided in Table 4.6-12 illustrates typical levels generated by various construction equipment and provides guidance on determining the noise from construction activities.

The existing sensitive land uses along J Street Drain range from 5 to 500 feet away as mentioned above. As evident from Table 4.6-12, noise levels generated from the proposed off-road equipment that is expected to be used during construction will likely exceed the ~~55~~68 dB(A) L_{eq} daytime County standards for hospitals, nursing homes, schools, churches, and libraries. As mentioned previously, there are a nursing home and a church are located within 500 feet of the proposed project. Therefore, a potentially significant impact is identified and mitigation is required. ~~, but such facilities are not present within 500 feet of the proposed project~~. Standards for residential areas apply to evening and night, but because construction is not proposed for these time periods, the standards would not be exceeded. ~~Construction of the proposed project would result in a less than significant noise impact; however~~ Construction noise mitigation measures will be implemented during each phase of the proposed project to comply with the County threshold and City ordinances.

Operations

The operation of the proposed project would include maintenance activities similar to those currently in place, which would generate intermittent daytime trips for maintenance purposes only; therefore, no new operational noise impact would occur. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain. These BMPs will be incorporated as part of the proposed project for operational activities. Impacts would be less than significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional daytime trips to the beach during the rainy season when a large storm event is forecast. These trips are expected to be infrequent and would not be characterized as excessive or leading to a significant noise impact. Therefore, a less than significant impact is identified for this issue area.

Table 4.6-12. Typical Construction Equipment Noise

Equipment Type Noise Source	Dominant Noise Components[1]	50-Foot Noise Level (L_{eq}) dB(A)[2, 3]	Noise Level Range (Lp) dB(A)[2, 3]	50-Foot Maximum Noise Level (L_{max}) dB(A)[2, 3]
Air Compressor (portable)[4]	E, C, H, I	81	76-89	89
Air Compressor (stationary)	E, C, H, I	82	76-89	89
Auger, Drilled Shaft Rig	E, C, F, I, W	82	76-89	89
Backhoe	E, C, F, I, H, W	85	81-90	90
Bar Bender	E, P, W	82	78-88	85
Chain Saw	E, W, C	85	72-88	88
Compactor	E, C, F, I, W	82	81-85	85
Concrete Batch Plant	W, E, C	92	80-96	96
Concrete Mixer (small trailer)	W, E, C	67	65-68	68
Concrete Mixer Truck	E, C, F, W, T	85	69-89	89
Concrete Pump Trailer	E, C, H	82	74-84	84
Concrete Vibrator	W, E, C	76	68-81	81
Crane, Derrick	E, C, F, I, T	88	79-90	90
Crane, Mobile	E, C, F, I, T	83	80-85	85
Dozer (Bulldozer)	E, C, F, I, H	80	77-90	90
Excavator	E, C, F, I, H, W	87	83-92	92
Forklift	E, C, I, W	84	81-86	86
Front End Loader	E, C, F, I, H	79	77-90	90
Generator	E, C	78	71-87	87
Gradall	E, C, F, I, W	82	78-85	85
Grader	E, C, F, I, W	85	79-89	89
Grinder	W	80	75-82	82
Hydraulic Hammer	W, E, C, H	102	99-105	105
Impact Wrench	W, P	85	75-85	85
Jack Hammer	P, W, E, C	82	75-88	88
Paver	E, D, F, I	89	82-92	92
Pile Driver (Impact/ Sonic/ Hydraulic)	W, P, E	101 / 96 / 65	94-107 / 90-99 / 65	107 / 99 / 65
Pavement Breaker	W, E, P	82	75-85	85
Pneumatic Tool	P, W, E, C	85	78-88	88
Pump	E, C	76	68-80	80
Rock Drill	W, E, P	98	83-99	99
Roller	E, C, F, I, W	74	70-83	83
Sand Blaster	W, E, C, H, I	85	80-87	87
Saw, Electric	W	78	59-80	80
Scraper	E, C, F, I, W	88	82-91	91
Shovel	E, C, F, I, W	82	77-90	90
Tamper	W, E, C	86	85-88	88
Tractor	E, C, F, I, W	82	77-90	90
Trencher		83	81-85	85

Equipment Type Noise Source	Dominant Noise Components[1]	50-Foot Noise Level (L_{eq}) dB(A)[2, 3]	Noise Level Range (Lp) dB(A)[2, 3]	50-Foot Maximum Noise Level (L_{max}) dB(A)[2, 3]
Trucks (Under Load)	E, C, F, I, T	88	81-95	95
Water Truck	W, E, C, F, I, T	90	89-94	94
Other Equipment with Diesel	E, C, F, I	82	75-88	88

Notes: 1. Ranked noisy components. C=Casing, E=Exhaust, F=Fan, H=Hydraulics, I=Intake air, P=Pneumatic exhaust, T=Transmission, W=Work tool.
2. Table based on EPA studies and measured data from various construction equipment and manufacturer's data.
3. Equipment noise levels are at 50 feet from individual construction equipment and with no other noise contributors.
4. Portable air compressor rated at 75 cfm or greater and operating at greater than 50 psi.

Expose people to or generate excessive ground-borne vibration or ground-borne noise levels?

Construction

The proposed project has the potential to expose people to or generate excessive groundborne vibration or groundborne noise levels because pile driving is required for construction. Off-road equipment expected to be used during construction includes: wheel loaders, track dozers, scrapers, excavator with hydraulic hammer, pile driver, motor grader, concrete pump, concrete trucks, dump trucks, and other miscellaneous small equipment. The Ventura County Initial Study Assessment Guidelines (2011) state that any project that either individually of when combined with other recently approved, pending, and probable future projects, including construction activities involving blasting, pile-driving, vibratory compaction, demolition, and drilling or excavation which exceed the threshold criteria provided in Section 12.2 of the FTA *Transit Noise and Vibration Impact Assessment* (2006), is considered to have a potentially significant impact. Tables 4.6-9 and 4.6-10 show the vibration source levels for construction equipment and the construction vibration damage criteria respectively. Table 4.6-11 illustrates the groundborne vibration impact criteria for general assessment. The nearby residences would be considered a Category 2.

As discussed in Section 4.5 Transportation and Circulation, during construction, no more than three haul trucks would be on site for loading at a given time, and approximately 45 construction-related trips per day are expected to occur. Haul truck trips during construction would also cause noise and vibration impacts. The City of Oxnard and City of Port Hueneme have designated specific roadways as truck routes (Hueneme Road and Arnold Road), which minimize noise and vibration impacts. Truck-related construction traffic would use these roads during haul trips, which would minimize noise and vibration related to truck traffic. Vertical shoring is ~~no longer~~ proposed on the west side of the channel. ~~However, g~~ Ground-borne vibration and ground-borne noise impacts are considered potentially significant. Mitigation is required.

Operations

Project operation would include maintenance activities similar to those currently in place, which would generate intermittent trips for maintenance purposes only; therefore, no new operational vibration impacts would occur. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain. These BMPs will be incorporated as part of the proposed project for operational activities to ensure impacts remain less than significant.

Beach Elevation Management Plan (BEMP)

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a large storm event is forecast. These trips are expected to be infrequent and would not be characterized as excessive or leading to a significant vibration impact. Therefore, a less than significant impact is identified for this issue area.

Expose people to or generate noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies?

Construction

City of Oxnard

Section 7-188(D) of the City of Oxnard Municipal Code exempts from the provisions of Article XI – Sound Regulation "sound sources associated with or created by construction, repair, remodeling or grading of any real property…provided the activities occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, including Saturday." Project construction would occur between the hours of 7:00 a.m. and 6:00 p.m.; therefore, the project would not exceed the standards of the City of Oxnard ordinance. Additionally, the mitigation measures presented in Section 4.6.6 (Mitigation Measures NOISE-1 and NOISE-2) would reduce construction noise levels to a less than significant level under the County's threshold.

City of Port Hueneme

The City of Port Hueneme Municipal Code does not include an exemption for construction activities, rather, the City's Noise Ordinance regulates the time in which construction activities are prohibited altogether. According to the City's ordinance, no person adjacent to or within any residential zone in the city shall operate power construction equipment or tools or perform any outside construction or repair work on buildings or structures, or operate any pile driver, steam shovel, pneumatic hammer, steam or electric hoist, or other construction device so as to create any noise which exceeds the noise level limits of the Noise Ordinance between the hours of 7 p.m. and 7 a.m. Monday through Saturday, and no earlier than 9 a.m. or later than 6 p.m. on Sunday and federal holidays. Project construction would occur between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday; therefore, the project would comply with the standards of the City of Port Hueneme's ordinance with respect to construction time prohibitions.

Although the City's noise ordinance allows for construction activities to occur between the hours of 7 a.m. and 7 p.m., operational exterior noise levels between the hours of 7:00 a.m. and 6:00 p.m. are defined as 55 dB for noise sensitive and residential, 65 dB for commercial and 75 dB for industrial properties in the City of Port Hueneme (Section 3430 of the Port Hueneme Municipal Code). Section 3431 states that "no person shall operate or cause to be operated any source of sound at any location within the City… when measured on any receiving property to exceed the following Noise Level Limits…:

(a) The Exterior Noise Levels for that land use, as specified in Section 3430 above, for a total period of more than thirty minutes in any consecutive sixty minutes; or
(b) The Exterior Noise Levels plus 5 dB for a total period of more than fifteen minutes in any consecutive sixty minutes; or

(c) The Exterior Noise Levels plus 10 dB for a total period of more than five minutes in any consecutive sixty minutes; or

(d) The Exterior Noise Levels plus 15 dB for a total period of more than one minute in any consecutive sixty minutes; or

(e) The Exterior Noise Levels plus 20 dB for any period of time."

The land uses within the City of Port Hueneme adjacent to the proposed project site include residential, commercial, and industrial uses. As identified in Section 3431 of the City's Noise Ordinance, there are different thresholds for the different land uses. Construction of the proposed project may exceed the threshold for residences and commercial property within the City of Port Hueneme's city limits.

Construction activities will occur in four phases, with construction within or immediately adjacent to the City of Port Hueneme city limits occurring during phase 1 of the project. Phases 2 through 4 would be constructed within the City of Oxnard, but approximately 70 to 130 feet from residences located within the City of Port Hueneme. Although the City of Port Hueneme's Noise Ordinance does not exempt construction activity, its recognition that daytime construction noise should be regulated differently than non-daytime construction noise is consistent with County Construction Noise Threshold Criteria and the City of Oxnard's Noise Ordinance. Construction noise levels will be substantially similar for those portions of the project located in Port Hueneme and Oxnard. Land uses adjacent to the project are also substantially similar for all phases of the project. There is no basis for making a distinction between those phases of the project to be constructed in the City of Oxnard, and those portions of the project to be constructed in the City of Port Hueneme. The County Construction Noise Threshold Criteria and Control Plan takes into account the many factors that contribute to the potential impacts due to construction noise, including the location of sensitive receptors, the type or phase of construction, the combination of equipment used, the site layout, and the construction methods employed. Given the disparity between City ordinances, the District applies County thresholds for determining noise significance in a uniform manner to all project phases.

The mixed use nature of the area (i.e., residential, commercial and industrial) results in varying noise thresholds within a small area. The Ventura County Watershed Projection District's thresholds of significance for noise provide additional guidance for evaluating noise impacts within a mixed land use area. As shown on Table 4.6-12, noise levels generated from the proposed off-road equipment that is expected to be used during construction will likely exceed 55dB(A) L_{eq} (south of Hueneme Road) and 68 dB(A) L_{eq} (north of Hueneme Road) daytime County standards for hospitals, nursing homes, schools, churches, and libraries. As discussed above, a nursing home and a church are located north of Hueneme Road. Standards for residential areas apply to evening and night, but because construction is not proposed for these time periods, the standards would not be exceeded. Construction of the proposed project would result in a significant noise impact for the nursing home and church. Construction noise mitigation measures will be implemented during each phase of the proposed project to reduce noise and address County threshold and City ordinances.

Operations

Project operation would include maintenance activities similar to those currently in place, which would generate intermittent trips for maintenance purposes only; therefore, no new operational noise impacts would occur. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain. These BMPs will be incorporated as part of the proposed project for operational activities to ensure impacts remain less than significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a large storm event is forecast. Staging of one dozer would occur briefly in the easternmost Port Hueneme Beach Park parking area, located near residential property in Port Hueneme. The grooming itself would occur away from all residential, commercial, industrial, or other sensitive properties, and therefore would not be subject to City ordinances. Work would be completed within a few hours on each grooming occasion. Therefore, a less than significant impact is identified for this issue area.

Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction

During construction of the J Street Drain, off-road equipment expected to be used includes: wheel loaders, track dozers, scrapers, excavator with hydraulic hammer, pile driver, motor grader, concrete pump, concrete tucks, dump trucks, and other miscellaneous small equipment. This equipment can generate noise; however, since this is a temporary condition associated with project construction, the impact would be less than significant.

Operations

Project operation would result in maintenance activities similar to those currently in place which would generate intermittent trips for maintenance purposes only; therefore, no new noise impacts would occur during operation. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain. These BMPs are incorporated as part of the proposed project for operational activities and would ensure that impacts are less than significant. The proposed project would not result in a permanent increase in ambient noise levels at J Street Drain Project area. A less than significant impact is identified.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a large storm event is forecast. These trips are expected to be infrequent and would not be characterized as excessive or leading to a significant noise impact. Therefore, a less than significant impact is identified for this issue area.

Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction

The J Street Drain Project is proposed to be constructed in four phases with the first phase scheduled to begin in spring 2013 and lasting for 10 months. Temporary noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators have the potential to reach high levels as evident from Table 4.6-12. As stated previously, the District applies County thresholds for determining noise significance in a uniform manner to all project phases. ~~However, c~~Construction would be scheduled during daytime hours only, so Ventura County thresholds for residential areas would not be exceeded. ~~The project would not be constructed within 500 feet of receptors defined as noise-~~

~~sensitive during daytime hours~~. The County's standard for daytime sensitive noise receptors would likely be exceeded adjacent to Shoreline Care Center, and potentially at Our Saviour's Evangelical Lutheran Church. Therefore, temporary increases in ambient noise would be ~~less than~~ significant.

Operations

The operation of the proposed project would include maintenance activities similar to those currently in place, which would generate intermittent daytime trips for maintenance purposes only; therefore, no new noise impacts would occur during operation. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain. These BMPs will be incorporated as part of the proposed project for operational activities. Impacts would be less than significant.

Beach Elevation Management Plan

The BEMP is anticipated to be used on a periodic basis and would result in infrequent trips to the beach. The grooming of the sand berm involves a single dozer and would not result in substantial temporary increase in ambient noise level. Therefore, a less than significant impact is identified for this issue area.

Result in exposure of people residing or working in the project area to excessive noise levels if the project is located within an area covered by an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport?

The Oxnard Airport is located at 1841 West 5th Street in the City of Oxnard, approximately three miles from the project site. The Camarillo Airport is located at 555 Airport Way in the City of Camarillo, approximately 10 miles from the proposed project site. Therefore, a less than significant impact is identified for this issue.

Result in exposure of people residing or working in the project area to excessive noise levels if the project is located in the vicinity of a private airstrip?

A private airstrip is not located in the vicinity of the project site. The airport closest to J Street Drain is the Oxnard Airport, a public airport located approximately three miles north of the drain. No impacts are anticipated for the J Street Drain project with regard to noise generated by private airstrips.

4.6.5 Cumulative-Level Impact Analysis

The General Plan (Section 2.16.2-1 of the Goals, Policies and Programs) establishes the threshold criteria mentioned previously; above which significant noise impacts would be anticipated.

Construction

Construction activities would likely exceed the 55 dB(A) L_{eq} (south of Hueneme Road) and 68 dB(A) L_{eq} (north of Hueneme Road) daytime County standard for hospitals, nursing homes, schools, churches, and libraries. As mentioned previously, there are a nursing home and a church within 500 feet of the proposed project. ~~, but such facilities are not present within 500 feet of the proposed project~~. Standards for residential areas apply to evening and night, but because construction is not proposed for these time periods, the standards would not be exceeded. When the proposed project is considered with the other cumulative projects (Table 2.0-1), no cumulative impact is anticipated because the project would not be constructed between the hours of 7:00 p.m. and 7:00 a.m. and the cumulative projects are located greater than 500 feet from the Shoreline Care Center and Our Saviour's Evangelical Lutheran Church. Therefore,

construction of cumulative projects would not contribute to a significant cumulative noise impact. Impacts would be less than significant.

Operations

Operation of the proposed project would occur as it currently does under existing conditions. Therefore, there would be no new noise generated by the proposed project during operation. The proposed project would not contribute to a significant cumulative impact and a significant cumulative impact would not result. No impact is identified.

Beach Elevation Management Plan

Cumulative projects closest to the BEMP access route include Water Pipeline I, Water Pipeline II, and Advanced Purification Facility. Implementation of the BEMP would only generate noise for a very short duration of time between the hours of 7:00 a.m. and 7:00 p.m., and would be associated with the sound from one dozer, and would not result in project-level noise impacts. Therefore, noise generated by implementation of the BEMP would not contribute to a significant cumulative noise impact. Impacts would be less than significant.

Expose people to or generate excessive ground-borne vibration or ground-borne noise levels?

Construction

The proposed project has the potential to expose people to or generate excessive ground-borne vibration or ground-borne noise levels. Because all cumulative projects near the proposed project are either constructed, in the early planning phase or currently under construction, none would be constructed concurrently with the proposed project. Therefore, cumulative impacts would be less than significant.

Operations

Operation of the proposed project would occur as it currently does under existing conditions. Therefore, there would be no new ground-borne vibration generated by the proposed project during operation. The proposed project would not contribute to a significant cumulative impact and a significant cumulative impact would not result. No impact is identified.

Beach Elevation Management Plan

Implementation of the BEMP would not result in substantial ground-borne vibration or ground-borne noise levels. Due to the distance between the BEMP access route and cumulative projects, implementation of the BEMP would not contribute to a significant cumulative impact related to ground-borne vibration. Therefore, a less than significant cumulative impact is identified.

Expose people to or generate noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies?

Construction

As stated in the project-level analysis, the District applies County thresholds for determining noise significance in a uniform manner to all project phases. As shown on Table 4.6-12, noise levels generated from the proposed off-road equipment that is expected to be used during construction will likely exceed 55dB(A) L_{eq} (south of Hueneme Road) and 68 dB(A) L_{eq} (north of Hueneme Road) daytime County

standards for hospitals, nursing homes, schools, churches, and libraries. There is a senior home, Shoreline Care Center, located adjacent to the proposed project site at 5225 South J Street. There is also a church, Our Saviour's Evangelical Lutheran Church, located approximately 275 feet from the project site. Construction activities would exceed the noise standards for care facilities at these locations at the individual project level, but because cumulative projects are located more than 500 feet away from either facility, cumulative impacts are less than significant.

Standards for residential areas apply to evening and night, but because construction is not proposed for these time periods, the standards would not be exceeded. Construction of the proposed project would result in a less than significant project-level noise impact. Furthermore, because none of the cumulative projects would be constructed in the project area concurrent with construction of the proposed project, cumulative impacts are also less than significant. Construction noise mitigation measures will be implemented during each phase of the proposed project to reduce noise and address the County threshold and City ordinances.

Operations

Project operation would include maintenance activities similar to those currently in place, which would generate intermittent trips for maintenance purposes only; therefore, no new operational noise impacts would occur. The District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project contains BMPs for the operational maintenance activities for J Street Drain. These BMPs will be incorporated as part of the proposed project for operational activities to ensure cumulative impacts remain less than significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a large storm event is forecast. Staging of one dozer would occur briefly in the easternmost Port Hueneme Beach Park parking area, located near residential property in Port Hueneme. The grooming itself would occur away from all residential, commercial, industrial, or other sensitive properties, and therefore would not be subject to City ordinances. Work would be completed within a few hours on each grooming occasion. Therefore, a less than significant cumulative impact is identified for this issue area.

Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction

Construction of the proposed project would not result in a permanent increase in ambient noise in the project vicinity. Therefore, construction of the project would not contribute to a permanent increase in ambient noise and cumulative impacts would be less than significant.

Operations

Operation of the proposed project would occur as it currently does under existing conditions. Therefore, there would be no new permanent sources of ambient noise generated by the proposed project during operation. The proposed project would not contribute to a significant cumulative impact and a significant cumulative impact would not result. A less than significant impact is identified.

Beach Elevation Management Plan

Implementation of the BEMP would not result in a permanent increase in ambient noise levels, as the beach grooming operations would be periodic and of a short duration. Therefore, the BEMP would not contribute to a permanent increase in ambient noise and a cumulative impact would not result.

Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction

It is anticipated that there would be temporary noise impacts from equipment and haul trucks during construction of the proposed project. None of the cumulative projects would be constructed in the project area concurrent with construction of the proposed project. Therefore, due to the distance between the proposed project and cumulative projects, the proposed project would not contribute to a significant temporary increase in ambient noise. Cumulative impacts would be less than significant.

Operations

Operation of the proposed project would not result in significant project-level impacts to ambient noise levels, as current activities would continue as they occur now. Therefore, a less than significant cumulative impact would result.

Beach Elevation Management Plan

Implementation of the BEMP would result in a temporary increase in ambient noise. However, none of the cumulative projects would be constructed near the BEMP implementation area. Therefore, temporary noise generated by cumulative projects (i.e., construction-related noise) would not combine with temporary noise generated by implementation of the BEMP and a significant cumulative impact would not result.

Result in exposure of people residing or working in the project area to excessive noise levels if the project is located within an area covered by an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport?

Construction and operation of the proposed project would not generate excessive noise levels within an area covered by an airport land use plan. Due to the distance between the proposed project and cumulative projects and due to the timing of construction of cumulative projects, the proposed project would not contribute to a significant cumulative impact related to noise within an area covered by an airport land use plan. Therefore, cumulative impacts would be less than significant for this issue.

Result in exposure of people residing or working in the project area to excessive noise levels if the project is located in the vicinity of a private airstrip?

The proposed project is not located in the vicinity of a private airstrip. Therefore, construction and operation of the proposed project would not result in exposure of people residing or working in the project area to excessive noise levels in the vicinity of a private airstrip. Cumulative impacts would be less than significant for this issue.

4.6.6 Mitigation Measures

The following mitigation measures shall be implemented to comply with City ordinances:

1. Use of various combinations of equipment source noise reduction and propagation path noise reduction.
2. Feasible and reasonable equipment noise mitigation measures shall be implemented to reduce noise. Examples of equipment source noise reduction methods are listed in this section. The implementation of one or more of these measures, along with those of the other sections, may be desirable to reduce construction noise.

NOISE-1 Equipment Noise Reduction

1. Minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete or asphalt demolition and removal.

2. Pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise limitations.

3. Provide impact noise reducing equipment; i.e., jackhammers and pavement breaker(s), with noise attenuating shields, shrouds or portable barriers or enclosures, to reduce operating noise.
4. Provide upgraded mufflers, acoustical lining or acoustical paneling for other noisy equipment, including internal combustion engines.

5. Avoid blasting and impact-type pile driving.

6. Use alternative procedures of construction and select a combination of techniques that generate the least overall noise and vibration. Such alternative procedures could include the following:

    a. Use electric welders powered by remote generators.
    b. Mix concrete at non-sensitive off-site locations, instead of on-site.
    c. Erect prefabricated structures instead of constructing buildings on-site.

7. Use construction equipment manufactured or modified to reduce noise and vibration emissions, such as:

    a. Electric instead of diesel-powered equipment.
    b. Hydraulic tools instead of pneumatic tools.
    c. Electric saws instead of air- or gasoline-driven saws.

8. Turn off idling equipment when not in use for periods longer than 30 minutes.

NOISE-2 A temporary noise control barrier shall be installed and maintained between the temporary work area and Buildings 6 and 7 in the Surfside III community during periods when heavy equipment is operating within 500 feet of these residences or when heavy-duty trucks are regularly using the access road adjacent to the drain. <u>Additionally,</u>

temporary noise control barriers shall be installed and maintained in residential and commercial areas along Phases 2-4 to the extent that they do not affect traffic sight lines (e.g., noise barriers would not be installed at intersections). The noise barrier shall be composed of noise control blankets 10 feet tall with a sound transmission class of at least STC-25. In addition to placement of noise control blankets along the construction area adjacent to the Shoreline Care Facility, located at 5225 South J Street, and if needed, Our Saviour's Evangelical Lutheran Church at 905 Redwood Street, to further reduce noise levels below 68 dB(A) L_{eq}, additional noise control barriers shall be installed. To ensure sufficient noise barriers are deployed, construction noise levels shall be monitored ten feet from the exterior of the nursing home and church at the start of work activities within 500 feet of these two locations. Barriers would be installed to reduce noise levels generated by the loudest equipment when construction activities are closest to the nursing home and church. Monitoring would occur at the nursing home during construction Phases 2 and 3 and at the church during construction Phase 4. Construction noise levels would be monitored weekly thereafter to ensure proper function of the barriers throughout work and that the desired noise attenuation at these locations is achieved.

This noise control barrier will also provide visual screening along the eastern boundary of the Surfside III property to shield residents from views of the J Street Drain. If the Surfside III Condominium Owners' Association does not grant a temporary work area to enable installation of temporary noise barriers at Buildings 6 and 7, the District will provide funds for the Association to arrange the barrier installation on their property. Sound barriers would not be installed where encircling block walls already exist (e.g., newer condo/townhome complex west of J Street Drain in Phase 1).

The following mitigation measure shall be implemented to reduce vibration impacts:

NOISE-3 Prior to construction, the District shall request property owner permission to video record the condition of structures adjacent to the J Street Drain in the presence of the property owner. The recording shall be performed and stored by an independent third-party, with a copy given to the property owner. If vibration-induced damages occur as a result of construction, property owners would be invited to submit claims documenting such damages within one year following construction completion. The third-party would again enter the property to video record its post-construction condition, again providing a copy to the property owner. Both recordings would be compared, and the District would provide compensation to repair new damages observed in the post-construction recordings. Once both parties have agreed to the compensation, both pre- and post-construction video recordings stored by the third-party would be given to the property owner.

4.6.6.1 Ventura County Watershed Protection District Best Management Practices

The Ventura County Board of Supervisors adopted the Ventura County Watershed Protection District (District) Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project No. 80030 in May 2008. The final document includes Best Management Practices (BMPs) that will be added to the District's Maintenance Activity Guidelines. The Operation and Maintenance Division staff will be responsible for ensuring the proper implementation of the BMPs on a routine, year-round basis. The Division staff will also be responsible for ensuring compliance with all permit conditions, conducting or employing qualified personnel for any required pre-project site surveys or inspections, updating the Activity Guidelines sheets, instructing crews on BMPs,

overseeing certain BMP implementation, documenting the implementation of the BMPs, and conducting any agency coordination.

The following BMPs will be implemented to minimize noise impacts during operation:

- Construction Noise BMPs. Noise-generating construction activities shall be restricted to the daytime (i.e., 7:00 AM to 7:00 PM, Monday through Friday), during which noise levels shall not exceed:
- 75 dB(A) L_{eq}(h) at noise sensitive locations when construction work duration would last up to 3 days;
- 70 dB(A) L_{eq}(h) at noise sensitive locations when construction work would last from 4 to 7 days;
- 65 dB(A) L_{eq}(h) at noise sensitive locations when construction work would last from 1 to 2 weeks;
- 60 dB(A) L_{eq}(h) at noise sensitive locations when construction work would last from 2 to 8 weeks, or
- 55 dB(A) L_{eq}(h) at noise sensitive locations when construction work duration would exceed 8 weeks.

If these thresholds are exceeded at noise sensitive locations, noise abatement measures shall be implemented to reduce noise levels. Noise abatement measures shall include, but are not limited to, the construction equipment source noise reduction methods and construction noise propagation path reduction methods provided in the County of Ventura Construction Noise Threshold Criteria and Control Plan. As defined by the County of Ventura Construction Noise Threshold Criteria (2005), daytime noise-sensitive receptors include hospital, nursing homes (quasi-residential), schools, churches, and libraries (when in use). Single-family, multi-family dwellings, hotels, and motels are considered evening and nighttime noise-sensitive receptors. Since noise-generating construction activities would not occur during the evening or night hours, no noise mitigation for single-family dwellings, multi-family dwellings, hotels or motels is necessary.

4.6.7 Significance After Mitigation

Mitigation measure NOISE-1 requires equipment noise reduction techniques to be implemented during construction. Mitigation measure NOISE-2 will require the installation of a temporary noise control barrier ~~within the Surfside III~~ along all project phases. Implementation of the NOISE-1 and NOISE-2 ~~identified~~ mitigation measures ~~is not required, as the noise impacts associated with the construction of proposed project are~~ will reduce impacts to a less than significant level. ~~However,~~ Construction noise mitigation measures will be implemented ~~as part of the proposed project along portions of Phase 1 due to the proximity of Buildings 6 and 7 of the Surfside III Condominiums~~ during construction of all project phases to address the County threshold and City ordinances. Mitigation measure NOISE-3 would reduce impacts resulting from vibration to a level less than significant. ~~I~~Vibration impacts after mitigation are less than significant.

4.7 GEOLOGIC AND SEISMIC HAZARDS

This section addresses geologic processes and features, including topography, geology and geologic hazards, soils, and erosion potential related to the J Street Drain Project, assesses impacts of the proposed uses, and recommends mitigation measures to reduce potential project impacts. Additionally, the following document was used in the preparation of this section:

> *Geotechnical Study J Street Drainage Improvements*. Prepared by Fugro West, Inc. January 2009 (Appendix F).
>
> *Ormond Beach Lagoon Sand Berm Management Technical Memo*. Prepared by HDR Engineering, Inc. August 2011 (Appendix C).

4.7.1 Environmental Setting

The proposed project is located in the City of Oxnard, located at the western edge of the Oxnard Plain, an alluvial plain that covers over 200 square miles in the southern portion of Ventura County. Much of the city is on the relatively flat coastal plain, but steeply sloped hills abut the northern portion of the community. The western portion of the city stretches north along the Santa Clara River and is characterized by a narrow valley with steeply sloped areas on both sides.

Topographic Setting – Regional Overview

The proposed project site is located on the Oxnard Coastal Plain situated in the Transverse Range Province, which extends along the coast from the Santa Ynez Mountains to the Los Angeles Basin. The Transverse Range Province is an east-west trending belt of mountains and uplands bounded on the north by the Santa Ynez fault, on the east by the San Bernardino Mountains, on the south by the Transverse Ranges frontal fault zone, and on the west by the Pacific Ocean. The province is characterized by a diverse assemblage of igneous, volcanic, metamorphic and sedimentary rocks ranging in age from Cretaceous (65 million years ago) to Holocene (recent). Pronounced east-west trending folds and reverse faults characterize the region and reflect regional north-south compressional forces. The Ventura Basin is bounded on the north by the Santa Ynez-Topatopa Mountains and on the south by the Channel Islands, the western Santa Monica Mountains, and the Simi Hills. To the east, the basin is bounded by the San Gabriel fault zone. To the west, the Santa Barbara Channel separates the offshore islands from the mainland. Near the Santa Barbara Channel, the Ventura Basin is a transitional zone consisting of a coastal plain and shoreline. The coastal plain is composed of a broad alluvial plain, some of which forms estuaries and lagoons.

The general topographic character of the project area is flat with an approximately 18-foot elevation change from north to south. This area ranges in elevation from approximately 24 feet above mean sea level (AMSL) at the northern end of the project boundary to 3 feet AMSL at the southern end within the Ormond Beach Lagoon.

Project Site Soils

The soils of the City of Oxnard and surrounding area have been classified by the U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS) to determine soil capability for agricultural production. The SCS mapping program rates the agricultural suitability of soils in terms of both the Land Use Capability Classification System and the Storie Index. Capability classes range from Class I soils, which have few limitations restricting their use for agriculture, to Class VIII soils, which are unsuitable

for agriculture. The majority of soils in the City of Oxnard are Class I and II, which by definition constitute "prime agricultural soils" under the SCS Land Use Capability Classification System.

The project alignment contains eight different soil types that are mapped and listed in Figure 4.7-1. The map shows soils within 500 feet of the project boundary.

Soils in the project area vary and include Camarillo loam (Cc), Camarillo sandy loam (Cd), Hueneme sandy loam (Hn), as well as coastal beaches (CnB). Soil depths are variable and may be as shallow as 10 inches. The Camarillo-Hueneme-Pacheco Association can be described as level and nearly level, very deep, poorly drained loamy sands and silty clay loams. Soil depth can be up to 60 inches or more. The soils in this association are Class II soils and are also some of the most productive in the City. They are used for irrigated vegetables, field crops, lemons and strawberries. In undrained areas, there is a seasonal water table within a depth of two feet and periodically the soils contain soluble salts.

Erosion

Rates of erosion can vary depending on a number of factors including climate conditions, soil material, soil structure, and levels of human activity. Generally, soils on steeper slopes have a higher potential risk of erosion. The City of Oxnard 2020 General Plan Background Report, Agricultural and Soil Resources (5.5), identifies the K-factor for soil surfaces or soils easily susceptible to erosion processes within the City. The project site is identified as having moderate erosion susceptibility or K-factor of 0.24-0.28, with the lower channel area identified as having low erosion susceptibility or K-factor of 0.17-0.20.

Seismicity

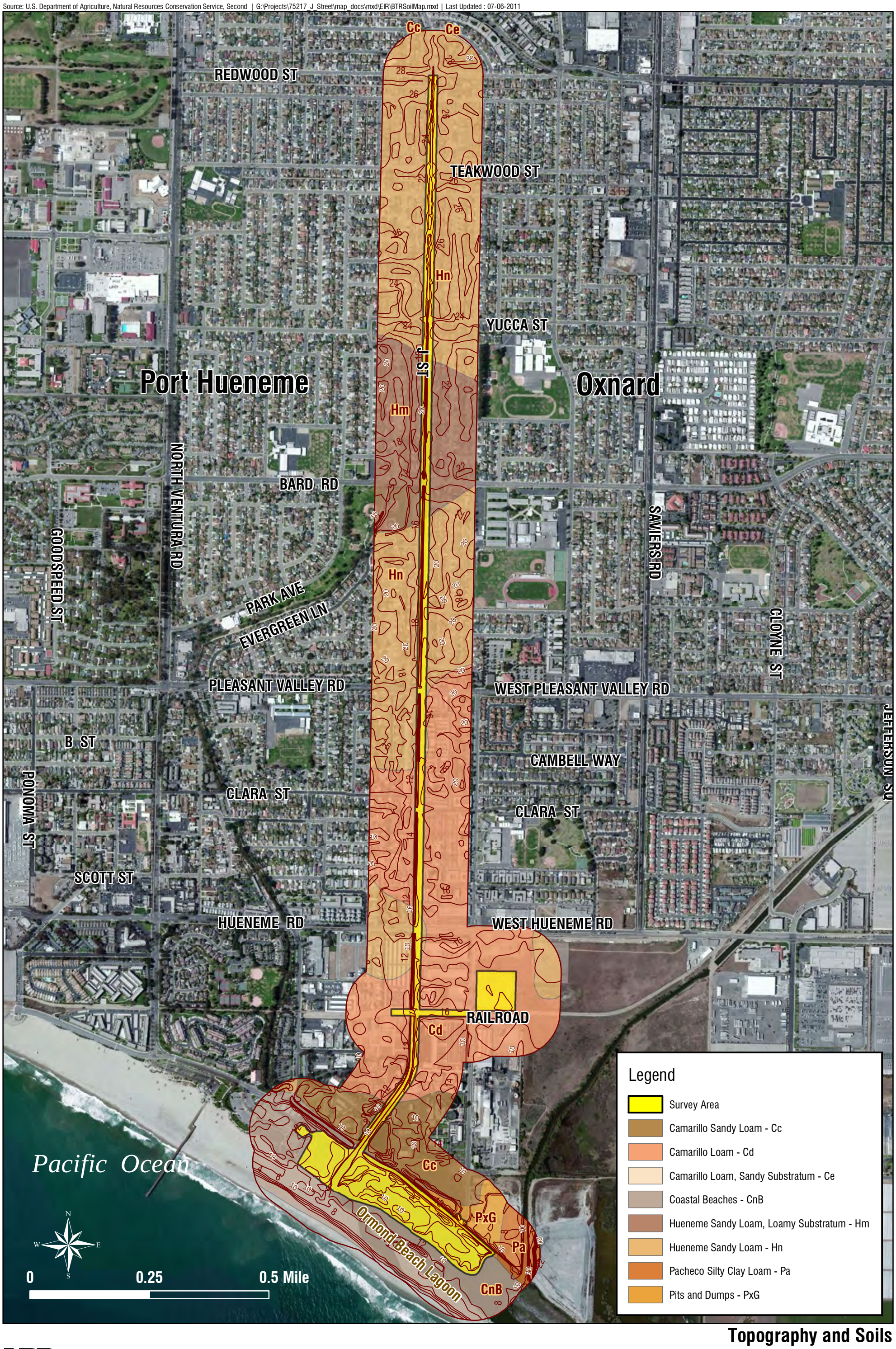
Ground Rupture and Ground Shaking

The project is located within the seismically active Southern California Region. The California Division of Mines and Geology (CDMG) designates faults as active, potentially active, and inactive. A fault is considered active if it can be demonstrated that the fault has experienced surface displacement in the past 11,000 years. A fault is considered potentially active if it can be demonstrated that movement has occurred in the past 2 million years. Finally, a fault is considered inactive if it can be demonstrated that no movement has occurred in the past two million years. As depicted in Figure 4.7-2, active and potentially active faults are located within the project vicinity.

The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. Ground rupture is defined as surface displacement which occurs along the surface of the causative fault during an earthquake. No known traces or zones of an Alquist-Priolo Fault Act-zoned fault are located within the project area.

The primary geologic hazard at the site is moderate to strong ground motion (acceleration) caused by an earthquake on any of the local or regional faults. The project site is located within Seismic Risk Zone 4. Areas within Seismic Zone 4, have a one in ten chance that an earthquake with an active peak acceleration level of 0.04 g (4/100 the acceleration of gravity) will occur within the next 50 years. Peak ground accelerations could range from 0.50 g to 0.80 g. Though no Alquist-Priolo Zones exist within the proposed project area, because the proposed project site lies in a seismically active region, it is susceptible to several types of earthquake-related risks, including surface rupture, ground shaking, liquefaction, tsunamis, and inundation.

Source: U.S. Department of Agriculture, Natural Resources Conservation Service, Second | G:\Projects\75217_J_Street\map_docs\mxd\EIR\BTRSoilMap.mxd | Last Updated : 07-06-2011



Topography and Soils

FIGURE 4.7-1

HDR
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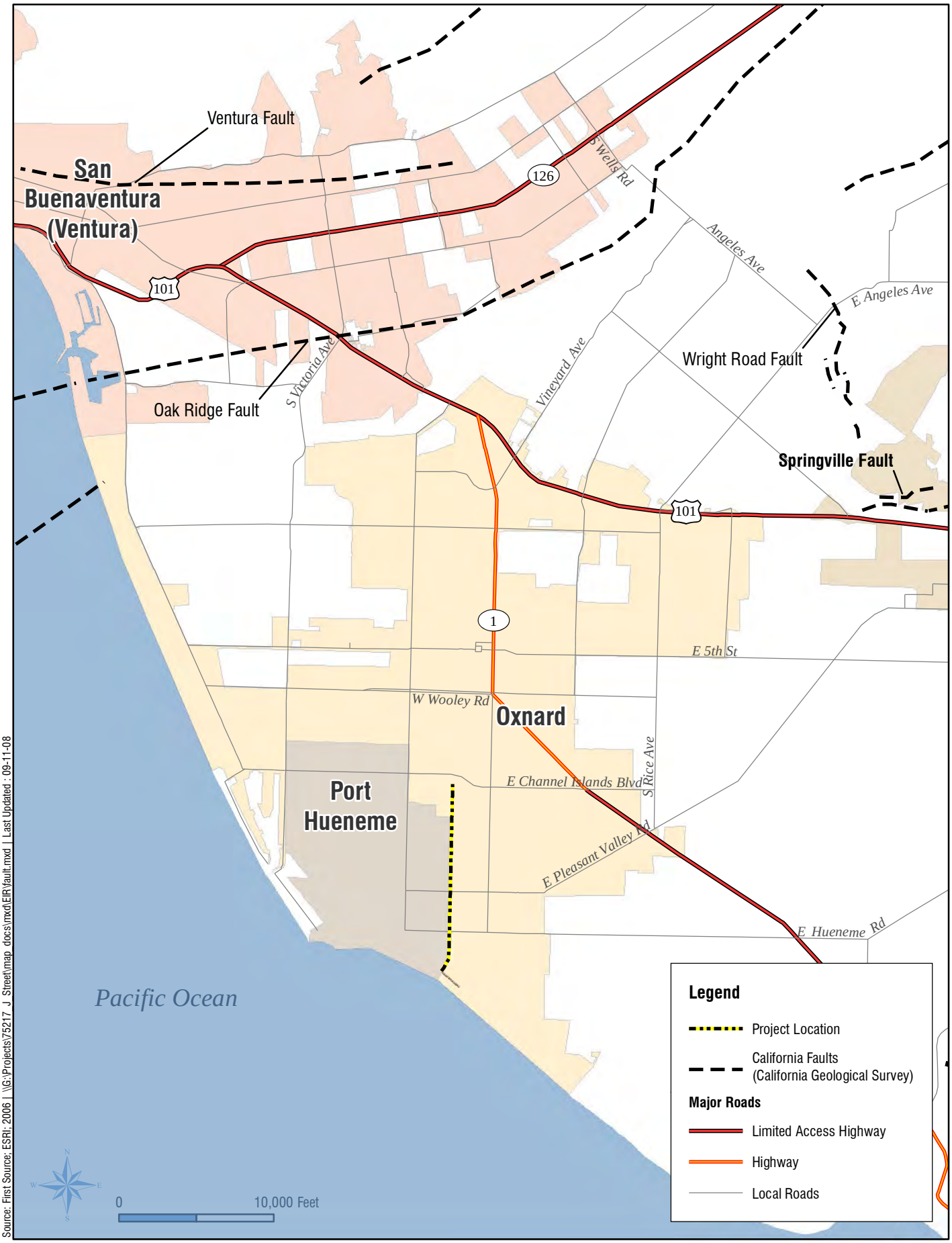

Source: First Source; ESRI; 2006 | \\G:\Projects\75217_J Street\map docs\mxd\EIR\fault.mxd | Last Updated : 09-11-08

Alquist-Priolo Fault Zone/Fault Map

FIGURE 4.7-2

J Street Drain | Ventura County Watershed Protection District | EIR

HDR
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The project site would probably experience ground shaking from earthquake activity that is associated with the faults in the surrounding area. In relative terms, the ground shaking could be severe with an earthquake of maximum credible or probable magnitude in one of the nearby faults. The two most significant factors in determining the intensity of ground shaking are magnitude and distance from the epicenter of an earthquake. Based on a regional probabilistic seismic hazard evaluation using averaged results from the ground motion attenuation relations, the CDMG estimates peak horizontal ground acceleration (PGA) ranging from 0.59g to 0.62g for a 10 percent probability of exceedance in a 50-year exposure period (2002). CDMG (2002) also indicates that the predominant earthquake moment magnitude is about M7.3 and the modal distance is about two kilometers (km) for the project area.

Figure 4.7-2 outlines the active faults within the project vicinity. The most regionally active faults are the Oak Ridge, Pitas Point-Ventura, Simi, Red Mountain, San Cayetano, and Malibu Coast faults, all within 15 miles of the project site. Table 4.7-1 lists the active faults for the City of Oxnard and associated seismic information.

Table 4.7-1. Regionally Active Faults

Fault Zone	Location Relative to City of Oxnard	Slip Rate (mm/yr)[a]	Maximum Credible Magnitude	Maximum Probable Magnitude
Oak Ridge	1 mile NW	3.5 to 6.0	7.5	6.7
Pitas Point-Ventura	6 miles NW	0.5 to 1.5	6.1	6.6
Red Mountain	10 miles NW	0.4 to 1.5	N/A	6.6
San Cayetano	15 miles N	1.3 to 9.0	6.75	6.7
Simi	7 miles NW	N/A	6.6	6.6
Malibu Coast	15 miles SE	0.3	7.5	6.6

Note: a = Average rate of displacement at a point along a fault.
Source: Southern California Earthquake Data Center and the City of Oxnard 2020 General Plan Background Report (2007).

Landslides

Landslide is the general term for the dislodging and falling of a mass of soil or rocks along a sloped surface. The relatively flat terrain of the project site minimizes the potential for landslides.

Slope Stability

Various types and degrees of slope instability are part of the natural weathering and erosional cycles. Factors contributing to slope instability include topography, bedrock and soil types, bedrock orientation, precipitation, vegetation, seismic shaking, and human-induced topographic alteration. Slope stability covers a series of mass- movement phenomena such as large landslides, rockfalls, mudflows, and shallow soil failure. These mass movements may be triggered by seismic activity, rainfall, undercutting of seacliffs by wave erosion, and other factors. Because the proposed project site is relatively flat, hazards associated with slope stability would be low.

Liquefaction

Liquefaction can be described as a “quicksand” condition in which there is a total loss of foundation support caused by a shock (typically an earthquake of significant magnitude). This condition results from a sudden decrease of shearing resistance in a cohesionless soil (such as sand) accompanied by a

temporary increase in porewater pressure. Important factors in determining liquefaction potential are the intensity and duration of shaking, and the presence of relatively low-density fine sand and silt, in an area of shallow ground water.

Liquefaction potential also increases as the depth to ground water decreases. Typically, in order for liquefaction to occur, the groundwater table must be less than 50 feet deep. Groundwater at the project area was encountered at depths ranging from 4½ feet to 11 feet bgs. The proposed project site is located in the Oxnard Plain which has a high ground water table underlain by several saturated aquifers. The City of Oxnard Safety Element Liquefaction Potential Map depicts the Study Area to be located within an area with high to moderate liquefaction potential. The City of Port Hueneme and the City of Oxnard, including the project site, have been identified as a Liquefaction Hazard Zone by the State of California.

Settlement

Seismically-induced settlement or compaction of dry or moist cohesionless soils can be an effect related to earthquake ground motion. Some such settlement can be expected to occur on the site as a result of strong ground-shaking.

Differential settlement often affects foundations placed on varying soils or fill materials, where the varying soils or fills settle at different rates. Soils throughout the project site are anticipated to be relatively horizontally stratified and laterally continuous over broad areas based on the USDA Soil Survey maps.

Expansive Soils

Expansive soils have the characteristic of expanding when wet and shrinking when dry. Soils with expansive qualities can cause damage to structures such as foundations and buried utilities due to the expansion and contraction of the soil during wetting and drying periods. The USDA Soil Maps for Ventura County includes mapped locations of soils and classifies the expansion potential of a soil according to the shrink-swell potential. Soils with moderate shrink-swell (expansive) potential have been identified in the project area. Soils with expansion potential contain clay minerals that expand when wet and shrink when dry. Repeated shrinking and swelling of the soil can result in damage to foundations, fill slopes, utilities, and other associated facilities. Site-specific geotechnical studies will be required to identify areas underlain by expansive soils and provide appropriate mitigation measures.

Land Subsidence

Subsidence is the displacement of the ground surface vertically over a broad region or at localized areas. Land subsidence is typically caused by groundwater extraction, oil field production, or by tectonic processes. Both Ventura County and the City of Oxnard identify three subsidence hazard zones within the county: (1) negligible land subsidence; (2) probable subsidence less than 0.05 ft/yr; and (3) probable subsidence of 0.05 ft/yr. According to Figure IX-1, Seismic/Geologic Hazards, from the City of Oxnard 2020 General Plan, the project area is located within the City of Oxnard zone of probable land subsidence of 0.05 ft/yr. Portions of the City of Oxnard have subsided. According to the City of Oxnard 2020 General Plan Safety Element, the available records show that the amount of much of this subsidence is at least one foot. In the area near Hueneme Road and SR-1, which is adjacent to the southeast corner of the City, the amount of subsidence has been up to 12 feet.

No recognized subsidence has been identified in the City of Port Hueneme. The likelihood of significant subsidence occurring in the City is considered very minimal.

Tsunamis and Seiches

A tsunami is an ocean wave produced by offshore seismic activity. The proposed project site is located near the Pacific Ocean and the potential for tsunami damage exists. Approximately 50 tsunamis have been reported along the California coast since 1912. Waves induced by offshore tsunamis could be transported from the shoreline to approximately one mile inland. The Ventura County coast has a low tsunami damage potential, but may be unsafe during such an event. These waves are not common, and Port Hueneme is somewhat sheltered from tsunamis generated in the North Pacific by the Channel Islands; however, it is relatively exposed to tsunamis generated in the South Pacific. The largest tsunami wave amplitude recorded at Port Hueneme was 8.8 feet, associated with the Chilean earthquake of 1960.

Seiches are harmonic waves in an enclosed water body caused by seismic activity. Seiches typically occur in lakes and bays, and are normally caused by unusual tides, winds or currents, but can also be produced by earthquake ground motion. The shaking oscillates the water back and forth, causing seiche waves. The primary threat from a seiche is to structures and boats in or very near a lake, harbor or bay. Due to the location of the J Street Drain, potential for seiches to occur near the project site is low.

4.7.2 Regulatory Setting

Federal Authorities and Administering Agencies

No federal authorities or administering agencies are known to have regulatory jurisdiction over geologic issues pertaining to the project.

California Code of Regulations

Title 24 of the California Code of Regulations (CCR) is the California Building Code. The State of California provides a minimum standard for building design through the 2001 California Building Code (CBC). The 2001 CBC is based entirely on the 1997 Uniform Building Code (UBC), but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Industrial and residential buildings are plan-checked by local building officials of California's 476 cities and 58 counties (not by state agencies). Chapter 23 of the CBC contains specific requirements for seismic safety. The Study Area is located in Seismic Zone 4, the highest zone in terms of seismic risk in California. Chapter 29 of the CBC regulates excavation, foundations, and retaining walls. Chapter 33 of the CBC contains specific requirements pertaining to site demolition, excavation, and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials. Chapter 70 of the CBC regulates grading activities, including drainage and erosion control. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching as specified in California Occupational Safety & Health Administration (Cal-OSHA) regulations (Title 8 of the CCR) and in Section A33 of the CBC.

Because J Street Drain is a flood control facility rather than an industrial or residential building, it will be constructed according to the *Ventura County Flood Control District Design Manual*, originally adopted by the Ventura County Board of Supervisors in July 1968 and periodically updated thereafter.

California Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Fault Zoning Act of 1972 prohibits the construction of buildings used for human occupancy on active surface faults, which are faults that have ruptured the ground surface in the past 11,000 years (Holocene Epoch). It specifies, in part, that new habitable building structures maintain a

minimum 50-foot setback from all known active faults. The California Geological Society (CGS) Special Publication 42 (updated 1999) describes Alquist-Priolo Earthquake Fault hazard zones in California. None of the Study Area is within an Alquist-Priolo Earthquake Fault Zone designated by the State of California.

Seismic Hazards Mapping Act

CGS also provides guidance with regard to seismic hazards. Under CGS' Seismic Hazards Mapping Act, seismic hazard zones are to be identified and mapped to assist local governments for planning and development purposes. The intent of this publication is to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes. CGS' Special Publications 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California (CGS 1997b), provides guidance for evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations. The study area is located within a CGS-designated liquefaction seismic hazard zone. Appropriate evaluation and mitigation of liquefaction hazard must be evaluated in site-specific geotechnical investigations.

Local Ordinances and Administering Agencies

Ventura County

The Ventura County General Plan, Chapter 2 Hazards, identifies goals, policies, and programs relating to known existing and potential hazards, and other significant physical constraints to development/land use.

The specific goals, policies, and programs are organized under the following major headings: (1) general goals, policies and programs, (2) fault rupture, (3) ground shaking, (4) liquefaction, (5) seiche, (6) tsunami, (7) landslides/mudslides, (8) expansive soils, (9) subsidence, (10) flood hazard, (11) inundation from dam failure, (12) coastal wave and beach erosion, (13) fire hazards, (14) transportation-related hazards, (15) hazardous materials and waste, (16) noise hazards, and (17) civil disturbance.

2.1 General Goals, Policies and Programs

The following general goals, policies and programs apply to hazards:

2.1.1 Goals

1. Identify all major hazards and other physical constraints to development in Ventura County, and convey this information to all appropriate parties.
2. Protect public health, safety and general welfare from identified hazards and potential disasters.
3. Shield public and private property and essential facilities from identified hazards and potential disasters.
4. Minimize loss of life, injury, damage to structures, and economic and social dislocations resulting from identified hazards and potential disasters.

2.1.2 Programs

5. The County Sheriff's Department Office of Emergency Services (OES) will continue to maintain and periodically update the Ventura County Multi-hazard Functional Plan, including mitigation measures and preparedness, response, and recovery strategies for the following twelve hazard

specific contingency sections (i.e., plans): Earthquake Hazards, Hazardous Materials and Waste, Flood and Flood Hazards, Inundation from Dam Failure, Transportation Related Hazards, Civil Unrest, Terrorism, National Security Emergency, Landslides/Mudslides, Tsunami, Marine Oil Spill, and Fire Hazards. To the extent feasible, County agencies will, and other public agencies are encouraged to, participate in joint emergency planning and response training, and cooperatively respond to emergencies when they occur.

6. All agencies involved in warning and evacuation activities should periodically review and, if necessary, update their plans and procedures for the hazards defined and described in this Chapter, and shall provide updated hazard and constraint information to the Planning Division when available.
7. The Building and Safety Division will continue to enforce requirements of the California Building Code pertaining to earthquake-resistant design and construction.
8. The Building and Safety Division will comply with applicable provisions of Chapter 12.2 (commencing with Sec. 8875), Division 1, of Title 2 of the Government Code, pertaining to identification of potentially hazardous buildings in the unincorporated area of Ventura County, and establishment of a mitigation program for such potentially hazardous buildings.

2.2 Fault Rupture

The goal, policies and programs that apply to fault rupture are as follows:

2.2.1 Goal

Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from fault rupture.

2.2.2 Policies

1. Detailed geologic investigations performed by Certified Engineering Geologists are required for all proposed habitable structures in Earthquake Fault Hazard Zones as defined by the Alquist-Priolo Earthquake Fault Zoning Act. Development will not be allowed unless the investigation confirms that the proposed habitable structures are not subject to fault rupture hazard. Proposed developments that are located at the ends of the Earthquake Fault Hazard Zones may be required, at the discretion of the Public Works Agency Certified Engineering Geologist, to be evaluated for earthquake fault rupture hazards.
2. No habitable structures shall be located across or on any active fault zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act. Furthermore, no habitable structures shall be located within 50 feet of the mapped trace of an active fault unless an appropriate geologic investigation and report demonstrates that the site is not subject to a fault rupture hazard.
3. All development projects involving construction within Earthquake Fault Hazard Zones, shall be reviewed by the Public Works Agency Certified Engineering Geologist in accordance with the requirements of the Alquist-Priolo Earthquake Fault Zoning Act and the policies and criteria established by the State pursuant to said Act.
4. Land in Earthquake Fault Hazard Zones and potentially active fault areas should, where feasible, be designated Open Space or Agriculture on the General Land Use Maps.

5. Roads, streets, highways, utility conduits, and oil and gas pipelines, shall be planned to avoid crossing active faults where feasible. When such location is unavoidable, the design shall include measures to reduce the effects of any fault movement as much as possible.
6. No new essential facilities, special occupancy structures, or hazardous materials storage facilities shall be located within active fault zones unless it can be adequately demonstrated that the facilities are not subject to fault rupture hazard.

2.2.3 Programs

1. The Fault Rupture chapter should be updated as part of every update to the Hazards Appendix of the County General Plan.
2. The Multi-hazard Functional Plan - Major Earthquake Contingency section will be reviewed and revised annually by the County Sheriff's Office of Emergency Services. The Office of Emergency Services will continue to provide public information programs and pamphlet information on earthquake preparedness.
3. The Building and Safety Division, with the support of the General Services Agency-Facilities & Materials Division and CEO-Risk Management, Health, Safety & Loss Prevention (HSLP) will implement the requirements of the Essential Services Buildings Seismic Safety Act of 1986.

2.3 Ground Shaking

The goal, policy and programs that apply to ground shaking are as follows:

2.3.1 Goal

Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from ground shaking.

2.3.2 Policy

All structures designed for human occupancy shall incorporate engineering measures to mitigate against risk of collapse from ground shaking.

2.4 Liquefaction

The goal, policy, and programs that apply to liquefaction are as follows:

2.4.1 Goal

Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from liquefaction.

2.4.2 Policy

Prior to issuance of building or grading permits for essential facilities, special occupancy structures, two-story single family residences, or hazardous materials storage facilities located within areas prone to liquefaction, a geotechnical report that includes a seismic analysis and evaluation of liquefaction in accordance with the State of California Guidelines shall be prepared in order to assess the liquefaction potential and provide recommendations for mitigation.

2.4.3 Programs

1. The Liquefaction chapter should be updated as part of all updates to the Hazards Appendix of the County General Plan.
2. The Building and Safety Division will implement the requirements of the California Building Code to reduce the effects of liquefaction on habitable structures.

2.5 Seiche

The goal, policies and programs that apply to seiche hazards are as follows:

2.5.1 Goal

Minimize the risk of loss of life, injury, collapse of habitable structures and economic and social dislocations resulting from a seiche.

2.5.2 Policies

1. The Seiche Hazard Area shall be considered during the preparation of regional and area plans and special studies, and used to guide future investigations of the hazard.
2. The seiche hazard shall be taken into account in the design of all development within a Seiche Hazard Area.

2.5.3 Programs

1. The County Sheriff's Department Office of Emergency Services will annually review and revise the Multi-hazard Functional Plan's Tsunami/Seiche Contingency section.
2. The Building and Safety Division will implement the requirements of the California Building Code to reduce the effects of seiche hazard on habitable structures.

2.6 Tsunami

The goal, policy and program that apply to tsunami hazards are as follows:

2.6.1 Goal

Minimize the risk of loss of life, injury, and collapse of habitable structures, and economic and social dislocations resulting from a tsunami.

2.6.2 Policy

Essential facilities, special occupancy structures and hazardous materials storage facilities should not be located in tsunami hazard areas.

2.6.3 Program

The County Sheriff's Department Office of Emergency Services will annually review and revise the County Multi-hazard Functional Plan's Tsunami/Seiche Contingency section.

2.7 Landslides/Mudslides

The goal, policies and programs that apply to landslides/mudslides are as follows:

2.7.1 Goal

Minimize the risk of life, injury, collapse of habitable structures, and economic and social dislocations resulting from landslides/mudslides.

2.7.2 Policies

1. Development in mapped landslide/mudslide hazard areas shall not be permitted unless adequate geotechnical engineering investigations are performed, and appropriate and sufficient safeguards are incorporated into the project design.
2. In landslide/mudslide hazard areas, there shall be no alteration of the land which is likely to increase the hazard, including concentration of water through drainage, irrigation or septic systems, removal of vegetative cover, and no undercutting of the bases of slopes or other improper grading methods.
3. Drainage plans that direct runoff and drainage away from slopes shall be required for construction in hillside areas.

2.7.3 Programs

1. The Landslides/Mudslides chapter should be updated as part of every update to the Hazards Appendix of the County General Plan.
2. The Public Works Agency will continue to enforce Chapter 70 (Excavation and Grading) of the California Building Code to ensure that areas of mapped landslides/mudslides or hillside areas are adequately investigated. Proposed development must incorporate appropriate design provisions to prevent landsliding and demonstrate that an adequate factor of safety against landsliding exists or will exist upon completion of the proposed development.
3. The Public Works Agency will enforce the requirements of the State of California Seismic Hazards Act and for all sites within potential earthquake induced landslide areas as mapped by the State Geologist. Project proponents for these sites must submit a geotechnical report that addresses the potential for earthquake induced landslides or rock falls to the Public Works Agency for review prior to obtaining a grading or building permit.

2.8 Expansive Soils

The goal and policies that apply to expansive soils are as follows:

2.8.1 Goal

Minimize the risk of damage to structures from the effects of expansive soils.

2.8.2 Policies

1. Construction must conform to established standards of the Ventura County Building Code, adopted from the California Building Code.

2. A geotechnical report, prepared by a registered civil engineer and based upon adequate soil testing of the materials to be encountered at the sub-grade elevation, shall be submitted to the County Surveyor, Environmental Health Division, and Building and Safety for every applicable subdivision and Building Permit application (as required by the California Building Code).
3. No habitable structures or individual sewage disposal systems shall be placed on or in expansive soils unless suitable mitigation measures to prevent the adverse effect of these conditions are incorporated into the project.

2.9 Subsidence

The goal, policies and programs that apply to subsidence are as follows:

2.9.1 Goal

Minimize the risk of damage to structures, transportation corridors, and infrastructure from the effects of subsidence.

2.9.2 Policies

2. Structural design of buildings and other structures shall recognize the potential for hydrocompaction subsidence and provide mitigation recommendations for structures that may be affected.
3. No structure which is needed for public safety or emergency services shall be located where an interruption in service could result from structural failure due to subsidence. If such location in an area subject to potential subsidence is unavoidable, the structure shall be designed to mitigate the hazard.

2.9.3 Programs

1. The Subsidence chapter should be updated as part of all updates to the Hazards Appendix of the County General Plan.
2. The Building and Safety Division will implement the requirements of the California Building Code to reduce the effects of subsidence on habitable structures as required by the California Building Code.

City of Oxnard

Conformance with the City's Grading and Building Codes are considered generally satisfactory (by the City) to address geologic hazards and development grading activities. The City of Oxnard General Plan Safety Element recommends an adequate site-specific investigation be performed where the possibility of soil or geologic problems exist. Additionally, the Safety Element includes the following goals and policies regarding geologic hazards.

Development Policies

A. Goals

Maintenance and enhancement of a safe community.

B. Objectives

1. Manage urban development to protect areas subject to geologic hazards.
2. Minimize beach erosion.
3. Minimize damage to public and private property from flooding.
4. Provide for the safe use and transportation of hazardous materials and wastes.

C. Policies

Geologic Hazards

1. The City should adopt updated versions of the Uniform Building Code and require all new private and public construction to conform to its earthquake resistant design provisions.
2. The City shall require that adequate soils, geologic and structural evaluation reports be prepared by registered soils engineers, engineering geologists, and/or structural engineers, as appropriate, for all new development.
3. The City should require that geological reports, building plans and the appropriate sections of environmental impact reports be reviewed by registered engineering geologists and/or structural engineers.
4. The City should evaluate disaster plans and potential effectiveness in light of various earthquake intensities.
5. With applications for permits and approvals, the City should require the submission of a geological report or a request for a waiver of such a report if the proposed development is located in a potential liquefaction area and the development proposal is one of the following:
   a. Any subdivision of land subject to the Subdivision Map Act for which the eventual construction of a structure for human occupancy is contemplated; or
   b. Structures for human occupancy, except single-family dwellings and mobile homes, to be built or placed on lots previously approved through the building permit process.
6. Structures for human occupancy may only be constructed or placed on the site if the approved geological report shows that no undue hazard would be created. Mitigation measures may be required for human occupancy structures, based on the recommendation in the geological report.

   Waiver of the liquefaction report is allowed in certain situations where it can be shown as follows: (1) that groundwater or geologic conditions do not constitute a liquefaction hazard; or (2) that the proposed project is a land division; or (3) that satisfactory mitigation of the potential hazard is possible, as submitted by a qualified engineer or geologist. 6. All proposed development shall be required to complete a site-specific soils investigation, which addresses at a minimum liquefaction and compressible soil characteristics on-site. A report shall be submitted to the City detailing the findings of this soil investigation, and the report shall identify any necessary construction techniques or other mitigation measures to prevent significant liquefaction/ compressible soils impacts upon the proposed development. All recommendations of said report shall be incorporated into the development as conditions of approval.
7. The City shall avoid, to the maximum extent feasible, increases in the level of groundwater extraction as a method for meeting new water demands. If feasible, the City shall reduce the level of current groundwater extraction to minimize existing subsidence trends.

8. The City should locate all facilities necessary to carry out post-disaster emergency services in areas of low geologic hazard risk.
9. All existing and future abandoned oil wells shall be required to be capped and secured according to the California Division of Oil and Gas Standards.

City of Port Hueneme

The City of Port Hueneme General Plan, Public Safety and Facilities Element contains the following goals and policies regarding geologic hazards.

GOAL 2: Mitigate the Potential for loss of life, injuries, damage to property, and economic and social displacement resulting from future earthquakes or other geologic hazards by the avoidance, elimination, or reduction of risk to an acceptable level.

Policy 2-1: Improve interjurisdictional cooperation and communication to improve disaster response and emergency preparedness.

Policy 2-2: Incorporate guidelines and recommendations resulting from the implementation of AR 3897, Seismic Hazards Mapping Act, as they become available into the Seismic Safety Element, Zoning Ordinance, and other City policy documents, codes, and guidelines.

Policy 2-3: Promote the public's education of earthquake and associated hazards through City newsletters, school programs, neighborhood groups, and other methods as appropriate.

Policy 2-4: Maintain, revise (when necessary) and enforce appropriate standards and codes to reduce or avoid all levels of seismic or geologic risk.

California Coastal Act

Section 30253 of the California requires new development to do all of the following to minimize adverse impacts:

a. Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
b. Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

4.7.3 Significance Thresholds

Significant thresholds are addressed according to the thresholds set forth by the County of Ventura Initial Study Assessment Guidelines (2011), County of Ventura Administrative Supplement to the State *CEQA Guidelines*, County of Ventura General Plan, and the state *CEQA Guidelines*.

Fault Rupture Hazard

According to the Ventura County Initial Study Assessment Guidelines (2011), a project is potentially at risk with respect to fault rupture if it is located within any of the following areas: (1) A State of California designated Alquist-Priolo Special Fault Study Zone; and (2) A County of Ventura designated Fault Hazard Area.

Ground Shaking

1. Is the proposed structure designed to be built in accordance with all applicable requirements of the Ventura County Building Code? If the answer is no, then the project has the potential to expose people or other structures to potential significant adverse effects, including the risk of loss, injury or death involving ground shaking hazards. If the answer is yes, then the project design will reduce the adverse effects of ground shaking to less than significant.
2. The hazards from ground shaking will affect each project individually; and no cumulative ground shaking hazard would occur as a result of other approved, proposed or probable projects.

Liquefaction

1. The State of California, based on the Quaternary Geology of Ventura County, water well records for material type and density, and highest groundwater elevations, has produced the Seismic Hazards Zone Maps including potential for liquefaction. The State of California Seismic Hazard Zones Maps are utilized for all determinations for liquefaction potential. A proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving liquefaction if it is located within a Seismic Hazards Zone.

2. The hazards from liquefaction will affect each project individually; and no cumulative liquefaction hazard would occur as a result of other approved, proposed or probable projects.

Expansive Soils Hazards

1. According to the Ventura County Initial Study Assessment Guidelines, the determination of a significant soils expansion effect shall be based on an inquiry of whether a proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving soil expansion if it is located within a soils expansive hazard zone or where soils with an expansion index greater than 20 are present.

2. Expansive soils hazards will affect each project individually; and no cumulative expansive soils hazard would occur as a result of other approved, proposed or probable projects.

Landslide/Mudflow Hazard

1. According to the Ventura County Initial Study Assessment Guidelines, the threshold for landslide/mudflow hazard is determined by the Public Works Agency Certified Engineering Geologist based on the location of the site or project within or outside of mapped landslides, potential earthquake induced landslide zones, and geomorphology of hillside terrain.

2. Landslide/mudslide hazards will affect each project individually; and no cumulative landslide/mudslide hazard would occur as a result of other approved, proposed or probable projects.

Seiche Hazard

1. According to the Ventura County Initial Study Assessment Guidelines, areas subject to seiche hazards are those located within 10 to 20 feet of vertical elevation from an enclosed body of water such as a lake or reservoir. The height of hazard above the water level is dependent on the ground motion intensity, duration of shaking, and subsurface topography of the lake or reservoir

and surface topography of the shoreline. There are no enclosed lakes or reservoirs within 10 feet vertical elevation from the project study area.

2. Seiche hazards will affect each project individually; and no cumulative seiche hazard would occur as a result of other approved, proposed or probable projects.

Tsunami Hazard

1. According to the Ventura County Initial Study Assessment Guidelines, threshold criteria for tsunami hazard is whether the project is located in a mapped area of tsunami hazard, as shown on the County General Plan maps. For most portions of the north and south coastal areas, the tsunami hazard does not extend to areas more than 30 feet above sea level. For areas along the coastal plain, the tsunami hazard extends inland for approximately one mile.
2. Tsunami hazards will affect each project individually; and no cumulative tsunami hazard would occur as a result of other approved, proposed or probable projects.

Subsidence Hazard

1. According to the Ventura County Initial Study Assessment Guidelines, the determination of a significant subsidence effect shall be based on an inquiry of whether a proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving subsidence if it is located within a subsidence hazard zone.
2. Subsidence hazards will affect each project individually; and no cumulative subsidence hazard would occur as a result of other approved, proposed or probable projects.

As defined in Appendix G of the *California Environmental Quality Act* (*CEQA) Guidelines*, impacts related to geology and soils are considered significant if the project would:

- Expose people or structures to potential substantive adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault,
    - Strong seismic ground shaking;
    - Seismic related ground failure, including liquefaction;
    - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative water disposal system where sewers are not available for the disposal of waste water.

4.7.4 Project Impacts

Fault Rupture Hazard

Construction

No active faults are located on the proposed project site, nor is the project site located within an Alquist-Priolo Earthquake Fault Zone or Ventura County designated Fault Hazard Area. The fault nearest to the J Street Drain is the Oak Ridge Fault, located approximately one mile north of the site. The fault rupture potential is considered to be low. Thus, construction of the proposed project would not result in exposure of people or structures to substantial adverse effects related to fault rupture. A less than significant impact is identified.

Operations

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur generally as they do under existing conditions. Therefore, no new actions are associated with operation and maintenance of the proposed project. No impact associated with fault rupture hazard is identified.

Beach Elevation Management Plan

Implementation of the Beach Elevation Management Plan (BEMP) is not anticipated to result in a significant impact associated with fault rupture hazard because no active faults are located on the proposed project site, nor is the project site located within an Alquist-Priolo Earthquake Fault Zone or Ventura County Fault Hazard Area. The fault nearest to the BEMP access route is the Oak Ridge Fault, located approximately one mile north of the route. The fault rupture potential of the Oak Ridge Fault is considered to be low. Therefore, impacts associated with the BEMP would be less than significant.

Ground Shaking Hazard

Construction

The project area is subject to moderate ground shaking (Ventura County General Plan Hazards Appendix, May 8, 2007). According to the Ventura County *Initial Study Assessment Guidelines*, ground shaking hazards throughout Ventura County are accommodated by the Ventura County Building Code. The effects of ground shaking hazard are required to be considered within the existing framework of grading and building code ordinances which apply to all sites and projects. Although it would not comply with the Ventura County Building Code, the project would be designed and constructed according to the *Ventura County Flood Control District Design Manual*, which is more relevant to the J Street Drain. The Ventura County Building Code applies specifically to industrial and residential buildings, neither of which would be constructed as part of the proposed project. Therefore, the project is not anticipated to expose people or structures to substantive adverse effects related to ground shaking. Because the J Street Drain would comply with the *Design Manual*, which takes the place of the Building Code in the case of flood control facilities, a less than significant impact is identified.

Operations

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. The proposed project does not include any above-ground structures. Additionally,

maintenance activities would occur generally as they do under existing conditions. Therefore, no new actions are associated with operation and maintenance of the proposed project. No impact associated with ground shaking hazard is identified.

Beach Elevation Management Plan

Implementation of the BEMP is not anticipated to result in a significant impact associated with ground shaking hazard because the BEMP access route is not located on an active fault or within an Alquist-Priolo Earthquake Fault Zone. Ground shaking is considered an existing and perpetual hazard in Southern California and implementation of the BEMP would not affect this condition. Implementation of the BEMP would not construct any structures nor would it expose emergency personnel to increased risks involving ground shaking since no structures are located along the BEMP access route. Therefore, impacts would be less than significant.

Liquefaction

Construction

A Geotechnical Study was prepared for the proposed project by Fugro West, Inc. According to the *Geotechnical Study J Street Drainage Improvements* (January 2009), a subsurface exploration program was utilized to obtain geotechnical data for use in developing recommendations for the proposed project. Eleven Cone Penetrometer Test (CPT) soundings were advanced to depths ranging from approximately 33 feet to 50 feet below the ground surface (bgs). Details of the subsurface exploration are presented in Appendix F of the EIR.

Groundwater was observed in all of the borings at depths ranging from about 4.5 feet to 11 feet bgs. Groundwater levels published by the California Geologic Society (2002) indicate historic groundwater levels within five feet bgs.

Soil liquefaction occurs as a result of a loss of shear strength or shearing resistance in loose, saturated soils subjected to earthquake-induced ground shaking. Typically, soil liquefaction occurs within the upper 50 feet of the soil profile and can be manifested at the ground surface by the formation of sand boils, ground surface settlement, lateral spreading, and/or ground oscillation. Like most of Oxnard and Port Hueneme, the J Street Drain is located within a liquefaction hazard zone as mapped by CDMG (2002). Granular subsurface soils and high groundwater suggest liquefaction settlement could occur along the alignment. The magnitude of liquefaction-induced settlement along the channel alignment was estimated using the CPT-Analyst software program at each of the 11 CPT soundings performed for this project. A design groundwater level of five feet bgs along J Street was used at all locations. The design earthquake input parameter was the site PGA, which is described in the discussion regarding ground shaking in Section 4.7-1 above. The range of estimated liquefaction settlements at each CPT location is between two and eight inches with settlement increasing as CPT locations move toward the ocean.

While the proposed project does not include structures that would expose people to liquefaction hazards, the range of estimated liquefaction settlements has the potential to substantially damage the proposed drain during the design earthquake. However, the drain would have reinforced walls and a reinforced concrete floor approximately eight inches thick. Additionally, the design and construction of the drain would comply with the *Ventura County Flood Control District Design Manual*. Therefore, the drain would be designed to withstand potential damage associated with liquefaction. A less than significant impact is identified.

Operations

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur generally as they do under existing conditions. Therefore, no new actions are associated with operation and maintenance of the proposed project. No impact associated with liquefaction is identified.

Beach Elevation Management Plan

Implementation of the BEMP is not anticipated to result in a significant impact associated with liquefaction because the BEMP would not construct any structures within a liquefaction prone area. Additionally, the primary action associated with implementation of the BEMP is grooming the sand berm at Ormond Beach Lagoon to a specified height at a pre-specified location immediately prior to a predicted storm event. Activities associated with periodic grooming of the sand berm would not be affected by liquefaction since these activities could occur without consideration of liquefaction settlement. Therefore, implementation of the BEMP would not expose people or structures to adverse effects related to liquefaction. Therefore, impacts would be less than significant.

Subsidence Hazard

Construction

Land subsidence is typically caused by groundwater extraction, oil field production, or tectonic processes. According to Figure IX-1, Seismic/Geologic Hazards, in the City of Oxnard 2020 General Plan, the project area is located within the zone of probable land subsidence of 0.05 feet per year. The construction of the proposed drain would require the installation of dewatering wells, dewatering, and discharge of groundwater into surface water. Dewatering is necessary to create a relatively dry work area for excavation and construction activities. Due to the temporary nature of construction dewatering, as well as the relatively small size of the project area and relatively small amount of groundwater extraction required (when compared to the rate of extraction of the Oxnard aquifer (see Section 4.3 Water)), the existing rate of subsidence is not anticipated to increase as a result of the proposed project. Also, although located within a subsidence zone, the project would not create new habitable structures that would expose people to risk of loss, injury, or death. Therefore, impacts related to subsidence would be less than significant.

Operations

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur generally as they do under existing conditions. Therefore, no new actions are associated with operation and maintenance of the proposed project. No impact associated with subsidence hazard is identified.

Beach Elevation Management Plan

Implementation of the BEMP would not require groundwater extraction nor would it construct any structures within an area prone to subsidence. Therefore, implementation of the BEMP would not affect the existing subsidence rate. No impact would result.

Expansive Soils Hazards

Construction

According to the Ventura County *Initial Study Assessment Guidelines*, the determination of a significant soils expansion effect shall be based on an inquiry of whether a proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving soil expansion if it is located within a soils expansive hazard zone or where soils with an expansion index greater than 20 are present. Soils with moderate shrink-swell (expansive) potential have been identified in the project area by USDA Soil Maps for Ventura County. Soils with expansion potential contain clay minerals. Native soils observed in the borings and encountered in the CPTs at the ground surface or below the artificial fill consisted of predominately coarse-grained alluvial deposits with interbedded fine-grained deposits of variable thickness and consistency. The coarse-grained deposits consisted of loose to medium dense sands, silty sands and clayey sands. The fine- grained material consisted of soft to stiff silts and clays. According to the *Geotechnical Study J Street Drainage Improvements* (2009), expansive clays were observed in three locations along the J Street Drain alignment: one along J Street between Yucca Street and Bard Road, one near the intersection of J Street and Clara Street, and a third at the proposed beach outlet. These clays exhibited relatively high plasticity indices (above 27) which can be used as an indicator of expansive soils. Therefore, a potentially significant impact is identified and mitigation is required.

Operations

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur generally as they do under existing conditions. Therefore, no new actions are associated with operation and maintenance of the proposed project. No impact associated with expansive soils hazard is identified.

Beach Elevation Management Plan

Implementation of the BEMP is not anticipated to result in a significant impact associated with expansive soils hazard because no structures would be constructed under the BEMP. Additionally, the primary action associated with implementation of the BEMP is grooming the sand berm at Ormond Beach Lagoon to a specified height at a pre-specified location immediately prior to a predicted storm event. Activities associated with grooming the sand berm would not be affected by the expansion potential of sand. Therefore, implementation of the BEMP would not expose people or structures to adverse effects related to expansive soils. Therefore, impacts would be less than significant.

Landslide/Mudflow Hazard

Construction

The J Street Drain project site is not anticipated to be prone to landslides or mudflow as the site is relatively flat. No impact is identified for this issue area.

Operations

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur generally as they do under

existing conditions. Therefore, no new actions are associated with operation and maintenance of the proposed project. No impact associated with landslide/mudflow is identified.

Beach Elevation Management Plan

Implementation of the BEMP is not anticipated to result in a significant impact associated with landslide/mudflow because the BEMP access route and sand berm location are relatively flat. Therefore, no impacts would result.

Seiche Hazard

Construction

According to the Ventura County *Initial Study Assessment Guidelines*, areas subject to seiche hazards are those located within 10 to 20 feet of vertical elevation from an enclosed body of water such as a lake or reservoir. The height of hazard above the water level is dependent on the ground motion intensity, duration of shaking, and subsurface topography of the lake or reservoir and surface topography of the shoreline. There are no enclosed lakes or reservoirs within 10 feet vertical elevation from the project study area. Therefore, no impact is associated with seiche.

Operation

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur generally as they do under existing conditions. Therefore, no new actions are associated with operation and maintenance of the proposed project. No impact associated with seiche is identified.

Beach Elevation Management Plan

Implementation of the BEMP would not result in a significant impact related to seiche because no lakes or reservoirs are located near the BEMP access route or approximate grooming location. No impact is identified.

Tsunami Hazard

Construction

According to Figure IX-3, Flooding and Tsunami/Seiche Potential, of the City of Oxnard General Plan Safety Element, the proposed project is located in an area subject to tsunami (1984). However, in 2006 the Ventura County Sheriff's Office of Emergency Services prepared the Ventura County Operational Area Tsunami Evacuation Plan with input from the cities of Oxnard, Port Hueneme, Ventura, and other agencies and jurisdictions. If risk of a tsunami hazard within the project area is identified, the proposed project would comply with the stipulations of the Ventura County Operational Area Tsunami Evacuation Plan. By complying with this plan, impacts associated with tsunami would be less than significant.

Operation

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur generally as they do under existing conditions. Therefore, no new actions are associated with operation and maintenance of the proposed project. No impact associated with tsunami is identified.

Beach Elevation Management Plan

Implementation of the BEMP is not anticipated to expose people or structures to a tsunami hazard. If a tsunami warning is issued, the BEMP would not be implemented since beach areas would be evacuated (Ventura County Sheriff's Office of Emergency Services 2006). By complying with the stipulations of the Ventura County Operational Area Tsunami Evacuation Plan, a less than significant impact related to tsunami would occur.

Substantial Soil Erosion or the Loss of Topsoil

Construction

Construction of the proposed project would require excavation of the existing drain which would result in disturbance of soils and subsequent exposure to wind and water erosion. The proposed development would require groundwater dewatering, demolition of existing concrete lining, removal and stockpiling of soils onsite, and the construction of the new, higher capacity drain. Prior to the replacement of concrete lining within the drain, project excavation would expose soil to erosion by wind or water. Additionally, construction of the proposed drain may result in erosion or sedimentation related to exposed soils and sediment removal and dewatering discharges may cause erosion at the discharge point.

Earth-disturbing activities associated with construction would be temporary and would not result in a permanent or significant alteration of significant natural topographic features that could exacerbate erosion. Specific erosion impacts would depend largely on the areas affected and the length of time soils are subject to conditions that would be affected by erosion processes. Although the potential for erosion would be limited, exposure of soil to wind and water during construction would still occur. During construction, erosion potential would be minimized by following the recommendations regarding erosion potential outlined in the *Geotechnical Study J Street Drainage Improvements* (2009). However, these recommendations would not fully avoid potential impacts associated with erosion. Therefore, impacts associated with short-term exposure of graded soils and sedimentation are considered significant and require mitigation.

Operations

The operation of the project will not result in soil erosion or the loss of topsoil because the project would be completely covered in concrete. Therefore, no impact is anticipated.

Beach Elevation Management Plan

The primary action associated with implementation of the BEMP is grooming the sand berm at Ormond Beach Lagoon to a specified height at a pre-specified location immediately prior to a predicted storm event. Grooming of the sand berm is not anticipated to result in sand erosion, as the sand will be smoothly redistributed on Ormond Beach, not removed. Therefore, implementation of the BEMP would not result in substantial soil erosion or loss of topsoil. Impacts would be less than significant.

Have soils incapable of adequately supporting the use of septic tanks or alternative water disposal system where sewers are not available for the disposal of waste water?

The proposed J Street Drain project does not propose the use of septic tanks or alternative waste disposal methods. No impact is identified.

4.7.5 Cumulative Impacts

Fault Rupture Hazard

Construction

Construction of the proposed project would not result in a project-level significant impact associated with fault rupture because it is not located within an Alquist-Priolo Earthquake Fault Zone or Ventura County designated Fault Hazard Area. The nearest fault is located approximately one mile away. Therefore, construction of the proposed project would not contribute to a cumulative impact related to exposure of people or structures to fault rupture hazard. A less than significant cumulative impact is identified.

Operations

Operation of the proposed project would not result in a project-level impact associated with fault rupture hazard and, therefore, would not contribute to any cumulative impact. Cumulative impacts would not occur.

Beach Elevation Management Plan

Implementation of the BEMP would require temporary activities associated with periodic grooming of the sand berm at Ormond Beach Lagoon. Implementation of the BEMP would not place people or structures on an active fault or within an Alquist-Priolo Earthquake Fault Zone or Ventura County designated Fault Hazard Area. Therefore, the BEMP would not substantially contribute to a significant cumulative impact related to exposure of people or structures to fault rupture. A less than significant cumulative impact is identified.

Ground Shaking Hazard

Construction, Operations, and Beach Elevation Management Plan

The Ventura County Initial Study Assessment Guidelines state that hazards from ground shaking will affect each project individually, and no cumulative ground shaking hazard would occur as a result of other approved, proposed, or probable projects. Therefore, the project will not cause a cumulative ground shaking impact during construction, operation, or implementation of the BEMP.

Liquefaction

Construction, Operations, and Beach Elevation Management Plan

The Ventura County Initial Study Assessment Guidelines state that hazards from liquefaction will affect each project individually, and no cumulative liquefaction hazard would occur as a result of other approved, proposed, or probable projects. Therefore, the project will not cause a cumulative liquefaction impact during construction, operation, or implementation of the BEMP.

Subsidence Hazard

Construction, Operations, and Beach Elevation Management Plan

The Ventura County Initial Study Assessment Guidelines state that hazards from subsidence will affect each project individually, and no cumulative subsidence hazard would occur as a result of other approved, proposed, or probable projects. Therefore, the project will not cause a cumulative subsidence impact during construction, operation, or implementation of the BEMP.

Expansive Soils Hazards

Construction, Operations, and Beach Elevation Management Plan

The Ventura County Initial Study Assessment Guidelines state that hazards from expansive soils will affect each project individually, and no cumulative expansive soils hazard would occur as a result of other approved, proposed, or probable projects. Therefore, the project will not cause a cumulative expansive soils impact during construction, operation, or implementation of the BEMP.

Landslide/Mudflow Hazard

Construction, Operations, and Beach Elevation Management Plan

The Ventura County Initial Study Assessment Guidelines state that hazards from landslides/mudflows will affect each project individually, and no cumulative landslide/mudflow hazard would occur as a result of other approved, proposed, or probable projects. Therefore, the project will not cause a cumulative landslide/mudflow impact during construction, operation, or implementation of the BEMP.

Seiche Hazard

Construction, Operations, and Beach Elevation Management Plan

The Ventura County Initial Study Assessment Guidelines state that seiche hazards will affect each project individually, and no cumulative seiche hazard would occur as a result of other approved, proposed, or probable projects. Therefore, the project will not cause a cumulative seiche impact during construction, operation, or implementation of the BEMP.

Tsunami Hazard

Construction, Operations, and Beach Elevation Management Plan

The Ventura County Initial Study Assessment Guidelines state that tsunami hazards will affect each project individually, and no cumulative tsunami hazard would occur as a result of other approved, proposed, or probable projects. Therefore, the project will not cause a cumulative tsunami impact during construction, operation, or implementation of the BEMP.

Substantial Soil Erosion or Loss of Topsoil

Construction

Earth-disturbing activities associated with construction would be temporary and would not result in a permanent or significant alteration of significant natural topographic features that could increase or exacerbate erosion. In addition, cumulative projects in the vicinity of the J Street Drain would not be constructed concurrently with the proposed project. Therefore, construction of the proposed project would not substantially contribute to a cumulative impact related to soil erosion or loss of topsoil. Cumulative impacts would be less than significant.

Operations

Operation of the proposed project would occur in accordance with Best Management Practices (BMPs) listed in the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program (see Section 4.7.6.1). Therefore, operations would not result in a project-level impact associated with soil erosion or the loss of topsoil and, therefore, would not contribute to any cumulative impact. Cumulative impacts would not occur.

Beach Elevation Management Plan

Implementation of the BEMP would not result in substantial soil erosion or loss of topsoil since the periodic grooming activities would smoothly redistribute the sand on Ormond Beach, not remove it. Implementation of the BEMP would not substantially contribute to a cumulative impact related to soil erosion or loss of topsoil. Cumulative impacts would be less than significant.

Have soils incapable of adequately supporting the use of septic tanks or alternative water disposal system where sewers are not available for the disposal of waste water?

The proposed J Street Drain project does not propose the use of septic tanks or alternative waste disposal methods. No cumulative impact is identified.

4.7.6 Mitigation Measures

As discussed in Section 4.3, Water Resources and Hydraulic Hazards, prior to the start of construction, a construction Stormwater Pollution Prevention Plan (SWPPP) will be prepared that describes the site, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-stormwater management controls.

GEO-1 Erosion and Sediment Control

In order to mitigate potential soil erosion and loss of topsoil from excavation, the construction SWPPP shall incorporate, but not be limited to, the following measures, as appropriate, to minimize erosion:

- Excavation and grading shall be restricted to the dry season (April 15 to October 15) unless an erosion control plan is in place and all measures therein are in effect.

- Best Management Practices (BMPs) will be employed to control erosion, including temporary siltation protection devices such as silt fencing, straw bales, and sand bags. These shall be placed at the base of all cut and fill slopes and soil stockpile areas where potential erosion may occur.
- Refer to Section 4.3, Water Resources and Hydraulic Hazards, for additional requirements related to stormwater and non-stormwater pollution prevention and control.

GEO-2 Seismic Related Ground Failure and Expansive Soils

The proposed project shall comply with all pertinent recommendations set forth in the Preliminary Geologic Geotechnical Investigation (Appendix F) to reduce the risk of hazards associated with seismic-related ground failure and expansive soils along the J Street Drain. These recommendations address the following:

- Site preparation
- Excavation – stabilization measures, dewatering procedure, and shoring
- Fill Material and General Fill Placement
- Channel Foundation Design

GEO-3

a) A Licensed Surveyor shall plan and install a survey monument monitoring system on buildings within 25 feet of proposed vertical shoring to collect monthly baseline data for six months before construction. The monuments shall remain in place and be monitored monthly for one year after construction completion to track any latent changes. During construction, the Licensed Surveyor shall conduct surveys corresponding to major phases of work such as shoring installation, excavation, and backfill.

b) Before Phase 1 construction may begin, the District shall require the Contractor to prepare a Work Plan, which would take into account all available geotechnical information for the areas where vertical shoring and sheet piles are to be installed. The Plan would specify the contractor's approach to installing vertical shoring and sheet piles in a manner that would avoid and minimize associated potential vibration damage to adjacent structures.

c) The Work Plan shall require the Contractor to take daily measurements of the survey monuments on adjacent structures described in (a) above to track potential changes during construction.

d) Should the surveys or measurements described in (a) and (c) above indicate subsidence or other damage due to construction activities, the Contractor shall modify the Work Plan to address the causes. Property owners within 25 feet of the proposed shoring shall be promptly notified of observed damage, and any Work Plan revisions shall be available to property owners upon request. For multi-unit structures, the District shall identify a single designated representative with whom to communicate.

e) The District shall provide a construction contact telephone number to adjacent residents before work commences so that they may report possible observations of damage immediately to the District.

4.7.6.1 Ventura County Watershed Protection District Best Management Practices

The Ventura County Board of Supervisors adopted the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project No. 80030 in May 2008. The final document includes BMPs that have been added to the District's Maintenance Activity Guidelines. The Operation and Maintenance Division staff will be responsible for ensuring the proper implementation of the BMPs on a routine, year-round basis. The Division staff will also be responsible for ensuring compliance with all permit conditions, conducting or employing qualified personnel for any required pre-project site surveys or inspections, updating the Activity Guidelines sheets, instructing crews on BMPs, overseeing certain BMP implementation, documenting the implementation of the BMPs, and conducting any agency coordination.

The following BMPs will be implemented to minimize impacts during operation:

- Avoid Channel Work During the Rainy Season. Routine maintenance and repair activities in earthen channels and in channels with soft bottoms and bank protection shall not occur during the rainy season, 1 December to 1 April, to avoid work when water could be present in the drainage due to runoff. Routine maintenance and repair activities may occur during this period if water is absent from the drainage because of low runoff conditions, or activities can be performed without working in flowing water. Work in flowing water during this period may proceed if there are no feasible alternatives and completion of the maintenance work during this time period is critical. Work in flowing water shall be conducted according to the BMPs established in the Water Diversion Guide attached as Appendix E to this EIR.
- Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from 1 December to 1 April. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.
- Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.
- Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel or basin. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.

4.7.7 Significance After Mitigation

With incorporation of the identified mitigation measures, impacts will be less than significant.

4.7.8 Response to Notice of Preparation Comments

During the Notice of Preparation (NOP) comment period, the County of Ventura Public Works Agency, Water Resources and Engineering Department sent a comment letter requesting that each seismic and geologic hazard identified in the Initial Study be evaluated in the EIR. In response, the *Geotechnical Study J Street Drainage Improvements* was prepared for the proposed project and is included as Appendix F of this EIR. The *Geotechnical Study J Street Drainage Improvements* was completed in accordance with Ventura County standards and CEQA Guidelines. This includes a subsurface exploration program to obtain geotechnical data and provide recommendations for project construction and channel foundation design. Per the Geotechnical Study, mitigation measure GEO-2 was proposed to mitigate project impacts associated with geology and soils.

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4.8 HAZARDOUS MATERIALS AND WASTES

This section focuses on hazardous materials and wastes that may be present in the proposed J Street Drain Project. The potential hazards are described by location and type. Additionally, the following documents were used in the preparation of this section:

EDR DataMap Corridor Study, J Street Drain Project, Oxnard, CA 93033. Prepared by Environmental Data Resources, Inc. May 2, 2008 (Appendix G of this EIR).

~~*Groundwater Modeling Summary for the J Street Drainage Improvement Project, Oxnard, California*~~ *Hydrogeology Study Summary: J Street Drainage Improvement Project, Oxnard, California*. MU Hydrogeological and Environmental Services. ~~September~~ December 2011 (Appendix K of this EIR).

Solid Matrix Sampling and Analysis Results for the Oxnard Industrial Drain and Lagoon Areas, Halaco Superfund Site Remedial Investigation, Oxnard, California. Prepared for the U.S. Environmental Protection Agency Region 9 by CH2M Hill. June 2011. (http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/BySite/Halaco?OpenDocument#progress)

4.8.1 Environmental Setting

The area immediately adjacent to the J Street Drain is residential with some commercial development near Hueneme Road and the City of Oxnard Waste Water Treatment Plant south of Hueneme Road. Prior to residential development the area was under agricultural use. As the area developed, J Street Drain was excavated from the agricultural fields to provide drainage for the local area because there was no natural channel in the area. The area is now fully developed with the previously mentioned residential, commercial, and waste water treatment development. The local topography is relatively flat and approximately 10-20 feet above mean sea level (AMSL).

4.8.1.1 Existing Conditions

Approximately 0.25 miles to the east of the southern end of the J Street Drain is a recently designated Superfund site identified as the Halaco site. The Halaco site is located at 6200 Perkins Road, Oxnard, California. The Halaco facility abuts the Ormond Beach wetlands and is in proximity to the Ormond Beach Lagoon, Ormond Beach, and the Pacific Ocean. In January 2007, the State of California issued a letter supporting the addition of the Halaco Site to the Superfund National Priorities List (NPL). This site was proposed for the Environmental Protection Agency (EPA) Region 9 NPL on March 07, 2007, and listed as final on the NPL on September 19, 2007. Currently, study and remedy selection for this Superfund site is underway. The site is an abandoned secondary metal smelter bisected by the Oxnard Industrial Drain (OID), located over 1,000 feet from the J Street Drain project site. The site includes an 11-acre parcel containing the former smelter and an adjacent 26-acre waste management area where wastes were deposited. Immediately adjacent to the site lays a portion of the Ormond Beach wetlands. Halaco Engineering Company operated in Oxnard from 1965 until 2004. During their 40 years of operation, Halaco produced a large quantity of waste. The primary wastes were metal oxides, metal salts, and other materials that were skimmed off the top of the molten metal or that settled to the bottom during the smelting process (i.e., slag or dross). From about 1965 to 1970, Halaco discharged waste to the OID, which empties into the Ormond Beach Lagoon. From about 1970 to 2002, Halaco deposited wastes into unlined earthen settling ponds east of the smelter (the waste management area). An estimated 500,000 to

700,000 cubic yards of waste remain onsite. In 2002, Halaco filed for Chapter 11 bankruptcy. In 2006, after Halaco ceased operations, the bankruptcy was converted to a Chapter 7 (liquidation) bankruptcy.

Sampling conducted by the State of California and U.S. EPA from 1970 to 2004 found contamination sources on the smelter property and the waste disposal parcel. The smelter parcel has an estimated 50,000 cubic yards of process waste, and a larger amount of waste from a municipal dump that operated on what is now the smelter parcel in the 1940s and 1950s (Personal Communication, Wayne Praskins, Project Manager, EPA Superfund Program, August 2011). A surface impoundment and waste disposal pile are located on the waste disposal parcel, which together likely contain over 500,000 cubic yards of waste. Contamination found onsite includes a combination of several metals and radionuclides significantly above background. These contaminants include aluminum, arsenic, barium, beryllium, cadmium, chromium, copper, lead, magnesium, manganese, nickel, silver, zinc, thorium-228, thorium-230, and thorium-232. The EPA did not find elevated levels of cesium-137 in testing completed in 2006. Additionally, the EPA does not generally consider potassium-40 as a contaminant since it is naturally occurring (Praskins 2011). Contaminated soils and sediments containing one or more of the same metals and radionuclides have also been found on adjacent properties, including a nature preserve, and wetlands. The EPA has not found evidence of Halaco wastes on the beach (Praskins 2011).

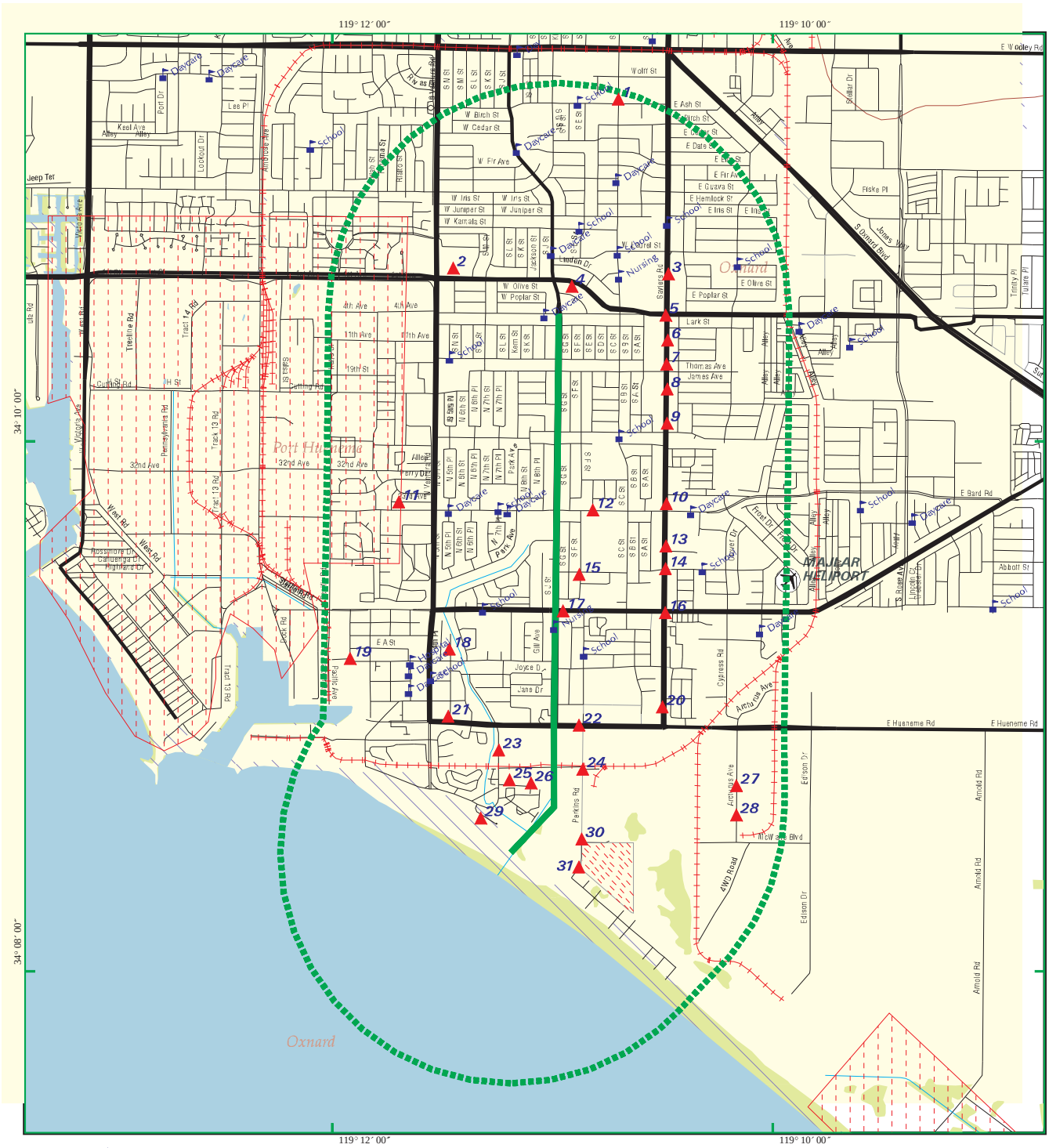
In February 2006, the State of California requested that the U.S. EPA conduct a “removal action” at the Halaco site. In July of 2006, the U.S. EPA reached an agreement with site owners to conduct a “time-critical removal action” to remove drums and other hazardous substances, fence the waste pile, and install a silt curtain and straw wattles. In February of 2007, the EPA began working to stabilize and secure the site and limit offsite migration of contaminated wastes (DTSC 2007) and in 2010, they demolished two abandoned industrial buildings that were at risk of collapse. The Halaco site is separated from the proposed project by the Oxnard Wastewater Treatment Plant and wetlands. Between 2008 and 2011, the EPA completed a screening-level ecological and human health risk assessment, prepared a preliminary evaluation of the sources, nature, extent, and movement of contamination in surface and ground water, and prepared and implemented a plan for additional sampling and analysis activities needed before site remediation can occur (EPA 2011).

Oil and Gas Facilities in the Project Vicinity

There are oil and gas extraction, processing, and treatment facilities located in and around the City of Oxnard. Potential concerns to public health and safety associated with these types of facilities are releases of hazardous materials, including flammable, explosive, and toxic materials. No active oil wells were identified within one mile of the project site.

Hazardous Materials

A Corridor Study dated May 02, 2008 was prepared by Environmental Data Resources, Inc (EDR). The report includes environmental database information, a scaled map showing the location of all identified potential sources of contamination, and information from state and federal databases for sites that may impact the project. According to the Corridor Study, the proposed project alignment does not run through any hazardous materials sites. However, as shown in Figure 4.8-1, several hazardous waste sites are in proximity to the proposed project site. A summary of these sites is included in Table 4.8-1. As shown, although hazardous material sites are located in proximity to the proposed project alignment, these sites do not pose a substantial hazard risk.



EDR® Environmental Data Resources Inc

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- 100-Yr Flood Zones
- National Wetland Inventory

N

0 1/4 1/2

Scale in Miles

Oxnard, CA

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Source: EDR; 2008 | G:\Projects\75217_J_street\graphics\docs\Hazardous_Material_Sites.ai | Last Updated : 08-17-11

Hazardous Materials Sites

FIGURE 4.8-1

HDR ONE COMPANY | *Many Solutions*℠

Table 4.8-1. Summary of Hazardous Materials Sites Near Proposed Project

Site Number	Site	Distance from J Street Drain	Summary	Associated Hazard Risk
4	Manhole	0.13 mile	Potential to impact drinking water.	Unsubstantial because site is not connected to J Street Drain.
12	Hueneme High School	0.15 mile	Generates a small quantity of hazardous wastes.	Unsubstantial because no violations were found.
15	Los Padres National Forest	0.10 mile	Underground storage tank.	Unsubstantial because no leaks were identified.
17	Chase Brothers Dairy	0.02 mile	Historical underground storage tank. Leak visually identified, but no substantial risk was identified.	Unsubstantial because leak has been cleaned up and storage tank has been replaced.
22	AMSEC	0.10 mile	Generates a small quantity of hazardous wastes. Historical leaking underground storage tanks have since undergone remediation and cases have been closed.	Unsubstantial because no violations were found, remediation has occurred, and case is closed.
24	Oxnard Wastewater Treatment Plant	0.10 mile	Historical leaking underground storage tank affected groundwater. Contaminated soil was removed and disposed of appropriately; however case was only partially closed because other contamination likely associated with the Halaco site was found.	Unsubstantial because contaminated soil was removed and Halaco site is undergoing remediation.
25	Pac Foundries	0.18 mile	Generates a small quantity of hazardous wastes.	Unsubstantial because no violations were found.
26	B & C Welding	0.10 mile	Leaking underground storage tank. Contaminated soil was removed and disposed of appropriately and case was closed in 1991.	Unsubstantial because remediation has occurred and case was closed in 1991.
29	Port Hueneme South Coast Defense Site	0.20 mile	Former work site of United States Army Corps of Engineers (USACE). Inactive since 2006.	Unsubstantial because no contamination was found and site is now inactive.
30-32	Halaco Engineering Company	0.25 mile	See above (Section 4.8.1.1).	Moderate because mitigation is required in order to prevent the potential movement of the contamination plume from migrating. See mitigation measure HAZ-1 below.

Source: Environmental Data Resources (May 2008)

Adjacency to Schools

There are five schools located within 0.25 mile of the project site. The five schools include: E.O. Green Junior High School, located approximately 0.2 mile east of the intersection of J Street and Yucca Street; Parkview Elementary School, located approximately 0.25 mile west of the intersection of J Street and Bard Street; Hueneme High School, located approximately 0.15 mile east of the intersection of J Street and Bard Street; Richard Bard Kindergarten School, located approximately 0.22 mile west of the intersection of J Street and Pleasant Valley Road; and Art Haycox Elementary School, located approximately 0.10 mile east of the intersection of J Street and Clara Street. Additionally, there is a day care center, Our Saviour's Preschool and Day Care Center, that is located approximately 0.08 mile west of the northern terminus of the proposed project.

Adjacency to Airports

The airport nearest to the project site is the Oxnard Airport, located approximately 2.18 miles northwest of the northern terminus of the proposed project. The runway is parallel to 5th Street, and runs in an east/west direction.

Emergency Plans

As identified in the City of Oxnard's General Plan Public Safety Element, the City has adopted an Emergency Plan (EP) to meet the requirements of the California Emergency Services Act of 1951 (Section 8550 et seq., Government Code). The City's EP identifies the evacuation routes, emergency facilities, and City personnel and equipment available to deal with emergency situations. While the EP is the authority for emergency actions within the City by City officials, it recognizes and supports the general concepts contained within the State of California Emergency Plan.

Wildland Fires

The project area is located within a fully developed area of the City of Oxnard, near the Pacific Ocean. The border of the City of Port Hueneme is close by, and that portion of the City is also fully developed. Because of the developed nature of this area, there are no identified plans for preventing wildland fires in this area.

4.8.2 Regulatory Setting

The term hazardous substance refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local regulatory agency or if it has characteristics defined as hazardous by such an agency.

The California Environmental Protection Agency, Department of Toxic Substances Control (Cal-EPA, DTSC) defines hazardous waste, as found in the California Health and Safety Code Section 25141(b), as follows:

> […] its quantity, concentration, or physical, chemical, or infectious characteristics: (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or

persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.

Many agencies regulate hazardous substances. The following discussion contains a summary review of regulatory controls pertaining to hazardous substances, including federal, State, and local laws and ordinances.

Federal Regulations

Federal agencies that regulate hazardous materials include the EPA, the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and the National Institute of Health (NIH). The following federal laws and guidelines govern hazardous materials:

- Federal Water Pollution Control Act
- Clean Air Act
- Occupational Safety and Health Act
- Federal Insecticide, Fungicide, and Rodenticide Act
- Comprehensive Environmental Response, Compensation, and Liability Act
- Guidelines for Carcinogens and Biohazards
- Superfund Amendments and Reauthorization Act Title III
- Resource Conservation and Recovery Act
- Safe Drinking Water Act
- Toxic Substances Control Act

Prior to August 1992, the principal agency at the federal level regulating the generation, transport and disposal of hazardous waste was the EPA under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the California Department of Toxic Substances Control (DTSC) was authorized to implement the State's hazardous waste management program for the EPA. The federal EPA continues to regulate hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

CERCLA, commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Subsection 101(40) of CERCLA defines "bona fide prospective purchaser" (BFPP) as a person, or tenant of that person, who acquires ownership of a facility after the date of enactment of the Brownfields Amendments, January 11, 2002. A BFPP may be subject to a "windfall lien" under the CERCLA Section 107(r), up to the amount of unrecovered response costs incurred by the United States at a facility for which the owner is not liable as a BFPP, and where the response action increases the fair market value of the facility. As to the amount and duration of any windfall lien, the Brownfields Amendments state that the amount is not to exceed the increase in fair market value attributable to the response action at the time of sale or other disposition of the property. The windfall lien arises at the time response costs at the facility are incurred by the United States, and shall continue until the earlier of satisfaction of the lien by sale or other means, or, notwithstanding any statute of limitations under CERCLA Section 113, recovery of all response costs incurred at the facility.

State Regulations

The Cal-EPA and the State Water Resources Control Board (SWRCB) establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable State and local laws include the following:

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL).

Assembly Bill 387 and Senate Bill 162 provide a comprehensive program to ensure that hazardous material contamination issues are adequately addressed prior to school development. The program involves the preparation of a Phase I Environmental Site Assessment to determine whether a release of a hazardous material has occurred onsite in the past or if there may be a naturally occurring hazardous material present at the site. Based on the information gathered, the Phase I should conclude that either: (1) no recognized environmental conditions were identified, or (2) a Preliminary Endangerment Assessment (PEA) is necessary.

California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR)

DOGGR is mandated by Section 3106 of the Public Resources Code to supervise the drilling, operation, maintenance, and abandonment of oil and gas wells for the purpose of preventing: (1) damage to life, health, property, and natural resources; (2) damage to underground and surface waters suitable for irrigation or domestic use; (3) loss of oil, gas, or reservoir energy; and 4) damage to oil and gas deposits by infiltrating water and other causes. DOGGR regulations are contained in CCR Title 14.

Ventura County Environmental Health

In 1997, the Ventura County Hazardous Materials Program was approved by the Cal-EPA to be a Certified Unified Program Authority (CUPA). The CUPA provides regulatory oversight for the following programs: Hazardous Waste Generator; Hazardous Waste Generator Onsite Treatment (Tiered Permit); Underground Storage Tank; Aboveground Storage Tank Spill Prevention Control and Countermeasure Plan; Hazardous Materials Release Response Plans and Inventory (Business Plans); and Risk Management Plans. In addition to conducting annual facility inspections the Hazardous Materials Program is involved with hazardous materials emergency response, investigation of the illegal disposal of hazardous waste, public complaints, and stormwater illicit discharge inspections.

Ventura County General Plan

The following General Plan goals and policies apply to the project:

Goals

1. Minimize the risk of life, injury, serious illness, damage to property, and economic and social dislocations resulting from the use, transport, treatment and disposal of hazardous materials and hazardous wastes.

2. Locate potentially hazardous facilities and operations in areas that would not expose the public to a significant risk of injury, loss of life, or property damage.

Policies

1. Hazardous wastes and hazardous materials shall be managed in such a way that waste reduction through alternative technology is the first priority, followed by recycling and on-site treatment, with disposal as the last resort.

2. Site plans for discretionary development that will generate hazardous wastes or utilize hazardous materials shall include details on hazardous waste reduction, recycling and storage.

3. Any business that handles a hazardous material shall establish a plan for emergency response to a release or threatened release of a hazardous material. The County Fire Protection District is designated as the agency responsible for implementation of this policy.

4. Applicants shall provide a statement indicating the presence of any hazardous wastes on a site, prior to development. The applicant must demonstrate that the waste site is properly closed, or will be closed before the project is inaugurated.

5. Commercial or industrial uses which generate, store, or handle hazardous waste and/or hazardous materials shall be located in compliance with the County Hazardous Waste Management Plan's siting criteria.

4.8.3 Significance Thresholds

In accordance with the Ventura County Initial Study Assessment Guidelines and *California Environmental Quality Act* (*CEQA) Guidelines*, the following thresholds are addressed in determining the significance of a project in relation to hazardous materials and wastes. The Ventura County *Initial Study Assessment Guidelines* were updated in April 2011. However, the update to the thresholds for hazardous materials and wastes does not change the project-level impact analysis provided in this EIR.

Whether the hazardous material and waste impacts of a project are significant shall be decided on a case-by-case basis and depends on:

- Individual or cumulative physical hazard of material(s) or waste;
- Amounts of materials or waste on-site, either in use or storage;

- Proximity of hazardous materials or waste to populated areas and compatibility of materials with neighboring facilities;
- Federal, state, and local laws, and ordinances, governing storage and use of hazardous materials or waste;
- Potential for spill or release; and
- Proximity of hazardous materials or waste to receiving waters or other significant environmental resource.

The storage, handling and disposal of potentially hazardous materials shall be in conformance with the requirements set forth in the following regulations:

- Underground Storage Tanks (USTs) - California Health and Safety Code, Division 20, Chapter 6.7 and California Code of Regulations (CCR) Title 23, Division 3, Chapter 16;
- Business Plan (BP) - California Health and Safety Code, Division 20, Chapter 6.95, Article 1;
- Risk Management Plan (RMP) - California Health and Safety Code, Division 20, Chapter 6.95, Article 2;
- Certified Uniform Program Agency (CUPA) - California Health and Safety Code, Division 20, Chapter 6.11;
- Fire Code – The Fire Code adopted by the VCFPD in regards to aboveground hazardous materials. Reference California Health and Safety Code, Division 12, part 2.7.
- Enabling Legislation - CCR Title 22, Division 4.5;
- California Health and Safety Code, Division 20, Chapter 6.5; and
- Permit Requirements - Ventura County Ordinance Code, Division 4, Chapter 5 (Hazardous Substances), Article 1, (CUPA).

4.8.4 Project-Level Impact Analysis

Individual or Cumulative Physical Hazard of Material(s) or Waste

Construction

Construction activities could involve the use, transport, and disposal of hazardous substances such as diesel fuel, gasoline, equipment fluids, concrete, cleaning solutions and solvents, lubricant oils, adhesives, human waste, and chemical toilets. These materials and waste have the potential to be toxic and may pollute, poison, or degrade environmental resources in the project area. However, extensive safety procedures and measures required by federal, state, and local laws protect worker health and safety and the environment to the maximum extent possible. Compliance with all applicable regulations involving the use, transport, and disposal of hazardous substances would minimize the risk of an accidental release of hazardous materials during construction. Other known hazardous substances and toxic emissions are controlled by existing rules and regulations regarding lead-based paint, polychlorinated biphenyls, and contaminated soils. Mandatory compliance with these required procedures would ensure a less than significant impact related to the removal of these materials during construction.

The project will require the placement of dewatering wells approximately 15 to 20 feet deep, along the work area of the J Street Drain. These wells will be installed and removed as construction moves upstream. Once installed, these wells will be attached to temporary pumps to extract the water (i.e., dewatering) for discharge into the Perkins Drain. Because portions of the channel are located close to the Pacific shoreline, the dewatering will require pumping so that the water table is lowered to approximately mean sea level and below, in order to accommodate construction of the improvements to the channel. Based on timetables established for the project, it is anticipated that dewatering along the lower reach of the channel would endure for a period of approximately two to four months.

The nearby Halaco Superfund Site, located approximately 1,500 feet east of the southern portion of the J Street Drain, overlies a groundwater plume impacted primarily by Halaco metals. Currently, the natural direction of groundwater movement beneath the western portion of the Halaco Site (i.e., closest to the J Street Drain) is toward ~~the shoreline~~ McWane Boulevard (i.e., ~~southwest~~ northward) ~~with ultimate discharge into the Pacific Ocean~~. The entrainment of metals in groundwater nearest the J Street Drain project area is considered potentially problematic, in that the contaminated plume could be encountered during construction activity, in which case treatment of the extracted groundwater would be required prior to discharge into the Perkins Drain. A groundwater modeling study was performed to address this potential problem.

The numerical model of the groundwater system beneath the J Street Channel was used to evaluate potential impacts to groundwater in response to dewatering that will be necessary to construct the drain, particularly with regards to whether metal contaminants in groundwater may migrate toward the channel and possibly enter into the dewatering stream. The numerical model of the groundwater system beneath the J Street Channel area demonstrates that a drain, possibly the sewer line beneath McWane Boulevard and Perkins Road, in combination with elevated surface water in the Ormond Beach Lagoon and the OID have significant effects on groundwater elevations and migration in the area with groundwater flow identified in the direction of McWane Boulevard and Perkins Road. The simulations demonstrate that it is unlikely for dewatering to draw groundwater from beneath the Halaco Site toward the J Street Drain under current conditions. However, should the existing northward drain effect on groundwater cease, the dewatering effort may cause migration of potentially impacted groundwater from beneath the Halaco Site up to 50 feet toward the J Street Drain (based on refined hydraulic conductivity determined during field testing in November 2011). A potentially significant impact is identified. Injection of water into the shallow aquifer through five wells located in the beach parking area between the J Street Drain and the Halaco Site can be utilized to mitigate potential migration of groundwater from beneath the Halaco Site. The monitoring of water levels within selected monitoring wells in the vicinity of the Halaco Site can be utilized before and during Phase 1 dewatering to assess whether groundwater continues to move toward a northern "drain," and during dewatering to identify if migration of groundwater from the Halaco Site toward the J Street Drain is occurring. Mitigation Measure HAZ-1 would reduce potentially significant impacts to a less than significant level.

~~As a result of the numerical groundwater model, it is expected that dewatering will pull contaminated groundwater toward the line of pumping wells that will be placed along the channel for dewatering purposes. However, the maximum expected distance of migration from the Halaco Site in response to proposed construction dewatering is approximately 300 feet, or less than one-fifth of the distance between the Halaco Site and the channel. A distance of half the maximum (or 150 feet) is more realistic given the conservative assumptions used in the model (specifically the use of a high hydraulic conductivity in the 'maximum' scenario). Regardless of the actual distance that contaminated groundwater may flow in the direction of the channel, the cessation of dewatering is expected to halt migration of impacted groundwater toward the channel. In this situation, with removal of the artificial gradient induced by the pumps, the groundwater will resume the natural gradient toward the Pacific shoreline where its ultimate~~

~~discharge will occur with considerable dilution as it discharges slowly in contact with surrounding oceanic water. Dewatering at the site would result in a temporary impact with regards to the potential migration of heavy metals within the groundwater plume from the Halaco site. This is considered a significant impact and mitigation is required.~~

~~Mitigation measure HAZ-1 requires the use of sheet piling during construction to address this impact. Through numerical modeling, the use of sheet piling was demonstrated to isolate groundwater from the Halaco Site and prevent migration of groundwater toward the channel. In addition, the use of sheet piling will reduce the overall volume of water required to be withdrawn in order to construct the channel~~.

As noted in the project description, the discharged water will be tested, and treated if necessary, prior to placement into Perkins Drain, as required by the project NPDES permit for groundwater dewatering.

Operation

Operation of the proposed project would occur as it does under existing conditions and would not require the use or result in production of greater quantities of hazardous materials or waste than under existing conditions. Maintenance activities associated with operation of the proposed project would also occur as they do under existing conditions and would involve sediment removal and vegetation control. These activities typically involve the use of minor quantities of hazardous materials to power an excavator or truck. However, since no new actions are proposed, no new impact would result. In addition, groundwater pumping would not occur during operation. Although the J Street Drain would be enlarged to contain the 100-year storm, this increased volume of water would not come into contact with the Halaco Superfund site, as the lagoon would breach and thus storm runoff would discharge directly to the ocean under much smaller flow conditions, such as a 2-year storm. Therefore, operation of the proposed project is not anticipated to result in an individual or cumulative physical hazard of materials or waste. A less than significant impact is identified.

Beach Elevation Management Plan

Implementation of the Beach Elevation Management Plan (BEMP) would require minimal use of hazardous materials and may generate minimal quantities of hazardous waste. Specifically, operation of beach grooming equipment (i.e., bulldozers) would require the use of hazardous substances such as diesel fuel, gasoline, equipment fluids, and/or lubricant oils. However, extensive safety procedures and measures required by federal, state, and local laws regulate the use of these materials and protect worker health and the environment to the maximum extent possible. Compliance with all applicable regulations would minimize the risk of an accidental release of hazardous materials or waste during implementation of the BEMP. Therefore, a less than significant impact is anticipated.

Amounts of Materials or Waste On-site, Either in Use or Storage

Construction

As identified above, construction of the proposed project could require the transport, use, and disposal of potentially hazardous materials and may generate minimal quantities of waste. However, the proposed project is required to comply with existing federal, state, and local regulations related to the transport, use, disposal, and storage of these materials and waste. Additionally, construction of the proposed project would be done in phases and construction materials would be transported to the project site on an as-needed basis. Materials would be located on-site temporarily and would not be stored for long-term use. Therefore, it is not anticipated that the amount of hazardous materials required for construction of the

proposed project would pose a risk to workers or the environment. Impacts would be less than significant.

Operation

Operation of the proposed project would occur generally as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur as they do under existing conditions and no new impacts would result. Operation and maintenance of the proposed project are not anticipated to require the use or production of greater quantities of hazardous materials than are currently used. Also, since no new actions are proposed, no new impact would result. Therefore, impacts would be less than significant.

Beach Elevation Management Plan

Implementation of the BEMP would require minimal use of hazardous substances such as diesel fuel, gasoline, equipment fluids, and/or lubricant oils and may generate minimal quantities of hazardous waste. However, extensive safety procedures and measures required by federal, state, and local laws regulate the use of these materials and protect worker health and the environment to the maximum extent possible. Additionally, federal, state, and local safety procedures and measures are in place for the handling and disposal of any hazardous wastes. Compliance with all applicable regulations would minimize the risk of an accidental release of hazardous materials during implementation of the BEMP. Therefore, a less than significant impact is anticipated.

Proximity of Hazardous Materials or Waste to Populated Areas and Compatibility of Materials with Neighboring Facilities

Construction

Five schools and one preschool/day care center are located within 0.25 mile of the proposed project site. This includes E.O. Green Junior High School, Parkview Elementary School, Hueneme High School, Richard Bard Kindergarten School, Art Haycox Elementary School, and Our Saviour's Preschool and Day Care Center. Additionally, the proposed project alignment runs immediately adjacent to single- and multi-family residences.

Hazardous materials and wastes associated with construction of the proposed project includes diesel fuel, gasoline, equipment fluids, concrete, cleaning solutions and solvents, lubricant oils, adhesives, human wastes, and chemical toilets. These materials are often encountered in daily life. Potentially hazardous construction materials would be kept within the project site and would not be present in substantial amounts. Additionally, as identified above, existing federal, state, and local regulations would prevent significant impacts associated with the use, transport, and disposal of hazardous materials and waste. Further, construction of the proposed project would not require the use or production of any material or waste not typically required for construction activities. Therefore, although construction materials and waste have the potential to be hazardous, the associated risks are not unusual for construction activities. These materials are not anticipated to impact any populated areas or neighboring facilities.

Pursuant to CEQA, a project would result in a significant hazardous materials impact if it would be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. According to the EDR Datamap Corridor Study prepared for the proposed project, the project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. However, some hazardous materials sites were identified within proximity to the proposed project site. As identified above in Table 4.8-1, these hazardous materials sites do not pose a

substantial hazard risk to the proposed project. None of the sites are currently identified by the DTSC as active sites, with the exception of the Halaco site. Between 2007 and 2011 the Halaco site underwent investigation to determine the extent of contamination in accordance with EPA regulations and requirements (DTSC 2008, EPA 2011).

As discussed above, if groundwater movement were to change either before or during Phase 1 dewatering from its current northward direction to a southward direction, the maximum expected distance of hazardous material migration from the Halaco Site in response to dewatering is approximately ~~300~~ 50 feet, or less than ~~one fifth~~ four percent of the distance between the Halaco Site and the channel~~; a distance of half the maximum (or 150 feet) is more realistic given the conservative assumptions used in the model(specifically the use of a high hydraulic conductivity value in the 'maximum' scenario)~~. The cessation of dewatering is expected to halt migration of impacted groundwater toward the channel, and in this situation, the groundwater from the western portion of the Halaco Site lying closest to the J Street Drain will resume migrating along the ~~natural~~ pre-project gradient ~~toward the Pacific shoreline where its ultimate discharge will occur with considerable dilution as it discharges slowly in contact with surrounding oceanic water~~. Dewatering at the site ~~would~~ may result in a temporary impact with regards to the potential migration of heavy metals within the ground water plume from the Halaco site. This is considered a significant impact and mitigation is required.

Mitigation measure HAZ-1 requires the use of ~~sheet piling~~ monitoring wells, and possibly injection wells during construction to address this impact. Through numerical modeling, the use of ~~sheet piling~~ injection wells was demonstrated to isolate groundwater from the Halaco Site and prevent migration of groundwater toward the channel. ~~In addition, the use of sheet piling will reduce the overall volume of water required to be withdrawn in order to construct the channel.~~

Operation

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur as they do under existing conditions and no new impacts would result. Since operation and maintenance activities would occur as they do under existing conditions impacts to populated areas and neighboring facilities would be less than significant.

Beach Elevation Management Plan

Implementation of the BEMP would require minimal use of hazardous substances such as diesel fuel, gasoline, equipment fluids, and/or lubricant oils and minimal quantities of waste may be generated. However, extensive safety procedures and measures required by federal, state, and local laws regulate the use and disposal of these materials and wastes and protect worker health and the environment to the maximum extent possible. Compliance with all applicable regulations would minimize the risk of an accidental release of hazardous materials or waste during implementation of the BEMP. Therefore, a less than significant impact to populated areas and neighboring facilities is anticipated.

Federal, State, and Local Laws, and Ordinances, Governing Storage and Use of Hazardous Materials or Waste

Construction

Construction of the proposed project could involve the use and storage of hazardous substances such as diesel fuel, gasoline, equipment fluids, concrete, cleaning solutions and solvents, lubricant oils, adhesives, human waste, and chemical toilets. Federal, state, and local laws have been established to regulate the

handling of these materials and waste and ensure the safety of workers and the environment. The proposed project is subject to comply with these regulations and, therefore, impacts related to federal, state, and local laws and ordinances are anticipated to be less than significant.

Operation

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur as they do under existing conditions and no new impacts are anticipated. Operation and maintenance of the proposed project are not anticipated to require the use or production of greater quantities of hazardous materials or waste than under existing conditions. Therefore, since operation and maintenance activities would occur generally as they do under existing conditions, a less than significant impact is identified.

Beach Elevation Management Plan

Implementation of the BEMP would require minimal use of hazardous substances such as diesel fuel, gasoline, equipment fluids, and/or lubricant oils and minimal quantities of hazardous waste may be generated. However, extensive safety procedures and measures required by federal, state, and local laws regulate the use of these materials and protect worker health and the environment to the maximum extent possible. Compliance with all applicable regulations would minimize the risk of an accidental release of hazardous materials during implementation of the BEMP. Therefore, a less than significant impact is anticipated.

Potential for Spill or Release

Construction

The proposed project would involve the transport and use of fuels, lubricants, and various other liquids needed for operation of construction equipment at the site. These materials would be transported to the construction site on an as-needed basis by equipment service trucks. Materials and waste hazardous to humans, wildlife, and sensitive environments would be present during project construction, including diesel fuel, gasoline, equipment fluids, concrete, cleaning solutions and solvents, lubricant oils, adhesives, human waste, and chemical toilets. The potential exists for direct impacts to the environment from accidental spills of small amounts of hazardous materials or waste from construction equipment; however, existing federal and state standards are in place for the handling, storage and transport of these materials and waste. Compliance with the federal and state standards is required, thus a less than significant impact is anticipated during construction due to upset or accidental release of hazardous materials or waste into the environment.

Operation

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur as they do under existing conditions and no new impacts are anticipated. Operation and maintenance of the proposed project are not anticipated to require the use or production of greater quantities of hazardous materials or waste than under existing conditions. Therefore, since operation and maintenance activities would occur generally as they do under existing conditions, impacts related to potential spill or release of hazardous materials would be less than significant.

Beach Elevation Management Plan

Implementation of the BEMP would require minimal use of hazardous substances such as diesel fuel, gasoline, equipment fluids, and/or lubricant oils and minimal quantities of hazardous waste may be generated. However, extensive safety procedures and measures required by federal, state, and local laws regulate the use and disposal of these materials and waste and protect worker health and the environment to the maximum extent possible. Compliance with all applicable regulations would minimize the risk of an accidental spill or release of hazardous materials during implementation of the BEMP. Therefore, a less than significant impact is anticipated.

4.8.5 Cumulative-Level Impact Analysis

Individual or Cumulative Physical Hazard of Material(s) or Waste

Construction

Construction of the proposed project and cumulative projects would be required to comply with federal, state, and local regulations regarding the transport, use, storage, and disposal of hazardous materials and waste. Compliance with these regulations would prevent a significant hazardous materials or waste impact to people and the environment. Dewatering activities associated with the proposed project and cumulative projects (e.g., Water Pipeline II) would result in temporary impacts with regards to the potential migration of heavy metals within the groundwater plume from the Halaco site. Mitigation measure HAZ-1 requires the use of ~~sheet~~ monitoring wells, and possibly injection wells during dewatering activities to address this impact. Through numerical modeling, the use of ~~sheet piling~~ injection wells was demonstrated to isolate groundwater from the Halaco Site and prevent migration of groundwater toward the channel. ~~In addition, the use of sheet piling will reduce the overall volume of water required to be withdrawn in order to construct the channel.~~ Similar activities associated with cumulative projects near the Halaco site would be subject to similar mitigation to avoid potential impacts. Therefore, by adhering to applicable regulations and mitigation measures, cumulative impacts would be less than significant.

Operation

Operation and maintenance activities associated with the proposed project would occur generally as they do under existing conditions. Therefore, no new impacts related to hazardous materials or waste are anticipated during operation and maintenance. Cumulative impacts would be less than significant.

Beach Elevation Management Plan

Implementation of the BEMP would require minimal use of hazardous substances such as diesel fuel, gasoline, equipment fluids, and/or lubricant oils and minimal quantities of hazardous waste may be generated. However, extensive safety procedures and measures required by federal, state, and local laws regulate the use and disposal of these materials and waste and protect worker health and the environment to the maximum extent possible. Compliance with all applicable regulations would minimize the risk of an accidental spill or release of hazardous materials or waste during implementation of the BEMP. Therefore, a less than significant cumulative impact is anticipated.

Amounts of Materials or Waste On-site, Either in Use or Storage

Construction

Construction of the proposed project and cumulative projects would be required to comply with federal, state, and local regulations regarding the transport, use, storage, and disposal of hazardous materials and waste. Compliance with these regulations would prevent a significant hazardous materials or waste impact to people and the environment. Therefore, by adhering to applicable regulations, cumulative impacts would be less than significant.

Operation

Operation and maintenance activities associated with the proposed project would occur generally as they do under existing conditions. Therefore, no new impacts related to hazardous materials or waste are anticipated during operation and maintenance. Cumulative impacts would be less than significant.

Beach Elevation Management Plan

Implementation of the BEMP would require minimal use of hazardous substances such as diesel fuel, gasoline, equipment fluids, and/or lubricant oils and minimal quantities of waste may be generated. However, extensive safety procedures and measures required by federal, state, and local laws regulate the use and disposal of these materials and waste and protect worker health and the environment to the maximum extent possible. Compliance with all applicable regulations would minimize the risk of an accidental spill or release of hazardous materials or waste during implementation of the BEMP. Therefore, a less than significant impact is anticipated.

Proximity of Hazardous Materials or Waste to Populated Areas and Compatibility of Materials with Neighboring Facilities

Construction

Construction of the proposed project and cumulative projects would be required to comply with federal, state, and local regulations regarding the transport, use, storage, and disposal of hazardous materials and waste. Compliance with these regulations would prevent a significant hazardous materials or waste impact to populated areas and neighboring facilities. Dewatering activities associated with the proposed project and cumulative projects (e.g., Water Pipeline II) ~~would~~ may result in temporary impacts with regards to the potential migration of heavy metals within the groundwater plume from the Halaco site. Mitigation measure HAZ-1 requires the use of ~~sheet piling~~ monitoring wells, and possibly injection wells during dewatering activities to address this impact. Through numerical modeling, the use of ~~sheet piling~~ injection wells was demonstrated to isolate groundwater from the Halaco Site and prevent migration of groundwater toward the channel. ~~In addition, the use of sheet piling will reduce the overall volume of water required to be withdrawn in order to construct the channel~~ Similar activities associated with cumulative projects near the Halaco site would be subject to similar mitigation to avoid potential impacts. Therefore, by adhering to applicable regulations and mitigation measures, cumulative impacts would be less than significant.

Operation

Operation and maintenance activities associated with the proposed project would occur generally as they do under existing conditions. Therefore, no new impacts related to hazardous materials or waste are anticipated during operation and maintenance. Cumulative impacts would be less than significant.

Beach Elevation Management Plan

Implementation of the BEMP would require minimal use of hazardous substances such as diesel fuel, gasoline, equipment fluids, and/or lubricant oils and minimal quantities of hazardous waste may be generated. However, extensive safety procedures and measures required by federal, state, and local laws regulate the use and disposal of these materials and waste and protect worker health and the environment to the maximum extent possible. Compliance with all applicable regulations would minimize the risk of an accidental spill or release of hazardous or waste materials during implementation of the BEMP. Therefore, a less than significant impact is anticipated.

Federal, State, and Local Laws, and Ordinances, Governing Storage and Use of Hazardous Materials and Waste

Construction

Construction of the proposed project and cumulative projects would be required to comply with federal, state, and local regulations regarding the transport, use, storage, and disposal of hazardous materials and waste. Compliance with these regulations is required to prevent a significant hazardous materials or waste impact. By complying with regulations, cumulative impacts would be less than significant.

Operation

Operation and maintenance activities associated with the proposed project would occur generally as they do under existing conditions. Therefore, no new impacts related to hazardous materials or waste are anticipated during operation and maintenance. Cumulative impacts would be less than significant.

Beach Elevation Management Plan

Implementation of the BEMP would require minimal use of hazardous substances such as diesel fuel, gasoline, equipment fluids, and/or lubricant oils and minimal quantities of hazardous waste may be generated. However, extensive safety procedures and measures required by federal, state, and local laws regulate the use and disposal of these materials and waste and protect worker health and the environment to the maximum extent possible. Compliance with all applicable regulations would minimize the risk of an accidental spill or release of hazardous materials or waste during implementation of the BEMP. Therefore, a less than significant impact is anticipated.

Potential for Spill or Release

Construction

Construction of the proposed project and cumulative projects would be required to comply with federal, state, and local regulations regarding the transport, use, storage, and disposal of hazardous materials and waste. Compliance with these regulations would reduce the potential for accidental spill or release of hazardous materials or waste. Therefore, by adhering to applicable regulations, cumulative impacts would be less than significant.

Operation

Operation and maintenance activities associated with the proposed project would occur generally as they do under existing conditions. Therefore, no new impacts related to hazardous materials or waste are anticipated during operation and maintenance. Cumulative impacts would be less than significant.

Beach Elevation Management Plan

Implementation of the BEMP would require minimal use of hazardous substances such as diesel fuel, gasoline, equipment fluids, and/or lubricant oils and minimal quantities of hazardous waste may be generated. However, extensive safety procedures and measures required by federal, state, and local laws regulate the use and disposal of these materials and waste and protect worker health and the environment to the maximum extent possible. Compliance with all applicable regulations would minimize the risk of an accidental spill or release of hazardous materials during implementation of the BEMP. Therefore, a less than significant impact is anticipated.

4.8.6 Mitigation Measures

HAZ-1 Prior to dewatering activities between the Ventura County Railroad and the south project terminus, ~~sheet piling shall be placed on the east side of the drain channel in order to prevent the migration of groundwater from the Halaco site~~ the District shall install or use existing monitoring wells in order to verify the direction of groundwater movement at the time of dewatering. If it is determined that there is a potential for groundwater migration at the site, the District shall install and operate five injection wells. Injection of water into the shallow aquifer at the beach parking area between the J Street Drain and the Halaco Site would minimize the migration of groundwater from beneath the Halaco Site. ~~Note that additional field testing is currently being conducted to provide a more representative value for hydraulic conductivity for the vicinity of the drain. In the event that the results show the need for sheet piling on both the west and east side of the drain, sheet piling will be placed on both sides of the drain~~.

4.8.7 Significance After Mitigation

Implementation of the HAZ-1 measure would prevent the migration of contaminated groundwater at the Halaco site to the J Street drain site. The impact is ~~would be~~ reduced to a less than significant level.

4.8.8 Response to Notice of Preparation Comments

During the comment period for the NOP, the County of Ventura Resource Management Agency sent a comment letter regarding the storage, handling, and disposal of hazardous materials. As identified in the analysis above, construction of the proposed project would comply with all federal, state, and local regulations regarding the transport, use, handling, and disposal of hazardous materials. Impacts to people and the environment resulting from the use of hazardous materials would be less than significant. Additionally, the Resource Management Agency commented that the proposed project would generate hazardous waste, which may create adverse impacts. However, the proposed project is not anticipated to generate greater quantities of hazardous wastes than under existing conditions. Hazardous wastes generated by construction activities would comply with all federal, state, and local regulations regarding the storage, handling, and disposal of these materials. Therefore, substantial impacts are not anticipated.

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4.9 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section describes known cultural resources (including their potential significance), assesses potential impacts of the proposed uses, and recommends mitigation measures to reduce the significance of potential project impacts. Additionally, the following document was used in the preparation of this section and is included as Appendix E of this Environmental Impact Report (EIR):

Cultural Resources Constraint Analysis. Prepared by Kyle Consulting. June 2008.

4.9.1 Environmental Setting

Cultural resources are places, structures, or objects that are important for scientific, historic, and/or religious reasons to cultures, communities, groups, or individuals. Cultural resources include historic and prehistoric archaeological sites, architectural remains, engineering structures, and artifacts that provide evidence of past human activity. They also include places, resources, or items of importance in the traditions of societies and religions.

The Cultural Resources Constraint Analysis was completed in compliance with Ventura County and *California Environmental Quality Act (CEQA) Guidelines*. The study area is a linear alignment approximately 3,352.8 meters (11,000 feet) in length that is located in Ventura County, California. The project area is shown on the Oxnard 7.5' U.S. Geological Survey (USGS) topographic map.

Literature information and site records on recorded cultural resources within a one-half mile radius of the study area were obtained from data provided by the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, California. In addition, early maps were checked for historic resources. Consultation regarding this project was completed with the Native American Heritage Commission (NAHC) and local Native Americans.

4.9.1.1 History

Prehistoric Cultural Background

The Native American occupants of the study area, identified as Chumash, were one of the first native California groups encountered by European explorers, specifically Cabrillo who sailed between the Channel Islands in 1542-1543. This large group of Hokan speaking California natives was basically a coastal people who occupied territory in Central California that extended from Estero Bay on the north to Malibu Canyon in the south, from the Carrizo Plain in the east to the Santa Barbara Channel Islands to the west. Kroeber (1925) expressed doubt that there were any permanent Chumash villages in the Carrizo Plains area to the east away from the coastal area. Chumash generally exploited the exceptionally rich maritime resources that were available to them in the coastal areas of their territory.

Kroeber (1925) states that the Chumash lived in large houses up to 50 feet or more in diameter that housed a community of up to 50 individuals. These structures were constructed of willow or other poles that were bent and tied together at the top and then covered with tule mats or thatch. The Chumash seemed to have been one of the few California Native groups who constructed raised platforms that were used for beds within rooms inside the houses. Canoes constructed from wooden planks were used to travel to the islands within the Santa Barbara Channel. The Chumash used spear throwers as well as bows and arrows for hunting. The Chumash were skilled artisans who made fine baskets and stone cookware.

Chumash rock art has been identified in caves and on overhangs, many located in the Los Padres National Forest.

A Spanish land expedition led by Gaspar de Portola left Baja California in 1769, eventually reaching Chumash territory. Five Spanish missions were established in Chumash territory, introducing European diseases that decimated the local inhabitants. Chumash territory was divided into Mexican Land Grants and settled by European settlers, resulting in further displacement of the native Chumash. Today, the Chumash are a nationally-recognized tribe. They live just outside Santa Ynez near Mission Santa Inés and throughout original Chumash territory (Chumash Tribe History Page http://www.santaynez.org/).

Previously Recorded Archaeological Sites

A literature review and record search of the project site and a one-half mile radius was completed by the SCCIC at California State University, Fullerton, California. This search identified seventeen studies that have been conducted within a one-half mile radius of the project site. Of these, six include the project location. There are twelve additional investigations located on the Oxnard 7.5' USGS Quadrangle that are unmapped due to insufficient locational information but that may be within a one-half mile radius of the project area.

Two prehistoric archaeological sites and one historic site have been identified outside of the project area but within the one-half mile radius. One of the archaeological sites, 4-VEN-662, was originally recorded by Van Valkenburgh in 1933 and rerecorded in 1979 by Home and Craig who noted cores, flakes, hammerstones, ground stone, burned rock, shellfish, and faunal remains. Van Valkenburgh, Home and Craig stated that the site might represent the ethnographic village of Wenem, a Chumash word that means "sleeping place." Home and Craig described the site as very important. A site update was completed in 2004 by Wlodarske and Bonner who noted that approximately 60 percent of the site had been destroyed by construction. They also state that the site may represent the village of Hueneme and, that if that is true, it may be one of the most important resources in the region. The second archaeological site, 56-150016, was recorded by Taylor in 1978 although no site description was provided.

Home and Craig (1979) recorded a historic resource, 4-VEN-664(H), which they described as the remains of twentieth century farm buildings. Artifacts noted included shell, cut cow bone, 1903 glass, crockery, stoneware, bricks, irrigation tile, ceramics, glass, and one handmade shell button.

The cultural resource studies identified no cultural resources within the proposed project site. No properties have been listed within a one-half mile of the project area by the California Point of Historical Interest of the Office of Historic Preservation, Department of Parks and Recreation, the California Historical Landmarks of the Office of Historic Preservation, Department of Parks and Recreation, the California Register of Historic Places, the National Register of Historic Places, or the California Historic Resources Inventory.

Paleontological Resources

Paleontological resources are any remains, traces, or imprints of a plant or animal that has been preserved in the Earth's crust since some past geologic time. Paleontological resources include invertebrate fossils, microfossils, petrified wood, plants, tract, and vertebrate fossils.

According to the Geologic Map of California, Los Angeles Sheet prepared by the California Department of Conservation, the proposed project site is underlain by Quaternary alluvium (1969). The Quaternary Period is the geologic time period occurring from roughly 2.6 million years ago to the present. Therefore,

Quaternary alluvial deposits are considered to be relatively young with a relatively low potential for fossils to occur.

4.9.1.2 Native American Consultation Results

Native American consultation included a sacred lands check with the NAHC for the presence of Native American cultural resources in the immediate project area. No specific site information was on file with the NAHC. However, the NAHC provided a list of Native American individuals and organizations that might have knowledge of cultural resources within the project area. A letter explaining the project and asking for any comments was mailed to all names on the list. The contact list and a sample of the letter along with correspondence from the NAHC are included in Appendix B of the Cultural Resources Constraint Analysis.

Two responses were received, from Patrick Tumamait and Randy Guzman-Folkes. The comments were requested to be presented in writing but had not yet been received upon completion of the report. Patrick Tumamait noted in a telephone conversation with the sub-consultant that two Chumash burial sites are located in the area near the beach area. These sites were not identified by the record search unless Mr. Tumamait was referring to 4-VEN-662, the village of Wenemu/Hueneme. The recorded location of this village site is outside of any area that might be impacted by the proposed project.

4.9.2 Regulatory Setting

California Coastal Act

The California Coastal Act (CCA) recognizes archaeological and historic resources as sensitive and requires the development of reasonable mitigation measures with the California Office of Historic Preservation. These procedures are defined in CCA Section 30244.

Public Resources Code

Section 15064.5 of the *CEQA Guidelines* also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under California Public Resources Code (PRC) Section 5097.98. In short, it prohibits interference with the free expression of Native American religions by any public agency or contracted private party on public land, and by similarly prohibiting the disturbance of any Native American cemetery or sacred site by such parties on public land.

State Health and Safety Code Section 7050.5

In the event that human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Ventura County Coroner has made the necessary findings as to origin. If the County Coroner determines the remains to be Native American, the NAHC shall be contacted within 24 hours. Subsequently, the NAHC shall identify the “most likely descendant.” The most likely descendant shall have 24 hours to make recommendations to the District for the disposition of the remains as provided in Public Resources Code 5097.98.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) is a federal law passed in 1990. NAGPRA provides a process for federal agencies and museums to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, and objects of cultural patrimony, to lineal descendants, culturally affiliated Native American tribes, and Native Hawaiian organizations.

Ventura County

Ventura County General Plan

1.8 Paleontological and Cultural Resources

The goals, policies and programs which apply to paleontological and cultural resources are as follows:

1.8.1 Goals

1. Identify, inventory, preserve and protect the paleontological and cultural resources of Ventura County (including archaeological, historical and Native American resources) for their scientific, educational and cultural value.
2. Enhance cooperation with cities, special districts, other appropriate organizations, and private landowners in acknowledging and preserving the County's paleontological and cultural resources.

1.8.2 Policies

1. Discretionary developments shall be assessed for potential paleontological and cultural resource impacts, except when exempt from such requirements by CEQA. Such assessments shall be incorporated into a County-wide paleontological and cultural resource data base.
2. Discretionary development shall be designed or re-designed to avoid potential impacts to significant paleontological or cultural resources whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less than significant level and/or shall be mitigated by extracting maximum recoverable data. Determinations of impacts, significance and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups), historical or paleontological consultants, depending on the type of resource in question.
3. Mitigation of significant impacts on cultural or paleontological resources shall follow the Guidelines of the State Office of Historic Preservation, the State Native American Heritage Commission, and shall be performed in consultation with professionals in their respective areas of expertise.
4. During environmental review of discretionary development the reviewing agency shall be responsible for identifying sites having potential archaeological, architectural or historical significance and this information shall be provided to the County Cultural Heritage Board for evaluation.
5. During environmental review of discretionary development the reviewing agency shall be responsible for identifying sites having potential archaeological, architectural or historical significance and this information shall be provided to the County Cultural Heritage Board for evaluation.

6. The Building and Safety Division shall utilize the State Historic Building Code for preserving historic sites in the County.

City of Oxnard

City of Oxnard General Plan

The City of Oxnard General Plan Conservation Element includes the following goals and policies regarding cultural resources.

Development Policies

A. Goals

Maintenance and enhancement of natural resources and open space.

B. Objectives

7. Protect and enhance areas of cultural and historic significance.

Cultural Resources

39. The City shall require a cultural resources study that includes a field study component prior to the permitting of specific development plans that may affect significant historical resources. A qualified archaeologist should inspect development locations for surface evidence of archaeological deposits, and archaeological monitoring during grading should be required in areas where significant cultural resources have been identified or are expected to occur. If cultural resources are uncovered during construction, all work in the area should be halted and a qualified archaeologist consulted to determine the significance of the find. In the event that development threatens significant archaeological resources, alternatives should be considered, including planning construction to avoid archeological sites, deeding archaeological sites into permanent conservation easements, and planning parks, green space, or other open space to incorporate archaeological sites.

City of Port Hueneme

City of Port Hueneme General Plan

The City of Port Hueneme General Plan Conservation/Open Space/Environmental Resource Element contains goals and polices that maintain and enhance the City's historically significant sites and structures.

Goal 10: Maintain and Enhance the City's historically significant sites or structures.

Policy 10-1: Identify, designate, and protect facilities of historical significance.

Policy 10-5: Require mitigation measures to protect archaeological or paleontological resources in the event that new resources are discovered.

4.9.3 Significance Thresholds

Impact to a cultural resource will be significant if the project will:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State *CEQA Guidelines* and the Ventura County *Initial Study Assessment Guidelines*;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 and the Ventura County *Initial Study Assessment Guidelines*;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature as defined in the Ventura County *Initial Study Assessment Guidelines*; or
- Disturb any human remains, including those interred outside of formal cemeteries, pursuant to §15064.5 and the Ventura County *Initial Study Assessment Guidelines*.

The above thresholds are taken from Appendix G of the State *CEQA Guidelines* and expanded to incorporate by reference those significance thresholds recently adopted by the Ventura County Board of Supervisors. According to the 2011 Ventura County *Initial Study Assessment Guidelines*, the significance of an archaeological or historic resource is materially impaired when a project:

1. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Act or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not archaeologically, historically, or culturally significant; or
2. Demolishes or materially alters in an adverse manner those physical characteristics of an archaeological or historical resource that convey its archaeological or historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register of Historical Resources as determined by a lead agency for purposes of CEQA; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.
4. Demolition, relocation, or alteration such that the significance of an archaeological or historical resource would be impaired (Public Resources Code, Sections 5020(g) and 5020(q)).

Impacts to paleontological resources would be significant if:

1. They would affect a geologic formation with moderate to high paleontological importance directly through grading and excavation of fossiliferous rock, which can result in the loss of scientifically important fossil specimens and associated geological data, or indirectly by increasing access opportunities for unauthorized collection of fossil materials from valuable sites. Cumulative impacts include all projects which contribute to the progressive loss of exposed rock in Ventura County that can be studied and prospected for fossil remains.

4.9.4 Project-Level Impact Analysis

Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State *CEQA Guidelines* and the Ventura County *Initial Study Assessment Guidelines*?

Construction

The Cultural Resources Constraint Analysis Report prepared for the project site did not identify any historical resources located within the J Street Drain Project Area. Therefore, construction of the proposed project would not demolish, materially alter or relocate any historical resources. Therefore, no impact to historical resources due to project construction is identified.

Operation

No historical resources are located within the proposed project area. Therefore, operation of the proposed project would not demolish, materially alter, or relocate any historical resources. Therefore, no impact to historical resources due to operation and maintenance is identified.

Beach Elevation Management Plan

No historical resources are located within the proposed project area. Therefore, implementation of the Beach Elevation Management Plan (BEMP) would not demolish or materially alter any historical resources. Therefore, no impact to historical resources due to implementation of the BEMP is identified.

Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5 and the Ventura County *Initial Study Assessment Guidelines*?

Construction

The Cultural Resources Constraint Analysis Report prepared for the J Street Drain project did not identify any archeological resources located within the project area. However, archaeological resource sites have been identified in proximity to the project alignment and there is the potential for previously unknown subsurface artifacts to be demolished, materially altered, or relocated during ground disturbing activities. Therefore, construction of the proposed project would result in potentially significant impacts and mitigation is required.

Operation

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur generally as they do under existing conditions. Further, operation and maintenance activities do not involve new excavation or disturbance of native soil, thus there is not a potential to demolish, materially alter, or relocate archaeological resources.

Beach Elevation Management Plan

The Cultural Resources and Constraint Analysis did not identify any archaeological resources on the project site. It is not anticipated that implementation of the BEMP would result in impacts to undiscovered archeological resources because the sand in this location is the result of ongoing natural

beach processes. Being recently deposited, beach sands are not expected to contain archaeological resources. The only ground disturbing activities associated with implementation of the BEMP involve periodic shallow grooming of the sand berm. Therefore, no impacts to archaeological resources are identified.

Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature as defined in the Ventura County *Initial Study Assessment Guidelines*?

Construction

The potential for paleontological resources to occur within Quaternary alluvial deposits is relatively low. According to the Ventura *County Initial Study Assessment Guidelines*, Quaternary alluvial deposits would not be characterized as a geologic formation with a moderate to high potential for paleontological importance. Therefore, ground disturbing activities associated with the construction of the proposed project have little potential to impact undiscovered paleontological resources. This impact is considered less than significant.

Operation

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Additionally, maintenance activities would occur generally as they do under existing conditions. Operation and maintenance activities do not involve new excavation or disturbance of land formations. Additionally, the project area is underlain with Quaternary alluvial deposits, which have a low potential for containing paleontological resources. Therefore, no new actions are associated with operation and maintenance of the proposed project, and no impact to paleontological resources is identified due to operations and maintenance activities.

Beach Elevation Management Plan

Implementation of the BEMP is not anticipated to result in a significant impact to undiscovered paleontological features or a unique geological feature because sand in this location is the result of ongoing natural beach processes. Being recently deposited, beach sands are not expected to contain paleontological resources. The only ground disturbing activities associated with implementation of the BEMP involve periodic shallow grooming of the sand berm. Therefore, impacts would be less than significant.

Disturb any human remains, including those interred outside of formal cemeteries, pursuant to §15064.5 and the Ventura County *Initial Study Assessment Guidelines*?

Construction

No evidence of human remains, including those interred outside of formal cemeteries, was discovered during the records search, literature review, field survey, or site testing and evaluation at the project site. There is no remaining indication that the project site was used by Native Americans for religious, ritual, or other special activities and therefore impacts to Native American burial sites are not expected. However, although no evidence was uncovered during the literature review and field survey, there is still potential that human remains may be disturbed during construction activities. Therefore, a potentially significant impact is identified and mitigation is required.

Operation

Operation of the proposed project would generally occur as it does under existing conditions, but with greater drain capacity. Operation and maintenance activities do not involve new excavation or disturbance of native soil, thus there is not a potential to unearth human remains. Additionally, maintenance activities would occur generally as they do under existing conditions. Therefore, no new actions are associated with operation and maintenance of the proposed project. No impact to human remains is anticipated.

Beach Elevation Management Plan

Implementation of the BEMP is not anticipated to result in a significant impact to undiscovered human remains because the sand berm supporting Ormond Beach Lagoon consists of recent deposits that are not anticipated to contain human remains. The only ground disturbing activities associated with implementation of the BEMP involve shallow grooming of this recently deposited sand. Therefore, impacts would be less than significant.

4.9.5 Cumulative-Level Impact Analysis

Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State *CEQA Guidelines* and the Ventura County *Initial Study Assessment Guidelines*?

Construction

Construction of the proposed project would not result in a project-level impact to historical resources, as there are not any historical resources located within the project area, thus the project does not have the potential to contribute to a cumulative impact. Therefore, no cumulative impact to historical resources due to project construction is identified.

Operation

Operation and maintenance of the proposed project would not result in a project-level impact to historical resources, thus, the project does not have the potential to contribute to a cumulative impact. Therefore, no cumulative impact to historical resources due to project operation and maintenance is identified.

Beach Elevation Management Plan

Implementation of the BEMP would not result in a project-level impact to historical resources and, thus, the project does not have the potential to contribute to a cumulative impact. Therefore, no cumulative impact to historical resources due to periodic implementation of the BEMP is identified.

Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 and the Ventura County *Initial Study Assessment Guidelines*?

Construction

Any potential impacts to archaeological resources would be site-specific. The Water Pipeline 1 and the J Station Elimination projects would intersect the J Street Drain project at Hueneme Road and the Ventura

County Railroad, respectively. Therefore, the proposed project could contribute to a significant cumulative impact to archaeological resources if such resources were encountered along those project alignments as well as within the J Street Drain work area. A potentially significant cumulative impact is identified for construction activities.

Operation

Operation and maintenance of the proposed project would not result in project-level impacts to archaeological resources, thus, the project does not have the potential to contribute to a cumulative impact. Therefore, no cumulative impact to archaeological resources due to project operation and maintenance is identified.

Beach Elevation Management Plan

Implementation of the BEMP would not result in project-level impacts to archaeological resources, thus, the project does not have the potential to contribute to a cumulative impact. Therefore, no cumulative impact to archaeological resources due to periodic implementation of the BEMP is identified.

Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, as defined in the Ventura County *Initial Study Assessment Guidelines*?

Construction

Less than significant project-level impacts to paleontological resources were identified, since the project area is underlain with Quanternary alluvium, which has a relatively low potential for paleontological resouces. Other cumulative projects considered in this analysis are also located in areas underlain by Quaternary alluvium, therefore, it is expected that the potential for paleontological resources would also be low. Therefore, the proposed project would not contribute to a significant cumulative impact to paleontological resources, and a less than significant cumulative impact is identified for construction activities.

Operation

Operation and maintenance of the proposed project would not result in project-level impacts to paleontological resources, thus, the project does not have the potential to contribute to a cumulative impact. Therefore, no cumulative impact to paleontological resources due to project operation and maintenance is identified

Beach Elevation Management Plan

Implementation of the BEMP would not result in project-level impacts to paleontological resources, thus, the project does not have the potential to contribute to a cumulative impact. Therefore, no cumulative impact to paleontological resources due to periodic implementation of the BEMP is identified.

Disturb any human remains, including those interred outside of formal cemeteries, pursuant to §15064.5 and the Ventura County *Initial Study Assessment Guidelines*?

Construction

Any impacts to human remains would be site-specific. The Water Pipeline 1 and the J Station Elimination projects would intersect the J Street Drain project at Hueneme Road and the Ventura County Railroad, respectively. Therefore, the proposed project could contribute to a significant cumulative impact to human remains if any were encountered along those project alignments as well as within the J Street Drain work area. A potentially significant cumulative impact is identified for construction activities.

Operation

Operation and maintenance of the proposed project would not result in project-level impacts to human remains and, therefore, would not contribute to any cumulative impact. No cumulative impacts related to human remains are identified for the operation and maintenance phase of the project.

Beach Elevation Management Plan

Implementation of the BEMP would result in less than significant project-level impacts to human remains and, therefore, would not contribute to any cumulative impact. Less than significant impacts related to human remains are identified for the periodic implementation of the BEMP.

4.9.6 Mitigation Measures

Archaeological Resources

To mitigate for potential project-level and cumulative impacts to archaeological resources, the following mitigation measures shall be implemented:

CULT-1 In the event that archaeological resources are exposed during project construction, all earth disturbing work within the vicinity of the find shall be temporarily suspended or redirected until a qualified archaeologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume.

CULT-2 If the resource is determined to be potentially significant, a cultural resources treatment plan shall be developed to provide appropriate mitigation measures. These measures may include archaeological testing and data recovery excavation. The treatment plan shall also include a detailed description of associated reporting requirements, curation requirements for any cultural materials collected during treatment, and the qualifications for archaeologists involved in treatment activities.

Human Remains

To reduce potential impacts to human remains, the following mitigation measure shall be implemented:

CULT-3 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Ventura County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code

Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Ventura County Coroner determines the remains to be Native American, the NAHC shall be contacted within a reasonable timeframe. Subsequently, the NAHC shall identify the "most likely descendant." The most likely descendant shall then make recommendations, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98.

4.9.7 Significance After Mitigation

Implementation of the proposed project would not result in impacts to historical or paleontological resources as these resources do not occur within the project area. However, during construction, the proposed project has the potential to encounter unidentified archaeological resources. Additionally, any construction project has the potential to encounter unexpected human remains. However, by implementing mitigation measures CULT-1 and CULT-2, in the event that ground disturbing activities discover archaeological resources, a qualified archaeological monitor would be on-site to stop construction activities until the resource can be appropriately treated, if necessary. By obtaining a qualified archaeological monitor and empowering the monitor to stop construction activities, the cultural value of any discovered archaeological resources would be retained. Additionally, in the event that human remains are uncovered during ground disturbing activities, implementation of mitigation measure CULT-3 would ensure that the appropriate agencies are contacted such that the remains are respectfully treated. Therefore, by implementing mitigation measures CULT-1 through CULT-3, potential impacts to cultural resources and human remains would be reduced to below a level of significance.

4.9.8 Response to Notice of Preparation Comments

During the Notice of Preparation (NOP) comment period, the NAHC sent a comment letter with recommendations in assessing and mitigating project-related impacts to archaeological resources. Recommendations include contacting a regional archaeological information center, preparation of an archaeological report, contacting the NAHC for a Sacred Lands File check, and provision of mitigation measures. In response, a Cultural Resources Constraint Analysis was prepared for the proposed project and is included as Appendix E of this EIR. The Cultural Resources Constraint Analysis was completed in accordance with Ventura County standards and *CEQA Guidelines*. This includes contact with the SCCIC, the regional archaeological information center, and a Sacred Lands File check with the NAHC. Additionally, the Cultural Resource Constraints Analysis serves as the archaeological report and meets the requirements identified in the NAHC NOP comment letter. Per the Cultural Resources Constraints Analysis, mitigation measures CULT-1 through CULT-3 are proposed to mitigate impacts to cultural resources associated with the proposed project.

4.10 WASTE TREATMENT/DISPOSAL

This section of the Environmental Impact Report (EIR) focuses on potential solid waste impacts due to implementation of the project. Other subject areas related to utilities and service systems were determined to be less than significant during the Initial Study process. Specifically, the environmental issue areas of water supply quality, water supply quantity, fire flows, sewage disposal systems, sewage treatment collection, flood control/drainage facilities, electric, gas, and communication were determined to either be not impacted or impacted at a less than significant level. Therefore, these issues are not further analyzed in the EIR. Please see Appendix A of the EIR for the Initial Study. Issues related to solid waste were also determined to be less than significant during the Initial Study process; however, due to comments received on the Notice of Preparation (NOP), solid waste is further analyzed in the EIR.

4.10.1 Environmental Setting

City of Oxnard

The City of Oxnard currently collects and disposes in excess of 203,000 tons of refuse annually through the City-owned Del Norte Regional Recycling and Transfer Station (Del Norte). Del Norte accepts refuse from Oxnard and several other cities and areas in western Ventura County and is capable of recycling 50 to 80 percent of the refuse it receives. Currently, refuse incapable of being recycled is hauled to Chiquita Canyon Disposal Facility.

The Chiquita Canyon Disposal Facility is a 592-acre landfill located in Los Angeles County, California. Currently, 257 acres are permitted for the actual disposal of waste. The remainder of the site is for sedimentation ponds, buffer area and future expansions. The facility accepts approximately 5,000 to 6,000 tons per day. The landfill is restricted to receive no more than 6,000 tons per day or 30,000 tons per week.

The Del Norte Regional Recycling & Transfer Station is a 16-acre regional transfer station and materials recovery facility. It is owned by the City of Oxnard and operated by the private sector. Materials accepted by Del Norte include the following: refuse, yard and green waste, scrap wood, demolition debris, tires, refrigerators and air conditioners. Currently, Del Norte processes nearly 1,500 tons of waste every day.

City of Port Hueneme

The City of Port Hueneme Solid Waste Division provides all solid waste and recycling services for the residents, commercial businesses, and Naval Base in Port Hueneme. The City's solid waste is also transported to Del Norte Regional Recycling & Transfer Station.

4.10.2 Regulatory Setting

County of Ventura

The Public Facilities and Services Chapter of the General Plan identifies goals, policies and programs applicable to public facilities and services throughout Ventura County at both a local and regional level. The following general goals, policies and programs apply to public facilities and services:

4.1 General Goals, Policies and Programs

4.1.1 Goals

1. Ensure the provision of adequate individual and public sewage/waste collection, treatment and disposal facilities to meet the County's current and future needs in a manner which will protect the natural environment and ensure protection of the public's health, safety and welfare.
3. Ensure continuous waste disposal capacity to meet the County's current and projected waste disposal needs.

4.1.2 Policies

1. Community sewage treatment facilities and solid waste disposal sites shall be deemed consistent with the General Plan only if they are designated on the Public Facilities Map. On-site septic systems (i.e., individual sewage disposal systems), on-site wastewater treatment facilities, waste transfer stations, off-site waste treatment facilities and on-site storage facilities are consistent with the General Plan if they conform to the goals, policies and programs of the General Plan.
2. Any subdivision, or discretionary change in land use having a direct effect upon the volume of sewage, shall be required to connect to a public sewer system. Exceptions to this policy to allow the use of septic systems may be granted in accordance with County Sewer Policy. Installation and maintenance of septic systems shall be regulated by the County Environmental Health Division in accordance with the County's Sewer Policy, County Building Code, and County Service Area 32.
4. Discretionary development adjacent to existing and proposed waste treatment, transfer and disposal sites, as identified in the Countywide Integrated Waste Management Plan, shall not conflict with the current and anticipated future use of these waste facilities.
6. Applicants for discretionary development shall be encouraged to employ practices that reduce the quantities of wastes generated and shall be requested to engage in recycling activities to further reduce the volume of waste disposed of in landfills.

City of Oxnard General Plan

Development Policies

A. Goals

Public facilities and services adequate to serve existing and future development within the City's Urban Service Area.

B. Objectives

3. Reduce solid waste requiring disposal at local landfills and encourage recycling.

C. Policies

<u>Solid Waste</u>

1. Resource recovery shall be utilized to reduce the amount of solid waste that needs disposal.

3. The City shall require applicants for discretionary development approval to employ practices that reduce the quantities of wastes generated and promote resource recovery.

City of Port Hueneme General Plan

City of Port Hueneme Public Safety and General Plan 34 Facilities Element

Goal 10: Provide Necessary Control and Reduction of Solid Waste Generation and Disposal

Policy 10-1: Implement the City's Source Reduction and Recycling Element.

Policy 10-3: Investigate the feasibility of creating a curbside recycling program for all residential uses, and implement if cost effective.

Policy 10-4: Encourage and facilitate waste reduction, recycling, and use of recycled materials within City government offices and facilities.

Policy 10-6: Review waste collection procedures for conformance with safety codes.

4.10.3 Significance Thresholds

As defined in Appendix G of the *CEQA Guidelines*, the project would result in significant impacts to utilities and service systems if the project would not:

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with federal state, and local statues and regulations related to solid waste.

The 2011 Ventura County *Initial Study Assessment Guidelines* state:

- Does the proposed project have a direct or indirect adverse effect on a landfill such that it impairs the landfill's disposal capacity in terms of reducing its useful life to less than 15 years? If it does, then the project has a potentially significant impact on the demand for solid waste disposal capacity.

In addition, Ventura County Ordinance 4155 minimizes the potential solid waste disposal capacity impacts for any project by mandating the recycling of materials found on the "Director's List of Recyclables."

4.10.4 Project-Level Impact Analysis

Landfill Capacity

Construction

As required by California Public Resources Code (Public Resources Code, 2006 Division 30, Chapter 4, Article 1, §41701), Ventura County's Countywide Siting Element (CSE), adopted in June of 2001 and updated annually, confirms Ventura County has at least 15 years of disposal capacity available for waste generated by in-County projects. Therefore, because the County exceeds the minimum disposal capacity required by state Public Resources Code (PRC), no individual project of this type or magnitude will

significantly impact the County's remaining solid waste disposal capacity. Therefore, impacts are less than significant.

Table 4.10-1 quantifies the amount of soil and concrete volume for transport due to project construction. As shown in Table 4.10-1, when all phases of construction are considered, it is anticipated that 139,569 cubic yards (cy) of soil material and 7,816 cy of concrete material will be transported offsite. In accordance to the Ventura County Ordinance 4155, the proposed project would recycle soils and concrete resulting from demolition of the existing channel construction of the new J Street Drain. The construction of the proposed J Street Drain would involve demolition of concrete channel and excavation of channel to the appropriate depth during which the dirt would either be stockpiled for backfill or transported to a recycling facility. The demolition of the existing drain and construction of the new, higher capacity drain, will take place in phases. The demolition of the existing channel will be conducted using heavy equipment to break up the concrete. Once the concrete is broken up, it would be loaded for transport to another location for recycling. As discussed above, Del Norte Regional Recycling and Transfer Station currently handles waste transfer and recycling for the City of Oxnard. It is anticipated that concrete/ demolition debris would be recycled at Del Norte and excess soil would be either reused or hauled to Chiquita Canyon Disposal Facility for use as daily soil cover. The construction contract specifications would include a requirement that all recyclable construction materials generated during the demolition and construction phases of the project be reused on site, or recycled at a permitted recycling facility. For this project that includes, at a minimum, concrete, asphalt, wood, and metal. Additionally, all sediment and soil, not reused on site during the construction and/or landscaping phases of the project, should be transported to an authorized or permitted facility for recycling or reuse. The proposed project may potentially contribute excess soil to the local landfills; however, the proposed recycling or reuse of most materials to be removed from the site would minimize the volume of solid waste that would be transported to the landfill. The project is not expected to reduce the landfill's capacity such that its useful life would fall below 15 years. Therefore, impacts are less than significant.

Table 4.10-1. Soil and Concrete Volumes

Phase	Soil Volume for Transport (cy)	Concrete Volume (cy)
1	51,657	2,458
2	29,546	1,658
3	37,212	2,219
4	21,154	1,481
Total	139,569	7,816

Source: HDR 2008.
cy = cubic yards

Operations

The operation of the proposed project would include maintenance activities similar to those currently in place and would not be characterized as generating solid waste. Therefore, impacts are less than significant.

Beach Elevation Management Plan

The Beach Elevation Management Plan (BEMP) would be implemented periodically and would only have equipment on the beach for a few hours. The BEMP is not expected to generate any solid waste as the grooming of the berm would redistribute the sand on the beach and would not require any disposal of sand. Therefore, no impact is identified for this issue area.

Compliance with Standards

The project will comply with all applicable federal state, and local statutes and regulations related to solid waste. Therefore, no impact is identified.

4.10.5 Cumulative-Level Impact Analysis

Landfill Capacity

The construction of the proposed project would recycle soils and concrete resulting from construction activities. The proposed project would not result in project-level impacts to solid waste management. When the project is considered with other cumulative projects, there would be an incremental increase in material that is going to the Del Norte Regional Recycling and Transfer Station and the Chiquita Canyon Disposal Facility. However, since there is a minimum of 15 years of disposal capacity at Chiquita Canyon, there would not be a cumulative impact.

4.10.6 Mitigation Measures

No impacts were identified; therefore, no mitigation is required.

4.10.7 Significance After Mitigation

No impacts were identified; therefore, no mitigation is required. Project- and cumulative-level impacts related to solid waste would be less than significant.

4.10.8 Response to Notice of Preparation Comments

During the NOP comment period, the County of Ventura Integrated Waste Management Division (IWMD) commented that the proposed project would result in a less than significant impact to solid waste disposal facilities. However, the proposed project is subject to comply with the requirements of Ventura County Ordinances 4308 and 4357 to assist in diverting 50 percent of the County's solid waste from local landfills, as required by Assembly Bill (AB) 939. The IWMD also recommended contract specifications to ensure that the proposed project would comply with Ventura County Ordinances 4308 and 4357. As discussed above under the discussion of solid waste management during construction, the proposed project would recycle soils and concrete resulting from excavation and demolition activities at the Del Norte Regional Recycling and Transfer Station. Additionally, the construction contract specifications would include a requirement that all recyclable construction materials generated during demolition and construction activities be reused onsite, or recycled at a permitted recycling facility. These materials include concrete, asphalt, wood, metal, and sediment/soil. Therefore, the proposed project would comply with Ventura County Ordinances 4308 and 4357, and the proposed project would divert at least 50 percent of its solid waste from local landfills.

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4.11 PUBLIC HEALTH

This section of the Environmental Impact Report (EIR) focuses on potential public health impacts due to implementation of the project. Issues related to public health were determined to be less than significant during the Initial Study process; however, due to comments received from the public, public health is further analyzed in the EIR. Larry Walker Associates prepared a Mosquito Technical Study for the proposed project area in January 2011. The technical study provides an analysis of the mosquito production potential of the proposed J Street Drain Project compared with the current J Street Drain and the proposed project alternatives. The complete report is included as Appendix I of the EIR.

4.11.1 Environmental Setting

Vectors

An organism, such as a mosquito or tick that carries disease-causing microorganisms from one host to another is known as a disease vector. Mosquitoes are of particular concern because of their breeding habits. The mosquito's water requirement during breeding makes areas with quantities of standing water breeding grounds for mosquitoes. Areas with natural and induced standing water (e.g., highly urban areas where rain and activities such as landscape irrigation creates water pools) are susceptible. According to the Ventura County Vector Control Program, there are typically 15 species of common mosquitoes found in Ventura County.

Mosquitoes are potential vectors of organisms that can cause disease to pets, domestic animals, wildlife, or humans. Although 12 mosquito-borne viruses are known to occur in California, only West Nile virus, western equine encephalomyelitis virus, and St. Louis encephalitis virus are significant causes of human disease in California. Mosquito-borne diseases that are of concern in Ventura County are St. Louis encephalitis (SLE), western equine encephalitis (WEE), West Nile virus (WNV), and malaria.

According to the California Department of Public Health, U.C. Davis Center for Vectorborne Diseases, Mosquito and Vector Control Association of California, and California Department of Food and Agriculture[1], the latest data on West Nile virus show that West Nile virus activity in California has been decreasing since 2004. The 2011 data demonstrate that there have been no human cases of the West Nile virus in Ventura County as of August 5, 2011. The most recent human case of West Nile virus in Ventura County was observed in 2006.[2]

Mosquito Life Cycle. The mosquito life cycle is characterized by four distinct stages: egg, larva, pupa, and adult. In those species of greatest public health concern in California, eggs are laid on the surface of standing water where they float for approximately 48 hours and then hatch as larvae. The larvae live in water, but do not have gills. Instead, they rely on a special siphon tube used to break the surface-tension of the water and breathe atmospheric air. Larvae feed on micro-organisms and organic matter in the water column, and grow in size until they metamorphose into the pupal stage. The pupal stage is a resting, non-feeding stage during which the adult mosquito develops. After a few days in the pupal stage, the winged adult emerges from the water and flies away. Adult mosquitoes must feed to survive, but only female mosquitoes take blood. They use the protein in the blood to develop eggs for the next generation

[1] California Department of Public Health, et al. "West Nile Virus Activity in California Counties 2011 Year to Date." August 5, 2011. http://www.westnile.ca.gov/home.php.
[2] California Department of Public Health, et al. "2006 Summary Table of Human Infection," "2007 Summary Table of Human Infection," "2008 Summary Table of Human Infection," "2009 Summary Table of Human Infection," "2010 Human WNV Incidence Report," and "2011 Human WNV Incidence Report." August 5, 2011. http://www.westnile.ca.gov/reports.php?report_category_id=1.

(Larry Walker Associates 2011). A single female mosquito may bite the same or multiple hosts many times.

Mosquitoes may be lured by a number of different attractants. After mating, newly emerged females are attracted to host cues such as CO_2, heat, and body odors in order to find a host and take a blood meal for egg development. After several days of rest in a protected location, their attraction shifts to odors associated with waters that are potential larval habitats. Artificial lights can be somewhat attractive to certain species, but usually only in less developed areas with few competing light sources.
Nearly all species of mosquitoes have a definite seasonality that varies depending on the geographic region (Larry Walker Associates 2011). Temperature is important in mosquito production and the development of larvae. Many mosquitoes experience a hibernation-like period where mosquito production ceases during the winter (Larry Walker Associates 2011). In Ventura County and other parts of southern California, mosquito production decreases substantially beginning in the cooler late fall or winter months and then increases from spring into summer (Larry Walker Associates 2011).

Mosquito Breeding. Mosquitoes are inherently linked to water since all the immature life stages are aquatic. However, not all sources of water are conducive to mosquito breeding. Mosquitoes generally require calm, stagnant water for breeding as opposed to open, exposed water. Flowing waters or waters with surface disturbance from wind, waves, or animals are not suitable habitat for mosquito breeding. Disturbance of the water surface can cause mosquito larvae to drown if it causes the siphon tube through which they breathe to disconnect from atmospheric air. Similarly, waters deep enough to sustain populations of fish and other aquatic organisms are not suitable habitat because mosquito larvae are a food source for these predators. Wetlands and salt marshes, especially those with unmanaged, dense, emergent vegetation, are notorious mosquito breeding habitats. Vegetation protects mosquito larvae from wind, wave, and animal disturbance and provides safe refuge from predators (Larry Walker Associates 2011). As an example, large lakes only produce mosquitoes along shorelines protected from wind and predators by vegetation. Waters that contain substantial emergent (e.g., cattails, bulrush) or floating vegetation (e.g., duckweed, hyacinth) provide refuge for developing mosquito larvae with calm, predator-free waters (Larry Walker Associates 2011). Wetlands and salt marshes, especially those with unmanaged, dense, emergent vegetation, are notorious mosquito breeding habitats.

Common Species at J Street Drain. Three main species of biting mosquitoes are commonly found in the J Street Dain area: *Culex tarsalis*, *Culex quinquefasciatus*[3], and *Culex erythrothorax*. *Culex quinquefasciatus* and *Culex tarsalis* are considered primary vectors of encephalitis viruses (e.g., West Nile virus) while the role of *Culex erythrothorax* in virus transmission is believed to be minor (Goddard et al., 2002). All three species readily bite humans and can become a nuisance, thus they are primary targets of control efforts in Ventura County and throughout the state. Each species has habitat preferences for larval development (detailed below). Because of their significance to public health and as nuisance species, the biology and ecology of these species have been well studied. Relevant specie-specific habitat preferences are described here.

- *Culex tarsalis* are opportunistic and will breed in a variety of habitats including wetlands, birdbaths, neglected swimming pools, and almost any artificial container (Larry Walker Associates, 2010). *Culex tarsalis* larvae are known to occur in brackish marshes as long as the salt content does not exceed one percent. However, *Culex tarsalis* larvae are not tolerant of polluted waters (e.g., nutrient rich waters). Adult *Culex tarsalis* are known to disperse from their origins up to several kilometers (Larry Walker Associates 2011).

[3] Synonymous with *Culex pipiens* in some locations.

- *Culex quinquefasciatus* prefer nutrient-rich waters containing high concentrations of organic matter and also have a strong affinity for underground areas such as storm drains. However, they are also opportunistic and will share many of the habitats used by *Culex tarsalis*, especially urban sources and nutrient-rich treatment wetlands. Adult *Culex quinquefasciatus* can travel up to 1.5 kilometers (0.9 miles) from their origin, but generally travel less than 1 kilometer (0.6 miles) (Larry Walker Associates 2011).
- *Culex erythrothorax* are closely tied to wetlands, preferring swamps and marshes or the margins of water bodies that contain dense, emergent vegetation such as cattails (Larry Walker Associates 2011). This species is almost never found outside these habitats. Adult *Culex erythrothorax* are known to disperse from their origins up to approximately 1 kilometer (Larry Walker Associates 2011), but the majority of adults appear to remain relatively close to their preferred wetland habitats.

Vector Control Program

The Vector Control Program of the Ventura County Environmental Health Division monitors and controls mosquito breeding in flood control channels, drains, roadside ditches, catch basins, gutters, creeks, marshes, retention and detention basins, pools, and rain water depressions. Vector Control Program staff constantly monitor and control over 2,000 potential mosquito breeding sources to prevent and minimize exposure of the public to mosquito borne diseases. Vector control staff also responds to reports of mosquitoes or potential mosquito breeding sources from the public. The mission of the program is to suppress the population of mosquitoes to minimize the potential transmission of disease and reduce annoyance caused by these insects. The Vector Control staff conducts continuous encephalitis virus surveillance, including West Nile virus, and monitors the County areas for plague, Lyme disease, and Hantavirus to prevent and minimize the exposure of the public to these diseases.

Existing Conditions

Water Levels and Water Ponding

The J Street Drain flows into the Ormond Beach Lagoon, which consists of a dynamic array of wetland, freshwater, estuarine, and marine habitats. Water levels in the lagoon and the drain are a function of the initial water level, beach conditions (elevation, width), and freshwater inflow (from the drain). The expected maximum water level is regulated by the lowest beach crest elevation or the height of the sand berm, above which a breach in the lagoon would take place (in the absence of manual breaching) and water from the lagoon would discharge into the Pacific Ocean. When the lagoon closes off to the ocean, there are times when the backed up, or “ponded” water, extends from the lagoon to just upstream of Hueneme Road in the drain. Figure 4.11-1 shows two conditions where the water surface levels are at 6.5 feet and 3.8 feet and the associated acres of water. This figure illustrates the back up of water that occurs within the lagoon and the drain. Because of the dynamic nature of the project area, the level of water at the lagoon and drain varies throughout the year. Because the water level is typically higher prior to breaching, the water ponds further upstream in the drain. At that time, the water level may reach 6.5 feet, covering about 41.6 acres of the lagoon and the drain and extending just north of Hueneme Road. After breaching, the water surface level may reach 3.8 feet, covering about 23.3 acres and ponding upstream to the railroad (VCRR). The standing water in the drain during both conditions creates potential mosquito breeding sites.

Adult Mosquito Surveillance

The Ventura County Vector Control Program (VCVCP) uses adult mosquito traps as part of their comprehensive mosquito surveillance and control plan. Traps provide the VCVCP with quantitative data vital to decision-making in regards to mosquito control for the protection of public health. Mosquitoes captured in the traps can serve some or all of the following uses: (1) to monitor mosquito abundance and species composition in a local area; (2) to collect specimens for laboratory testing to determine if disease pathogens (e.g., encephalitis viruses) are circulating within the local mosquito population; (3) to provide early detection of exotic (i.e., non-native species); and (4) to evaluate the effectiveness of local mosquito control efforts. Although trap data may help pinpoint local areas where mosquito populations require additional control, the VCVCP typically only treats bodies of water against mosquito larvae based on direct evidence of immature mosquitoes in the waterbody rather than due to the presence of adults in the area. The traps use carbon dioxide (CO_2) as an attractant and capture only female mosquitoes. However, it should be noted that traps, because they are deployed overnight, represent only a "snap shot" in time of the mosquito population in an area. Attempts are made to deploy traps during representative weather conditions.

The VCVCP has limited resources available that must be used to protect the entire County. Adult mosquito traps are deployed in areas of greatest concern, usually triggered by evidence of local disease transmission in birds, humans, or other animals, but also in response to local nuisance complaints. For this reason, the number and location of traps deployed often varies seasonally and yearly. During 2008-2010, citizen complaints from the Surfside III Condominium Complex, located in the area near the terminal end of the J Street Drain, led the VCVCP to increase their surveillance efforts in the immediate vicinity in an attempt to identify both the species present and their potential points of origin. As a result, more data were generated for this area during this two-year period than in previous years. It should also be noted that trap data are collected during the late spring through early fall. Mosquito production is generally low during the late fall and winter months, thus traps are typically not deployed at those times. This section discusses the relevant trap data collected in the J Street Drain area between 1999 and 2010. A map of the locations for which trap data were collected in the J Street Drain area is presented in Figure 4.11-2.

Data Analysis: Greater J Street Drain Area

VCVCP deployed adult mosquito traps in nine locations in the greater J Street Drain area in 2005, 2008, 2009, and 2010 (Figure 4.11-2). In locations where traps were placed more than once, data vary widely from one deployment to the next. For example, the trap site at J Street Drain near Hueneme Road captured numbers ranging from less than 25 to greater than 200 with equally variable species composition. A multitude of factors can influence the flight of adult mosquitoes and associated overnight trap captures including natural factors (such as temperature, wind, and rain) and artificial factors (such as street lights and vehicle traffic). However, adult populations also fluctuate in response to seasons, habitat availability, and control efforts. The more urban trap sites located to the north and west of Ormond Beach Lagoon, and the trap site located in the undeveloped floodplain of the Oxnard Industrial Drain, captured a substantial percentage of *Culex quinquefasciatus*. This species thrives in disturbed and nutrient-rich habitats, including belowground stormwater infrastructure (Larry Walker Associates 2011). Its opportunistic use of nearly any small source of urban water (e.g., neglected pools, ornamental ponds, clogged rain gutters, flower pots) as well as belowground sources for breeding make it challenging to control. These same traps also captured a large percentage of *Culex tarsalis*, which also thrives in urban areas, but almost never breeds belowground.

Source: Ventura County Watershed Protection District : 2009 | G:\Projects\75217_J_street\graphics\docs\Ponded_Water.ai | Last Updated : 10-26-09

Ponded Water

FIGURE 4.11-1

HDR
ONE COMPANY | *Many Solutions*℠

Source: SCAG 2005; ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\EIR\MosquitoTrapLocations1.mxd | Last Updated : 07-27-2011

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Adult Mosquito Trap Locations in the Greater J Street Drain Area

FIGURE 4.11-2

J Street Drain | Ventura County Watershed Protection District | EIR

The relatively high number of adult mosquitoes captured in traps in September 2009, combined with numerous complaints from residents of the Surfside III Condominium Complex, prompted the VCVCP to investigate the OWWTP as a possible source of increased mosquito production. The VCVCP routinely monitors several areas within the OWWTP, including the pond and inactive treatment cells, which would be likely mosquito breeding sources. In response to the resident complaints and increase in *Culex quinquefasciatus* mosquitoes captured in traps, the VCVCP requested authorization to more broadly examine the OWWTP for new mosquito breeding sources and OWWTP staff cooperated with this request. The investigation led to the detection of a large belowground flooded basement that was actively producing *Culex quinquefasciatus* mosquitoes. The flooded basement was considered a new mosquito source in the area. The VCVCP has since routinely addressed this source and other newly added smaller potential sources on the OWWTP property, in addition to the sites within the OWWTP previously monitored and treated. Trap data collected in 2010 show far fewer mosquitoes in the greater J Street Drain area, reflecting the increased control efforts at new source locations by the VCVCP. Overall, these data suggest that mosquito production is spread relatively equally within the developed areas surrounding the J Street Drain, with no evidence of sharp rises in mosquito numbers in traps located near the J Street Drain that would implicate this conveyance channel as a major source of mosquitoes. Table 4.11-1 lists locations near the J Street Drain routinely inspected for mosquitoes by the VCVCP.

Existing Treatment

The VCVCP focuses the bulk of its efforts on mosquito control, i.e. minimizing populations of vector and nuisance mosquitoes to protect public health and quality of life throughout Ventura County. The Mosquito Abatement and Vector Control District Law[4] provides authority to the VCVCP to address any altered property that supports the development, attraction, or harborage of vectors; any water that is a breeding place for vectors; and any activity that supports the development, attraction, or harborage of vectors. Mosquito control is not intended to eliminate all mosquitoes. Rather, the goal is to reduce adult mosquito populations to a level that minimizes the possibility of people and animals getting sick due to mosquito-transmitted diseases (Larry Walker Associates 2011).

Mosquito control usually occurs through an integrated pest management strategy that utilizes a variety of measures to control mosquitoes. Whereas adult mosquitoes are widespread in the environment, as discussed above, larvae must have water to develop. Therefore, larval control in aquatic habitats is the foundation of most mosquito control programs in California. Minimizing the number of adults that emerge is crucial to reducing the incidence and risk of nuisance and disease. The measures most often utilized in the mosquito control approach include habitat modification, biological controls, and chemical application. Habitat modification includes creating ditches to maintain water circulation through swamps and marshes and thinning or removing emergent vegetation within and along the margins of water bodies to maintain water movement, reduce cover, and destroy mosquito larvae. Biological controls include the use of fish and aquatic invertebrates to prey on mosquito larvae. Chemical application is a more target-direct and, therefore, more often utilized way to abate mosquitoes than habitat modification or biological controls. Mosquito control formulations can target mosquitoes during specific life cycle stages and are most effective at controlling mosquitoes during the larval stage (CDPH 2008).

[4] California Health and Safety Code, Division 3, Chapter 1.

Table 4.11-1. Existing Vector Source within Project Area

Site No.	Site Name	Site Description
1	Bubbling Springs Park drains	Concrete drain south of Hueneme Road and north of footbridge
2	Hueneme Drain Sec E	Surfside Drive to J Street Drain
3	Hueneme Drain Sec D	Hueneme Road. to south end of Bubbling Springs Park
4	Surfside catch basin	Catch basin on surfside South of Hueneme Road
5	Hueneme drain construction	Enter off Ocean View Drive-through parking lot to left
6	Oxnard Wastewater Treatment Plant-pond	Pond behind (west) of plant
7	Oxnard Wastewater Treatment Plant-cells	Individual cells and overflow area
8	Sedimentation building sump 2	Oxnard wastewater treatment plant
9	J Street Drain Sec E	Hueneme Road to beach
10	Sodium hypochlorite tank sump	Oxnard wastewater treatment plant
11	Sodium bisulfate tank 1	Oxnard wastewater treatment plant
12	Sedimentation sump 1	Oxnard wastewater treatment plant
13	Oxnard Wastewater Treatment Plant - Old influent building	Confined space hazard - flooded basement
14	West gallery sumps	Oxnard wastewater treatment plant
15	Halaco dunes wetland	Access from Ocean View Drive
16	Blower building sump	Oxnard wastewater treatment plant
17	Blower sump 2	Oxnard wastewater treatment plant
18	Aeration sump 1a	Oxnard wastewater treatment plant
19	Aeration tank ditch 1a	Oxnard wastewater treatment plant
20	Waste water treatment plant ditch	Oxnard wastewater treatment plant
21	Aeration tank 1c sump	Oxnard wastewater treatment plant
22	Aeration tank ditch 1c	Oxnard wastewater treatment plant
23	Blower sump 1	Oxnard wastewater treatment plant
24	Aeration tank 2b pathway	Oxnard wastewater treatment plant
25	Halaco-ocean overflow	Swamp area bordered by Oxnard Industrial Drain, J Street Drain, and Pacific Ocean
26	West McWane Boulevard marsh & ponding	West end of McWane Boulevard /access by dirt path along pole line
27	Oxnard Industrial Drain Sec F	Hueneme Road to beach
28	Ormond beach salt marsh	Access end McWane Boulevard by k-rail
29	Edison marsh railway ditch	Ditch along railway and agricultural fields
30	West McWane Boulevard ditch	Ditch both sides of McWane Boulevard paved section near k-rail
31	Arcturus-BMW ditch	Grass ditch in front of BMW processing facility
32	Edison marsh	Marsh east of Ormond beach salt marsh
33	South end of Edison Road, marsh	Marsh area around outside contractors parking lot
34	Edison Road canal-west side	On west side of canal at end of Edison Road
35	Edison Road ditch	McWane Boulevard to Edison plant
36	Edison Road canal, east	Canal at east side and end of Edison Road
38	Arnold Road and wetland area	Ditches along both sides of Arnold road, wetland

Site No.	Site Name	Site Description
39	End of Casper Road	Ditch and canal running north-south at end of Casper
40	Casper Road Sec A	Along both sides of road, south of Hueneme Road
41	Casper Road Sec B	Ditches on both sides of road
42	Casper Road Sec C	Ditches along both sides of Casper Road
43	Ventura Duck Club	Enter off of Casper Road. see caretaker
44	Pt. Mugu Duck Club	Enter off Hueneme Road next to Mugu drain
45	Mugu drain Sec B	Hueneme Road to 1st gate

Source: County of Ventura Environmental Health Division Vector Control Program

The application of any chemical to control mosquitoes is done only after establishing the need to do so by the presence of mosquito larvae detected during mosquito monitoring and surveillance. Larval mosquito monitoring includes identifying and checking likely larval developmental sites for the presence of mosquito larvae and then treating the water to kill the mosquito larvae before they emerge as flying, biting adults. Personnel working for vector control agencies who apply pesticides in California are certified by the California Department of Public Health (CDPH) (CDPH and MVCAC 2010). The VCVCP uses a focused approach for chemical application to target waterbodies with known mosquito breeding grounds and does not use a "blanket approach" to chemical application for all water bodies. The VCVCP applies chemicals in this manner as part of best management practices to reduce the amount of chemicals applied to waterbodies. Furthermore, it is not efficient or effective to target all waterbodies as many waterbodies have habitat characteristics which make them unlikely breeding grounds for mosquitoes, as discussed above. The VCVCP uses two categories of larvicides as part of chemical applications, both of which are considered relatively non-toxic to non-target organisms and have no documented ecological side-effects when applied according to the label:

- VectoLex (*Bacillus sphaericus*) and VectoBac (*Bacillus thuringiensis israelensis*) are microbial larvicides. These products work by exploiting insecticidal toxins found in natural bacteria that only have significant effects on the target insects (CDPH and MVCAC 2010).
- Methoprene is an insect growth regulator that comes in several formulations including extended release pellets, briquettes, and ingots, water-soluble packets, and liquid. Methoprene disrupts the physiological development of larvae, which prevents adults from emerging from the water body. Methoprene has minimal non-target effects and has no use restrictions in California (CDPH and MVCAC 2010).

It is often difficult to pin-point "hot spots" of mosquito breeding due to the vast number of potential sources in developed areas. An important tool used by vector control agencies, including the VCVCP, is adult mosquito traps. Traps are deployed in areas suspected of producing large numbers of mosquitoes based on historical data, disease surveillance data, and public complaints. Trap captures allow the VCVCP to count and identify mosquitoes to determine the potential public health risk and the need for control. Adult mosquito surveillance can also be used as a feedback or quality control mechanism to determine how effectively an overall program reduces mosquito populations (CDPH and MVCAC 2010). With limited resources, vector control programs prioritize adult mosquito surveillance for use in tracking and preventing diseases such as West Nile virus over public annoyance and treatment feedback. Public complaints are addressed through field visits to assess if additional treatment is needed, though may not result in the deployment of adult traps.

4.11.1.1 Current J Street Drain Configuration

The J Street Drain is currently a trapezoidal, concrete flood control channel approximately 20-30 feet wide with 1.5:1 sloped walls and an average depth near 4 feet. The J Street Drain discharges into Ormond Beach Lagoon, which usually does not have an outlet to the ocean. The effect of Ormond Beach Lagoon having no outlet is that water backs up into the J Street Drain nearly to Hueneme Road. While mosquito control best management practices (BMPs) largely advocate reducing or eliminating standing water in channels and drains as the primary strategy for mosquito control, the endangered species requirements in Ormond Lagoon prevent such practices.

The current J Street Drain has a concrete substrate and relatively steep sides, both of which inhibit emergent vegetation growth along the bottom and margins of the channel. Lack of vegetation can prevent mosquito production as no sheltered areas for mosquito larvae to use as refuge are provided. As described above, the current J Street Drain is 20-30 feet wide. Because of this wide, open surface, the lack of vegetative cover, and the location near the Pacific Ocean, the water surface in the drain experiences wind and wave action, especially near the beach. Even relatively minor wind and wave action on the surface of the water prevent the breathing siphons of mosquito larvae from maintaining a connection to the air, therefore effectively drowning the larvae. This makes the current J Street drain not ideal habitat for mosquito breeding. In addition, the depth of the J Street Drain allows it to support numerous fish of various sizes (Section 4.2, page 4.2-14 of this EIR) that will opportunistically prey on mosquito larvae. Recent inspections of the J Street Drain by California Department of Public Health, Vector-Borne Disease Section staff confirmed that the J Street Drain does not currently provide suitable habitat to support large mosquito populations (Larry Walker Associates 2011). Additionally, the open channel allows for safe and easy maintenance, monitoring, and treatment.

4.11.2 Regulatory Setting

Pursuant to Division 3, Chapter 5, §2001(f) of the California Health and Safety Code:

(c) In enacting this chapter, it is the intent of the Legislature to create and continue a broad statutory authority for a class of special districts with the power to conduct effective programs for the surveillance, prevention, abatement, and control of mosquitoes and other vectors.

(d) It is also the intent of the Legislature that mosquito abatement and vector control districts cooperate with other public agencies to protect the public health, safety, and welfare. Further, the Legislature encourages local communities and local officials to adapt the powers and procedures provided by this chapter to meet the diversity of their own local circumstances and responsibilities.

4.11.3 Significance Thresholds

The purpose of these guidelines is to ensure consistent and complete assessment of the project-related impacts to public health in accordance with the California Environmental Quality Act (CEQA), the *CEQA Guidelines*, the 2011 Ventura County Initial Study Assessment Guidelines, and the Ventura County Administrative Supplement implementing CEQA.

Significance must be determined on a case by case basis and is related to project type, location and other environmental factors. If it is determined that project-related impacts are significant and can be mitigated through minor project redesign or adoption of standard conditions, then project specific mitigation shall be identified.

For projects requiring testing for perchlorate and trichloroethene, the standards used for the threshold will be based on current information from the U.S. Environmental Protection Agency (EPA) Preliminary Remedial Goal and the California Department of Health Services Public Health Goal or Maximum Contaminant Level (MCL) for perchlorate and TCE in water and soil.

4.11.4 Project-Level Impact Analysis

Construction

The existing J Street Drain concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station. After reconstruction of the J Street Drain concrete lining, the channel invert would be about three feet lower than the existing invert in order to create the required channel capacity. As a result, the finished invert would need to be daylighted via an earthen ramp to the sand berm/lagoon at a 10:1 slope over a distance of approximately 40 feet from the end of the existing concrete. A 6- to 8-foot thick layer of four-ton rock riprap would be placed horizontally beneath the earthen ramp at the end of and at the same elevation as the concrete drain bottom to dissipate energy flow. It is anticipated that during the first few natural lagoon breaching events following Phase 1 construction, the movement of water (tidal and drain flow) would result in an equilibrium elevation within the channel transition area, between the end of the concrete channel and the Ormond Beach Lagoon annual breach location. When the lagoon has breached, there is a potential for temporary standing water to accumulate upstream of the earthen ramp before the new equilibrium elevation establishes at the end of the reconstructed J Street Drain. The lagoon typically breaches during the late fall and winter, when storm runoff increases the water surface elevation enough to overtop the beach sand berm. As described above, mosquito production decreases substantially in the cooler late fall and winter months. Therefore, temporary accumulation of standing water behind the earthen ramp is not expected to substantially increase mosquito production.

When the lagoon outlet is closed and the water surface elevation in Ormond Beach Lagoon is at 6.5 feet, the additional surface water acreage of the J Street Drain would be one additional acre at the completion of Phase I (north limit at Hueneme Road) and 2.6 additional acres at the completion of Phase II (north limit at Pleasant Valley Road). However, neither the changes in channel configuration nor the resulting additional back-up are expected to increase the suitability of the drain habitat for mosquito breeding.

As discussed above, the Vector Control Program currently uses larvicides for mosquito abatement, including VectoLex G and VectoBac G, which are applied according to the manufacturer's label and meet all state and federal regulations. These larvicides contain biological insecticides, such as the microbial larvicides, *Bacillus sphaericus* and *Bacillus thuringiensis israelensis*, which are naturally occurring bacteria that produce toxins targeting various species of mosquitoes, fungus gnats, and black flies. Only these species are susceptible to these bacteria – other aquatic invertebrates and non-target insects are unaffected. In addition, the EPA evaluates and registers (licenses) pesticides to ensure that they can be used safely by vector control programs. To evaluate any pesticide, EPA assesses a wide variety of tests to determine whether a pesticide has the potential to cause adverse effects on humans, wildlife, fish and plants, including endangered species and non-target organisms. Therefore, the larvicides used by the Ventura County Vector Control Program undergo extensive testing prior to registration and are virtually nontoxic to humans and do not pose risks to wildlife, non-target species, or the environment when applied according to label instructions.

Potential vector impacts associated with mosquitoes may occur due to increased areas of temporary standing water within the J Street Drain concrete channel between the lagoon and Hueneme Road. As discussed above, the Ventura County Vector Control Program's ongoing mosquito abatement activities

are expected to effectively control mosquito populations without impacting other, desirable species after the construction of J Street Drain concrete channel and earthen ramp. In addition, the widened channel would continue to be subject to wind and wave disturbance, as is the existing channel. Deeper water within the channel would support a larger population of fish and other predatory aquatic life than currently exists. Therefore, this impact is considered less than significant.

Operations

The proposed J Street Drain project includes changing the existing open trapezoidal concrete channel into an open rectangular channel with vertical rather than sloped walls. The channel would be approximately four feet deeper and the existing sloped channel walls would be replaced with vertical walls. Conversion to vertical channel walls would eliminate existing shallow water along the edges of the channel. The wider, deeper channel will increase the overall capacity of the channel and convey greater volumes of flood water to prevent the channel from over-topping and causing damage to property and vital facilities. The change in channel geometry would increase the depth, surface area, and length of backed up water. When the lagoon outlet is closed and the water surface elevation in Ormond Beach Lagoon is at 6.5 feet, the additional surface water acreage of the J Street Drain would be one additional acre at the completion of Phase I and 2.6 additional acres at the completion of Phase II. However, neither the changes in channel configuration nor the resulting additional back-up are expected to increase the suitability of the drain habitat for mosquito breeding. The proposed changes in the channel geometry will likely amplify the design characteristics' negative effects on mosquito breeding. Vertical channel walls are considered the most desirable design choice to reduce potential for vegetative or other cover along the channel margins and present the best scenario for preventing refuge for immature mosquitoes. Additionally, the deeper channel will provide better habitat for predator fish while the wider channel will increase wind, wave, and animal disturbances of the water surface. The proposed channel geometry will not reduce the ease or safety of access for mosquito monitoring and treatment or channel maintenance.

Due to endangered species constraints, the deepening of the J Street Drain as part of the proposed project would not extend into Ormond Beach Lagoon. Following a breach event, this could result in a situation where the majority of the J Street Drain empties, while a section of standing water remains at the terminus of the drain where the elevation is lower than the lagoon. This scenario is not expected to increase the probability of mosquito production for the following reasons:

1) Vertical walls, lack of vegetation, and wind action would maintain poor mosquito habitat similar to pre-breach conditions
2) Fish living in coastal lagoons, such as the tidewater goby, are adapted to tolerate fluctuations in water level and should remain in the channel providing predation and additional surface water disturbance.
3) Breach events usually take place during the colder winter months when mosquito production is low; therefore, any short-term creation of habitat prior to the lagoon refilling would not be expected to produce a substantial number of mosquitoes.

It should also be noted that breaches close relatively quickly, and the continuous flow in the channel would refill the drain, preventing this configuration from persisting. Furthermore, it is expected that the depth of the drain and the lagoon would equalize over time such that standing water may not remain in the drain during future breaches. Therefore, this impact is considered less than significant.

Beach Elevation Management Plan

The Beach Elevation Management Plan (BEMP) is anticipated to be periodically and would only have equipment on the beach for a few hours. Grooming the beach elevation would ensure the lagoon breaches naturally before adjacent developed properties can become flooded. As discussed previously, the breaching of Ormond Beach Lagoon would decrease the water level in the lagoon and the drain. Standing water and potential mosquito breeding sites would decrease as a result of the BEMP, however mosquito populations are expected to be low when the BEMP would be implemented in the fall and winter. The Ventura County Vector Control Program would continue to conduct mosquito surveillance and abatement activities as needed within the project area. Therefore, no impact is identified for this issue area.

4.11.5 Cumulative-Level Impact Analysis

Construction

The construction of the proposed project would result in temporary ponding at the transition area between the end of the concrete channel and Ormond Beach Lagoon. Construction of the proposed project would not result in a project-level significant impact to public health. In addition, other proposed projects near J Street Drain would not increase the amount of standing water in the project vicinity. Therefore, a less than significant cumulative impact would result.

Operations

The wider, deeper channel will increase the overall capacity of the channel and convey greater volumes of flood water to prevent the channel from over-topping and causing damage to property and vital facilities. The change in channel geometry would increase the depth, surface area, and length of backed up water. There is a potential for temporary standing water to accumulate upstream of the earthen ramp before the new equilibrium elevation establishes at the end of the reconstructed J Street Drain. When the water surface elevation in Ormond Beach Lagoon is at 6.5 feet, the additional surface water acreage of the J Street Drain would be one additional acre at the completion of Phase I and 2.6 additional acres at the completion of Phase II. However, neither the changes in channel configuration nor the resulting additional back-up are expected to increase the suitability of the drain habitat for mosquito breeding.

The Ventura County Vector Control Program would continue to conduct mosquito surveillance and abatement activities within the project area during operation. Operation of the proposed project would not result in a project-level significant impact to public health. In addition, other proposed projects near J Street Drain would not increase the amount of standing water in the project vicinity. Therefore, a less than significant cumulative impact would result.

Beach Elevation Management Plan

The Beach Elevation Management Plan (BEMP) would be implemented periodically and would only have equipment on the beach for a few hours. Grooming the beach elevation would ensure the lagoon breaches naturally before adjacent developed properties can become flooded. As discussed previously, the breaching of Ormond Beach Lagoon would decrease the water level in the lagoon and the drain. Implementation of the BEMP would not result in a project-level impact to public health. Therefore, no cumulative impact would result.

4.11.6 Mitigation Measures

No significant impacts were identified, therefore no mitigation is required.

4.11.6.1 Ventura County Watershed Protection District Best Management Practices

The Ventura County Board of Supervisors adopted the District's Final Program EIR for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program Project No. 80030 in May 2008. The final document includes BMPs that have been added to the District's Maintenance Activity Guidelines. The Operation and Maintenance Division staff will be responsible for ensuring the proper implementation of the BMPs on a routine, year-round basis. The Division staff will also be responsible for ensuring compliance with all permit conditions, conducting or employing qualified personnel for any required pre-project site surveys or inspections, updating the Activity Guidelines sheets, instructing crews on BMPs, overseeing certain BMP implementation, documenting the implementation of the BMPs, and conducting any agency coordination.

The following BMPs will be implemented to minimize impacts during operation:

- *Aquatic Pesticide BMPs.* The District shall follow the most up-to-date BMPs and the monitoring and reporting requirements in the District's NPDES Stormwater Quality Management Plan (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000, available at http://vcstormwater.org/documents/workproducts/stormwater_quality_mangement_plan.pdf) when applying herbicides to channels and basins. The District shall also follow BMPs in the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides (included in Appendix I).

4.11.7 Response to Notice of Preparation Comments

After the Notice of Preparation (NOP) comment period, the Surfside III Condominium Owners' Association J Street Drain Project Committee commented that the proposed project would result in increased standing water containment and mosquito infestation in the project area and requested that public health be addressed in the EIR. A detailed mosquito analysis was prepared based upon this response and is included in Appendix I. There is a potential for temporary standing water to accumulate upstream of the earthen ramp before the new equilibrium elevation establishes at the end of the reconstructed J Street Drain. When the water surface elevation in Ormond Beach Lagoon is at 6.5 feet, the additional surface water acreage of the J Street Drain would be one additional acre at the completion of Phase I and 2.6 additional acres at the completion of Phase II. However, neither the changes in channel configuration nor the resulting additional back-up are expected to increase the suitability of the drain habitat for mosquito breeding.

Furthermore, mosquito surveillance and abatement activities conducted by the Ventura County Vector Control Program within the project area would continue after the project is completed. As a result, impacts related to public health would be less than significant.

4.12 GREENHOUSE GAS EMISSIONS

This section examines potential global climate change impacts associated with the proposed J Street Drain Project. A Global Climate Change Evaluation was prepared by Scientific Resources Associated (2011) and is included as Appendix H.

4.12.1 Environmental Setting

Greenhouse gases (GHG) include both naturally occurring and anthropogenic gases that trap heat in the earth's atmosphere. GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). These gases capture heat radiated from the sun and re-radiated from the earth's surface as it is reflected back into the atmosphere, roughly analogous to the retention of heat energy in a greenhouse. The accumulation of GHGs has been implicated as a driving force for global climate change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and the impact of human activities that alter the composition of the global atmosphere.

Both natural processes and human activities emit GHGs. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. Although there is disagreement as to the speed of global warming and the extent of the impacts attributable to human activities, the majority of the scientific community now agrees that there is a direct link between increased emission of GHGs and long-term global temperature. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. One of the purposes of the J Street Drain project is to improve stormwater flow and reduce potential flooding in the cities of Oxnard and Port Hueneme. The project would therefore alleviate potential flooding impacts in the event that global climate change affects the severity of storms and runoff or raises sea level.

The accumulation of GHGs in the atmosphere regulates the earth's temperature; however, emissions from human activities such as electricity production and motor vehicles have elevated the concentration of GHGs in the atmosphere. In 2005, in recognition of California's vulnerability to the potential effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which California emissions of GHG would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Ozone-depleting gases contribute to the destruction of the earth's naturally occurring ozone, which protects our planet from the damaging effects of solar ultraviolet radiation. The biggest contributors to ozone depletion are chlorofluorocarbons (CFCs), halons, carbon tetrachloride, methyl chloroform, and other halogenated compounds.

4.12.2 Regulatory Setting

Assembly Bill 32

In 2006, California passed Assembly Bill (AB 32), the California Global Warming Solutions Act of 2006, which requires the California Air Resources Board (ARB) to design and implement emission limits, regulations, and other measures, such that California GHG emissions will be reduced to 1990 levels by 2020. AB 32 required that by January 1, 2008, ARB would determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. ARB adopted its Scoping Plan in December 2008, which provided estimates of the 1990 GHG emissions level and identified sectors for the reduction of GHG emissions. The ARB has estimated that the 1990 GHG emissions level was 427 million metric tons (MMT) net CO_{2e}. The ARB estimates that a reduction of 173 MMT net CO_{2e} emissions below business-as-usual would be required by 2020 to meet the 1990 levels (ARB 2007b). This amounts to a 15 percent reduction from today's levels, and a 30 percent reduction from projected business-as-usual levels in 2020.

Senate Bill 97

Senate Bill (SB) 97, enacted in 2007, amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directs the Governor's Office of Planning and Research (OPR) to develop draft CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" by July 1, 2009 and directs the Resources Agency to certify and adopt the CEQA guidelines by January 1, 2010.

OPR Technical Advisory, CEQA and Climate Change

The OPR published a technical advisory on CEQA and Climate Change on June 19, 2008. The guidance did not include a suggested threshold, but stated that the OPR has asked CARB to recommend a method for setting thresholds which will encourage consistency and uniformity in the CEQA analysis of greenhouse gas emissions throughout the state." The OPR does recommend that CEQA analyses include the following components: (1) identify greenhouse gas emissions; (2) determine significance; and (3) mitigate impacts. In April 2011, the OPR published its proposed revisions to CEQA to address GHG emissions.

California Air Pollution Control Officers Association

In January 2008, the California Air Pollution Control Officers Association (CAPCOA) issued a white paper on evaluating and addressing GHGs under CEQA entitled *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*. This resource guide was prepared to support local governments as they develop their programs and policies around climate change issues. The paper was intended to provide a common platform of information about key elements of CEQA as they pertain to GHG, including an analysis of different approaches to setting significance thresholds. The paper discussed a range of GHG emission thresholds that could be used.

Senate Bill 375

Senate Bill 375 requires that regions within the state which have a metropolitan planning organization must adopt a sustainable community's strategy as part of their regional transportation plans. The strategy

must be designed to achieve certain goals for the reduction of GHG emissions. The bill finds that GHG from autos and light trucks can be substantially reduced by new vehicle technology, but even so "it will be necessary to achieve significant additional greenhouse gas reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 provides that new CEQA provisions be enacted to "encourage developers to submit applications and local governments to make land use decisions that will help the state achieve its goals under AB 32," and that "current planning models and analytical techniques used for making transportation infrastructure decisions and for air quality planning should be able to assess the effects of policy choices, such as residential development patterns, expanded transit service and accessibility, the walkability of communities, and the use of economic incentives and disincentives."

4.12.3 Significance Thresholds

As defined in Appendix G of the *California Environmental Quality Act* (*CEQA) Guidelines*, impacts to Global Climate Change would be considered significant if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

As discussed in Section 15064.4 of the *CEQA Guidelines*, the determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency, consistent with the provisions in Section 15064. Section 15064.4 further provides that a lead agency should make a good-faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate, provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or
2) Rely on a qualitative analysis or performance based standards. Section 15064.4 also advises a lead agency to consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:
    a) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
    b) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
    c) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

CAPCOA recommended a threshold of 900 metric tons of CO_{2e} emissions as a threshold below which no further evaluation would be required, and no significant impact would occur (CAPCOA 2008). Lead

agencies have utilized this threshold as an initial screening threshold to determine whether further evaluation is required.

To date, Ventura County has not adopted specific quantitative thresholds of significance for GHGs. The County has reviewed thresholds and approaches for evaluating significance based on guidance issued by the South Coast Air Quality Management District (SCAQMD), the Bay Area Air Quality Management District, and the San Joaquin Valley Air Pollution Control District, but has not implemented any of the approaches used by these agencies.

On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is the lead agency. On September 28, 2010, the SCAQMD recommended a threshold of 10,000 metric tons of CO_{2e} annually for industrial projects. Given the nature of the project as a temporary construction project, for the purpose of this document, the significance of impacts has been evaluated based on the SCAQMD's interim threshold for industrial projects of 10,000 metric tons of CO_{2e} annually.

The Council on Environmental Quality (CEQ) has also issued draft guidance directing Federal agencies on consideration of the effects of GHG emissions in National Environmental Policy Act (NEPA) documents. The CEQ indicated that the environmental analysis and documents in the NEPA process should provide the decision maker with information on: (1) the GHG emissions effects of a proposed action and alternatives; and (2) the relationship of climate change effects to a proposed action or alternatives, including the relationship to proposed design, environmental impacts, mitigation, and adaptation measures. The draft guidance indicated that if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO_{2e} GHG emissions on an annual basis, agencies should conduct a qualitative and quantitative analysis of GHG impacts. The CEQ does not propose this level as an indicator of a threshold of significant effects, but rather as an indicator of the minimum level of GHG emissions that may warrant some description in the NEPA analysis.

Because the SCAQMD's interim threshold of 10,000 metric tons of CO_{2e} for industrial projects is more stringent than the CEQ's guideline of 25,000 metric tons of CO_{2e} on an annual basis, the SCAQMD's threshold was utilized. The SCAQMD also recommends that, to evaluate the Project's contribution of GHG emissions over a project lifetime (assumed to be 30 years), the project's construction GHG emissions be amortized over a 30-year period. The amortization approach has been followed in this analysis to assess the potential significance of construction emissions.

4.12.4 Project-Level Impact Analysis

Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions

The main source of GHG emissions associated with the proposed project is from combustion of fossil fuels in construction equipment. Construction GHG emissions were calculated using the URBEMIS Model, Version 9.2.4. The URBEMIS Model contains the most recent emission factors from the Air Resources Board's EMFAC2007 and OFFROAD models. Model outputs are provided in Appendix A of EIR Appendix H. The URBEMIS Model provides estimates of CO_2 emissions only; to estimate emissions of CH_4 and N_2O, the relative emission rates from combustion of diesel fuel were used to derive conversion factors. The CO_2-equivalent emissions were calculated by multiplying the emissions of GHG by their global warming potential, and then summing the emissions. As shown in Table 4.12-1, amortized

construction emissions would contribute 804 metric tons annually to the lifetime of the project (30 years). The emissions are below the SCAQMD's annual threshold for industrial projects of 10,000 metric tons of CO_{2e}, and, when amortized, are below the CAPCOA recommended threshold of 900 metric tons of CO_{2e} emissions. A less than significant impact is identified.

Table 4.12-1. Estimated Construction GHG Emissions

Construction Phase	Total Emissions per Phase, Metric Tons[1]			
	CO_2	CH_4	N_2O	CO_2e[2]
Phase I	6,206	0.35	0.16	6,262
Phase II	5,968	0.34	0.15	6,022
Phase III	5,866	0.34	0.15	5,920
Phase IV	5,864	0.34	0.15	5,918
Total CO_2e Emissions, metric tons				24,122
Amortized CO_2e Emissions, metric tons				804

Source: Scientific Resources Associated, 2011
1. Metric tons are calculated by dividing the total short tons by a factor of 1.1023
2. Conversion Factors:
   CO_2 1
   CH_4 21
   N_2O 310

Operational Emissions

Operational impacts associated with the proposed project are associated with ongoing maintenance activities. It is anticipated that maintenance of the reconstructed drain will be similar to the existing maintenance activities.

In order to programmatically address operational activities associated with ongoing maintenance, the Ventura County Watershed Protection District prepared a Program Environmental Impact Report (EIR) for the *Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program*. The Final Program EIR for was certified in May 2008. The environmental protection measures proposed by the District aim to reduce the current administrative process to comply with agreements and permits necessary for the maintenance activities at the District's facilities. Currently, many of the District's facility maintenance activities occur in drainages, watercourses, creeks, basins, and water bodies where such activities are regulated by several state and federal agencies. Typical maintenance activities include sediment removal and vegetation control to maintain capacity within the facility. The modification to the bed, bank, and/or vegetation in a natural drainage (and certain man-made drainages) is regulated by the California Department of Fish and Game (CDFG) under Section 1600 et seq. of the Fish and Game Code, by the US Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act, and by the Regional Water Quality Control Board (RWQCB) under Section 401 of the Clean Water Act.

In the Program EIR, GHG emissions attributable to operation and maintenance activities were evaluated. The main source of emissions associated with operation and maintenance activities was from vehicles. It was estimated that operation and maintenance activities would contribute 23.04 metric tons per year of CO_2e from light-duty vehicles and 44.30 metric tons per year of CO_2e from heavy duty vehicles, for a total of 67.34 metric tons per year. Operation and maintenance activities for the proposed project would

be included in this estimate. Maintenance activities associated with the proposed J Street Drain would be similar to the activities currently taking place for the existing drain maintenance. Therefore, no new GHG impacts would result from the proposed drain maintenance activities during project operation.

The Program EIR identified climate action strategies that will reduce GHG emissions to the extent possible. These measures include discrete early action measures proposed by the ARB to reduce GHG emissions in their Scoping Plan (ARB 2008), as well as measures identified in the Association of Environmental Professionals (AEP) White Paper (AEP 2007). The ARB discrete early action measures and AEP climate action strategies that are relevant to operational emissions associated with operation and maintenance activities for the J Street Drain, as identified in the EIR, include the following:

- Implementation of the Low Carbon Fuel Standard. This standard will be implemented state-wide through fuels programs regulated by the ARB.
- Reduction of HFC-134a emissions from non-professional servicing of motor vehicle air conditioning systems. Vehicle maintenance is conducted by County automotive professionals, and employees are prohibited from servicing District vehicles.
- Diesel anti-idling provisions that limit motor vehicle idling to 5 minutes or less from commercial vehicles. The ARB has promulgated a rule that applies to commercial vehicles.
- Alternative fuels: the ARB is evaluating requirements to require the use of 1 to 4 percent biodiesel in California fuels, and evaluating increasing the use of ethanol in fuels.
- Achieve a statewide goal of 50 percent recycling. Recycling of construction waste is currently mandated by the County's Integrated Waste Management Division (Ordinance 4357) and is a requirement of all contracts for operation and maintenance work within Ventura County.

The J Street Drain project will comply with these climate action measures and will reduce GHGs to the extent feasible. Impacts would be less than significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a storm event is forecast. These trips are expected to be infrequent and would not be characterized as generating excessive emissions. Therefore, a less than significant impact is identified for this issue area.

Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Construction and Operation

Emissions of GHGs were evaluated for both construction and operation of the J Street Drain Project. The main source of emissions associated with the project would be construction activities. Operational emissions would be unchanged from existing conditions. Emissions from construction would be below the SCAQMD's interim threshold of 10,000 metric tons of CO_2e annually for industrial projects, and, when amortized, would be below the CAPCOA recommended threshold of 900 metric tons of CO_2e emissions. Impacts would be less than significant.

Beach Elevation Management Plan

The BEMP would be implemented periodically and would result in occasional trips to the beach during the rainy season when a storm event is forecast. These trips are expected to be infrequent, would not be characterized as generating excessive emissions, and would not conflict with any applicable plan, policy or regulation related to greenhouse gas emission. Therefore, a less than significant impact is identified for this issue area.

4.12.5 Cumulative-Level Impact Analysis

The proposed project would result in an incremental increase in GHG emissions. However, as shown in the analysis above, the emissions are below the SCAQMD's annual threshold for industrial projects of 10,000 metric tons of CO_2e, and, when amortized, are below the CAPCOA recommended threshold of 900 metric tons of CO_2e emissions. When added to the projects identified in Table 2.0-3, Cumulative Projects, the incremental increase in GHG emissions from the proposed project would not be significantly considerable. Therefore, a less than significant impact is identified.

4.12.6 Mitigation Measures

The project impacts were determined to be less than significant therefore, no mitigation is required. Additionally, mitigation measures AQ-1 identified in Section 4.4, Air Quality, would reduce ozone precursor emissions to a less than significant level. Operational BMPs discussed in Section 4.12.4 and previously adopted by the District would aid in minimizing potential GHG emissions.

4.12.7 Significance After Mitigation

As presented in Section 4.12.4 and 4.12.5, no mitigation is required. Project- and cumulative-level GHG emissions are less than significant.

4.12.8 Response to Notice of Preparation Comments

There were no Notice of Preparation (NOP) comments regarding greenhouse gas emissions.

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5.0 ALTERNATIVES

The identification and analysis of alternatives is a fundamental concept under California Environmental Quality Act (CEQA). This is evident in that the role of alternatives in an Environmental Impact Report (EIR) is set forth clearly and forthrightly within the CEQA statutes. Specifically, CEQA §21002.1(a) states:

> *"The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."*

The *CEQA Guidelines* require an EIR to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (*CEQA Guidelines* §15126.6(a)). The *CEQA Guidelines* direct that selection of alternatives focus on those alternatives capable of eliminating any significant environmental effects of the project or of reducing them to a less-than significant level, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly. In cases where a project is not expected to result in significant impacts after implementation of recommended mitigation, review of project alternatives is still appropriate.

The range of alternatives required within an EIR is governed by the "rule of reason" which requires an EIR to include only those alternatives necessary to permit a reasoned choice. The discussion of alternatives need not be exhaustive. Furthermore, an EIR need not consider an alternative whose implementation is remote and speculative or whose effects cannot be reasonably ascertained. Alternatives that were considered but were rejected as infeasible during the scoping process should be identified along with a reasonably detailed discussion of the reasons and facts supporting the conclusion that such alternatives were infeasible.

Based on the alternatives analysis, an environmentally superior alternative is designated among the alternatives. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives (*CEQA Guidelines* §15126.6(e)(2)).

5.1 CRITERIA FOR ALTERNATIVES ANALYSIS

The J Street Drain Project is to provide flood control protection for the residents and properties along J Street from a 100-year flood. The primary objectives of the project are:

- Flood control protection – increase drain size to provide capacity for 100-year flood flow;
- Maintain the existing functional characteristics of the Ormond Beach Lagoon;
- Ensure project compatibility with future Ormond Beach Lagoon restoration plans;
- Minimize the disturbance to tidewater goby habitat downstream of the J Street lined channel;
- Minimize operation and maintenance requirements, especially during storms; and
- Minimize effects on water quality of the lagoon.

The following analysis focuses on identifying alternatives that can reduce or avoid the identified significant impacts. Significant but mitigated impacts have been identified for visual resources, biological resources, water resources and hydraulic hazards, transportation and circulation, geologic and

seismic hazards, noise, and cultural resources. Residences are located within five feet of the drain in the Surfside III condominium community, and within 50 feet of the drain north of this area. Several different design alternatives were considered for the project and are identified in Sections 5.2 through 5.3 of the EIR. All of these alternatives would require construction of some type that would result in elevated noise levels at adjacent sensitive receptors. The only alternative that would eliminate construction-related noise is the "no project" alternative, which is analyzed in Section 5.3.

5.2 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

In addition to specifying that the EIR evaluate "a range of reasonable alternatives" to the project, Section 15126.6(c) of the *CEQA Guidelines* requires that an EIR identify any alternatives that were considered but were rejected as infeasible. The following outlet alternatives, dike system and natural system with the restoration project, were considered for analysis in the Draft EIR, but were not considered for further evaluation. These alternatives are described below, along with a discussion of why they were rejected from further consideration.

5.2.1 Outlet Alternative A: Dike System

Under this alternative, flow from the J Street Drain is allowed to drain directly into the Pacific Ocean, essentially bypassing the Ormond Beach Lagoon. This alternative would require channeling of the beach including the construction of a berm on the west side of the channel. This berm would prevent flow from traveling though the Ormond Beach Lagoon as it does now. Due to sand deposition from the ocean, this alternative would require yearly maintenance to ensure that the constructed channel remains open.

By diverting drain water from the end of drain to the ocean, this alternative would remove drain water from portions of the lagoon. The dike system alternatives would reduce inflows from J Street Drain to the lagoon, creating lower water levels in the lagoon and possibly affecting the frequency at which the sand berm barrier is breached. This alternative could affect two endangered species—the California least tern and tidewater goby. The former species would be affected if the water levels in the Ormond Beach Lagoon were significantly reduced in the spring and summer when this species is foraging in the lagoon. The latter species would be affected by increased salinity in the diverted J Street Drain, particularly if the diked channel were open to the ocean during the dry season, when freshwater input is low. The high salinities in the diked channel would not support tidewater goby over the long term, as this species requires brackish water. Therefore, the extent of this species, which currently occupies the lower J Street Drain, as well as the lagoon, could diminish.

This alternative would not reduce impacts relating to other issue areas including water quality, air quality, traffic, noise, geology and soils, hazardous materials, cultural resources, utilities, and public health compared to the Preferred Alternative. However, this alternative would result in greater impacts to biological resources and is therefore eliminated from further consideration.

5.2.2 Outlet Alternative B: Natural System with the Restoration Project (California State Coastal Conservancy)

This alternative would involve leaving the end of the drain as it is, but having a managed lagoon outlet as described in the Beach Elevation Management Plan (BEMP). Under this alternative, flow from the J Street Drain is allowed to drain directly into the Ormond Beach Lagoon and out to the Pacific Ocean at its present location. This alternative would be based on the Coastal Conservancy's development of a wetland just south of the area where the Oxnard Industrial Drain flows into the Ormond Beach Lagoon.

This wetland area is to be developed/designed by the Coastal Conservatory. In this alternative, the Ormond Beach Lagoon would require little to no maintenance at the ocean outlet. As part of this alternative, the lagoon area on the east side of the J Street Drain Channel, just south of the old Hueneme Drain Channel, would be excavated down to improve outlet conditions for the J Street Drain and to increase the wetland area.

This alternative would not reduce significant impacts that have been identified for the Preferred Alternative. After reconstruction of the J Street Drain concrete lining, the channel invert would be about four feet lower than the existing invert in order to create the required channel capacity. This alternative would require excavation of the lagoon downstream of J Street Drain to facilitate the movement of water from the drain into the lagoon, potentially reducing the extent of standing water in upstream portions of the drain and transferring it to the lagoon instead. This would shift available mosquito breeding areas from an easily treated location (the J Street Drain) to one that is less accessible to Ventura County Vector Control Program (VCVCP) staff and more suitable for mosquito breeding by way of its shallow, vegetated margins. Due to the additional excavation, this alternative would result in greater impacts to air quality, traffic, noise, geologic hazards, hazardous materials, water resources, and cultural resources. Furthermore, extensive excavation within the lagoon would have greater impacts to sensitive biological resources such as tidewater goby, California least tern, and marsh habitats. Because this alternative would not reduce potential significant impacts, it was eliminated from further consideration.

5.3 EVALUATION OF ALTERNATIVES

5.3.1 Beach Outlet Alternatives

5.3.1.1 Outlet Alternative C: Preferred Outlet Alternative

The alternative is the Preferred Outlet Alternative, as discussed in Section 3.0 of this document. The analysis of the environmental impacts associated with this alternative is discussed in Sections 4.1 through 4.12 of this document. This alternative will only be discussed for comparative purposes in this section.

5.3.1.2 Outlet Alternative D: No Project

Under this alternative, the Ormond Beach Lagoon would not be altered in any way. Essentially, this alternative allows the lagoon to function as it does now with periodic natural breaching. J Street Drain would drain directly to the Ormond Beach Lagoon as it does now. In this option, the VCWPD would not modify the Ormond Beach Lagoon, and a BEMP would not be adopted. Flow from J Street Drain would continue to pass through the lagoon and out to the ocean at its present location. This alternative would accommodate future development of a wetland just south of the area where the Oxnard Industrial Drain flows into the Ormond Beach Lagoon. This wetland area may be developed/designed by the Coastal Conservancy. As part of Alternative D, maintenance personnel would need to periodically remove vegetation around the ocean outlet. This maintenance work would prevent root establishment in the ocean outlet area and allow the outlet to open more easily by natural breaching processes.

Environmental Effects

The Preferred Outlet Alternative involves excavation and construction of a new drain outlet, replacement of approximately 0.07 acres of existing rock riprap at the end of the reconstructed concrete channel, and construction of a 40-foot earthen ramp to transition the deepened channel to the higher adjacent lagoon elevation. This ramp would be temporary, since it is anticipated that the movement of water (tidal and

drain flow) during the first few natural breaching events would ultimately result in an equilibrium elevation within the drain channel transition area. The Preferred Outlet Alternative also includes adoption and possible implementation of a BEMP. Therefore, compared to the Preferred Outlet Alternative, the No Project Outlet Alternative would result in no construction-related impacts since construction or emergency breaching activities would not occur. The No Project Outlet Alternative would not impact the existing hydrology, circulation pattern, water quality, or biological resources at the Ormond Beach Lagoon. Additionally, this alternative would not result in impacts relating to other issue areas including land use and planning, air quality, traffic, noise, geology and soils, hazardous materials, cultural resources, and utilities. Compared to the Preferred Outlet Alternative, the No Project Outlet Alternative would result in fewer environmental impacts. However, when the No Project Outlet Alternative is combined with the Preferred Channel Alternative, the lack of a transition from the deepened channel to the lagoon may increase erosion of the lagoon and cause more extensive ponding of flows upstream~~, hence increasing potential mosquito breeding areas~~.

Relation to Project Objectives

This alternative would meet most of the objectives of this project including ensuring project compatibility with future Ormond Beach Lagoon restoration plans. However, ~~in the event of rare emergency conditions where the lagoon has not breached naturally,~~ the No Project Outlet Alternative does not provide an action plan for beach grooming (BEMP) to ensure sufficient flood protection for upstream properties. Furthermore, the lack of a transition between the deepened drain and the adjacent higher elevation lagoon may conflict with the objective of providing 100-year flood protection.

5.3.2 Channel Alternatives

Alternative A: Buried box culverts that would allow for planting on top (Figure 5.0-1). This alternative would require that the box culverts be strengthened to hold the additional weight of the vegetation on top.

Alternative B: This alternative is the Preferred Channel Alternative, as discussed in Section 3.0 of this document (Figure 5.0-1). The analysis of the environmental impacts associated with this alternative is discussed in Sections 4.1 through 4.12 of this document. This alternative will only be discussed for comparative purposes in this section.

Alternative C: Open rectangular channel with step (Figure 5.0-1). This alternative would have a main channel with vertical walls that would be sufficient to carry most stormwater flows, however as flow increased it would reach the step and spread out further. This would still allow for the desired capacity, but would also allow for creating a narrow recreation area on the step.

Alternative D: Two separated buried box culverts (Figure 5.0-1). Like Alternative A, this alternative would require strengthening the box culverts to allow for vegetation on top. By separating the culverts a vegetated swale would be created between the culverts. This vegetated swale could then be used to treat the stormwater runoff before it enters the culverts.

Alternative E: Natural Channel (Figure 5.0-1). This alternative would be a completely natural channel with no concrete sides or bottom. This would require a much wider channel than currently exists, and would impact the existing streets and require removal of homes on one side of the street.

Alternative F: No Project.

Figure 5.0-1. Alternatives

5.3.2.1 Alternative A: Buried Box Culverts

Alternative A would feature buried box culverts that would allow for landscaping on top. This alternative would require that the box culverts be strengthened to hold the additional weight of the vegetation on top. Having vegetation on top would allow for an aesthetic benefit for the length of J Street. However, the drain would remain an open channel south of Hueneme Road to avoid impacts to listed species.

Environmental Effects

Alternative A would not require additional right-of-way (Figure 5.0-1). This alternative would result in similar environmental impacts when compared to the Preferred Alternative. During construction, excess soil would be transported to landfills and concrete debris would be transported for recycling. This alternative would require greater soil excavation than the Preferred Alternative and may result in greater excess soil to be hauled off to landfills. Therefore, construction of this alternative would involve additional haul truck trips. With regard to air quality, construction-related oxides of nitrogen (NO_x) emissions would exceed the Ventura County Air Pollution Control District (VCAPCD) and South Coast Air Quality Management District (SCAQMD) daily thresholds of significance. However, these impacts would be less than significant due to their temporary nature and implementation of VCAPCD mitigation measures. With regard to global climate change, impacts would be similar to those analyzed in Section 4.12. Construction emissions would add to greenhouse gas emissions in the atmosphere; however, as with the proposed project, the emissions are not anticipated to exceed SCAQMD's annual threshold for industrial projects of 10,000 metric tons of carbon dioxide equivalent (CO_{2e},) and, when amortized, would be below the California Air Pollution Control Officers Association (CAPCOA) recommended annual threshold of 900 metric tons of CO_{2e} emissions. Noise construction impacts associated with this alternative would be similar to those of the Preferred Alternative and would be less than significant with incorporation of mitigation. Traffic impacts would be greater due to more haul truck trips to transport excess soil. However, traffic impacts would be less than significant with mitigation measures. The excess soil would result in a greater solid waste impact as more soil would be required to be accommodated at landfills.

Construction-related impacts to cultural resources would be the same as the Preferred Alternative as no archeological resources were found within the project area. Mitigation measures would be in place for the potential that previously unknown subsurface artifacts are encountered during ground disturbance activities. The potential for impacts to paleontological resources would be low, as it is for the Preferred Alternative. Impacts associated with geology including liquefaction and expansive soil would be similar to the Preferred Alternative as well. The construction associated with this alternative would be similar to the Preferred Alternative. Impacts are less than significant with mitigation measures.

Water and biological impacts for this alternative would result in similar impacts and mitigation measures as the Preferred Alternative because both alternatives would require similar footprints for construction.

As indicated above, waste treatment/disposal impacts associated with this alternative would be greater than the Preferred Alternative. This alternative would include a covered top for landscaping which would result in long-term visual resources benefits, thus reducing this significant impact. This alternative would not change the amount of ponded water compared to the Preferred Alternative. Public health impacts associated with mosquito breeding areas would be greater than the Preferred Alternative because the covered channel would be difficult to access and therefore mosquito treatment may be less effective.

The operation of this alternative would result in maintenance activities similar to those currently in place and the Preferred Alternative. However, the box culvert drain would not be accessible for dumping and trash would not blow into the covered drain; therefore, less maintenance with regards to trash clean up would be necessary for this alternative.

Relation to Project Objectives

This alternative would meet all of the project objectives regarding flood control protection, Ormond Beach Lagoon, and tidewater goby. Additionally, Alternative A would provide an aesthetic benefit by adding landscaping on top of the drain for the length of J Street. However, Alternative A would likely cost substantially more than the Preferred Alternative due to the increased construction and landscaping costs.

5.3.2.2 Alternative C: Open Rectangular Channel with Step

This alternative would have a main channel with vertical walls that would be sufficient to carry most stormwater flows, however as flow increased it would reach the step and spread out further. This would still allow for the desired capacity, but would also allow for creation of a narrow landscaping area on the step.

Environmental Effects

Alternative C would require additional right-of-way as evident in Figure 5.0-1. While this alternative would involve design features that differ from the Preferred Alternative, construction impacts associated with this alternative would not differ considerably.

During construction, excess soil would be transported to landfills and concrete debris would be transported for recycling. This alternative would require similar soil excavation as the Preferred Alternative and would result in similar quantities of excess soil to be hauled off to landfills. With regards to air quality, construction-related NO_x emissions would exceed the VCAPCD and SCAQMD daily thresholds of significance, but impacts would be considered less than significant due to their temporary nature. With regard to global climate change, impacts would be similar to those analyzed in Section 4.12. Construction emissions would add to greenhouse gas emissions in the atmosphere; however, as with the proposed project, the emissions are not anticipated to exceed SCAQMD's annual threshold for industrial projects of 10,000 metric tons of CO_{2e}, and, when amortized, would be below the CAPCOA recommended annual threshold of 900 metric tons of CO_{2e} emissions. Noise construction impacts associated with this alternative would be similar to those of the Preferred Alternative and would be less than significant with mitigation. Traffic construction impacts associated with this alternative would be similar to those of the Preferred Alternative, which would be less than significant with mitigation measures.

The potential for impacts to paleontological resources would be low, as it is for the Preferred Alternative.

Other construction impacts relating to cultural resources would be the same as the Preferred Alternative as no archeological resources were found within the project area. Mitigation measures would be in place for the potential that previously unknown subsurface artifacts are encountered during ground disturbance activities. Additionally, impacts associated with geology, including liquefaction and expansive soil, would be similar to the Preferred Alternative as well.

Water and biological impacts for this alternative would result in similar impacts and mitigation measures as the Preferred Alternative because both alternatives would require similar footprints for construction.

As indicated above, waste treatment/disposal impacts associated with this alternative would be similar to the Preferred Alternative. This alternative would include a narrow area on the step for vegetation which would result in long-term visual resources benefits, thus reducing this significant impact. This alternative may increase the area of ponded water compared to the Preferred Alternative, with water within the "step" channel sections being shallower and supporting vegetation. This would create more suitable habitat for mosquito breeding than the Preferred Alternative. Public health impacts associated with mosquito breeding areas would therefore be greater than the Preferred Alternative.

The operation of this alternative would require maintenance activities similar to those currently in place and the Preferred Alternative. Operational impacts would be the same as the Preferred Alternative.

Relation to Project Objectives

This alternative would also meet the project objectives with regards to flood control protection, Ormond Beach Lagoon, and tidewater goby. Additionally, Alternative C would provide an aesthetic benefit by having a vegetated step for the length of the drain. However, this alternative would require additional right-of-way which has the potential to alter the alignment of J Street.

5.3.2.3 Alternative D: Two Separated Buried Box Culverts

Like Alternative A, this alternative would require strengthening the box culverts to allow for vegetation on top. By separating the culverts a vegetated swale would be created between the culverts. This vegetated swale could then be used to treat stormwater runoff before it enters the culverts. Due to the presence of endangered California least tern and tidewater goby south of Hueneme Road (Phase 1), this alternative is only considered for Phases 2-4.

Environmental Effects

Alternative D would require additional right-of-way and relocation of existing utility compared to the Preferred Alternative (Figure 5.0-1). This alternative would result in a significant impact to utilities and would require additional mitigation measures.

Excess soil from excavation would be transported to landfills and concrete debris from demolition would be transported for recycling. This alternative would require greater soil excavation than the Preferred Alternative and may result in greater quantities of excess soil to be hauled off to landfills. Construction of this alternative would involve additional haul truck trips. Construction NO_x emissions would exceed the VCAPCD and SCAQMD daily thresholds of significance; however, impacts would be considered less than significant due to their temporary nature. With regard to global climate change, impacts would be similar to those analyzed in Section 4.12. Construction emissions would add to greenhouse gas emissions in the atmosphere; however, as with the proposed project, the emissions are not anticipated to exceed SCAQMD's annual threshold for industrial projects of 10,000 metric tons of CO_{2e}, and, when amortized, would be below the CAPCOA recommended annual threshold of 900 metric tons of CO_{2e} emissions. Noise construction impacts associated with this alternative would be similar to those of the Preferred Alternative and would be less than significant with mitigation. Traffic impacts would be greater due to more haul truck trips to transport excess soil. However, as with the Preferred Alternative, traffic impacts would be less than significant with mitigation measures. The excess soil would result in a greater solid waste impact as more soil would be required to be accommodated at landfills.

The potential for impacts to paleontological resources would be low, as it is for the Preferred Alternative.

Other construction impacts relating to cultural resources would be the same as the Preferred Alternative as no archeological resources located within the project area were found. Mitigation measures would be in place to address the potential for previously unknown subsurface artifacts to be encountered during ground disturbance activities. Impacts associated with geology including liquefaction and expansive soil would be similar to the Preferred Alternative as well.

Water and biological impacts for this alternative would result in similar impacts and mitigation measures as the Preferred Alternative because both alternatives would require similar footprints for construction. Impacts relating to waste treatment and disposal and water supply demand would be greater than the Preferred Alternative, as indicated above. This alternative would include a covered top for vegetation which would result in long-term visual resources benefits, thus reducing this significant impact. This alternative would not change the amount of ponded water compared to the Preferred Alternative. Public health impacts associated with mosquito breeding areas would be greater than the Preferred Alternative because the covered channel would be difficult to access and therefore mosquito treatment may be less effective.

The operation of this alternative would result in maintenance activities similar to those currently in place and the Preferred Alternative. However, the buried box culvert drain would not be accessible for dumping and trash would not blow into the covered drain; therefore, less maintenance with regard to trash clean up would be necessary with this alternative.

Relation to Project Objectives

This alternative would meet the project objectives with regards to flood control protection, Ormond Beach Lagoon, and tidewater goby. Additionally, Alternative D would provide an aesthetic benefit by having a landscaped median for the length of J Street. However, this alternative would likely cost substantially more than the Preferred Alternative due to increased landscaping and construction costs and the cost of relocating existing utilities.

5.3.2.4 Alternative E: Natural Channel

This alternative would be a completely natural channel with no concrete sides or bottom. This would require a much wider channel than currently exists, and would impact the existing streets and require removal of homes on one side of the street.

Environmental Effects

Alternative E would require additional right-of-way and relocation of existing utilities and homes compared to the Preferred Alternative (Figure 5.0-1). This alternative would result in a significant impact to land use and would require mitigation measures.

This alternative would require excavation and demolition during construction in order to create the natural channel. Excess soil and concrete debris would be transported to landfills and recycling centers, respectively. Regarding air quality, construction-related NO_x emissions would exceed the VCAPCD and SCAQMD daily thresholds of significance. However, impacts would be considered less than significant due to their temporary nature and the implementation of VCAPCD mitigation measures. With regard to global climate change, construction emissions would be greater and the greenhouse gas emission would be greater. The proposed project results in 804 metric tons of CO_{2e}.. Even with the increased footprint,

the emissions are not anticipated to exceed SCAQMD's annual threshold for industrial projects of 10,000 metric tons of CO_{2e}, and, when amortized, would be expected to be below the CAPCOA recommended threshold of 900 metric tons of CO_{2e} emissions.

Additionally, impacts related to noise and traffic would be of a greater degree than that associated with the Preferred Alternative since the construction footprint would be substantially larger. Further, because one side of J Street would be eliminated under this alternative, traffic impacts would likely be significant and unmitigable. After excavation and demolition, the drain would remain as a natural earthen channel and no additional construction impacts (i.e., concrete placement) would occur. Therefore, air quality, noise, and traffic construction impacts would not be as significant as those of the Preferred Alternative.

Construction impacts relating to cultural and paleontological resources would be less than significant because this alternative does not require excavation of previously undisturbed subsurface areas because the natural channel would be shallower than the concrete channel alternatives. Impacts associated with geology, including liquefaction and expansive soil, would be similar to the Preferred Alternative.

Biological impacts and mitigation measures for this alternative would be greater than the Preferred Alternative because a greater project footprint is required for construction. However, there is potential that the open channel could be used by aquatic species as habitat. Groundwater and surface water quality impacts may be significant as a result of this alternative because the natural channel allows runoff containing pollutants to percolate through the permeable surface into groundwater supply. During storm events, flows passing through the natural channel would be more turbid than flows in a concrete channel due to bed and bank erosion. Additionally, runoff flow would decrease as some runoff maybe lost due to groundwater recharge.

Impacts relating to waste treatment and disposal would be greater than the Preferred Alternative as a result of the larger volume of soil that would be transported to the landfill.

This alternative would potentially result in long-term benefits to visual resources due to the aesthetic value of an open channel. The impact to visual resources would therefore be less than the Preferred Alternative. This alternative might increase the area of ponded water compared to the Preferred Alternative. Suitable mosquito breeding habitat would be more extensive because of shallower flow depth and availability of vegetation to shelter larvae from wind, waves, and natural predators. Public health impacts resulting from larger mosquito breeding areas would be greater than the Preferred Alternative.

The operation of this alternative would require maintenance activities similar to those currently in place and the Preferred Alternative; however, maintenance activities would potentially have to occur more frequently. In the natural channel option desired vegetation would be planted within the channel to help maintain slopes and minimize erosion. However, the vegetation would need to be trimmed and maintained by the District to prevent reduction of capacity. Therefore, maintenance for the natural channel alternative may be greater than the Preferred Alternative.

Relation to Project Objectives

This alternative would meet the project objectives regarding flood control protection. However, this alternative may not meet project objectives regarding Ormond Beach Lagoon and tidewater goby since the greater project footprint and natural channel have the potential to introduce greater quantities of polluted runoff, particularly turbid flows, into tidewater goby habitat and/or groundwater supply. Conversely, converting the existing concrete channel to an earthen channel could increase the area of

potential breeding habitat for tidewater goby, as this species burrows into channel or lagoon sediments to deposit eggs. This alternative would likely cost more than the Preferred Alternative due to the increased costs of construction and maintenance associated with removal of homes and maintaining the natural channel. Further, this alternative would eliminate part of an existing housing community, require substantially more rights-of-way, and eliminate a portion of J Street.

5.3.2.5 Alternative F: No Project

The No Project alternative, required by law to be evaluated in the EIR, considers ”existing conditions as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services” [*CEQA Guidelines* Section 15126.6 (e)(2)].

Environmental Effects

This alternative would not result in any of the construction- or BEMP-related impacts associated with the Preferred Alternative since no construction would occur and a BEMP would not be established. However, without the increase in flood protection the local area would continue to be susceptible to ~~increased~~ flooding~~, as well as federal requirements to purchase flood insurance for properties within an identified flood area~~.

Relation to Project Objectives

This alternative would not meet the project objectives with regards to flood control protection. Current conditions for Ormond Beach Lagoon and the tidewater goby would persist.

5.3.2.6 Environmentally Superior Alternative

Table 5.3-1 provides a qualitative comparison of the impacts for each alternative compared to the proposed project. As noted in Table 5.3-1, the No Project/No Development alternative would be considered the environmentally superior alternative, since it would eliminate all of the significant impacts identified for the project. However, *CEQA Guidelines* Section 15126.6(e)(2) states that “if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” Of the identified channel alternatives, Alternative A, Buried Box Culverts, would have the smallest degree of environmental impact. It would provide a long-term aesthetic benefit and therefore reduced impacts to visual resources compared to the Preferred Alternative.

Table 5.3-1. Comparison of Proposed Project to Channel Alternatives

Issue Area	Proposed Project (Alternative B)	Alternative A: Buried Box Culverts	Alternative C: Open Rectangular Channel With Step	Alternative D: Two Separated Buried Box Culverts	Alternative E: Natural Channel	Alternative F: No Project
Visual Resources	CEQA Significance: Mitigated to below a level of significance	CEQA Significance: Less than significant Compared to proposed project: Less impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Less than significant Compared to proposed project: Less impact	CEQA Significance: Less than significant Compared to proposed project: Less impact	CEQA Significance: Less than significant Compared to proposed project: Less impact
Biological Resources	CEQA Significance: Mitigated to below a level of significance	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Greater impact because greater project footprint	CEQA Significance: Less than significant Compared to proposed project: Less impact
Water Resources and Hydraulic Hazards	CEQA Significance: Mitigated to below a level of significance	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact (construction); greater impact (operation)	CEQA Significance: Potentially significant flooding hazard Compared to proposed project: Greater impact
Air Quality	CEQA Significance: Mitigated to below a level of significance	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Less than significant Compared to proposed project: Less impact

Issue Area	Proposed Project (Alternative B)	Alternative A: Buried Box Culverts	Alternative C: Open Rectangular Channel With Step	Alternative D: Two Separated Buried Box Culverts	Alternative E: Natural Channel	Alternative F: No Project
Transportation and Circulation	CEQA Significance: Mitigated to below a level of significance	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Significant even with mitigation Compared to proposed project: Greater impact because one lane would be eliminated from J Street	CEQA Significance: Less than significant Compared to proposed project: Less impact
Noise and Vibration	CEQA Significance: Mitigated to below a level of significance	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Greater impact because greater project footprint	CEQA Significance: Less than significant Compared to proposed project: Less impact
Geologic and Seismic Hazards	CEQA Significance: Mitigated to below a level of significance	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Less than significant Compared to proposed project: Less impact
Hazardous Materials and Waste	CEQA Significance: Mitigated to below a level of significance	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Less than significant Compared to proposed project: Less impact

Issue Area	Proposed Project (Alternative B)	Alternative A: Buried Box Culverts	Alternative C: Open Rectangular Channel With Step	Alternative D: Two Separated Buried Box Culverts	Alternative E: Natural Channel	Alternative F: No Project
Cultural and Paleontological Resources	CEQA Significance: Mitigated to below a level of significance	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Greater impact because greater project footprint	CEQA Significance: Less than significant Compared to proposed project: Less impact
Waste Treatment/ Disposal, Utilities	CEQA Significance: Mitigated to below a level of significance	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Similar impact	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Greater impact because need to relocate existing utilities	CEQA Significance: Mitigated to below a level of significance Compared to proposed project: Greater impact because need to relocate existing utilities	CEQA Significance: Less than significant Compared to proposed project: Less impact
Public Health	CEQA Significance: Less than significant	CEQA Significance: Potentially significant Compared to proposed project: Greater impact	CEQA Significance: Potentially significant Compared to proposed project: Greater impact	CEQA Significance: Potentially significant Compared to proposed project: Greater impact	CEQA Significance: Potentially significant Compared to proposed project: Greater impact	CEQA Significance: Less than significant Compared to proposed project: Similar impact
Greenhouse Gas Emissions	CEQA Significance: Less than significant	CEQA Significance: Less than significant Compared to proposed project: Similar impact	CEQA Significance: Less than significant Compared to proposed project: Similar impact	CEQA Significance: Less than significant Compared to proposed project: Similar impact	CEQA Significance: Less than significant Compared to proposed project: Similar impact	CEQA Significance: Less than significant Compared to proposed project: Less impact
Meets Project Objectives?	Yes	Yes	Yes	Yes	Yes	No

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6.0 OTHER ENVIRONMENTAL CONSIDERATIONS

6.1 GROWTH-INDUCING IMPACTS

This section discusses the ways in which the J Street Drain project could foster economic or population growth. Growth-inducing impacts are caused by those characteristics of a project that tend to foster or encourage population and/or economic growth. Inducements to growth include the generation of construction and permanent employment opportunities in the support sector of the economy. A project could also induce growth by lowering or removing barriers to growth or by creating an amenity that attracts new population or economic activity.

In accordance with Section 15126.2(d) of the *California Environmental Quality Act* (*CEQA) Guidelines*, an Environmental Impact Report (EIR) must *"discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth ... Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."* Two issues must be considered when assessing the growth-inducing impacts of a project:

- Elimination of obstacles to population growth: The extent to which additional infrastructure capacity or a change in regulatory structure would allow additional development in the City; and
- Promotion of economic growth: The extent to which the proposed project can cause increased activity in the local or regional economy. Economic impacts can include direct effects, such as the direction and strategies implemented within the project area and indirect or secondary impacts, such as increased commercial activity needed to serve the additional population projected from the project.

The J Street Drain project is proposed to accommodate existing 100-year flood flows. Implementation of the project would not eliminate any obstacles to population growth since the project would meet an existing demand for improved surface water drainage facilities in an area that is already developed. The project would not encourage new development in the area because of this improvement. Additionally, the project would not encourage economic growth since commercial or business components are not proposed as part of the project. Therefore, the J Street Drain project would not be growth-inducing and growth-inducing impacts would be less than significant.

6.2 INVENTORY OF UNAVOIDABLE IMPACTS

In accordance with California Environmental Quality Act *CEQA Guidelines* Section 15126(b), EIRs must include a discussion of significant environmental effects that cannot be avoided if the proposed project is implemented. There are no significant and unavoidable impacts associated with the proposed project. ~~The impact analysis, as detailed in Section 4 of this Draft EIR, concludes that the following impacts would remain significant after mitigation for impacts resulting from the proposed project.~~

~~6.2.1 Noise~~

~~Equipment that would be utilized for the construction of the J Street Drain project would generate noise exceeding the 55 A-weighted decibel (dBA) Equivalent Sound Level (L_{eq}) City of Port Hueneme daytime standard for residential areas. This noise would impact single-family homes and Surfside III Condominiums, located immediately adjacent to the J Street Drain. Although mitigation is proposed in Section 4.6 of the EIR, this mitigation would not adequately reduce construction noise to below the 55 dBA L_{eq} threshold. Aside from mitigation measures Noise-1 and Noise-2, there is no mitigation available to reduce construction-related noise. Therefore, construction-related noise would result in a significant unavoidable impact.~~

6.3 SIGNIFICANT IRREVERSIBLE CHANGES

In accordance with *California Environmental Quality Act (CEQA) Guidelines* Section 15126.2(c), an EIR must identify any significant irreversible environmental changes that would be caused by the proposed project being analyzed. Irreversible environmental changes may include current or future commitments to the use of non-renewable resources or secondary growth-inducing impacts that commit future generations to similar uses.

Construction and operation of the project will contribute to the incremental depletion of resources, predominantly of non-renewable resources. Resources such as lumber used in building construction, are generally considered renewable resources, and would be replenished over the lifetime of the project. However, the proposed project would not require the use of lumber. Non-renewable resources, such as natural gas, petroleum products, steel, copper and other materials are typically considered to be in finite supply and would not be replenished over the lifetime of the project.

Construction of the J Street Drain would result in significant impacts to California least tern, western snowy plover, and tidewater goby. Further, potential impacts would result to migratory bird nesting and foraging habitat. However, because these impacts to biological resources are temporary, they do not represent significant irreversible changes to the environment.

The majority of changes associated with the proposed project would be temporary during the construction phase. The project would not induce population growth or result in permanent impacts to biological resources, traffic, air quality, or noise. Therefore, aside from the use of non-renewable resources, the project would not result in further significant irreversible changes to the environment.

7.0 PERSONS, ORGANIZATIONS, AND AGENCIES CONSULTED

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NOTICE OF PREPARATION
J Street Drain Project
Ventura County Watershed Protection District

What's Being Done?

The Ventura County Watershed Protection District (VCWPD), acting as Lead Agency, has determined that the J Street Drain project may have a significant effect on the environment and that an Environmental Impact Report (EIR) should be prepared.

Briefly, the proposed project is anticipated to reduce local flooding along the J Street Drain during severe rainstorms. This reduction in flooding will occur by increasing the existing capacity of the Drain to convey stormwater during a 100-year storm event to the ocean. The existing, and proposed, end of the Drain is at Ormond Lagoon, an environmentally sensitive coastal wetland.

The project is anticipated to start construction mid 2009 and take approximately 12 months to complete. The project will start at the lagoon end of the Drain and work "up-stream" until complete.

Where is the Project Located?

The project is located in the median between the north and south bound traffic lanes of J Street. The project is primarily located in the City of Oxnard; however, south of Hueneme Road, the Drain forms the boundary between the cities of Oxnard and Port Hueneme. The project boundaries are anticipated to be Redwood Street to the north and Ormond Lagoon/Pacific Ocean to the south.

Why A Public Notice?

The VCWPD would like to request assistance with identifying the scope and content of the environmental information that should be addressed in the EIR.

How Do I Provide Project Input?

Please send any pertinent comments to:

Ventura County Watershed Protection District
Attn: Theresa Stevens, Ph.D.
800 South Victoria
Ventura, CA 93009-1610

Comments must be submitted by 5:00 PM, May 9, 2008. Comments may also be submitted via email on the project website: www.jstreetdrain.com.

Contacts

For more information, you may also contact Kirk Norman P.E., Project Manager at 805-654-2017, or Theresa Stevens, Sr. Environmental Specialist at 805-477-7139.

Thank you for your interest in this Watershed Protection District project!

J STREET DRAIN

INITIAL STUDY

Prepared for:

Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, CA 93009-1610
Contact: Kirk Norman, P.E., Project Manager
Theresa Stevens, Environmental Project Manager
(805) 654-2017

Prepared by:

HDR Engineering, Inc.
3230 El Camino Real, Suite 200
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(714) 730-2300

April 2008

TABLE OF CONTENTS

A. PROJECT DESCRIPTION 1

Project Background 1
Project Setting 1
Project Description 2

B. INITIAL STUDY CHECKLIST 6

C. ENVIRONMENTAL ANALYSIS 10

FIGURES

Figure 1. Regional and Vicinity Map 4
Figure 2. Project Site 5
Figure 3. Land Use 12

A. Project Description

Project Background

The proposed project involves increasing the capacity of the existing J Street Drain to the 100-year flood level. Currently, the Drain's capacity is estimated at 500 to 600 cubic feet per second (cfs), which is approximately a 5-year flood level. According to studies conducted by the Ventura County Watershed Protection District (VCWPD), the area surrounding the Drain is anticipated to flood during a severe rain event. In addition, the outlet of the channel is sometimes constrained by a sand berm (7.5 to 8 feet high) surrounding the Ormond Beach Lagoon. The sand berm hinders the direct flow path of the J Street Drain channel, which results in a reservoir of water in the lagoon.

The sand berm at the Ormond Beach Lagoon was manually breached prior to 1992 by VCWPD to create a discharge path directly to the ocean and prevent water and silt buildup in the channel. However, this practice was stopped in 1992 due to environmental concerns and restrictions. It is estimated that runoff from a 2-year storm flowing into the J Street Drain would generate enough water to fill up the lagoon and cause a natural breaching of the sand berm. Therefore, the sand berm at the Ormond Beach Lagoon breaches under existing conditions. The proposed project would allow J Street Drain to accommodate runoff from a 100-year storm event and would not include changes at the outlet of the Ormond Beach Lagoon which is currently located approximately ¾ mile downstream from the J Street Drain.

Project Setting

The project site is located along J Street, which is on the border of the City of Oxnard and City of Port Hueneme in Ventura County (Figure 1), as well as within the Ormond Beach Lagoon. The surrounding land uses consist mainly of residential development on both sides of J Street, some commercial uses near Hueneme Road, and the Oxnard Wastewater Treatment Plant (OWTP) near the lagoon.

The existing J Street Drain is a trapezoidal concrete-lined channel located along the centerline of J Street, and begins upstream at the Redwood Street crossing and ends downstream at the west boundary of the Ormond Beach Lagoon (Figure 2). The facility also includes culverts under the street crossings at the following locations:

- Redwood Street
- Teakwood Street
- Yucca Street
- Bard Road
- Pleasant Valley Road
- Clara Street
- Hueneme Road
- Railroad crossing – Ventura County Railroad (VCRR)

The existing concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station and the remaining earthen portion continues downstream before turning east at the sand berm.

Project Description

The proposed project would involve increasing the capacity of the existing channel to reduce flooding in residential and commercial areas of Oxnard and Port Hueneme, and improve stormwater flow through the J Street Drain. The existing concrete-lined channel has a depth of about 4 feet with a bottom width varying from 20 to 30 feet with 1:1 side slopes. There are various options that are being considered for the increased capacity channel and outlet. The project alternatives are identified as channel options and outlet options and these options can be combined as desired for the preferred alternative. Currently these are still being evaluated and there is no specific preferred alternative. Operation and maintenance of the proposed channel would be conducted in accordance with the Ventura County Watershed Protection District's routine operation and maintenance protocols.

Channel Alternatives

There are currently five channel alternatives being evaluated for the project:

Alternative A: Buried box culverts that would allow for planting on top. This alternative would require that the box culverts be strengthened to hold the additional weight of the vegetation on top. Vegetation on top of the channel would allow for creation of a public use trail or bike path for the length of Drain.

Alternative B: Open rectangular channel. This alternative would involve deepening the channel to increase the capacity. The channel walls would be vertical and top of the channel open.

Alternative C: Open rectangular channel with step. This alternative would have a main channel with vertical walls that would be sufficient to carry most stormwater flows, however as flow increased it would reach the step and spread out further. This would still allow for the desired capacity, but would also allow for creating a narrow recreation area on the step.

Alternative D: Two separated buried box culverts. Like Alternative A, this alternative would require strengthening the box culverts to allow for vegetation on top. By separating the culverts a vegetated swale would be created between the culverts. This vegetated swale could then be used to treat the stormwater runoff before it enters the culverts.

Alternative E: Earthen Channel. This alternative would be a earthen trapezoidal channel with no concrete sides or bottom. This would require a much wider channel than currently exists, and would impact the existing streets and require removal of homes on one side of the street. Some herbaceous vegetation may establish in the channel bottom between annual maintenance activities.

Outlet Alternatives

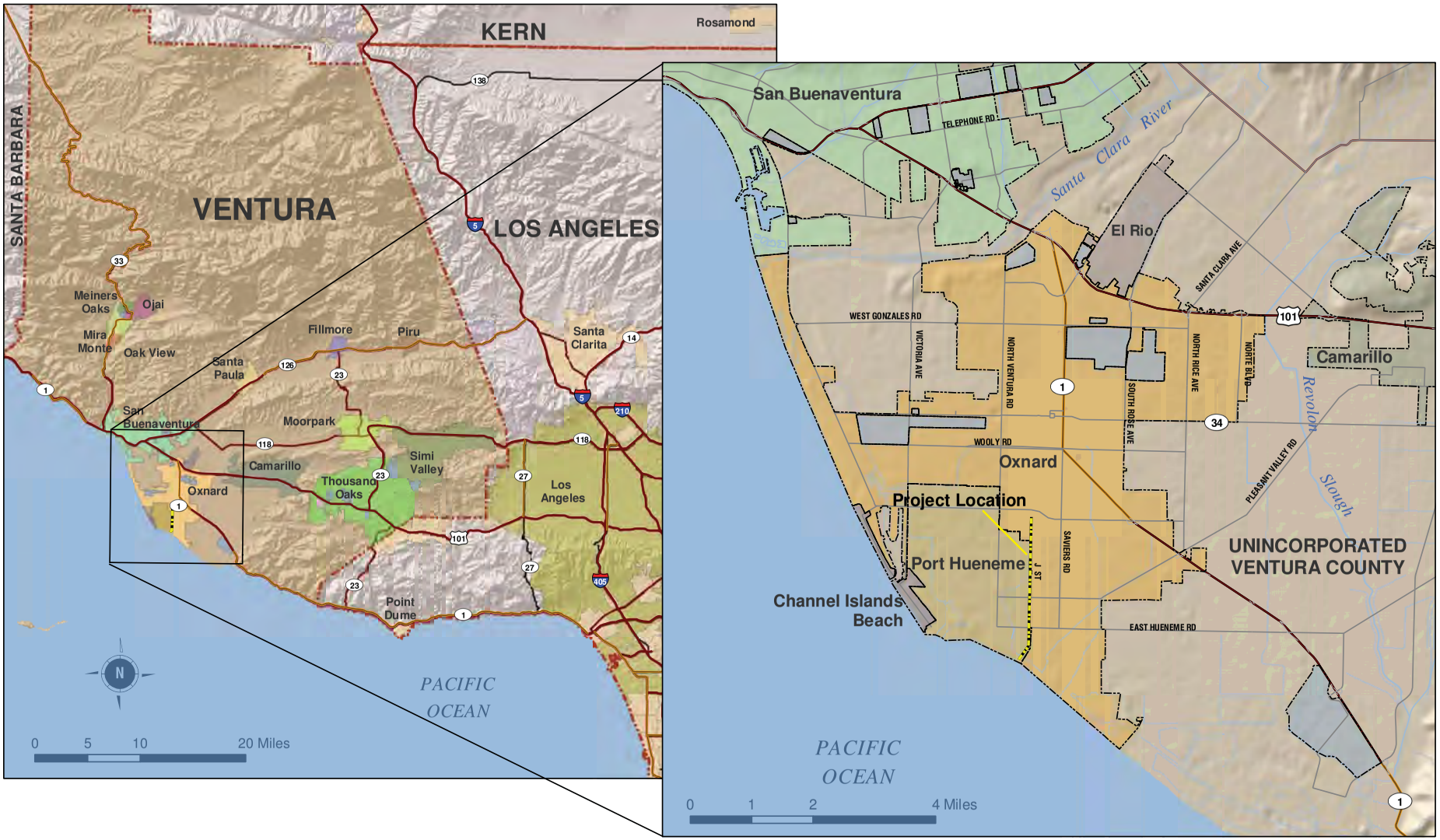
There are three outlet alternatives that are being considered. The three alternatives include:

Outlet Alternative A: Natural System. This alternative would mean that the lagoon would not be altered in any way for this project. Essentially this means the lagoon would function as it does now with the periodic breaching on it's own.

Outlet Alternative B: Dike System. This alternative would require changes to the beach and lagoon from the end of the J Street Drain to the ocean. This alternative would create a dike to direct the Drain water out through the lagoon and beach to the ocean. This would mean that the Drain water would not flow downcoast into the main portion of the lagoon. Additionally, the end of the Drain at the ocean would need to be managed to ensure that it stayed open as necessary.

Outlet Alternative C: Natural System with the Restoration Project. This project would involve leaving the end of the Drain as it is, but having a managed Lagoon outlet. The Lagoon restoration project is proposing to create a rock groin at the current 2008 location to assist with managing the Lagoon opening to the ocean. The J Street Drain water would not cause this Lagoon restoration alternative to change in any way.

These alternatives are currently undergoing engineering evaluation and a preferred alternative will be identified for the environmental document.



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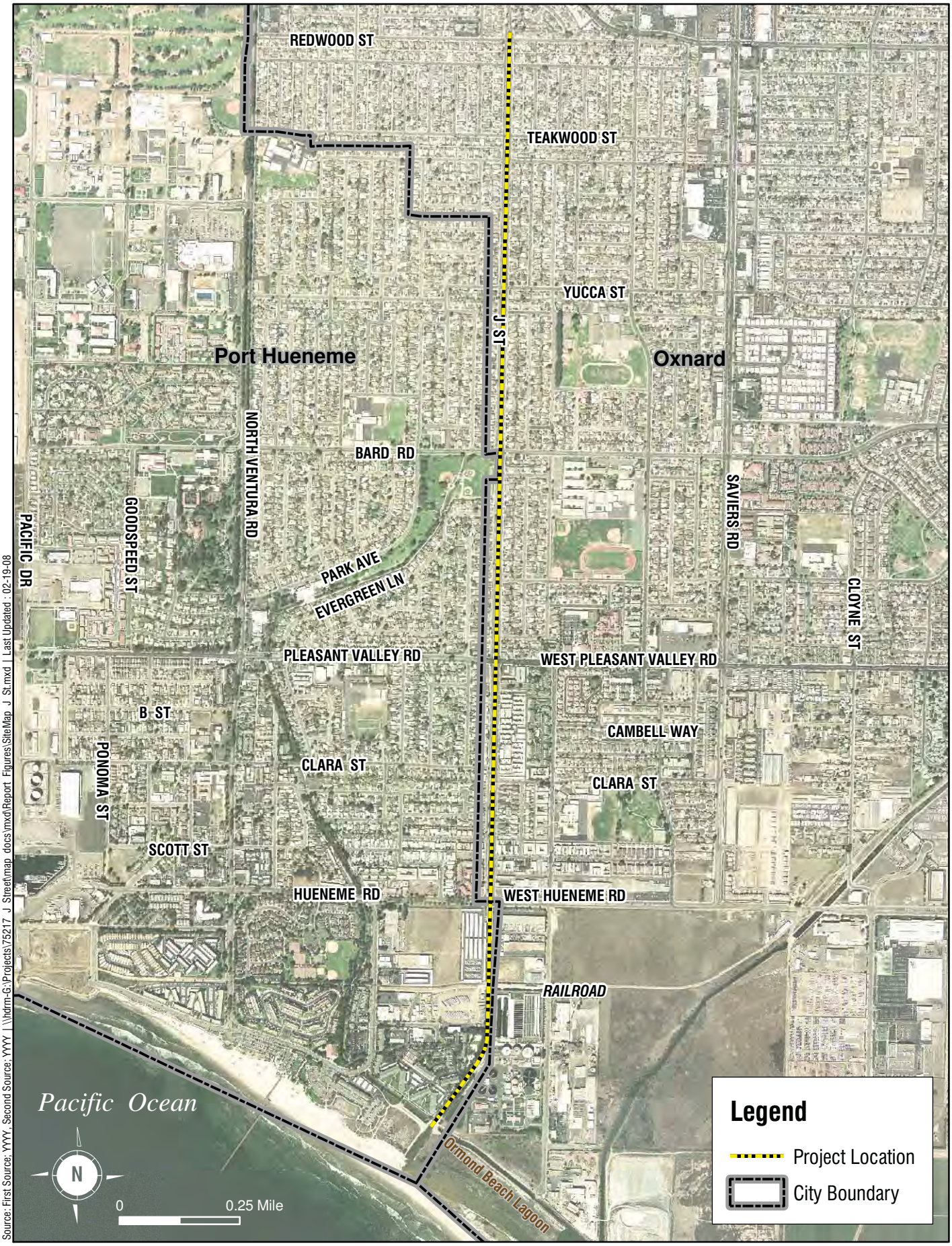
Project Regional & Vicinity Map
FIGURE 1



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Project Site

FIGURE 2

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B. Initial Study Checklist

	Issue (Responsible Department)	Project Impact Degree Of Effect*					Cumulative Impact Degree Of Effect*				
		N	LS	PS	M	PS	N	LS	PS	M	PS
General:	1. **General Plan Environmental Goals and Policies (Plng.)**			X					X		
Land Use:	2. **Land Use (Plng.):**										
	a. Community Character	X					X				
	b. Housing	X					X				
	c. Growth Inducement	X					X				
Resources:	3. **Air Quality (APCD):**										
	a. Regional		X					X			
	b. Local			X				X			
	4. **Water Resources (PWA):**										
	a. Groundwater Quantity			X				X			
	b. Groundwater Quality		X					X			
	c. Surface Water Quantity		X					X			
	d. Surface Water Quality		X					X			
	5. **Mineral Resources (Plng.):**										
	a. Aggregate	X						X			
	b. Petroleum	X						X			
	6. **Biological Resources:**										
	a. Endangered, Threatened, or Rare Species			X					X		
	b. Wetland Habitat			X					X		
	c. Coastal Habitat			X					X		
	d. Migration Corridors			X					X		
	e. Locally Important Species/Communities			X					X		
	7. **Agricultural Resources (Ag. Dept.):**										
	a. Soils	X					X				
	b. Water	X					X				
	c. Air Quality/Micro-Climate	X					X				
	d. Pests/Diseases	X					X				
	e. Land Use Incompatibility	X					X				
	8. **Visual Resources:**										
	a. Scenic Highway (Plng.)	X					X				
	b. Scenic Area/Feature			X			X				
	9. **Paleontological Resources**			X					X		
	10. **Cultural Resources:**										
	a. Archaeological			X					X		
	b. Historical (Plng.)		X					X			
	c. Ethnic, Social or Religious		X					X			
	11. **Energy Resources**	X					X				
	12. **Coastal Beaches & Sand Dunes**			X					X		

	Issue (Responsible Department)	Project Impact Degree Of Effect*					Cumulative Impact Degree Of Effect*				
		N	LS	PS	M	PS	N	LS	PS	M	PS
Hazards:	13. **Seismic Hazards (PWA):**										
	a. Fault Rupture		X					X			
	b. Ground Shaking		X					X			
	c. Tsunami		X					X			
	d. Seiche		X					X			
	e. Liquefaction		X					X			
	14. **Geologic Hazards (PWA):**										
	a. Subsidence		X					X			
	b. Expansive Soils		X					X			
	c. Landslides/Mudslides		X					X			
	15. **Hydraulic Hazards (PWA/FCD):**										
	a. Erosion/Siltation		X					X			
	b. Flooding		X					X			
	16. **Aviation Hazards (Airports)**	X					X				
	17. **Fire Hazards (Fire)**		X					X			
	18. **Hazardous Materials/Waste:**										
	a. Above-Ground Hazardous Materials (Fire)		X					X			
	b. Hazardous Materials (EH)		X					X			
	c. Hazardous Waste (EH)			X					X		
	19. **Noise and Vibration**			X					X		
	20. **Glare**	X					X				
	21. **Public Health (EH)**		X					X			
Public Facilities/ Services:	22. **Transportation/Circulation:**										
	a. Public Roads and Highways:										
	(1) Level of Service (PWA)			X				X			
	(2) Safety/Design (PWA)		X					X			
	(3) Tactical Analysis (Fire)		X					X			
	b. Private Roads and Driveways (Fire):										
	(1) Safety/Design		X					X			
	(2) Tactical Analysis		X					X			
	c. Pedestrian										
	(1) Public Facilities (PWA)		X					X			
	(2) Private Facilities		X					X			
	d. Parking (Plng.)		X					X			
	e. Bus Transit		X					X			
	f. Railroads		X					X			
	g. Airports (Airports)		X					X			
	h. Harbors (Harbors)		X					X			
	i. Pipelines		X					X			
	23. **Water Supply:**										
	a. Quality (EH)		X					X			
	b. Quantity (PWA)		X					X			
	c. Fire Flow (Fire)		X					X			

	Issue (Responsible Department)	Project Impact Degree Of Effect*					Cumulative Impact Degree Of Effect*				
		N	LS	PS M		PS	N	LS	PS M		PS
Public Facilities/ Services (Cont.):	24. **Waste Treatment/Disposal:**										
	a. Individual Sewage Disposal System (EH)		X					X			
	b. Sewage Collection/Treatment Facilities		X					X			
	c. Solid Waste Management (PWA)		X					X			
	d. Solid Waste Facilities (EHD)		X					X			
	25. **Utilities:**										
	a. Electric	X					X				
	b. Gas	X					X				
	c. Communication	X					X				
	26. **Flood Control/Drainage:**		X					X			
	a. FCD Facility (FCD)		X					X			
	b. Other Facilities (PWA)										
	27. **Law Enforcement/Emergency Svs. (Sheriff):**										
	a. Personnel/Equipment		X					X			
	b. Facilities		X					X			
	28. **Fire Protection (Fire):**										
	a. Distance/Response Time		X					X			
	b. Personnel/Equipment/Facilities		X					X			
	29. **Education:**										
	a. Schools	X					X				
	b. Libraries (Lib. Agency)	X					X				
	30. **Recreation (GSA):**										
	a. Local Parks/Facilities		X				X				
	b. Regional Parks/Facilities	X					X				
	c. Regional Trails/Corridors	X					X				

Degree Of Effect:

N = No Impact.
LS = Less Than Significant.
PS-M = Potentially Significant Impact Unless Mitigation Incorporated.
PS = Potentially Significant Impact.

Agencies:

APCD – Air Pollution Control District		Airports – Department of Airports
PWA – Public Works Agency		Fire – Fire Protection District
Plng. – Planning Division		Sheriff- Sheriff's Department
GSA – General Services Agency		EH – Environmental Health Division
Ag. Dept. – Agricultural Department		Lib. Agency – Library Services Agency
FCD – Flood Control District		
Harbors – Harbor Department		

D.	Mandatory Findings of Significance	Yes/Maybe	No
	Based on the information contained with Sections B and C:		
1.	Does the project have the potential to degrade the quality of the environment substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	X	
2.	Does the project have the potential to achieve short-term, to the disadvantage or long-term, environmental goals? (A short-term impact on the environment is one that occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.		X
3.	Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past project, the effect of other current projects, and the effect of probable future projects. (Several projects may have relatively small individual impacts on two or more resources, but the total of those impacts on the environment is significant.)		X
4.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	X	

E.	Determination of Environmental Document		
	On the basis of this initial evaluation:		
[ ]	I find the proposed project **could not** have a significant effect on the environment, and a **Negative Declaration** should be prepared.		
[ ]	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measure(s) described in Section C of the Initial Study will be applied to the project. A **Mitigated Negative Declaration** should be prepared.		
[X]	I find the proposed project, individually and/or cumulatively, MAY have a significant effect on the environment and an **Environmental Impact Report** is required.*		
[ ]	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **Environmental Impact Report** is required, but it must analyze only the effects that remain to be addressed.		
[ ]	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project, **nothing further is required.**		

Jeff Pratt

Signature of Person Responsible for Administering the Project

3/31/08

Date

*EIR Issues of Focus: _____

C. Environmental Analysis

General Plan Environmental Goals & Policies

General Plan Goals and Policies
The proposed project involves increasing the capacity of the existing J Street Drain to the 100 year flood level to reduce potential flooding in the surrounding area during a severe rain event. The proposed project would contribute to minimizing the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from the flood hazards. Therefore, the proposed project is expected to be consistent with the Ventura County General Plan, Goals, Policies, and Programs including 2.10 Flood Hazards, and 4.6 Flood Control and Drainage Facilities and the Coastal Area Plan. Additionally, the project is expected to be consistent with City of Oxnard and City of Hueneme General Plan environmental policies; specifically, goals regarding minimizing the impact of flooding to private and public development.

Local Coastal Plan Goals and Policies
The Local Coastal Plans for City of Oxnard and Port Huemene are contained within each citiy's General Plan. Potential impacts exist due to increase the rate at which the floodwater will enter the Lagoon as a result of the proposed project, though the project would not include any physical alterations to the Ormond Beach Lagoon. Therefore, the project may be potentially inconsistent with City of Oxnard's Coastal Land Use Plan regarding Wetlands in 3.2.2 Habitat Areas and policies regarding Environmentally Sensitive Habitat Areas. The project may be potentially inconsistent with City of Port Hueneme's Local Coastal Plan regarding Area A Hueneme Beach Park and associated policies regarding Environmentally Sensitive Habitat Areas. This issue area will be discussed in the Environmental Impact Report (EIR).

Land Use

The proposed project would improve the conveyance capacity of the J Street Drain to the Pacific Ocean and would reduce upstream flooding during 100-year storm events. As mentioned above, the project site is surrounded by residential and some commercial land uses (Figure 3). The proposed project would involve the improvement of an existing flood control channel and does not involve any land use changes. The project is therefore expected to have no impact on existing land use or supply of housing in the vicinity. While the project involves increasing the capacity of an existing drain, it is not expected to induce growth and development in the vicinity because the area is built-out. However, it would remove existing developed areas from the 100-year floodplain.

Air Quality

The proposed project is located within the South Central Coast Air Basin and under the jurisdiction of Ventura County Air Pollution Control Board (VCAPCD). Currently, the area exceeds both the state and federal air quality standards for ozone and the state standard for particulate matter (PM_{10}). The construction of the proposed project would result in temporary air quality impacts during construction, which may exceed applicable thresholds of significance. This issue will be further discussed in the EIR. Project operation will not result in any air pollutant emissions with the exception of occasional maintenance activities. The activities will be intermittent, and consist of single or small numbers of vehicles and limited use of mechanical equipment. However, the proposed project will not increase the amount of maintenance being

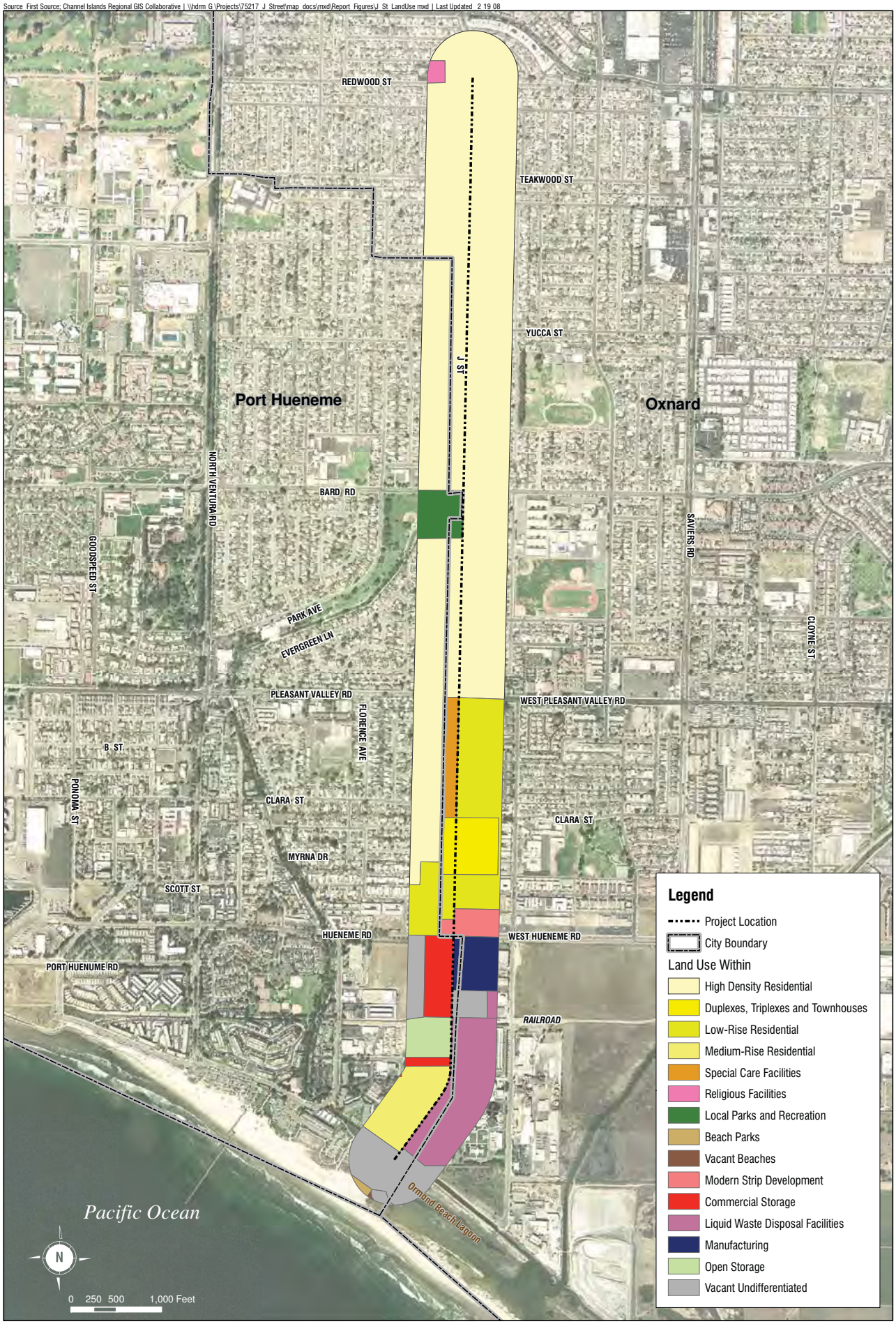
conducted for the existing channel, and will therefore not have a significant impact due to operations.

Water Resources

Groundwater

The proposed project may involve groundwater pumping and dewatering in order to excavate and construct the improved channel. Because this pumping would be temporary in nature and limited to the period of project construction, the project would not deplete groundwater supplies. However, the project may result in impacts from groundwater being discharged to surface water during construction, which will be discussed in the EIR. Groundwater quality is not expected to be impacted by the project.

Source: First Source; Channel Islands Regional GIS Collaborative | \\hdrm G:\Projects\75217_J_Street\map_docs\mxd\Report_Figures\J_St_LandUse.mxd | Last Updated: 2.19.08



Land Use

FIGURE 3

HDR
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Surface Water

The proposed project would increase the capacity of the existing J Street Drain to accommodate 100-year flood events. Surface runoff would continue to flow from the concrete channel to Ormond Beach Lagoon as it does currently. However, there is a potential that pumped groundwater from construction operations may be discharged to the surface water creating a potential impact to surface water.

The impact of the project on water resources will be further discussed in the EIR.

Mineral Resources

Because the project will deepen an existing channel within its current right-of-way, and the existing lagoon is not appropriate for mining of resources, the project is expected to have no impact on mineral resources in the vicinity. The project area is designated as Mineral Resource Zone (MRZ) 3a. This designation is based on available geologic data which indicates this area has a higher potential as a source of aggregate material suitable for Portland cement concrete than other deposits classified MRZ-3 by the City of Oxnard (City of Oxnard, General Plan 2020, Conservation Element). There are no aggregate mining or petroleum production facilities located in the project vicinity. Therefore, the proposed project would not impact the mineral resources and associated operations. This issue will not be discussed in the EIR.

Biological Resources

The proposed project involves deepening the existing channel invert of J Street Drain to improve flood conveyance capacity with the outlet of the channel at Ormond Beach Lagoon. Ormond Beach Lagoon is a large complex of wetlands, freshwater, estuarine, and marine habitats. While the project does not include physical alterations to the Lagoon, the project could increase the rate at which floodwater enters the Lagoon. A wide range of biological resources exist at the lagoon and potentially significant impacts may occur as the result of changes in flow. This issue area will be discussed in the EIR.

Agricultural Resources

The project is expected to have less than significant impacts on agricultural resources (e.g., soil, water, air quality from pesticide and herbicide use) because agricultural land would not be taken out of production. In addition, the project involving channel improvement is not expected to be incompatible with agricultural uses or resources. This issue will not be discussed further in the EIR.

Visual Resources

The proposed project would replace the existing fence and oleander bushes along the Drain. The removal of the oleander bushes may change the visual character of the project site. Depending on the final design of the proposed project and associated visual changes, impacts are potentially significant. This issue area will be discussed in the EIR.

Paleontological Resources

The proposed project may have potentially significant impacts on paleontological resources because these resources are typically not discovered until construction activities and excavation

are underway. To address paleontological resources that may be discovered during construction, applicable mitigation measures will be included in the EIR to address any potential impacts to paleontological resources.

Cultural Resources

The City of Oxnard General Plan Conservation Element identifies archaeological sites in the City. The proposed project is not located within or near the sites with the exception of the Ormond Beach area. The proposed project may have potentially significant impacts on archaeological and ethnic/social/religious resources because these resources are typically not discovered until construction activities and excavation are underway. To address archaeological resources that may be discovered during construction, applicable mitigation measures will be included in the EIR to address any potential impacts to cultural resources.

Energy Resources

The proposed project is expected to consume energy resources during the construction period; however it is not expected to have long-term impact on energy resources (e.g., natural gas, electricity). Short-term consumption of these resources would occur during construction and impacts would be minimal.

Coastal Beaches and Sand Dunes

Because of potential changes in storm water flows, the proposed project may have a potentially significant but indirect impact on coastal beaches and sand dunes because the project would increase the capacity of the existing channel and allow runoff at a faster flow rate into Ormond Beach. This issue area will be discussed in the EIR.

Seismic Hazards

The proposed project is expected to have no impact on seismic hazards (fault rupture, ground shaking, tsunami, seiche, liquefaction), nor would the project result in structures or other facilities that would be subject to damage and destruction from seismic activity. The project would be designed according to the appropriate seismic hazard zone.

Geologic Hazards

The proposed project is expected to have potential impacts associated with geologic hazards (subsidence, expansive soils, landslides/mudslides). A geotechnical report will be prepared identifying any geologic hazard and appropriate mitigation measures. This issue area will be discussed in the EIR.

Hydraulic Hazards

The purpose of the proposed project is to increase the channel capacity to reduce potential flooding problems. The project also includes replacement of existing culverts at street crossings with larger structures. Therefore, the project is expected to have potential impacts on hydraulic hazards (erosion/siltation, flooding). This issue area will be discussed in the EIR.

Aviation Hazards

The nearest airport is Oxnard Airport located at 2889 W. Fifth Street Oxnard, CA 93030, approximately 3 miles northwest of the project site. Because of this distance, the proposed project is expected to have no impact on aviation and will not be discussed in the EIR.

Hazardous Materials/Waste

Due to the presence of industrial and agricultural activities that have been ongoing in the project area for many years, hazardous materials/waste may be encountered during construction activities. In addition, there is a Superfund site near the project vicinity located at 6200 Perkins, previously Halaco Engineering Company. The site was placed on the National Priorities List in March 7, 2007. This issue area will be discussed in the EIR.

Noise and Vibration

The proposed project would involve short-term impacts on noise and vibration as a result of heavy equipment use for construction adjacent to residential areas during work hours. The construction activities would be temporary and localized and any potentially significant construction impacts will be mitigated. The proposed project is expected to have no long-term impact during operations because maintenance activities at the drain would not change as a result of the project. This issue area will be discussed in the EIR.

Light and Glare

The proposed project will not introduce any new sources or light or glare, and will therefore have no impact on night lighting or glare. This issue will not be discussed in the EIR.

Public Health

The project would reduce potential flooding in the area surrounding the J Street Drain; therefore, the proposed project is expected to have less than significant impact on public health and will not be discussed in the EIR.

Transportation/Circulation

Impacts would occur during construction and would result in temporary and localized increases in truck and equipment traffic on local roads and highways, as well as the potential for temporary road closures during construction. The project may also have potentially significant impacts on railroad and pipeline crossings during construction. This issue area and applicable mitigation measures will be discussed in the EIR.

Ongoing operation of the channel will not result in any increase in traffic. The number of maintenance vehicles will not increase from current levels needed for the existing channel.

The proposed project involves deepening an existing drain and would not likely interfere with the transportation safety/design, private facilities, parking, bus transit, airports, harbors, or other transportation/circulation issues. No impact would occur and therefore this will not be discussed in the EIR.

Water Supply

The proposed project is not expected to change the demand on water supply and therefore would not impact on water supply (quality, quantity, fire flow). This issue area will not be discussed in the EIR.

Waste Treatment/Disposal

The proposed project would not result in a demand for waste treatment/disposal and is expected to have no impact on individual sewage disposal systems. This issue area will not be discussed in the EIR. However, it may have less than significant impacts on sewage collection/treatment facilities or solid waste facilities that occur adjacent to the project reach during construction. Construction impacts will be discussed in the EIR.

Utilities

The proposed project involves the improvement of an existing concrete-lined channel and would not change any land uses requiring utility service. As a result, the project would have less than significant impacts on utilities including gas, electric, and communication. This issue area will not be discussed in the EIR.

Flood Control/Drainage

Because the project would involve improvement of existing flood control and drainage facilities adjacent to residential, commercial development, and roads, the proposed project is expected to have beneficial impacts on this issue area. This issue area will be discussed in the EIR. Existing public works facilities during construction would be impacted; however, impacts would be temporary and localized as the facilities are modified. Construction, and operation and maintenance impacts will be discussed in the EIR.

Law Enforcement/Emergency Systems

The proposed project involves the improvement of an existing concrete channel and would not change any land uses requiring police services. As a result, the proposed project is expected to have no impact on law enforcement/emergency systems including personnel/equipment or facilities. Emergency access would be provided during and after construction. Since no impact is anticipated, this issue area will not be discussed in the EIR.

Fire Protection

The proposed project involves the improvement of an existing concrete-lined channel and would not change any land uses requiring fire protection services. As a result, the proposed project is expected to have no impact on fire protection including distance/ response time, personnel/equipment or facilities. Emergency access would be provided during and after construction.

Education and Libraries

The proposed project involves the improvement of an existing concrete-lined channel and would not result in any new development that could increase local population or enrollment in local

schools. As a result, the proposed project is expected to have no impact on education including schools and libraries.

Recreation

Bubbling Spring Community Park, Hueneme Beach Park and the public beach is located within the project vicinity and may be impacted by the construction of the proposed project. This issue will be discussed in the EIR.

FILE COPY

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

Notice of Preparation

April 10, 2008

To: Reviewing Agencies

Re: J Street Drain Project
SCH# 2008041057

Attached for your review and comment is the Notice of Preparation (NOP) for the J Street Drain Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Theresa Stevens
Ventura County Watershed Protection District
800 S. Victoria Avenue
Ventura, CA 93009-1610

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

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APR 15 2008

WATERSHED PROTECTION DIST.

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2008041057
Project Title J Street Drain Project
Lead Agency Ventura County Watershed Protection District

Type NOP Notice of Preparation

Description The proposed project would involve increasing the capacity of the existing channel to reduce flooding in residential and commercial areas of Oxnard and Port Hueneme, and improve stormwater flow through the J Street Drain. The existing concrete-lined channel has a depth of about 4 feet with a bottom width varying from 20 to 30 feet with 1:1 side slopes. There are various options that are being considered for the increased capacity channel and outlet. The project alternatives are identified as channel options and outlet options and these options can be combined as desired for the preferred alternative. Currently these are still being evaluated and there is no specific preferred alternative. Operation and maintenance of the proposed channel would be conducted in accordance with the Ventura County Watershed Protection District's routine operation and maintenance protocols.

Lead Agency Contact

Name Theresa Stevens
Agency Ventura County Watershed Protection District
Phone (805) 477-7139 **Fax**
email
Address 800 S. Victoria Avenue
City Ventura **State** CA **Zip** 93009-1610

Project Location

County Ventura
City Oxnard, Port Hueneme
Region
Cross Streets Redwood Avenue to south of Hueneme Road
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways Ormond Lagoon - Pacific Ocean
Schools
Land Use Existing drain is maintained by Ventura County, but the local drains that feed into this drain are maintained by the respective cities (Oxnard and Port Hueneme).

Project Issues Aesthetic/Visual; Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Noise; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Cumulative Effects; Landuse

---

Reviewing Agencies Resources Agency; California Coastal Commission; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 5; Native American Heritage Commission; Office of Emergency Services; State Lands Commission; California Highway Patrol; Caltrans, District 7; Regional Water Quality Control Board, Region 4

Date Received 04/10/2008 **Start of Review** 04/10/2008 **End of Review** 05/09/2008

Note: Blanks in data fields result from insufficient information provided by lead agency.

County: Ventura SCH# 2008041091

Resources Agency

- [x] Resources Agency
  Nadell Gayou
- [ ] Dept. of Boating & Waterways
  David Johnson
- [x] California Coastal Commission
  Elizabeth A. Fuchs
- [ ] Colorado River Board
  Gerald R. Zimmerman
- [ ] Dept. of Conservation
  Sharon Howell
- [ ] California Energy Commission
  Dale Edwards
- [ ] Cal Fire
  Allen Robertson
- [ ] Office of Historic Preservation
  Wayne Donaldson
- [x] Dept of Parks & Recreation
  Environmental Stewardship Section
- [ ] Central Valley Flood Protection Board
  Mark Herald
- [ ] S.F. Bay Conservation & Dev't. Comm.
  Steve McAdam
- [x] Dept. of Water Resources
  Resources Agency
  Nadell Gayou
- [ ] _____
  Conservancy

Fish and Game

- [ ] Depart. of Fish & Game
  Scott Flint
  Environmental Services Division
- [ ] Fish & Game Region 1
  Donald Koch
- [ ] Fish & Game Region 1E
  Laurie Harnsberger
- [ ] Fish & Game Region 2
  Jeff Drongesen
- [ ] Fish & Game Region 3
  Robert Floerke
- [ ] Fish & Game Region 4
  Julie Vance
- [x] Fish & Game Region 5
  Don Chadwick
  Habitat Conservation Program
- [ ] Fish & Game Region 6
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] Fish & Game Region 6 I/M
  Gabrina Getchel
  Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Game M
  George Isaac
  Marine Region

Other Departments

- [ ] Food & Agriculture
  Steve Shaffer
  Dept. of Food and Agriculture
- [ ] Depart. of General Services
  Public School Construction
- [ ] Dept. of General Services
  Robert Sleppy
  Environmental Services Section
- [ ] Dept. of Health Services
  Veronica Malloy
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] Delta Protection Commission
  Debby Eddy
- [x] Office of Emergency Services
  Dennis Castrillo
- [ ] Governor's Office of Planning & Research
  State Clearinghouse
- [x] Native American Heritage Comm.
  Debbie Treadway
- [ ] Public Utilities Commission
  Ken Lewis
- [ ] Santa Monica Bay Restoration
  Guangyu Wang
- [x] State Lands Commission
  Marina Brand
- [ ] Tahoe Regional Planning Agency (TRPA)
  Cherry Jacques

Business, Trans & Housing

- [ ] Caltrans - Division of Aeronautics
  Sandy Hesnard
- [ ] Caltrans - Planning
  Terri Pencovic
- [x] California Highway Patrol
  Shirley Kelly
  Office of Special Projects
- [ ] Housing & Community Development
  Lisa Nichols
  Housing Policy Division

Dept. of Transportation

- [ ] Caltrans, District 1
  Rex Jackman
- [ ] Caltrans, District 2
  Marcellino Gonzalez
- [ ] Caltrans, District 3
  Jeff Pulverman
- [ ] Caltrans, District 4
  Tim Sable
- [ ] Caltrans, District 5
  David Murray
- [ ] Caltrans, District 6
  Moses Stites
- [x] Caltrans, District 7
  Vin Kumar
- [ ] Caltrans, District 8
  Dan Kopulsky
- [ ] Caltrans, District 9
  Gayle Rosander
- [ ] Caltrans, District 10
  Tom Dumas
- [ ] Caltrans, District 11
  Jacob Armstrong
- [ ] Caltrans, District 12
  Ryan P. Chamberlain

Cal EPA

Air Resources Board

- [ ] Airport Projects
  Jim Lemer
  - [ ] Transportation Projects
    Ravi Ramalingam
  - [ ] Industrial Projects
    Mike Tollstrup
- [ ] California Integrated Waste Management Board
  Sue O'Leary
- [ ] State Water Resources Control Board
  Regional Programs Unit
  Division of Financial Assistance
- [ ] State Water Resources Control Board
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] State Water Resouces Control Board
  Steven Herrera
  Division of Water Rights
- [ ] Dept. of Toxic Substances Control
  CEQA Tracking Center
- [ ] Department of Pesticide Regulation

Regional Water Quality Control Board (RWQCB)

- [ ] RWQCB 1
  Cathleen Hudson
  North Coast Region (1)
- [ ] RWQCB 2
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] RWQCB 3
  Central Coast Region (3)
- [x] RWQCB 4
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] RWQCB 5S
  Central Valley Region (5)
  - [ ] RWQCB 5F
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] RWQCB 5R
    Central Valley Region (5)
    Redding Branch Office
- [ ] RWQCB 6
  Lahontan Region (6)
  - [ ] RWQCB 6V
    Lahontan Region (6)
    Victorville Branch Office
- [ ] RWQCB 7
  Colorado River Basin Region (7)
- [ ] RWQCB 8
  Santa Ana Region (8)
- [ ] RWQCB 9
  San Diego Region (9)

- [ ] Other _____

Last Updated on 03/03/2008

State of California - The Resources Agency ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201

May 9, 2008

Theresa Stevens, Ph.D.
Senior Environmental Specialist
Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, CA 93009-1610
FAX (805) 654-3350

Notice of Preparation Draft Environmental Impact Report for the J Street Drain Project Ventura County

Dear Ms. Stevens:

The California Department of Fish and Game (Department) has reviewed the above-referenced Notice of Preparation (NOP), for a Draft Environmental Impact Report (DEIR) relative to impacts to biological resources. The proposed project is to increase the capacity of the existing channel to reduce flooding in residential and commercial areas of Oxnard and Port Hueneme, and improve stormwater flow through the J Street Drain.

The following statements and comments have been prepared pursuant to the Department's authority as Trustee Agency with jurisdiction over natural resources affected by the project (CEQA Section 15386) and pursuant to our authority as a Responsible Agency under the California Environmental Quality Act (CEQA), Section 15381 over those aspects of the proposed project that come under the purview of Fish and Game Code Section 1600 et seq. regarding impacts to streams and lakes.

The California Wildlife Action Plan, a recent Department guidance document, identified the following stressors affecting wildlife and habitats within the project area: 1) growth and development; 2) water management conflicts and degradation of aquatic ecosystems; 3) invasive species; 4) altered fire regimes; and 5) recreational pressures. The Department looks forward to working with the Ventura County Watershed Protection District (District) to minimize impacts to fish and wildlife resources with a focus on these stressors.

Department Environmental Staff visited the Ormond Lagoon on January 30th, 2008 during an onsite scoping meeting organized by the District. The lagoon is a popular wildlife and recreational feature in the area. Local members of the public at the meeting reported on the annual breaching of the sand berm. As you are aware, the hydraulics of a coastal lagoon is complex with fresh water inputs and lagoon outlet management or natural breaching controlling fish and wildlife resources. A hydraulic model of the lagoon is necessary to predict the effects of manipulations on most of the important biological processes. There are generally three manipulable hydraulic features of lagoons: 1) input of freshwater; 2) exchange with the ocean; and, 3) the internal circulation. All of these are linked hydro-dynamically, so that modification of any will modify all. Increasing freshwater input into a lagoon will have four general physical effects: 1) mean salinity will be lowered; 2) mean flushing rate will be increased; 3) the lagoon's tendency to stratify, both vertically and horizontally, will be increased; and 4) more seawater input will ensue, particularly if vertical stratification is enhanced. Therefore, it is important to

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develop the hydraulic model early to test input scenarios in order to select the least impacting or most environmentally enhancing alternative related to the freshwater flow volume and the outlet alternatives at Ormond lagoon.

To enable Department staff to adequately review and comment on the proposed project we recommend the following information, where applicable, be included in the Draft Environmental Impact Report:

1. A complete, recent assessment of flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats (Attachment 1).

    a. A thorough recent assessment of rare plants and rare natural communities, following the Department's Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities.

    b. A complete, recent assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Recent, focused, species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and U.S. Fish and Wildlife Service.

    c. Rare, threatened, and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (see CEQA Guidelines, Section 15380).

    d. The Department's Biogeographic Data Branch in Sacramento should be contacted at (916) 322-2493 to obtain current information on any previously reported sensitive species and habitats, including Significant Natural Areas identified under chapter 12 of the Fish and Game Code. In addition, any Significant Ecological Areas (SEAs) or Environmentally Sensitive Habitats (ESHs) or any areas that are considered sensitive by the local jurisdiction that are located in or adjacent to the project area must be addressed.

2. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. This discussion should focus on maximizing avoidance, and minimizing impacts.

    a. CEQA Guidelines, Section 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

    b. Project impacts should also be analyzed relative to their effects on off-site habitats and populations. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas are of concern to the Department and should be fully evaluated and provided. The analysis should also include a discussion of the potential for impacts resulting from such effects as increased vehicle traffic, outdoor artificial lighting, noise and vibration.

c. A cumulative effects analysis should be developed as described under CEQA Guidelines, Section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

d. Impacts to migratory wildlife affected by the project should be fully evaluated including proposals to removel/disturb native and ornamental landscaping and other nesting habitat for native birds. Impact evaluation may also include such elements as migratory butterfly roost sites and neo-tropical bird and waterfowl stop-over and staging sites. All migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of birds and their active nests, including raptors and other migratory nongame birds as listed under the MBTA.

e. Impacts to all habitats from City or County required Fuel Modification Zones (FMZ). Areas slated as mitigation for loss of habitat shall not occur within the FMZ.

f. Proposed project activities (including disturbances to vegetation) should take place outside of the breeding bird season (February 1- September 1) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). If project activities cannot avoid the breeding bird season, nest surveys should be conducted and active nests should be avoided and provided with a minimum buffer as determined by a biological monitor (the Department recommends a minimum 500-foot buffer for all active raptor nests).

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources including wetlands/riparian habitats, alluvial scrub, coastal sage scrub, Joshua tree woodlands, etc. should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.

a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Compensation for unavoidable impacts through acquisition and protection of high quality habitat elsewhere should be addressed with offsite mitigation locations clearly identified.

b. The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts (Attachment 2).

c. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.

4. A California Endangered Species Act (CESA) Permit must be obtained, if the project has the potential to result in "take" of species of plants or animals listed under CESA, either during construction or over the life of the project. CESA Permits are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to the proposed

project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, require that the Department issue a separate CEQA document for the issuance of a CESA permit unless the project CEQA document addresses all project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. For these reasons, the following information is requested:

a. Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Permit.

b. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.

5. The Department opposes the elimination of watercourses (including concrete channels) and/or the canalization of natural and manmade drainages or conversion to subsurface drains. All wetlands and watercourses, whether intermittent, ephemeral, or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic habitat values and maintain their value to on-site and off-site wildlife populations. The Department recommends a minimum natural buffer of 100 feet from the outside edge of the riparian zone on each side of a drainage.

a. The Department requires a Streambed Alteration Agreement (SAA), pursuant to Section 1600 et seq. of the Fish and Game Code, with the applicant prior to any direct or indirect impact to a lake or stream bed, bank or channel or associated riparian resources. The Department's issuance of a SAA may be a project that is subject to CEQA. To facilitate our issuance of the Agreement when CEQA applies, the Department as a responsible agency under CEQA may consider the local jurisdiction's (Lead Agency) document for the project. To minimize additional requirements by the Department under CEQA the document should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the Agreement. Early consultation is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources.

Thank you for this opportunity to provide comment. Please contact Mr. Dan Blankenship, Staff Environmental Scientist, at (661) 259-3750 if you should have any questions and for further coordination on the proposed project.

Sincerely,

Edmund J. Pert
Regional Manager
South Coast Region

cc: Ms. Helen Birss, Los Alamitos
Betty Courtney, Newhall
Dan Blankenship, Valencia
Jeff Humble, Ventura
HCP-Chron Department of Fish and Game
State Clearinghouse, Sacramento

EP:db

From: Rita Graham
To: Theresa Stevens
Date: 4/16/08 2:21 PM
Subject: J Street Drain Project No. 82322

Theresa

The Agricultural Commissioner's Office has received the Initial Study Checklist for the J Street Drain (Project No. 82322) and we concur with the findings of the attached Initial Study prepared by HDR Engineering concerning Agricultural Resources, Topic 7.a e, including the environmental analysis on Page 13.

The deadline for comments is April 25, 2008.

Thank you for the opportunity to comment.

Rita Graham
Agricultural Land Use Planner
Ventura County Agricultural Commissioner's Office
815 E. Santa Barbara Street
Santa Paula, CA 93060
(805) 933 2926 x 228 PLEASE NOTE NEW PHONE NUMBER
rita.graham@ventura.org

From: "Cleeves, Chuck" <Chuck.Cleeves@hdrinc.com>
To: "Young, William" <William.Young@hdrinc.com>, "Kirk Norman" <Kirk.Norman@...
CC: "Zola, Lloyd B." <Lloyd.Zola@hdrinc.com>
Date: 4/21/08 9:57 AM
Subject: FW: Comments for J Street Drain Project

This comment just came in through the web site.
I wanted to make sure that everyone was aware it came in.
Talk to you soon
Chuck

From: Don Occhiline [mailto:Don.Occhiline@ventura.org]
Sent: Monday, April 21, 2008 9:41 AM
To: jstreetdrain
Subject: Comments for J Street Drain Project

The project is two miles from the Oxnard Airport and is for improvements to the drainage system that runs along J Street in south Oxnard. The project will not cause any hazard to aviation either during construction or as a completed project. It will affect none of the Federal Regulation 49 CFR Part 77 surfaces during construction or when construction is completed.

If you have any questions, or I can be of assistance, please contact me via e mail or at (805) 388 4205.

Sincerely,

From: "Cleeves, Chuck" <Chuck.Cleeves@hdrinc.com>
To: "Theresa Stevens" <Theresa.Stevens@ventura.org>, "Kirk Norman" <Kirk.Nor...
CC: "Young, William" <William.Young@hdrinc.com>, "Zola, Lloyd B." <Lloyd.Zol...
Date: 4/23/08 4:50 PM
Subject: FW: J Street Drain Comments

FYI from the City of Ojai, through the website.

From: Katrina Rice Schmidt [mailto:schmidt@ci.ojai.ca.us]
Sent: Wednesday, April 23, 2008 4:19 PM
To: jstreetdrain
Subject: J Street Drain Comments

Ms. Stevens,

Thank you for the opportunity to review the Initial Study for the J Street Drain in Oxnard and Port Hueneme. The project site is outside of the City of Ojai's Sphere of Influence and its Area of Interest. City of Ojai staff has no comments on the project or on the environmental analysis.

Thank you.

~~~~~~~~~~~~~~~~~~~~
Katrina Rice Schmidt, AICP
City Planner
City of Ojai
401 S. Ventura St.
PO Box 1570
Ojai, CA 93024
(805) 640 2555
~~~~~~~~~~~~~~~~~~~~

MEMORANDUM

October 28, 2009

TO: **Kirk Norman, PE**

FROM: Christopher Williamson, Senior Planner

SUBJECT: J Street Drain Project NOP

This memorandum summarizes City of Oxnard requests for topic analysis in the J Street Drain Project EIR:

1. J Street is a designated bike path between from Wooley Road to Hueneme Road. The project's construction impacts on the bike path should be examined. The City supports a thorough analysis of partial or full coverage of a box culvert and the placement of a Class I bike trail with landscaping.
2. Construction impacts on J Street and all intersecting streets need to be fully evaluated for noise, air quality, ground shaking, parking, and truck deliveries (especially cement delivery and debris removal).
3. Circulation impacts on J Street and all intersecting streets need to be fully evaluated after the drain improvements. Are any lanes lost, cross streets closed, etc..?
4. The drain design should include mitigation options to improve its aesthetic appearance from pedestrian level.
5. The design of the outlet needs to work with the ongoing design options for the Ormond Beach wetlands restoration project, and work closely with the Ormond Beach Task Force and their various consultants.
6. We suggest the design team prepare and present several public workshops, and hold these meetings at the South Oxnard Library community room at several convenient times. Once a set of design options and environmental impacts and mitigations are identified, we suggest a study session with the City Planning Commission as a venue for taking public comment.

VENTURA COUNTY
AIR POLLUTION CONTROL DISTRICT
Memorandum

TO: Theresa Stevens, Senior Environmental Specialist

DATE: April 23, 2008

FROM: Alicia Stratton

SUBJECT: Request for Review of Initial Study Checklist for the J Street Drain, Oxnard (Project No. 82322)

Air Pollution Control District staff has reviewed the subject project, which is a proposal for a project to reduce local flooding along the J Street Drain during severe rainstorms. This reduction in flooding will occur by increasing the existing capacity of the Drain to convey stormwater during a 100-year storm event to the ocean. The existing, and proposed, end of the Drain is at Ormond Lagoon, an environmentally sensitive coastal wetland. The project site is located along J Street, which is on the border of the City of Oxnard and City of Port Hueneme.

Section 3 of the Initial Study addresses air quality issues. Due to the short-term nature of the project, we concur with the findings of this discussion that significant air quality issues will not occur from the project.

Although the project is not expected to result in any significant local air quality impacts, the District recommends the following conditions be placed on the permit to help minimize fugitive dust and particulate matter that may result from construction activities:

1) All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 15 miles per hour averaged over one hour) to prevent excessive amounts of fugitive dust.

2) All trucks that will haul excavated or graded material off site shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.

3) All unpaved on-site roads shall be periodically watered or treated with environmentally-safe dust suppressants to prevent excessive amounts of dust.

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4) The area disturbed by clearing, grading earth moving, or excavation operations shall be minimized to prevent excessive amounts of fugitive dust.

5) All active portions of the site shall be either periodically watered or treated with environmentally-safe dust suppressants to prevent excessive amounts of dust.

6) On-site vehicle speeds shall not exceed 15 miles per hour.

7) Construction equipment engines shall be maintained in good condition and in proper tune as per manufacturers' specifications.

If you have any questions, please call me at (805) 645-1426.

The Ventura Audubon Society, Inc.

P.O. Box 24196, Ventura, CA 93003 www.venturaaudubon.org

April 28, 2008

Ventura County Watershed Protection District
Attn: Theresa Stevens, Ph.D.
800 South Victoria Ave
Ventura, CA 93009-1610

Dear Dr. Stevens,

Thank you for the opportunity to comment on the Initial Study for the J. Street Drain project. We have the following comments:

1. Page 3: It's not entire clear how Outlet Alternative B: Dike System, will work. We would ask that that be thoroughly described in the EIR. The same is true for Outlet Alternative C: Natural System with Restoration Project.

2. Page 13: Biological Resources. Increasing the rate at which flood waters enter the lagoon may well cause physical alterations to the Lagoon or down coast beaches. Both California Least Terns (*Sterna antillarum antillarum*)and Western Snowy Plovers (*Charadrius alexandrinus nivosus*) nest on the beach between the Ormond Lagoon and the ocean as well as on the beaches down coast of the Lagoon. Snowy Plovers use the area directly to seaward of the J. Street Drain to roost in winter and to forage all year. We feel that the EIR must include an adequate discussion of these possible effects and their probably impact on these two species. In addition the Belding's savannah sparrow *(Passerculus sandwichensis beldingi)* occurs in the area and may nest on the center island of the Ormond Lagoon and should be considered.

Thank you for your consideration of these biological issues. Please call me at (805)652-0706 if you have questions.

Reed V. Smith, Science Chair
Ventura Audubon Society

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PUBLIC WORKS AGENCY
TRANSPORTATION DEPARTMENT
Traffic, Advance Planning & Permits Division

MEMORANDUM

DATE: April 25, 2008

TO: Ventura County Watershed Protection District
Attention: Theresa Stevens

FROM: Nazir Lalani, Deputy Director NL

SUBJECT: APPLICATION COMPLETENESS
PROJECT NO. 82322
J Street Drain
PERMITTEE: Kirk Norman or Theresa Stevens
Initial Study to increase the channel capacity of J Street Drain.
J Street, cities of Oxnard and Port Hueneme (cities).

Pursuant to your request, the Public Works Agency -- Transportation Department has reviewed the subject application and its supporting materials and has determined that the application is complete for our areas of responsibility.

The project would involve increasing the capacity of the existing channel to reduce flooding in residential and commercial areas of Oxnard and Port Hueneme, and improve stormwater flow through the J Street Drain.

The Initial Study Checklist and responses to the Checklist are made part hereof.

Our review is limited to the impacts this project may have on the County's Regional Road Network.

Please call me at 654-2080 if you have questions.

F:\transpor\LanDev\County\VCWPD 82322.doc

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INITIAL STUDY CHECKLIST

PUBLIC FACILITIES/SERVICES SECTION

TRANSPORTATION/CIRCULATION

	ISSUE (Responsible Department)	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	PS -M	PS	N	LS	PS -M	PS
PUBLIC FACILITIES/ SERVICES:	**22. Transportation/Circulation:**								
	A. Public Roads and Highways:								
	(1) Level of Service (PWA)		X				X		
	(2) Safety/Design (PWA)		X				X		
	C. Pedestrian/Bicycle:								
	(1) Public Facilities (PWA)		X				X		

DEGREE OF EFFECT:

N = No Impact.
LS = Less Than Significant
PS-M = Potentially Significant Impact Unless Mitigation Incorporated.
PS = Potentially Significant Impact.

INITIAL STUDY STANDARD DISCUSSIONS

PUBLIC FACILITIES/SERVICES

22. Transportation/Circulation

Item A. Public Roads/Highways

(1) and (2) Level of Service and Safety/Design

Environmental Analysis:

The project, as proposed, will not generate any new additional traffic on the County's Regional Road Network or local street system. Therefore, the Transportation Department does not require any conditions of approval.

Therefore, adverse traffic impacts relating to level of service and safety/design will be a Less Than Significant, if mitigated.

Item C. Pedestrian/Bicycle

(1) Public Facilities

Environmental Analysis:

The Transportation Department comments that the existing roads in the proximity of the proposed project site have provided adequate facilities pursuant to the County Road Standards and the State Department of Transportation (Caltrans).

Therefore, the Transportation Department considers that the adverse impacts relating to the supplementary addition of pedestrians and bicycles into the area would be a Less Than Significant.

STANDARD LAND DEVELOPMENT CONDITIONS

PUBLIC FACILITIES/SERVICES

Transportation/Circulation

1. The Notice of Preparation provides that construction will take approximately 12 months to complete. The Initial Study (Transportation /Circulation, page 15) states that impacts would occur during construction and would result in temporary and localized increases in truck and equipment traffic on local roads and highways. The project, as proposed, will not generate additional traffic or have any permanent adverse impact on the County's Regional Road Network or local street system and, therefore, will not require a Traffic Impact Mitigation Fee. The traffic associated with this project will be temporary construction related trips.

2. The applicant should identify the proposed truck route for the project, and shall submit a copy to Transportation Department. If the applicant uses the County road for truck and construction related trips, proper precautions shall be taken to protect all pavements, curb and gutter, sidewalks, and drainage structures from damage. Any portion damaged by the project's operations, in the opinion of the Transportation Department or designee, shall be replaced in accordance with current Standard Construction Details and/or in a manner acceptable to the Transportation Department or designee.

3. During the hauling of material to or from the sites, the trucks shall be covered to secure all material so that any nuisance or danger to the public from flying debris can be avoided.

(City Ox)
DUE APRIL 25, 2008
DUE 4-25

NO Comments

COUNTY OF VENTURA
PUBLIC WORKS AGENCY

ENGINEERING SERVICES DEPARTMENT
DEVELOPMENT & INSPECTION SERVICES DIVISION

MEMORANDUM

Date: April 17, 2008

To:
- ☒ Project File
- ☒ Grading/Drainage Section – Jim Myers
- ☒ Soils and Geology Section - Jim O'Tousa
- ☒ Transportation Dept. – Butch Britt
- ☐ Water Resources Section – David Panaro
- ☐ Watershed Protect. Dist. – Paul Callaway (VENTURA COUNTY WATERSHED PROTECTION DIST.)
- ☐ NPDES – Paul Tante
- ☒ IWMD – Bruce Belluschi
- ☐ County Surveyors Division – Mike Sullivan
- ☐ Real Estate Division – Steve Williams

From: Brian J. Trushinski, BES, MA, CFM
Engineer IV, Development and Inspection Services Division

Subject: **J STREET DRAIN**
Project No.: 82322

NOTE: THERE IS NO CHARGE NUMBER FOR THIS PROJECT REVIEW FOR THE VCWPD.

VENTURA COUNTY WATERSHED PROTECTION DISTRICT

Attached are standard application materials for the subject project. Please review these materials. This project could be one of the following:

☐ This project qualifies for a Categorical Exemption.

1. ***Pursuant to the material submitted, is the application complete/incomplete?***

However, you may have an adverse impact that would cause it to be an exception to the exemption. In that case complete an Initial Study Checklist

☒ This project does not qualify for a Categorical Exemption. Therefore, the following needs to be addressed:

1. ***Pursuant to the material submitted, is the application complete/incomplete?***
2. ***It will be assumed that the proposed project is consistent with the County's General Plans, unless otherwise stated.***
3. ***Complete an Initial Study Checklist***

Please return your comments to Theresa Stevens in the Ventura County Watershed Protection District (Brown Mail L#1610) and by email to Theresa.Stevens@ventura.org by April 25, 2008

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Ventura County
Watershed Protection District
Water Quality/Environmental Services Division

MEMORANDUM

DATE: April 10, 2008

TO: Brian Trushinski, Public Works Agency

FROM: Theresa Stevens, Sr. Environmental Specialist Theresa Stevens

SUBJECT: INITIAL STUDY CHECKLIST – J Street Drain (Project No. 82322)

The Ventura County Watershed Protection District is in the process of preparing an initial study for the proposed J Street Drain Improvement Project. According to the Ventura County Initial Study Assessment Guidelines, your department is responsible for making the impact determinations on the following initial study checklist items:

Resources – 4
Hazards – 13, 14, 15a
Public Services – 22a(1), 22a(2), 22c(1), 23b, 24c, 26b

These specific issues have been assigned to your department on the basis of professional expertise in dealing with the issues. Please use the adopted guidelines and your professional judgment in responding to each issue. For each determination made, please provide a brief description of the factual basis for such determination (both individual and cumulative impacts). The appropriate references to support this factual data should be provided in the description.

Please prepare the attached initial study checklist and return it by April 25, 2008. The hard copy may be returned to me at brown mail L#1610. An electronic copy should also be provided to Theresa.Stevens@ventura.org. If your response is not received by the return date, the District will address the issues for you. Thank you!

Attachments: Three (3) copies of the Initial Study

K:\WQ\Environmental Services\CEQA Information\Initial Study Checklist\is checklist - public works.doc

Transportation

NOTICE OF PREPARATION
J Street Drain Project
Ventura County Watershed Protection District

What's Being Done?

The Ventura County Watershed Protection District (VCWPD), acting as Lead Agency, has determined that the J Street Drain project may have a significant effect on the environment and that an Environmental Impact Report (EIR) should be prepared.

Briefly, the proposed project is anticipated to reduce local flooding along the J Street Drain during severe rainstorms. This reduction in flooding will occur by increasing the existing capacity of the Drain to convey stormwater during a 100-year storm event to the ocean. The existing, and proposed, end of the Drain is at Ormond Lagoon, an environmentally sensitive coastal wetland.

The project is anticipated to start construction mid 2009 and take approximately 12 months to complete. The project will start at the lagoon end of the Drain and work "up-stream" until complete.

Where is the Project Located?

The project is located in the median between the north and south bound traffic lanes of J Street. The project is primarily located in the City of Oxnard; however, south of Hueneme Road, the Drain forms the boundary between the cities of Oxnard and Port Hueneme. The project boundaries are anticipated to be Redwood Street to the north and Ormond Lagoon/Pacific Ocean to the south.

Why A Public Notice?

The VCWPD would like to request assistance with identifying the scope and content of the environmental information that should be addressed in the EIR.

How Do I Provide Project Input?

Please send any pertinent comments to:

Ventura County Watershed Protection District
Attn: Theresa Stevens, Ph.D.
800 South Victoria
Ventura, CA 93009-1610

Comments must be submitted by 5:00 PM, May 9, 2008. Comments may also be submitted via email on the project website: www.jstreetdrain.com.

Contacts

For more information, you may also contact Kirk Norman P.E., Project Manager at 805-654-2017, or Theresa Stevens, Sr. Environmental Specialist at 805-477-7139.

Thank you for your interest in this Watershed Protection District project!

From: "Cleeves, Chuck" <Chuck.Cleeves@hdrinc.com>
To: "Kirk Norman" <Kirk.Norman@ventura.org>, "Theresa Stevens" <Theresa.Stev...
CC: "Young, William" <William.Young@hdrinc.com>, "Zola, Lloyd B." <Lloyd.Zol...
Date: 5/9/08 5:45 PM
Subject: FW: NoP for J St. Drain Project

This came through the project website.

From: Peter Brand [mailto:brand@scc.ca.gov]
Sent: Friday, May 09, 2008 5:38 PM
To: jstreetdrain
Cc: David A Pritchett (David Pritchett)
Subject: FW: NoP for J St. Drain Project

To Whom It May Concern

Comment on the CEQA Notice of Preparation for J Street Drain Project by Ventura County Watershed Protection District:

These brief comments are limited to the Outlet Alternatives described in the NoP. As County officials know well, State Coastal Conservancy and partners are working on a comprehensive wetland restoration plan for the Ormond Beach area, including the lagoon that would be affected by the J Street Drain Project.

These are some brief comments to aid in the further scoping and planning for this project.

Biological Resources

The EIR scoping already has identified that potentially significant impacts may occur. The endangered tidewater goby (small fish) currently inhabits the lagoon and US Fish and Wildlife Service is the lead agency on specific comments about this species. As Outlet Alternative B (Dike System) would redirect the drain flows directly to the ocean instead of into the lagoon, potentially affecting the delicate balance of lagoon water levels and salinity that comprise the goby habitat, the hydrologic budget of the lagoon should be determined to estimate water inputs from J Street Drain, Oxnard Industrial Drain, ocean channel input, and potentially other sources. The dynamic, natural opening and closing duration of the ocean channel through the beach also should be examined as part of this hydrologic budget. Impacts to listed and sensitive birds also should be addressed, as some bird species also may be affected by the hydrologic budget in the lagoon.

Outlet Alternative C (Natural System with Restoration Project)

As described in the NoP, this Alternative seems to rely on a particular option eventually implemented for the wetland restoration project, specifically a rock groin to be installed for managing the lagoon opening to stay open permanently or semi permanently. Be advised that such a wetland management feature still is not an absolute certainty as the wetland planning still is in progress and the eventual choices for its various project alternatives have yet to be determined. We all will need to continue close coordination on this, especially for mutual

responsibilities on which agencies or organizations eventually will be constructing or maintaining any structures that control the lagoon opening. Depending upon the implementation schedule in years to come, Outlet Alternative C may not be an available option and a project that starts with Outlet Alternative B (Dike System) may be the only choice among the alternatives that currently are proposed.

Outlet Alternative A (Natural System)
The practicality of this alternative should be analyzed if the lagoon water level would back up into the upsteam drain channels, thereby negating the basic purpose of the project and viability of this Outlet Alternative.

Outlet Alternative B (Dike System)
The new channel and dike probably would cause dredging and filling of coastal wetlands and sensitive species habitat. Such impacts should be described and quantified in the EIR analysis.

City Limit Boundary
For Outlet Alernative B (Dike System), depending upon the exact location and size and shape of the dike, this may cross over into the Oxnard side of the City boundary, thereby triggering a need for different jurisdictional authority, Local Coastal Plan consistency, etc.

Water Quality
Although the Initial Study checklist indicates less than significant effects, the water quality in the lagoon should be addressed in the EIR because the project may redirect some of the drain flows directly into the ocean, thereby possibly changing the pollution concentrations from either Oxnard Industrial Drain or J Street Drain as the major source of water quantity and water quality input into the lagoon.

Please feel free to contact me further about our Ormond Beach project, via email or telephone 510 286 4162. We already are planning for the J Street Drain project to be a major discussion item during the Ormond Beach Task Force public meeting to be held on July 24.

Peter Brand, Project Manager

TS

RESOURCE MANAGEMENT AGENCY

county of ventura

Environmental Health Division
Robert Gallagher
Director

Resource Management Agency

ENVIRONMENTAL HEALTH DIVISION

MEMORANDUM

DATE: April 28, 2008

TO: Theresa Stevens

FROM: Melinda Talent MT

SUBJECT: **INITIAL STUDY – WATERSHED PROJECTION DISTRICT – J STREET DRAIN (PROJECT NO. 82322)**

The Environmental Health Division submits the following responses to items 18B, 18C, 21, 23A, 24A and 24D in the attached initial study checklist:

18. HAZARDOUS MATERIALS/WASTE:

B. Hazardous Materials

The proposed project will include the use of hazardous materials. Improper storage, handling, and disposal of these material(s) could result in the creation of adverse impacts to public health. Compliance with existing State regulations will reduce potential impacts to a level considered less than significant.

C. Hazardous Wastes

The proposed project will generate hazardous waste. Improper storage, handling, and disposal of these materials could result in the creation of adverse impacts from hazardous wastes. Compliance with existing State regulations will reduce potential impacts to a level considered less than significant.

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21. PUBLIC HEALTH:

The proposed project may have impacts to public health from hazardous materials/waste and solid waste, i.e., construction and demolition debris. Conformance with applicable standards pertaining to hazardous materials/waste and solid waste will reduce potential impacts to a level considered less than significant.

800 South Victoria Avenue, Ventura, CA 93009-1730 (805) 654-2813 FAX (805) 654-2480
Internet Web Site Address: www.ventura.org/rma/envhealth

23. WATER SUPPLY:

A. Quality

The proposed project will not require a supply of domestic water. Therefore, the project will not impact the quality of water available to the project.

24. WASTE TREATMENT/DISPOSAL:

A. Individual Sewage Disposal

The proposed project will not require the use of an on-site sewage disposal system. Therefore, the project will not create any adverse environmental impacts relative to on-site sewage disposal.

D. Solid Waste Facilities

The proposed project does not include a solid waste facility. Therefore, the project will not create any adverse impacts relating to solid waste facilities.

SECTION B

INITIAL STUDY CHECKLIST

PROJECT NUMBER: 82322
APPLICANT: WATERSHED PROTECTION DISTRICT

ISSUE	PROJECT IMPACT DEGREE OF EFFECT				CUMULATIVE IMPACT DEGREE OF EFFECT			
	N	LS	PS-M	PS	N	LS	PS-M	PS
18. HAZARDOUS MATERIALS/WASTE:								
B. Hazardous Materials	—	✓	—	—	—	✓	—	—
C. Hazardous Waste	—	✓	—	—	—	✓	—	—
21. PUBLIC HEALTH	—	✓	—	—	—	✓	—	—
23. WATER SUPPLY:								
A. Quality	✓	—	—	—	✓	—	—	—
24. WASTE TREATMENT/ DISPOSAL:								
A. Individual Sewage Disposal System	✓	—	—	—	✓	—	—	—
D. Solid Waste Facilities	✓	—	—	—	✓	—	—	—

STATE OF CALIFORNIA Arnold Schwarzenegger, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

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April 16, 2008

Theresa Stevens
Ventura County Watershed Protection District
800 S. Victoria Avenue
Ventura, CA 93009-1610

RE: SCH# 2008041057 J Street Drain Project: Ventura County.

Dear Ms. Stevens:

The Native American Heritage Commission (NAHC) has reviewed the Notice of Preparation (NOP) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. **USGS 7.5 minute quadrangle name, township, range and section required.**
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached.**
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

RECEIVED

APR 21 2008

WATERSHED PROTECTION DIST.

Sincerely,

Katy Sanchez

Katy Sanchez
Program Analyst

CC: State Clearinghouse

Native American Contacts
Ventura County
April 16, 2008

Charles Cooke
32835 Santiago Road
Acton , CA 93510

(661) 733-1812 - cell
suscol@intox.net

Chumash
Fernandeno
Tataviam
Kitanemuk

Patrick Tumamait
992 El Camino Corto
Ojai , CA 93023
yanahea2@aol.com
(805) 640-0481
(805) 216-1253 Cell

Chumash

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks , CA 91362
(805) 558-1154 - cell
805 492-7255

Chumash
Tataviam
Fernandeño

Stephen William Miller
189 Cartagena
Camarillo , CA 93010
(805) 484-2439

Chumash

Owl Clan
Dr. Kote & Lin A-Lul'Koy Lotah
48825 Sapaque Road
Bradley , CA 93426
(805) 472-9536

Chumash

Randy Guzman - Folkes
1931 Shadybrook Drive
Thousand Oaks , CA 91362
ndnrandy@hotmail.com
(805) 905-1675 - cell

Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

Julie Lynn Tumamait
365 North Poli Ave
Ojai , CA 93023
jtumamait@sbcglobal.net
(805) 646-6214

Chumash

Coastal Band of the Chumash Nation
Janet Garcia,Chairperson
P.O. Box 4464
Santa Barbara , CA 93140
805-964-3447

Chumash

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2008041057 J Street Drain Project: Ventura County.

Native American Contacts
Ventura County
April 16, 2008

Charles S. Parra
P.O. Box 6612 Chumash
Oxnard , CA 93031
(805) 340-3134 (Cell)
(805) 488-0481 (Home)

Carol A. Pulido
165 Mountainview Street Chumash
Oak View , CA 93022
805-649-2743 (Home)

Melissa M. Para-Hernandez
119 North Balsam Street Chumash
Oxnard , CA 93030
805-988-9171

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2008041057 J Street Drain Project: Ventura County.

COUNTY OF VENTURA
RESOURCE MANAGEMENT AGENCY
PLANNING DIVISION

MEMORANDUM

DATE: April 24, 2008

RECEIVED
APR 25 2008
WATERSHED PROTECTION DIST.

TO: Theresa Stevens, Sr. Environmental Specialist

FROM: Bruce Smith, Manager General Plan Section

SUBJECT: Review of Draft Initial Study/NOP for J Street Drain (Project No. 82322)

Ventura County Watershed Protection District (VCWPD) has requested the Planning Division to consider the proposed J Street Drain Improvement Project and assist in identifying potential environmental impacts related to the Initial Study Assessment checklist items for which Planning is responsible. A draft Initial Study has been prepared by the Watershed Protection District's Consultant (HDR Engineering, Inc.) and is the subject of this review. The Planning Division is responsible for assessing the following subject areas of the Initial Study checklist: General Plan Environmental Goals and Policies, Land Use (Community Character, Housing, Growth Inducement), Resources (Mineral Resources, Scenic Highways, and Historical Resources), and Public Facilities (Parking).

VCWPD is proposing to increase capacity of the J Street Drain to convey stormwater during a 100-year storm event and thereby reduce local flooding during severe rainstorms. The Drain ends at the Ormond Lagoon that is an environmentally sensitive coastal wetland. Construction is anticipated to begin mid 2009 and take approximately 12 months to complete. Work will begin at the lagoon and progress upstream until complete.

Summary of General Comments:

- The draft Initial Study checklist identifies several categories both individually and cumulatively as Potentially Significant Impact –Mitigation Required (PS-M). The EIR should explain how proposed mitigation would reduce impacts to less than significant for each specific impact or a Statement of Overriding Considerations must be adopted.

- Once additional analysis has been completed, an EIR should evaluate and address all issue areas that may be categorized as "Potentially Significant"; provide mitigation, and discuss how the mitigation will be implemented and monitored. The EIR should also identify any residual impacts.
- The comments listed below correspond to the numbers indicated in the draft Initial Study.

General Plan Environmental Goals and Policies

The discussion indicates that "...the proposed project is expected to be consistent with the Ventura County General Plan, Goals , Policies, and Programs including..." and then lists the issue areas. Because the project site is not located in the unincorporated area of the county, the Ventura County Planning Division concurs. The next paragraph goes on to discuss the Cities' of Oxnard and Port Hueneme Local Coastal Plans and the potential for impacts in relation to the cities plans.

Land Use

The draft Initial Study indicates that the proposed project "....is expected to have no impact on existing land use or supply of housing in the vicinity." While this is true for the proposed project, Alternative E would require removal of housing on one side of the street. This should be evaluated in the EIR.

Biological Resources

Please see attached memo.

Resources

The Planning Division concurs with the findings of the draft Initial Study.

Public Facilities

The VC Planning Division is responsible only for the Parking issue with regard to Public Facilities. No impacts to parking facilities are anticipated.

Thank you for the opportunity to review and comment on this project. If you have any questions regarding this memo, you may contact myself at 654-2497 or Kari Finley, Senior Planner at 654-3327.

COUNTY OF VENTURA
RESOURCE MANAGEMENT AGENCY
PLANNING DIVISION

MEMORANDUM

DATE: April 24, 2008

TO: Bruce Smith, Manager General Plan Section

FROM: Christina Danko, Planning Biologist

SUBJECT: Review of the J Street Drain Improvement Project Initial Study

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Biological Resources

The analysis of potentially significant biological impacts in the J Street Drain Initial Study is consistent with the Ventura County Initial Study Assessment Guidelines. The J Street Drain is lined with concrete and therefore does not contain significant wildlife habitat. However, the lower end of the drain and the Ormond Beach Lagoon, into which the drain flows, do provide habitat that could potentially support special status species. A brief review of the California Natural Diversity Database revealed a recorded occurrence of tidewater goby, a federally endangered fish, in the lower end of the J Street Drain, where it flows into the lagoon. In addition, there are recorded occurrences of western snowy plover, a federally threatened bird, around the lagoon.

The Ormond Beach Lagoon is considered a significant wetland habitat and coastal habitat in Ventura County. Therefore potential impacts to special status species, wetland habitat, and coastal habitat that would result from the J Street Drain Improvement Project should be studied in the EIR.

Location # 1740
800 South Victoria Avenue, Ventura, CA 93009

County of Ventura
Public Works Agency
Integrated Waste Management Division
MEMORANDUM

Date: April 24, 2008

To: Theresa Stevens, Sr. Environmental Specialist
Ventura County Watershed Protection District

From: Frank Kiesler, Assistant Manager
Integrated Waste Management Division

Subject: **J Street Drain Improvement Project**
Project No. 82322 - Draft Initial Study

The Integrated Waste Management Division (IWMD) has completed its review of the Draft Initial Study prepared for the J Street Drain Improvement Project, Project No. 82322. This document was submitted to the Public Works Agency by the Ventura County Watershed Protection District (VCWPD) on April 17, 2008. The IWMD has determined that the impact of this proposed project to permitted solid waste disposal facilities in Ventura County is "Less Than Significant" and has prepared an Initial Study Checklist as requested on the PWA Cover Memo dated April 17, 2008. *(See Attached)*

The Watershed Protection District is to comply to the extent practicable, with the general requirements of Ventura County Ordinances #4308 (pertaining to solid waste handling, disposal, waste reduction, and waste diversion) and #4357 (requirements for the recycling and diversion of construction and demolition debris), to assist the County's efforts to meet the requirements of Assembly Bill 939, which mandates all statewide jurisdictions to divert 50% of their solid waste from local landfills. Both Ordinances can be viewed in their entirety on the IWMD's website at http://www.wasteless.org/6_1ordinances.html. For a complete list of all recyclable construction materials, please refer to the "Director's List of Commercial Recyclables," also located on the IWMD's website at:
http://www.wasteless.org/PDF%20files/RecyclablesListBusiness-English.pdf)

We recommend the following Contract Specifications to the Watershed Protection District in regards to this project:

1. **Concrete and other Recyclable Construction Materials**
   The contract specifications shall include a requirement that all recyclable construction materials generated during the demolition and construction phases of the project be reused on site, or recycled at a permitted recycling facility. For this project that includes, at a minimum, concrete, asphalt, wood, and metal. All non-recyclable materials shall be disposed of at a permitted disposal facility.

2. **Green Materials - Recycling & Reuse**
The Contract Specifications shall include a requirement that all green materials (wood waste, vegetation) slated for removal prior to, during, or post construction, are diverted from the landfill. This can be accomplished by on-site chipping and land application at the project site, or by transporting the wood waste and/or vegetation to an authorized or permitted greenwaste facility in the County for recycling and/or composting. Illegal disposal and landfilling of recyclable organic material is prohibited.

3. **Sediment and Soil - Recycling & Reuse**
The contract specifications shall include a requirement that all sediment and soil, not reused on site during the construction and/or landscaping phases of the project, be transported to an authorized or permitted facility for recycling or reuse. Illegal disposal and landfilling of recyclable sediment and soil is prohibited.

4. **Commercial and Construction Equipment Used Oil Recycling**
The contract specifications shall include a requirement that motor oil, batteries, antifreeze, and other recyclable materials removed from commercial vehicles and construction equipment maintained and/or repaired onsite during the project's demolition and construction phases be recycled through a permitted or certified facility.

5. **Quantification of Materials Diverted from Landfill Disposal by On-Site Reuse or Recycling**
The contract specifications for this project shall include a requirement that the contractor(s) create, and submit, a Summary Table to the IWMD at the conclusion of the project. The Summary Table shall include the TYPE (e.g., green materials, concrete, asphalt, soil), and approximate WEIGHT of:
   - All recyclable materials generated during the demolition and construction phases of the project that were reused on-site, and
   - The name and address of the facilities where recyclable materials were transported for recycling or reuse. Receipts are required to verify that recycling occurred and the materials were not landfilled.

Thank you for providing the IWMD with an opportunity to comment on this project. Please send a copy of the final specifications to the IWMD via Brown Mail #1650. Should you have any questions regarding this memo, contact Pandee Leachman at 805/658-4315.

Ec: Donna Bernard, Development and Inspection Services, PWA
Howard E. Hope, IWMD
Don Sheppard, IWMD
Sandy Lomeli, IWMD

J Street Drain Improvement Project
Watershed Protection District Project No. 82322

INITIAL STUDY CHECKLIST

PUBLIC FACILITIES/SERVICES SECTION

Integrated Waste Management Division

	ISSUE (Responsible Department)	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	PS -M	PS	N	LS	PS -M	PS
PUBLIC FACILITIES/ SERVICES:	24. **Waste Treatment/Disposal:**								
	C. Integrated Waste Management Division (PWA)		X				X		

DEGREE OF EFFECT:

N = No Impact.
LS = Less Than Significant
PS-M = Potentially Significant Impact Unless Mitigation Incorporated
PS = Potentially Significant Impact.

JUSTIFICATION

The Integrated Waste Management Division (IWMD) has reviewed the application received on April 17, 2008 for the J Street Drain Improvement Project and has determined the degree of effect to permitted solid waste disposal facilities in Ventura County from this project to be "Less Than Significant."

Pursuant to the IWMD's factors determining the significance of project impacts to solid waste facilities within Ventura County, any discretionary development project generating solid waste will impact the County's remaining solid waste disposal capacity. Additionally, as required by California Public Resources Code (PRC) 41701, Ventura County's Countywide Siting Element (CSE), adopted in June of 2001 and updated annually, confirms Ventura County has at least 15 years of disposal capacity available for waste generated by in-County projects. Therefore, because the County currently exceeds the minimum disposal capacity required by state PRC, no individual project of this type and magnitude will significantly impact the County's remaining solid waste disposal capacity.

COUNTY OF VENTURA
PUBLIC WORKS AGENCY

WATER RESOURCES AND ENGINEERING DEPARTMENT
DEVELOPMENT & INSPECTION SERVICES DIVISION

MEMORANDUM

DATE: April 24, 2008

TO: Theresa Stevens
RMA - Planning Division

FROM: Brian J. Trushinski, BES, MA, CFM
Engineer III, Development and Inspection Services

SUBJECT: **PROJECT: J-STREET DRAIN: PROJECT No.: 82322**

Development & Inspection Services has reviewed the subject project and the supporting materials as they pertain to our areas of responsibility and offer the following comments:

Seismic Hazards Section, page 14

1. The project may result in structures that are damaged as a result of ground shaking, liquefaction or hazards associated with liquefaction such as lateral spreading. This section should be modified to reflect the potential hazards and should also include a statement about the future geotechnical report that will address the hazards and mitigate them to acceptable design levels.

Geologic Hazards Section, page 14

1. This section contains hazards that are not considered hazards for the project such as landslides and mudslides. It further points out that a geotechnical report will be prepared identifying and geologic hazard and appropriate mitigation measures. This should be done for the preparation of the Initial Study, otherwise the hazards should be considered as unknown.

The Initial Study Checklist provided on page 7 should be corrected for the Section 13 Seismic Hazards and the Section 14 Geologic Hazards. The text should discuss each hazard listed in the Initial Study Checklist.

RECEIVED
MAY 02 2008
WATERSHED PROTECTION DIST.

J Street Drain Meeting Notes

February 25, 2008

1. There is lots of trash in the channel. Can it be filtered out before it goes to the ocean?

2. The City has programs coming up to deal with source control of trash.

- City is working on study to assess sources of trash
- Where are the existing trash racks/nets?
- Netting at Oxnard West

3. What will be done with the construction demolition waste? Will it be recycled?

Discuss solid waste issues and potential hazards.

4. Area hydrology needs to be better understood.

5. There is a problem with this project being fragmented from the OID project and from plans that others (Calleguas MWD) have to discharge water (ie, take it out of the Oxnard treatment plant process).

6. The mouth of the lagoon moves up and down coast, it's not static and worth of study for this project.

7. Sand deposited from dredging of Port Hueneme contributes to the littoral process.

8. The beach may be receding due to less sand from the Port.

9. The Coastal Conservancy plans for lagoon restoration are not ripe and should not be used. Their staff doesn't understand the hydrology.

10. We should figure out how to move water over/around the Reliant energy plant.

11. We need to check on the limits of the conservation easement (Sierra Club) over Hueneme Beach west of the J Street outlet to the beach. It was recorded in the 1990s (?).

12. We need to study the tide and 100 year flood. Observations show the lagoon breaches well before 100-year flood water accumulates in the J Street drain. The additive effects of the 100-year flood and tide won't likely materialize.

13. We need to study the potential for reestablishing flow in the old blocked channel along the Haleco slag pile (immediately south of it) and of putting a culvert into McWane to get water from OID to the beach.

14. We need to study the potential for swapping old culverts downcoast at key blockages to get water flowing toward Pt. Mugu.

15. Want J street project to provide improvements to lagoon at outlet of the OID

Sierra Club- primary concern is OID – need to do an evaluation of the independent utility of J street project.

16. We need to include the Coastal Conservancy scenarios and historical aerial photos that show changes in the lagoon in the EIR.

17. We need to develop a cost estimate of reestablishing the blocked channel and swapping culverts...its likely small compared to the Coastal Conservancy plans. Other stuff on the J Street drain as requested by the residents is window-dressing.

18. We need to explain what prompted the J Street project.

19. We need to explain why we are focused on the J Street project instead of OID. OID fills almost to the bridge soffit on Hueneme Road during high tides. More full than J Street on same tide.

20. Will a direct outlet from J Street to the ocean increase the reach of the tide in J Street? URS alternative – if selected need to discuss tidal action

21. Should OID be a higher priority?

22. Cumulative impacts need to address effects at lagoon of both J street and OID improvements

23. Who recommends preferred alternatives and who decides on the project that gets built?

24. How much input do residents have to select an alternative?

25. Can taxes be assessed to help pay for a particular alternative or features thereof that residents want? How can residents facilitate this?

26. There is a concern about graffiti, trash, vermin etc, in open channel alternatives.

27. A covered channel would provide a safe corridor for kids on bikes going to/from school. A beneficial feature.

28. The Boy Scouts are ready to service landscaping on close box alternatives.

29. When was the last 100 year flood in Oxnard?

30. Please study the effects of opening old drains and enlarging culverts as suggested by the Sierra Club rep (Al Sanders); comment above.

31. Please discuss the potential for a permanent opening of J Street drain.

32. Please consider moving soil from Channel Islands Harbor disposal site to get water to spread (note: this site is in OID watershed).

33. Please consider buying the Metropolitan Water District holding which is surrounded by TNC and CC holdings (note: this site is in OID watershed).

34. Please consider buying the Metropolitan Water District holding which is surrounded by TNC and CC holdings (note: this site is in OID watershed).

35. Putting fresh water on the floodplain would be beneficial reuse of water which would transition into saline lagoon system. Brackish marsh habitat is missing.

36. EPA has been asked to evaluate fill on McWane because it likely came from the Haleco slag pile.

37. Check w/ EPA to see if they would oppose new culverts under McWane (note: this site is in the OID watershed).

38. Is there any federal or other outside funding?

39. Is Prop 1E funding available? It may be available for protection of homes from flooding.

40. The City of Oxnard Utility Task Force is a forum for residents to get involved w/ local issues.

41. How does the 550 acre subdivision project north of Hueneme Road affect our project? That project currently proposes to drain water to Oxnard Drain No. 2 but if that doesn't work, then water may come to OID. (note: not exactly sure where this 550 acres is).

42. Address need for maintenance and potential effects of maintenance operations

43. Need to distinguish between J street as a flood control project and desire for recreation and lagoon restoration

ENCLOSURE # 1

June 27, 2009 **Page One of Two**

TO: KIRK R. NORMAN, P.E. **FAX: 654-2108**
Watershed Protection District

RE: J STREET DRAIN PROJECT
Surfside III Concerns

RECEIVED JUN 27 2009 WATERSHED PROTECTION DISTRICT Design & Construction Division

Dear Mr. Norman
Thank you very much for taking your time to talk to me about the expansion of the J Street Drain and the effect on Surfside III property. Although your anticipation of a tentative start-date is at least a year away, I appreciate the information that you were able to provide; your helpfulness; and your courtesy!

In order to clarify some information that I may have misunderstood, I'd like to verify the distance that the new boundary fence will be moved from the position of the existing fence at the locations of 15+00 and 14+00 on your diagrams. You stated that a new permanent fence is to be constructed approximately three feet from the current fenceline. On your diagram, it looks closer to five feet, if the new fence is erected at the edge of your easement. Even more important is the eight-foot "work-area" that must be cleared. Did I correctly understand that all of our large trees, shrubbery, existing walkways and planters in that area will have to be removed to accommodate your work? Obviously, that will cause a considerable negative impact on our property.

Re: 15+00: You indicated that your understanding - regarding responsibility to provide replacement of the elements that have to be removed – is that sixty-foot-high trees and dense bushes might be replaced with much-smaller vegetation that will not provide us with effective "screening" from the water-treatment plant (let alone the loss of the beauty of the trees). The prospect of direct exposure to the offensive view, noise, and odors from the sewage facility poses a really-major problem to all owners whose homes are located along the drain.

Re: 14+00: We need to know what structures will be erected to replace the retaining walls, planters, and walkways that have to be removed. I realize you are an engineer concerned with reconstruction of a canal, and you probably won't be directly involved with these details, at least for some time. But these are issues affecting our property-values -- which, by law, must be disclosed to all current homeowners and prospective buyers. Therefore, the matter of who will pay for replacement-costs is of concern to all members of our Association

RECEIVED JUN 27 2009 VENTURA COUNTY FLOOD CONTROL DISTRICT Permit & Construction Division

RE: J STREET DRAIN PROJECT [6/21/09] Page Two
Surfside III

The damage to Surfside III property as a result of the drain project is critically-important to us; not only concerning the matter of our quality-of-life, but in regard to what may be a significant expense to the members of our Association for whatever modifications that will be required to restore both essential and decorative functions within our community.

I hope you will be able to provide the information that I am requesting, as soon as possible. Or, if you are not involved in some aspects of my inquiry, please let me know who else to contact. Following are the questions we have at this time:

***** Regarding our lack of information about this project for almost two years: WHO in the Surfside III complex was notified; HOW was notification made; and WHEN was this done?**

- **When will another EIR - or other public input - meeting be held?**
- **What is the distance that the new permanent boundary-fence will be installed from the existing fence?**
- **Which bushes and trees will have to be removed to provide you with the temporary eight-foot working-area during construction?**
- **Where can we find the documents that deal with the specific requirements regarding your responsibility to replace elements [vegetation and structures] which must be removed?**
- **Is there an amount of money already in your budget allocated to replacement of elements removed from the easement –area and replacement of elements on our property which have been adversely-affected by the project?**
- **Is there someone – other than yourself – that would have the answers to these, or additional, questions that we will have in the future?**

Surfside III is a multi-generational complex that provides relatively-affordable homes to families, singles and senior residents, both renters and owners. Your assistance in providing information to help us cope with the negative aspects of this project on our lives, will be sincerely appreciated.

Thank you again for your time and consideration.
Respectfully Yours,

Marion Kelemen

Surfside III
962 Lighthouse Way
Port Hueneme, CA 93041

Phone/Fax: (805) 986-0303
Email: lighthousecrew@verizon.net

July 6, 2009 [Page One of Two]

TO: ANGELA BONSIGLIO
Environmental Planner
Watershed Protection District

FAX: 654-3350

RE: J STREET DRAIN PROJECT
Surfside III Concerns

Several weeks ago, a member of the Surfside III Landscape Committee was informally told of the pending J Street Drain Project – and passed on the information at our Open Board Meeting on June 13, 2009.

As the SSIII townhouse owner whose property is closest to the project site, I immediately went on-line to find as much information about the project as possible. I then went to see the Project Manager, Mr. Norman – who was very helpful in answering many of the questions I posed at that time. Subsequently, I sent him a fax with a number of additional questions. To date, he has not responded.

This project will result in significant negative environmental effects on our property, including the removal of existing trees, shrubbery, walkways, planters, etc. that is required by the eight-foot work-area needed for the canal construction. The J Street website states that Environmental Studies began in January, 2008 – and that the VCWPD invited all interested parties to a series of public meetings that were held from January 16 - 30, 2008. We were not informed of these meetings!

As we - all 309 homeowner/taxpayers in our community - were not invited to participate in the public review process, I'm requesting your assistance in determining how, at this point, this oversight can be remedied to the greatest extent possible.

I understand there is a requirement that people who will be affected by a Public Works Project be informed of public meetings in a timely manner so that their issues of concern can be addressed. As we had no opportunity to give input or discuss our concerns; evaluate the several alternatives; or present opposition to any facet of the project, we are now requesting your agency to work with us to re-consider some critical aspects of the project.

RECEIVED
JUL 0 6 2009
WATERSHED PROTECTION DIST.

J STREET DRAIN PROJECT [7/4/09] **[Page Two]**
Surfside III Concerns

1) At this point, the engineering plans may have already been finalized, but as actual construction is not scheduled until January, 2010 at the earliest, we are asking for an alteration of the construction plan. We would like the eight foot work-area currently designated for the easement on our property, to be re-designated to the Water Treatment Facility on the other side of the canal. That location is industrial land which already has an access road adjacent to the construction site.

We are hoping that, as an environmental planner, you will support our effort to alter a plan that destroys the large trees and vegetation screening a residential community from the unsightly view, odor, and noise of a sewage-treatment plant. To date, we have not only been left out of the Public Process meetings, but we have not seen either the final EPA report or the Coastal Commission approval of our local ecological disaster.

2) If there is a indisputable reason why this alteration is not possible, then we are asking for your support in working with us to design a restoration plan to mitigate the damage to our community environment resulting from the eight-foot wide swath of destruction. All of the townhouse properties and all the residents in two large condo buildings that border on the canal will be directly and significantly affected by the project. Hopefully, the restoration plan will be custom-tailored for different areas of our property to provide acceptable remediation of the various types of damage.

3) We'd also appreciate your assistance in directing us to the person in charge of negotiations regarding compensation for the expenses to our Association for repairing the damage that will be caused by the removal of the large trees, bushes, retaining-walls, walkways, planters, and other structures affected by the project. This will involve replacement costs of both environmental and structural elements.

Please let me know that you have received this letter – and share whatever answers/information/assistance you can provide!

Thank you for your time and consideration!

Marion Kelemen
Liaison to SSIII Environmental Concerns Committee

Phone/Fax: 986-0303
Email: lighthousecrew@verizon.net

ENCLOSURE # 2

July 15, 2009

TO: KIRK R. NORMAN, P.E.
Watershed Protection District

FAX: 654-2108

RE: J STREET DRAIN PROJECT
Surfside III Issues

Dear Mr. Norman
THANK YOU again for your call in response to our concerns; for scheduling a conference-call with SSIII board-members on Friday morning; and for letting me know that you will send a letter answering our questions as soon as possible.

As some weeks have passed since my letter of June 27, we have had a chance to summarize our concerns and formulate some specific requests. In the interest of focusing on the current status of this situation - following is a brief summary of the critical issues that we wish to address in the conference-call:

1) As we were never notified about the meetings regarding this project – and therefore were left out of the public participation phase of the planning process - we are requesting special courtesy in remedying this lapse. In particular, we are asking for reconsideration of the "flood-condition sand-berm removal" alternative.

2) The current plan requires destruction of the large trees and vegetation screening our residential community from the unsightly view, odor, and noise of a sewage-treatment facility. As actual construction is not scheduled until January, 2010 at the earliest, we are requesting an alteration to the plan. We would like the eight foot work-area currently designated for the easement on our property, to be re-designated to the other side of the canal. That location is industrial land which already has an access road adjacent to the construction site.

3) If there are indisputable reasons why the sand-berm-removal alternative and the work-area alteration are both not possible, we are requesting your support in working with us to design a Restoration Plan to mitigate the damage to our community. Also, we need to know what arrangements are in place to provide compensation for the expenses to our Association for repairing and replacing both environmental and structural elements.

Assuming the sand-berm alternative and the work-area relocation were previously addressed, we would appreciate inclusion in your letter, of any relevant information regarding the reasons why these options cannot be reconsidered. We appreciate any assistance you can provide to help us maintain the existing environment at Surfside III – or at least recover from the effects of the project to the greatest degree possible.

Sincerely, Marion Kelemen

Phone/Fax: 986-0303
Email: lighthousecrew@verizon.net

RECEIVED
JUL 16 2009
...ION DISTRICT
...ation Division

July 24, 2009

RE: JSDP: SSIII CONCERNS

ATTN: When is the EIR Meeting?

SSIII: Measurements

FROM EXISTING FENCE:	FEET
Basketball Court	33
Playground	27
Picnic Area	15.5
Swing-set Area	22
Patio Fence [962 LHW]	16.5
(behind Bldg 7)	
Retaining Wall	4.5*
Sidewalk	5.5*
Parking Spaces	8.5
Corner of Bldg 7	11
(Behind Bldg 6)	
Parking Structure	9

QUESTIONS:

1...Exactly how far from the existing fence will the construction work-area fence be located? How many large trees will have to be removed? Will construction equipment be using our streets? How long will the construction go on?

2...Are you the person responsible for the current construction plan only – or will you be involved in the restoration plans also? How much money is in your budget for replacement of our trees and repair of structures damaged by this project?

3...Your plans indicate these structures (**) will be removed. This does not address electrical, sewer, water lines, and/or parking spaces that may be affected. Also, residents of Bldg 7 in the apartments nearest to the canal, will be only a few feet away from the construction work. Was this environmental cost considered?

4...The damage to our property, the impact on our residents, and the possible cost of mitigation to our owners is very extensive. Why was this project not designed with construction work done from the other side of the canal?

5... If you were involved in consideration of the alternative plans, WHY, AT THIS TIME OF EXTREME DROUGHT AND ECONOMIC COLLAPSE IN CALIFORNIA, WAS THIS DESTRUCTIVE AND EXPENSIVE PLAN CHOSEN INSTEAD OF THE SIMPLE ALTERNATIVE OF REMOVING THE SAND-BERM WHEN NECESSARY – which is the common-sense solution that has worked till now?

82322-1

August 15, 2009

TO: KIRK R. NORMAN, P.E.
Watershed Protection District

FAX: 654-2108

AUG 17 2009
RECEIVED
Design & Construction Division

RE: J STREET DRAIN PROJECT
Surfside III Issues
Reply to VCWPD Letter dated 7/30/09

Dear Mr. Norman
Thank you for your response to our concerns; for sending Project Engineer Matthew Hespenheide to SSIII for a meeting on July 24, 2009; for your letter of explanation to our previous questions; and for your presentation at our Board Meeting.

This letter is to inform you and your agency that the information in your letter does not address particular issues that are critical concerns to the owners and residents of our community. These specific issues include:

1) Failure to Notify is dismissed by the comment that one SSIII person attended the public meetings. That person did NOT get notification in the mail. She attended because she had information obtained from someone at another meeting. The fact remains that NO ONE at SSIII was given notice of the project! (And we found out about it by accident!)

2) Stagnant Water Back-up Condition - which was discussed with Mr. Hespenheide at the July 24 meeting - was not mentioned. We have already been suffering from a serious mosquito problem since the installation of the new Pump Station. The additional water back-up due to the expansion of canal-capacity, would greatly expand the mosquito-breeding capacity. This could become a Public Health issue.

3) We understand that a Temporary Work Easement necessary for the eight-foot Work Area, requires a legal agreement with SSIII to use our property for that purpose - including permission to remove all the existing trees, vegetation, and structural elements. Although the TWE was discussed in your letter, the Easement Agreement was not mentioned.

4) Restoration/Replacement due to damage connected with the Work Area is referred as a matter to be discussed with our Landscaping Committee. This critical issue is not a Landscape Committee matter. It directly affects the properties adjacent to the canal and impacts all members of our Association. Therefore, the negotiations regarding this issue will be the responsibility of the JSDP Committee and the Board. In this regard, we will need a clear explanation of the term "in kind" as it refers to the replacement of mature, 60 foot+ trees and any other elements or structures that will be replaced.

5) Compensation for the cost of damage is covered by your proposal for a pre-project inspection. While such an inspection is a necessary part of the process to determine the overall/total cost, only a comprehensive analysis of all facets of immediate and long-term damages will suffice to prepare us for negotiations regarding compensation. We would like to know how much money has been allocated in your budget for compensation to the SSIII HOA for damage to our property.

RECEIVED AUG 17 2009 FLOOD PROTECTION DISTRICT Planning & Construction Division

As the last time-period for public comment ended on May 9, 2008 – long before we were aware of the project - we will have no opportunity to input our concerns before the EIR is drafted. While this may be standard procedure in instances where interested parties have already been allowed to participate in public meetings, it is not consistent with the VCWPD goal of collaboration with watershed stakeholders in our situation – where approximately 1000 owners and residents were not able to participate in the planning process.

Therefore, to remediate this situation, we are requesting a special accommodation in the form of an additional time-period – before the DEIR is completed – to submit our concerns regarding this project. This action will ensure that our issues will be considered for inclusion in the DEIR – instead of waiting for an incomplete Report to be issued, and then trying to add elements to the document during the 45-day public review period. Allowing us to input these critical issues for inclusion in the DEIR is essential collaboration. If we will only be allowed to respond AFTER the EIR is written, we will be in the position of having had no notification, no participation in the planning process, and no accommodation to mitigate the failure to notify us of the project.

While we await response from you regarding the aforementioned issues, and your decision concerning permission to submit our concerns before the DEIR is completed, we request your assistance in providing additional critical information that is needed for us to proceed with our response to the project:

* **DETAILED SURVEY OF EIGHT-FOOT-WIDE TEMPORARY WORK AREA showing all trees, vegetation, and other structures to be removed.**

* **DETAILED SIDE-VIEW AND TOP-VIEW DRAWINGS OF WATER-CONTAINMENT LEVELS in canal from John Lang property-line to the end of the invert at the sand berm - showing maximum levels before the sand berm is breached. Also explanation of plan for elimination of mosquito-breeding in the greatly-increased amount of stagnant water.**

* **DATE WHEN ENVIRONMENTAL IMPACT REPORT WILL BE AVAILABLE.**

* **DATE/TIME/PLACE OF NEXT LOCAL PUBLIC MEETING.**

* **DATE/TIME/ADDRESS FOR COASTAL COMMISSION HEARING.**

We sincerely appreciate all your work to provide information and assistance to us in our effort to deal with the significant effects of this project on our community!

MARION KELEMEN
Chair, SSIII JSDP Committee / Liaison to Environmental Concerns Committee

Phone/Fax: (805) 986-0303
Email: lighthouseerew@verizon.net

J Street Drain / Ormond Beach Lagoon Coastal Engineering Report

Prepared for:

County of Ventura
800 S. Victoria Ave.
Ventura, CA 93009-1600

3230 El Camino Real
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Irvine, CA 92602
(714) 730-2331

This report incorporates revised and supplemental analysis by reference to the Coastal Engineering Report Addendum, dated November 2008.

Table of Contents

1. Introduction 7

1.1. Purpose and Use 7

1.2. Project Approach 7

1.3. Report Organization 7

2. Conclusions 9

3. Project Review 11

3.1. Physical Description 11

3.2. Previous Technical Studies 12

4. Physical Processes 14

4.1. Coastal Processes Summary 14

4.2. Coastal Lagoon Inlets and Breaching Review 15

4.3. Breaching at Ormond Lagoon 15

5. Data Collection and Interpretation 18

5.1. Critical Data Gaps 18

5.2. Surveys 18

5.2.1. Aerial Photogrammetric Survey 18

5.2.2. Beach Profile Survey 18

5.2.3. Lagoon Bathymetric Survey 20

5.2.4. Other Previous Surveys 20

5.3. Longshore Current 22

5.4. Sediment Samples 22

5.4.1. Bottom Sediment Samples 22

5.4.2. Suspended Sediment Samples 23

5.5. Beach Elevation 23

5.6. Water Level and Salinity Observations 26

5.6.1. April 2008 26

5.6.2. VCWPD J Street 793 ALERT Site 27

5.6.3. CH2M Hill, October 2008 - January 2008 28

5.6.4. Summary of Water Level Data 30

5.7. Storm Hydrographs 30

6. Alternatives Analysis 32

6.1. Description of Outlet Alternatives 32

6.1.1. No Action Alternative 32

6.1.2. Beach Maintenance Alternative *32*
6.1.3. Emergency Mechanical Breaching Alternative *33*
6.2. Numerical Modeling *33*
6.2.1. Breach Formation *33*
6.2.1.1. No Action *35*
6.2.1.2. Beach Maintenance *36*
6.2.1.3. Emergency Mechanical Breaching *37*
6.2.2. Breach Closure *37*
6.2.2.1. Closure Model Results *37*

7. Discussion **39**
7.1. Lagoon Geography and Morphology *39*
7.2. Water Level in the Lagoon *39*
7.3. Potential Impacts of Proposed Alternatives *39*
7.3.1. No Action *40*
7.3.2. Beach maintenance *40*
7.3.3. Emergency Mechanical Breaching *40*

8. References **41**

Appendix A – Coastal Processes Review **46**
A1. Wind *46*
A2. Waves *47*
A3. Tides *49*
A4. Precipitation *50*
A5. Upstream Sediment Load *51*
A6. Longshore Transport *51*
A7. Cross-shore Transport *52*
A8. Aeolian Transport *52*
A9. Relative Sea Level Rise *54*
A10. Aerial Photography *55*

Appendix B – Numerical Modeling **65**
B1. Model Approach and Conventions *65*
B1.1. Units, Coordinate System, Datum *65*
B1.2. Direction Convention *65*
B2. Seaward Breaching *65*
B2.1. Software Description *65*
B2.1.1. MIKE 21 Coupled Flexible Mesh Flow Model *65*

B2.1.2. Software Limitations 65
B2.2. Model Domain 66
B2.3. Boundary Conditions 69
B2.3.1. Hydrographs 69
B2.3.2. Tidal 69
B2.3.3. Sediment Transport 70
B2.3.4. Waves 70
B2.3.5. Salinity 70
B2.4. Model Parameters 70
B2.5. Other Forcing 70
B2.6. Initial Conditions 70
B2.7. Model Verification 71
B2.7.1. Waves 71
B2.7.2. Hydrodynamics 72
B2.7.3. Sediment Transport 73
B2.7.4. Salinity 75
B2.8. Breaching Model Results 76
B2.8.1. Idealized Representative Beach 77
B2.8.2. Beach Maintenance 80
B2.8.3. Emergency Breach 81
B3. Breach Closure 85
B3.1. Software Description 85
B3.1.1. SBEACH (Storm –induced BEAch CHange) 85
B3.2. Model Domain 85
B3.3. Boundary Conditions 85
B3.3.1. Waves 85
B3.3.2. Tidal 85
B3.4. Initial Conditions 86
B3.5. Closure Model Results 86

List of Figures

Figure 3.1. Three dimensional plot of the lagoon, Marsh 2008. 11
Figure 4.1. Locations of previous breaches. 16
Figure 5.1. Location of beach profile survey transects (Coastal Frontiers 2008). 19
Figure 5.2. Historical cross-shore profiles for Transect BCN23. 20
Figure 5.3. Aerial survey flown 3/5/2008 by Mercator Photogrammetric Systems. 21
Figure 5.4. Location of water and sediment grab samples. 23
Figure 5.5. MacroCTD location in Ormond Lagoon. 26
Figure 5.6. Measured lagoon water level, salinity and tide. 27
Figure 5.7. J Street 793 Alert Gage stage data for 2003. 28
Figure 5.8. Water level in the lagoon 12/5/2007 1/10/2008 (CH2M Hill 2008). 29
Figure 5.9. Water level in the lagoon 10/2007 1/2008 (CH2M Hill 2008). 29
Figure 5.10. Hydrograph for 2-year event. 30
Figure 5.11. Hydrograph for 100-year event. 31
Figure 6.1. Elevation above NAVD at peak flow during the 100-year event. 36

List of Tables

Table 5.1. Summary of available aerial surveys. 21
Table 5.2. Estimation of longshore current at Ormond Beach. 22
Table 5.3. Summary of historic beach elevation data. 25
Table 6.1. Model scenarios. 34
Table 6.2. Model result summary. 34

1. Introduction

HDR is conducting a Phase 1 preliminary design for Ventura County Watershed Protection District (VCWPD) to reconstruct approximately 2.2 miles of J Street Drain in the City of Oxnard, California. The combined flows of J Street Drain, Hueneme Drain, and the Oxnard Industrial Drain (OID) currently discharge into Ormond Beach Lagoon (lagoon). Following rainfall events, water levels in the lagoon rise and occasionally overtop the beach, forming a channel or breach that drains the lagoon and temporarily connects it to the Pacific Ocean. The overall goals of the project are to (1) reduce local flooding within the City of Oxnard by increasing the capacity of J Street Drain and reducing backwater effects in the lagoon during significant rain storms, and (2) minimize adverse ecological impacts to the lagoon. Because mechanical breaching benefits the first goal but is considered a detriment to the second, alternative management options and designs were investigated.

1.1. Purpose and Use

This report is intended primarily to document and inform the design of improvements to J Street Drain; it is not intended to provide a comprehensive analysis of the many hydrologic, hydraulic, and coastal processes historically and currently affecting the lagoon and its resources.

It is recognized that the lagoon is a unique and dynamic ecological resource and that human activities continue to influence its development and evolution. J Street Drain is an important source of freshwater for the lagoon, and thus modifications to the drain and its connection to the Pacific Ocean could cause beneficial and/or negative ecological impacts. Therefore, proposed modifications to J Street Drain were investigated for potential impacts to the lagoon dynamics and key physical processes. This report qualitatively describes historical lagoon morphology, key physical processes affecting lagoon breaching and closing, project specific data collection, and anticipated impacts to lagoon processes and morphology associated with proposed modifications to J Street Drain.

The Environmental Impact Report to be prepared by HDR will also utilize the findings of this report to frame the existing environment and assess any impacts related to physical changes documented herein.

1.2. Project Approach

Readily available site data and relevant previous studies were first gathered and reviewed. A reconnaissance site visit was then conducted and key physical processes were evaluated based on existing data and information. Following review of the existing data, supplemental field data were collected to fill critical data gaps. Analysis focused primarily on developing and modeling outlet alternatives to achieve the project goals as stated above.

1.3. Report Organization

Section 2 presents conclusions and key findings of the study. Previous relevant work by others is summarized in Section 3. Physical processes affecting the lagoon are summarized in Section 4. More detailed information on physical processes can be found in Appendix A. Supplemental

field data collected for the project and field data provided by others are discussed in Section 5. Section 6 includes the analysis of various outlet alternatives followed by a discussion of potential project implications and design recommendations in Section 7. References are listed in Section 8. Appendix B summarizes the numerical modeling performed.

1.4. Project Vertical Datum

The project vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD). However, the analysis presented herein references the North American Vertical Datum of 1988 (NAVD88) for consistency with more recent available data. The approximate correlation between the two datums is 0.0 ft NAVD ≈ -2.4 ft NGVD. Correlated values for key results are provided in the report conclusions.

2. Conclusions

The following conclusions are provided based on interpretation of readily available information, collection of supplemental field data, analysis of key physical process, and in consideration of the overall project goals.

1. Existing site conditions at Ormond Beach differ substantially from historic conditions. The project site historically contained a large wetland complex and coastal lagoons fronted by a beach. One lagoon was located north of J Street and fed by what is now the Hueneme Drain; the second was located south of J Street and fed by what is now the OID. Historical lagoons have been mostly filled and/or their drainages modified. Only a small remnant of the historical lagoon and wetlands at OID remains.

2. The existing lagoon began to develop following construction of J Street Drain, the Hueneme Pump Station in 1961, re-routing of the OID, and bypassing of littoral sediments initiated by the port of Port Hueneme in the early 1960s. J Street Drain and OID originally discharged separately to the ocean; as storm water ponded behind the growing dunes and beach, the two drains became connected in the late 1980s and began to function as a unit with a single outlet to the ocean during breaching events.

3. The geometry of the existing lagoon is naturally dynamic, varying considerably from season to season and year to year. Breaching during the design storms considered herein is dominated by the flows from OID and, more recently, breaches have tended to form near the OID and migrate south in the direction of net longshore sediment transport.

4. If sand bypassing at Port Hueneme were to cease, more rapid erosion at Ormond Beach would occur. Beach erosion and associated landward shoreline migration could create a lower and narrower beach, resulting in more frequent breaching. Similarly, ongoing sea level rise is expected to cause gradual shoreline recession and could conceptually result in more frequent breaching.

5. If J Street and OID were both provided permanent outlets through the beach to the ocean and freshwater not allowed to pond, the aerial extent of the lagoon would likely decrease due to infilling from wind blown sand and resulting in a lagoon more similar to the one that existed in the 1970s. If the ecology of the existing lagoon is to be maintained or improved, permanent outlets through the beach should not be considered.

6. When the lagoon is closed to the ocean, surface water and groundwater inflows cause the lagoon water level to rise, while evaporation and percolation through the beach tend to decrease water levels. Maximum water level in the lagoon prior to a breach is regulated by the lowest beach elevation between the lagoon and ocean. Beach elevation during closed conditions has been observed to be as high as 11.6 ft NGVD (14 ft NAVD) in isolated dunes. Based on available surveys and water level observations from 1975 to 2008, a nominal minimum beach elevation of 7.6 ft NGVD (10 ft NAVD) was applied for breaching analysis.

7. Lagoon breach formation is characterized as seaward breaching caused by freshwater overtopping the beach. Following a major breach, some limited wave-induced landward breaching may also occur. Breaches may occur multiple times each year. Wave-induced sediment transport is the main process for closing the breach and rebuilding the beach face. The tidal exchange through the breached inlet does not create velocities high enough to counteract the accretion caused by waves. Long-shore transport, aeolian transport, inflow from J Street, Hueneme and OID, and tidal exchange through the breach also contribute to the closure process. The time required for the breach to close is not expected to increase by emergency breaching.

8. Water levels in the lagoon, prior to a breach, range from about 1.6 ft to 6.6 ft NGVD (4 ft to 9 ft NAVD) and have been reported to reach up to 7.6 ft NGVD (10 ft NAVD). Based on numerical modeling for the 100-year storm, peak water levels within the lagoon at J Street are expected to reach about 9.6 ft NGVD (12 ft NAVD) in the absence of emergency breaching.

9. Channel design should consider lagoon water levels of no less than 9.6 ft NGVD (12 ft NAVD). If hydraulic analysis of the improved channel indicates that this water level cannot be accommodated by the design, or if the future unanticipated events change the condition of the beach/lagoon such that the design conditions analyzed herein may be exceeded, then emergency breaching must be considered.

10. Creating an emergency breach near OID prior to the 100-year storm is unlikely to decrease the peak water level in the lagoon near J Street, but would reduce initial lagoon water levels. A natural breach is expected to form early in the hydrograph for the 100-year storm, creating a breach well before peak flow arrives.

11. Creating an emergency breach near J-Street prior to the 100-year storm would decrease the peak water level in the lagoon near J Street from approximately 9.4 ft to 6.1 ft NGVD (11.8 ft to 8.5 ft NAVD). Emergency breaching would become less effective if performed further south of J Street.

12. Any emergency breaching alternative should include continuous monitoring of the lagoon water levels, a system for accurate prediction of storm events, a well defined emergency management plan, and the ability to rapidly mobilize excavation equipment. The emergency breach should be at least 50 ft wide, but would likely form on its own after initial excavation. Locating the breach near OID would maintain the existing lagoon configuration but does not achieve the lowest design water levels for the 100-year event at J Street.

3. Project Review

Various sources of existing information were gathered and reviewed to develop an understanding of the original project and recent analyses of J Street Drain and the Lagoon performed by others.

3.1. Physical Description

J Street drain was originally constructed in 1960 and discharged directly to the Pacific Ocean. As a result of storm water ponding behind the dunes and beach, two shallow lagoons formed at both J Street and OID, eventually becoming hydraulically connected and forming the existing lagoon. The lowest (deepest) areas of the lagoon are now located at the ends of J Street Drain and OID. These low areas are connected by a higher and relatively flat channel that varies in width from 50 to 100 ft. The surface area of the lagoon varies with freshwater inflow, the configuration of ephemeral side channels, and condition of the breach (open or closed). The majority of the wetted lagoon is located near to and south of the OID. The lagoon and adjacent wetlands intermittently connect to the Pacific Ocean following rain events when the lagoon water levels exceed the elevations of Ormond Beach. Bottom elevations in the lagoon are high compared to tide levels, thus limiting tidal range and prism. Figure 3.1 shows a three dimensional plot of the lagoon based on March 2008 aerial survey data. The water level shown is representative of mean higher high water (MHHW).

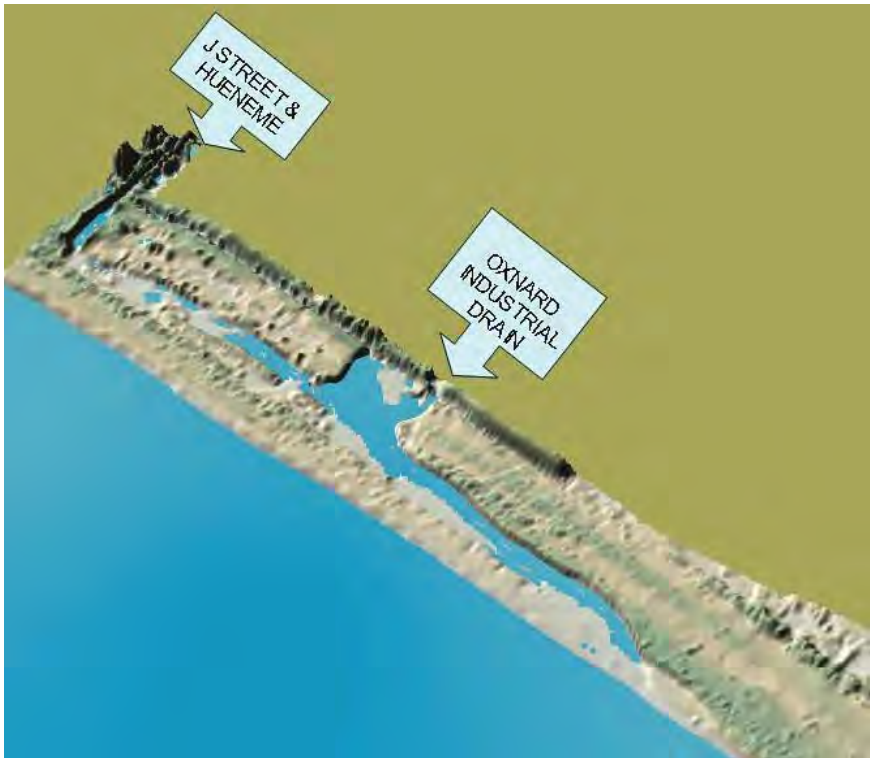

Figure 3.1. Three dimensional plot of the lagoon, Marsh 2008.

3.2. Previous Technical Studies

Previous hydraulic modeling and analysis of the J Street Drain and/or the lagoon has been conducted by the VCWPD (Su 2007, Tuan 1995), URS (2005), Tetra Tech (2005), and Phillip Williams and Associates (PWA 2007), among others. These studies differ in their assumptions regarding design flow rates and downstream boundary conditions in the lagoon but are otherwise consistent.

Prior to 1992, VCWPD routinely breached the lagoon mechanically near the J Street outfall. This practice was halted because of environmental concerns associated with decreasing water level and hydroperiod in the lagoon. Su's (2007) memorandum provides information on frequency of berm breaching and the modeling work of Tetra Tech (2005). Assuming that the berm completely breaches when the storage capacity of the lagoon is reached, Su (2007) indicates that the lagoon would breach during a 2-year storm event. During stronger storms the backwater effect of the lagoon will not substantially increase flooding because the breach occurs early in the storm. However, during the 2-year event, localized flooding may occur prior to breaching.

URS (2005) developed a plan and preliminary design to reduce flooding in the City of Oxnard by improving flow in J Street Drain. URS concluded that along with drainage system modifications, the backwater effect in the lagoon should be managed to reduce flooding. URS (2005) applied HEC-RAS, a one dimensional flow model, to analyze the existing and proposed hydraulic conditions. Rather than modeling the breaching process, URS assumed that the water level in the lagoon was either at the elevation of the beach or at normal depth based on channel slope, depending on the return period of the storm considered.

Tetra Tech (2005) applied FLO-2D, two dimensional flood analysis model, to define flooding in the City of Oxnard associated with a 100-year storm event; this modeling followed work by Pacific Advanced Civil Engineering. Tetra Tech also modeled the 2-year and 100-year storms to estimate when the lagoon breach occurs, assuming initial water levels in the lagoon of 4.0 ft and 6.5 ft Mean Sea Level (MSL) (6.7 ft and 9.2 ft NAVD). The analysis of flow in the lagoon was more detailed than that performed by URS (2005), but did not include an analysis of breaching processes that might elucidate potential project impacts for the improved channel. Tetra Tech suggested that lack of capacity in the existing drainage channels contributes more to local flooding than the condition of the beach elevation or lagoon water level.

Tuan's (1995) memorandum describes a VCRAT (Ventura County Rational Method) study to analyze the lagoon water level, backwater flooding effects, and rainfall intensity associated with flooding near the lagoon. The report indicates that the elevation of the beach varies from 5.5 ft to 8.5 ft MSL and that in September 1994 water levels in the lagoon reached approximately 7.5 ft MSL before breaching occurred. The analysis indicated that flooding begins when water levels in the lagoon reach 5.5 ft MSL and when rainfall intensity exceeds 1 inch/hour.

The California State Coastal Conservancy (SCC) is developing a comprehensive environmental restoration plan at Ormond Beach, including the lagoon and adjacent wetlands. To evaluate project feasibility, Philip Williams and Associates, Ltd (PWA 2007) prepared a hydrologic and

geomorphic conditions report. The report summarizes key processes affecting Ormond Beach, the lagoon, and surrounding wetlands based primarily on existing data sources, surveys of the upper beach, and studies by others. The report also describes concepts for maintaining a tidal inlet at the lagoon by modifying elevations of adjacent lands and installing jetties or similar structures.

Previous studies have characterized stormwater flows into Ormond Lagoon and generally describe processes affecting lagoon breaching. Detailed analyses of coastal processes, lagoon hydrodynamics, hydroperiod, lagoon breaching dynamics, and lagoon closure have not been previously performed for assessment of potential project-related impacts or for design purposes.

4. Physical Processes

Modifications to J Street Drain and outlet configuration could potentially alter breaching frequency and duration, tidal prism, lagoon hydroperiod, and other characteristics of the lagoon. Therefore, HDR investigated the history of the lagoon, behavior of similar systems, and key physical processes affecting the coupled behavior of the drains, lagoon, beach, and the nearshore Pacific Ocean. The following sections provide a summary of key physical processes affecting the lagoon. More detailed information on physical processes can be found in Appendix A and within the references listed in Section 8.

4.1. Coastal Processes Summary

- Tides in the project area are semi-diurnal with a 5.4 ft range between MHHW and MLLW. For reference, the elevation of MHHW is approximately 5.3 ft NAVD. Tides exceed MHHW approximately 5% of the time.

- Tidal Prism varies considerably with changing topography of the lagoon and connected channels. PWA (2007) estimated the tidal prism to be between 15 and 17 acre-ft. Based on the models presented in Appendix B, the tidal prism ranges from approximately 9 to 24 acre-ft, depending on the tide and geography of the lagoon.

- Winds are predominantly from the west and are characterized in detail in Appendix A. Wind plays three primary roles in coastal processes by driving nearshore waves, surface currents, and aeolian transport (wind blown sand).

- Average rainfall in the area is only about 0.04 inch/day with higher rates from October through April.

- Waves nearshore are predominantly from the southwest. Significant wave height ranges from 1.5 to 5.0 ft 85% of the time. Wave period is between 12 and 18 seconds 75% of the time. Waves drive longshore and cross shore sediment transport at Ormond Beach. Wave-driven sediment transport coupled with tides, wind and lack of strong discharge from the drainage system causes closure of the breach.

- Net longshore transport is to the south at about 1,000,000 CY per year. Disruption of ongoing artificial bypassing at Port Hueneme would result in significant erosion at Ormond Beach and thus potentially alter the nature of the lagoon.

- Cross-shore transport is the dominant process responsible for breach closure and has not been previously studied.

- Due to the arid climate, aeolian transport along Ormond Beach is significant and capable of partially filling and dividing the lagoon in the absence of significant freshwater discharge.

- Measured long-term mean sea level rise at nearby tidal stations is less than 1 ft per century. IPCC (2007) predicts eustatic sea level rise of 1.1 ft over the next 100 years. Sea level rise likely will not significantly affect the elevation of the beach adjacent the lagoon over the next 100 years. Rise of MHHW by 1.3 ft should be considered to determine the lower limit for lagoon water level during a storm.

- Combined sediment load from J Street and OID is approximately 320 CY per year (HDR 2008B) with about 95% of the sediment contributed by OID.

- Hydroperiod of the lagoon has not previously been studied and/or documented in detail.

4.2. Coastal Lagoon Inlets and Breaching Review

A review of available literature was conducted to provide background on work completed at other sites and methods applied to analyze lagoon breaching dynamics. The reader is referenced to the following sources for more information. Most of the literature relevant to coastal breaching focuses on landward breaching occurring during extreme marine events from elevated storm surge levels so that water is flowing from the ocean rather than to the ocean.

Coastal breaching models have been developed by Basco and Shin (1999), Kraus (2003), Tuan, Verhagen, and Visser (2006), Tuan (2007), Mohamed (2001), Faeh (2007), Srinivas and Dean (1996), Odd, Roberts, and Visser (1998), Maddocks (2000), and others. Examples of applicable general sediment transport work include Madsen and Wood (2002), Myrhaug and Holmedal (2003), Fredsøe and Deigaard (1992), Davies *et al* (2002), Baldock *et al* (2005), Ogston and Sternberg (2002), Smith (2002), Soulsby and Damgaard (2005), and Yu, Sternberg, and Beach (1993).

Case studies evaluating lagoon/estuary breaching on the California coast and around the world are documented by Kraus (2002), Hansen *et al* (2007), PWA (1993A, 1993B), and Battalio *et al* (2006), among others. Stone Lagoon (along the coast of northern California) is similar to Ormond Beach Lagoon in that it breaches seaward (Kraus 2002). Kraus (2008) presents detailed discussion of breaching at multiple northern California lagoons/estuaries.

4.3. Breaching at Ormond Lagoon

Breaching at the Ormond Lagoon is caused by buildup of freshwater originating from J Street, Hueneme and Industrial Drains and can be characterized as seaward breaching. Tuan (2007), following Gordon (1990), describes the breaching process of coastal lagoon barriers due to overflow induced by heavy rain as follows:

> "The lagoon breakout stage is observed to consist of three distinct stages. In the first stage, a preferred scour channel (initial channel) is formed and cuts backwards across the barrier. The flow is subcritical in the breach section and

supercritical on the down slope. The second stage commences when a crescent-shaped weir forms in the main sand plug followed by a series of steps in the channel. The breach width increases rapidly as the breach flow is highly turbulent and supercritical. Once the main sand plug has been washed out completely, the final stage begins with a slower rate of breach deepening and widening."

After the breach is established and upland discharge has significantly decreased, tidal exchange between the lagoon and ocean acts to maintain the breach. Waves transport sediment onshore and alongshore and the varying tide and wave run-up distribute the sediment along the shoreface. Sediment transport in the swash zone, similar to transport under a small bore, effectively carries sediment into the breach. As tidal flow in the inlet becomes insufficient to remove all of the sand being transported by the waves, the breach will begin to close.

Based on field observation of Ormond Lagoon by HDR, the breaching process appears to be consistent with that described by Tuan (2007) and Gordon (1990).

For reference, Figure 4.1 shows the location of previous historic breaches along Ormond Beach, based on historic surveys and aerial photographs. Breaches tend to occur along the lagoon south of J Street and, more recently, near the outlet of the OID. The figure shows that the breach has occured at many different locations. Recent breaches have been located closer to OID than to J-Street.

Figure 4.1. Locations of previous breaches.

Except at the existing breach area, which is the southeastern most area circled in Figure 4.1, the water level along the beach must exceed about 10 ft NAVD before landward breaching is likely

to occur. There is no record of the tide level exceeding this elevation since the Santa Barbara gauge was installed in 1933. For reference, the highest tide recorded at the Santa Barbara gauge is 7.3 ft NAVD. Wave run-up in combination with extreme high tides could overtop the beach and dunes when the beach is low, for example following a seaward breaching event. However, the volume of water contributed to the lagoon in this case would be relatively small compared to the storage area of the lagoon. In any case, landward breaching is controlled by the ocean tide and wave conditions, which cannot be affected by the J Street Drain modifications.

5. Data Collection and Interpretation

The primary objective of the data collection and interpretation was to fill critical data gaps and compare new data with existing data for more detailed assessment of lagoon dynamics and project alternatives. This section describes new data collected for the project and related data collected and provided by others.

5.1. Critical Data Gaps

Recent aerial photographic surveys and LiDAR surveys were not capable of providing bottom elevations for areas of the wet lagoon or beach. Therefore, a bathymetric survey was performed along the beach face, nearshore, and within the wetted lagoon to supplement existing survey data. Surface sediment grab samples were collected along the beach face from the surf zone to the dunes and within the lagoon and breach. Grain size distributions were then determined by laboratory testing. Concurrently, suspended sediment samples were collected and later tested. An electronic gauge was also installed within the lagoon to continuously monitor water levels and salinity near the main body of the lagoon for 30 days.

The data collection timing and duration was selected to meet the needs of the project schedule. At the direction of HDR, data collection and analyses were completed by Coastal Frontiers Corporation, as described in the *J Street Drain Coastal Engineering 2008 Beach and Lagoon Monitoring Program* report (Coastal Frontiers 2008).

5.2. Surveys

5.2.1. Aerial Photogrammetric Survey

An aerial photogrammetric survey was performed by Mercator Photogrammetric Systems (MCS) on March 5, 2008. The survey provided geo-referenced ortho-photos and topography for J Street Drain and areas surrounding the lagoon. The survey compared well with the traditional land surveys described in the following sections, with elevations generally varying by less than 0.5 ft.

5.2.2. Beach Profile Survey

Beach profiles were collected on March 21, 2008, along 13 transects located between Port Hueneme Beach (north of pier) and Arnold Road (approximately 2 miles south of the lagoon). Transects extended from the dry beach out to a depth of approximately 40 ft. The purpose of the beach profile survey was to provide detailed cross-shore profile data along the beach fronting the lagoon. Changes in two-dimensional beach profiles provide a means for estimating the closure depth and net cross-shore sediment transport patterns. Closure depth is an important parameter in sediment transport modeling, and is the depth beyond which sediment transport is less active.

Locations of the cross-shore beach profile transects are depicted in Figure 5.1. Three of the transects were located on transects previously established by the Beach Erosion Authority for the Clean Oceans and Nourishment (BEACON) monitoring program, while ten new transects, Transects OL01 through OL10, were established specifically for the present project. Alignments of the new transects were chosen based on transect BCN23. Transect OL01 was aligned with J

Street, approximately 575 ft east of transect BCN23, while transects OL02 through OL10 were taken at 500-ft intervals. The transect establishment activities, data collection procedure, and reduction processes are described by Coastal Frontiers (2008). The accuracy of the soundings vertically and horizontally is approximately ±0.5 ft and ±2.0 ft, respectively.

Figure 5.1. Location of beach profile survey transects (Coastal Frontiers 2008).

Figure 5.2 provides a beach profile plot for transect BCN23 and includes selected profiles obtained between October 1987 and November 2003 as provided by BEACON. Also shown is the observed depth of closure based on the beach profiles shown in Figure 5.2 (refer to Appendix B for additional details on depth of closure). All beach profile plots are provided in Coastal Frontiers (2008).

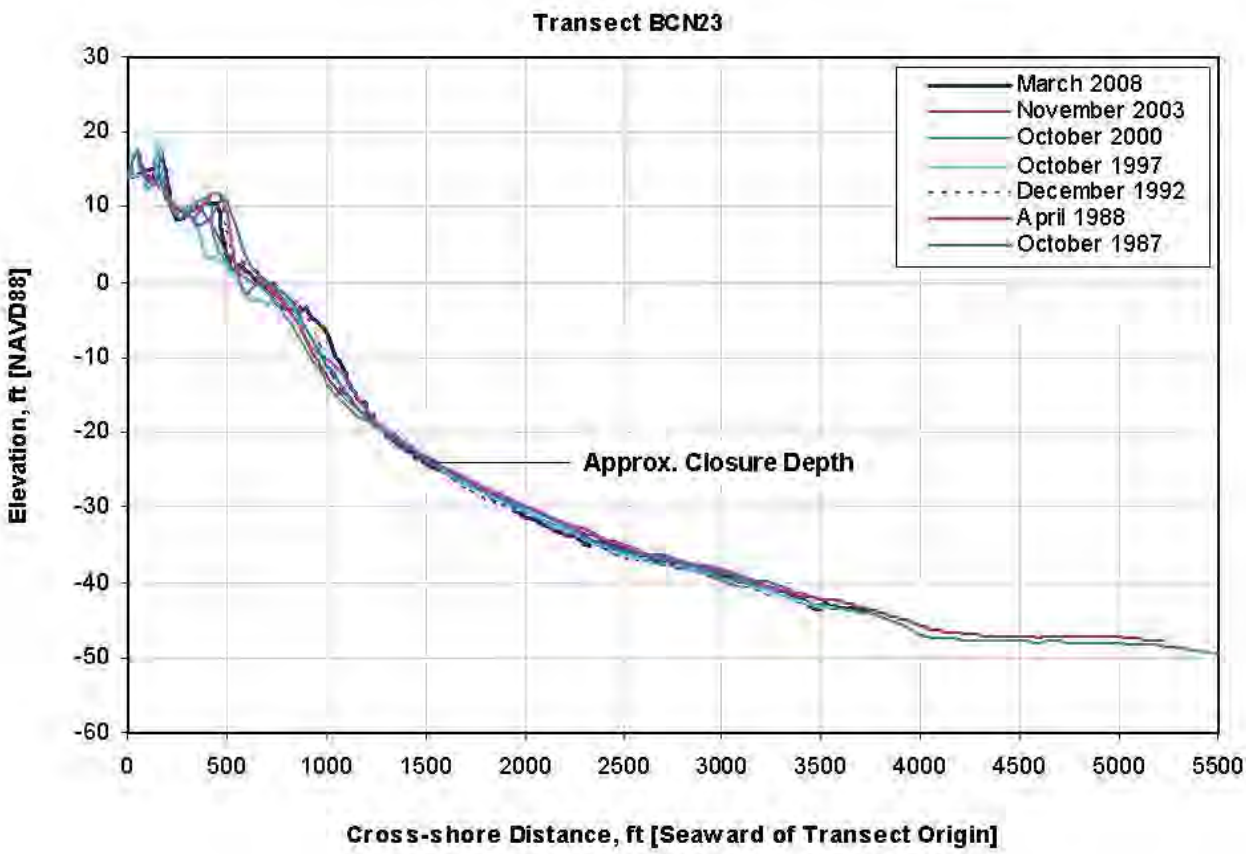

Figure 5.2. Historical cross-shore profiles for Transect BCN23.

5.2.3. Lagoon Bathymetric Survey

The bathymetric survey of Ormond Lagoon was conducted on March 24 and 27, 2008. The purpose of the survey was to establish bottom elevations of the lagoon and transitions between the lagoon and adjacent vegetated uplands. Surveys were conducted in U.S. survey feet relative to North American Vertical Datum of 1988 (NAVD88) in California State Plane Zone 5, NAD 83, respectively. The topographic and bathymetric data were acquired along cross-sections of the lagoon. A small breach had closed just prior to the bathymetric survey.

5.2.4. Other Previous Surveys

Numerous other topographic surveys were gathered and reviewed, as summarized in Table 5.1. Figure 5.3 shows the result of the March, 2008 Mercator Photogrammetric Systems survey.

Table 5.1. Summary of available aerial surveys.

Date	Source	Type	Vertical Datum
Mar-08	Mercator	Photogrammetry	NGVD
Jul-01	Towill, Inc.	LIDAR	NAVD
Apr-98	NOAA	LIDAR	NAVD
Oct-97	NOAA	LIDAR	NAVD
Dec-75	Toups Eng.	Photogrammetry	NGVD

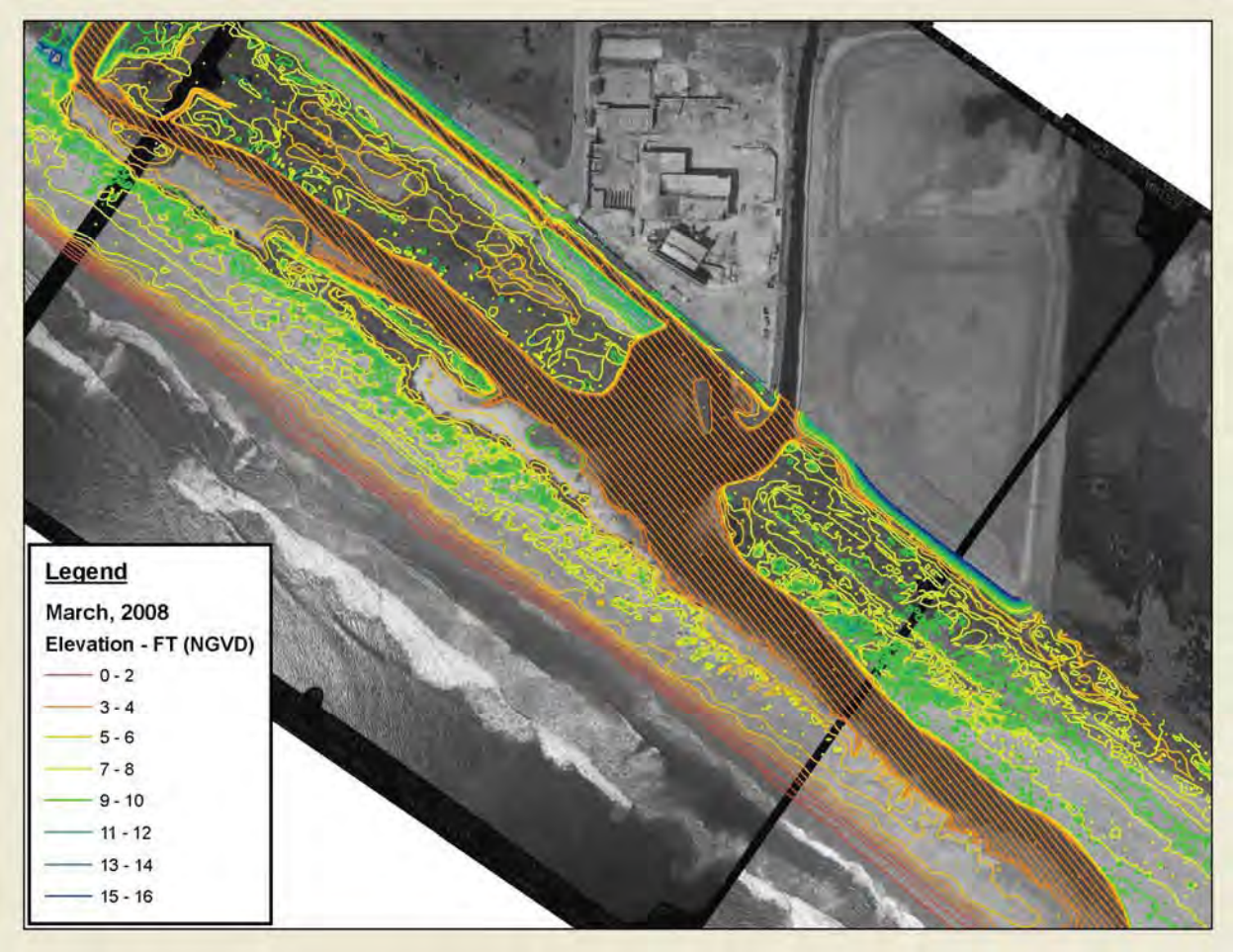

Figure 5.3. Aerial survey flown 3/5/2008 by Mercator Photogrammetric Systems.

5.3. Longshore Current

The combination of waves and currents in the nearshore create a longshore current that transports sediment along Ormond Beach. Characterization of the longshore current at Ormond Beach is important for determining sediment transport related to breach closure and calibrating the hydrodynamic and sediment transport models. The survey team estimated the longshore current to be approximately 2 ft/s during the sediment and water sample collection. Because there were no readily available means of measuring the longshore current, the survey rodman floated along shore near Transect OL09 for approximately 1 to 2 minutes. The position of the rodman was measured and the mean velocity calculated (Table 5.2). Although somewhat crude, this measurement technique provided a rough approximation of typical longshore current velocity at the site. Measurements of longshore current are otherwise unavailable for Ormond Beach.

Table 5.2. Estimation of longshore current at Ormond Beach.

Description	Location			Total Distance [ft]	Elapsed Time [sec]	Current Velocity [ft/sec]
	Northing [U.S. Ft]	Easting [U.S. Ft]	Elevation [Ft-NAVD88]			
Transect OL09 - Longshore Current Estimate A						
Start	1,872,501	6,204,841	1.4	161	74	2.2
Stop	1,872,378	6,204,946	0.8			
Transect OL09 - Longshore Current Estimate B						
Start	1,872,483	6,204,832	0.6	148	89	1.7
Stop	1,872,376	6,204,935	0.5			

5.4. Sediment Samples

Sediment size is a controlling factor of beach morphology. Thus, surface sediments were collected from the beach and lagoon. Suspended samples of total sediment concentration were also collected and analyzed.

5.4.1. Bottom Sediment Samples

A total of 14 sediment samples were collected at different locations along Transects OL01 and OL09 and inside Ormond Lagoon (Figure 5.4). Five samples were collected along each transect, two samples were collected in the lagoon, and the remaining two samples were collected at the site of the recent breach. Each sample consisted of 30 cm^3 of sand collected in two glass containers. A sieve analysis was performed on each of the sediment samples to determine the median grain size and particle size distribution. Results show that grain sizes along the Ormond Beach range from fine to medium sand with a median grain size between 0.23 and 0.57 mm, depending on location. Detailed sieve analysis results for each sample are provided separately in Coastal Frontiers (2008).

Figure 5.4. Location of water and sediment grab samples.

5.4.2. Suspended Sediment Samples

A total of 31 water samples were collected at 10 sites throughout the project area to analyze suspended sediment concentration. The samples were taken along Transects OL01 and OL09 and also inside Ormond Lagoon (Figure 5.4). Four locations along both Transects OL01 and Transect OL09 were sampled at depths of approximately 4, 3, 2, and 1 ft. The remaining two samples were taken inside the lagoon at mid-depth at approximately the same location of the bottom grab samples. Results from the sampling analysis show that the greatest concentrations of suspended sediments were located near the seabed at water depths of approximately 1-2 ft.

5.5. Beach Elevation

Survey data summarized in Table 5.3 were evaluated to determine representative maximum and minimum elevations of the beach during each respective survey. The expected maximum water

level in the lagoon is regulated by the lowest beach crest elevation. Aerial surveys provided maximum coverage of the beach allowing reasonably accurate estimation of the minimum and maximum beach elevations adjacent the lagoon. The beach transects surveyed by BEACON do not provide coverage at the breach and instead provided estimates of the maximum dune crest elevation near the lagoon. The 1975 survey shows that J Street and OID had separate discharge locations, similar to the configurations in the photographs presented in Appendix A.

The survey data suggest that the beach reaches its maximum elevation of approximately 14 ft NAVD in the vegetated dunes. Elevation across a beach is not uniform in space or constant in time. To support numerical modeling, described later in this report, it is important to define the beach in an idealized uniform manner. A nominal beach elevation is determined through analysis of available survey data to represent the existing beach elevation. The nominal elevation of the beach for the purposes of this discussion is defined as the elevation at which the beach is likely to be overtopped. The nominal elevation is significantly lower than the maximum beach elevation.

Tetra Tech (2005) assumed representative beach elevations of 10 to 11 ft MSL (12.7 to 13.7 ft NAVD) based on a single available survey. Review of the additional survey data listed in Table 5.3 indicates that elevations range from 4 to 14 ft NAVD, depending on storm activity, that 4 ft is representative for a breached condition, and 14 ft is representative for a beach that has not breached in well over one year. The aerial surveys show the representative nominal beach/dune crest elevation adjacent the lagoon to be approximately 10 ft NAVD.

Based on the aerial surveys and other available data and under typical conditions, a representative elevation for the beach prior to breaching is approximately 10 ft NAVD.

Table 5.3. Summary of historic beach elevation data.

Survey Date	Source	Maximum Dune Elev. ft NAVD	Nominal Beach Elev. ft NAVD	Minimum Beach Elev. ft NAVD
Mar-08	Coastal Frontiers	12	10	4
Mar-08	Mercator	14	10	4
Nov-03	BEACON - BCN24	12	NA	NA
Jul-01	Towill, Inc.	12	10	6
Apr-98	NOAA	13	8	4
Oct-97	BEACON - BCN24	12	NA	NA
Oct-97	NOAA	12	10	10
Dec-92	BEACON - BCN24	14	NA	NA
Apr-88	BEACON - BCN24	11	NA	NA
Oct-87	BEACON - BCN24	11	NA	NA
Dec-75	Toups Eng.	12	10	9

5.6. Water Level and Salinity Observations

Water level data is available from a number of sources and augmented by a 32-day data set of water level and salinity collected as part of the field program for the project.

5.6.1. April 2008

Salinity and water level data were collected over a 32 day period from March 27 to April 28, 2008 in the lagoon utilizing a MacroCTD sensor located as shown in Figure 5.5. The sensor was configured to record conductivity, temperature, and pressure every six minutes based on an average of 60 samples taken at 2 Hz. Salinity measurements of the ocean and inside the lagoon were collected to attempt to measure the salinity transport during a breaching event; however, the lagoon remained closed through the monitoring period. Measurements were taken at a single point at mid-depth to obtain a time series history for model input.

During the data collection period, the lagoon remained closed and water levels were not tidally influenced; however, some exchange of salinity between the ocean and lagoon did occur. The measured salinity in the lagoon, water level in the lagoon, and tidal elevation are shown in Figure 5.6. Salinity in the lagoon responded to fluctuating water levels in the ocean, with high tides resulting in an increase of salinity at the gage location. Even though the lagoon was not open to tidal exchange, waves in combination with high tides appear to have overtopped the recently closed breach, resulting in slightly higher water levels and salinity spikes measured at the gage. The overall trend of decreasing salinity combined with rising water level is attributed to industrial and agricultural runoff, and not precipitation. Significant rainfall was not recorded during the monitoring period.

Figure 5.5. MacroCTD location in Ormond Lagoon.

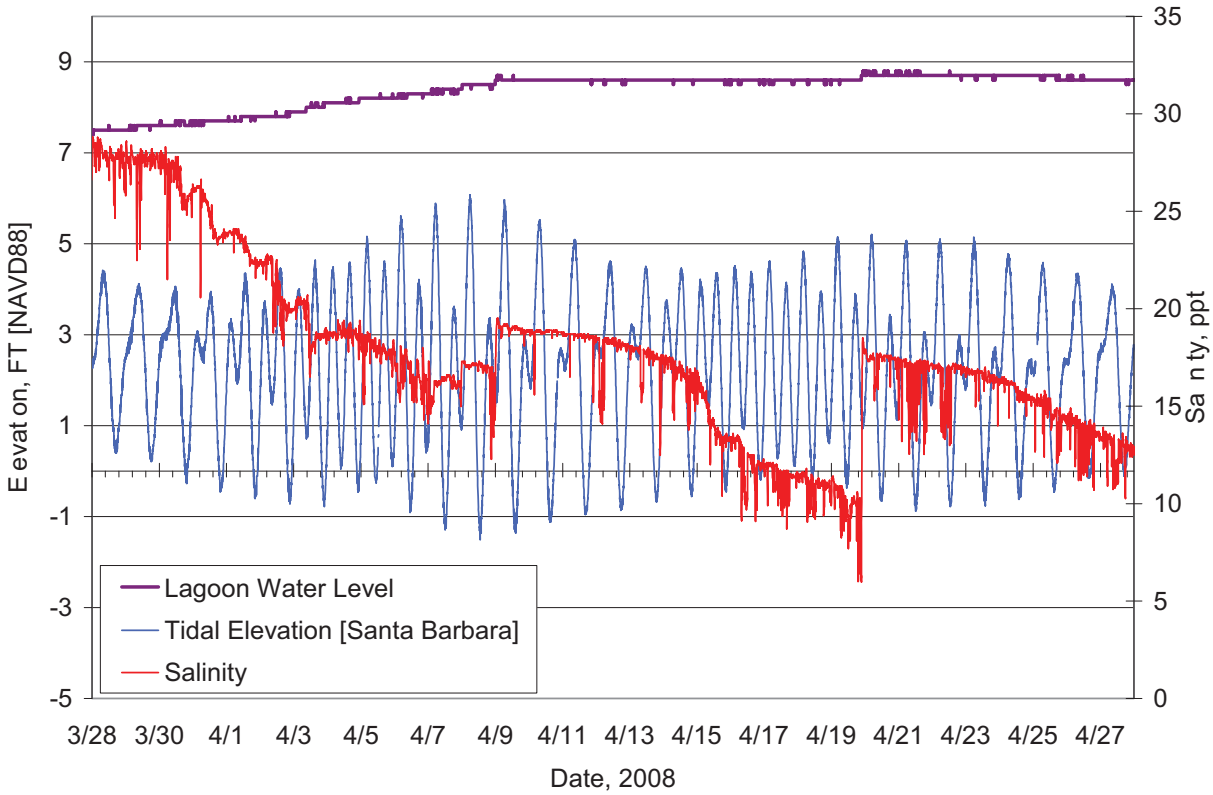

Figure 5.6. Measured lagoon water level, salinity and tide.

5.6.2. VCWPD J Street Water Level Gauge

A water level gage was installed by VCWPD near the Hueneme pump station in J Street Drain and operated from 2002 to 2005. Figure 5.7 presents the gage data from 2003. Calibration information was not available and the gage datum could not be determined by comparison with overlapping data sets. However, the data qualitatively indicate that the lagoon water levels generally rise and remain elevated above tidal levels during the summer months from May to September, and then rapidly decrease by 2 to 3 ft following breaches in early fall through the spring. The gage data also demonstrate that breaches form and close multiple times each year, from the early fall through the spring. Duration of lagoon closure may range from one week to five months or more. The data also indicate that the lagoon empties within 30 minutes to two hours following a breach, depending on the tide at the time of the breach.

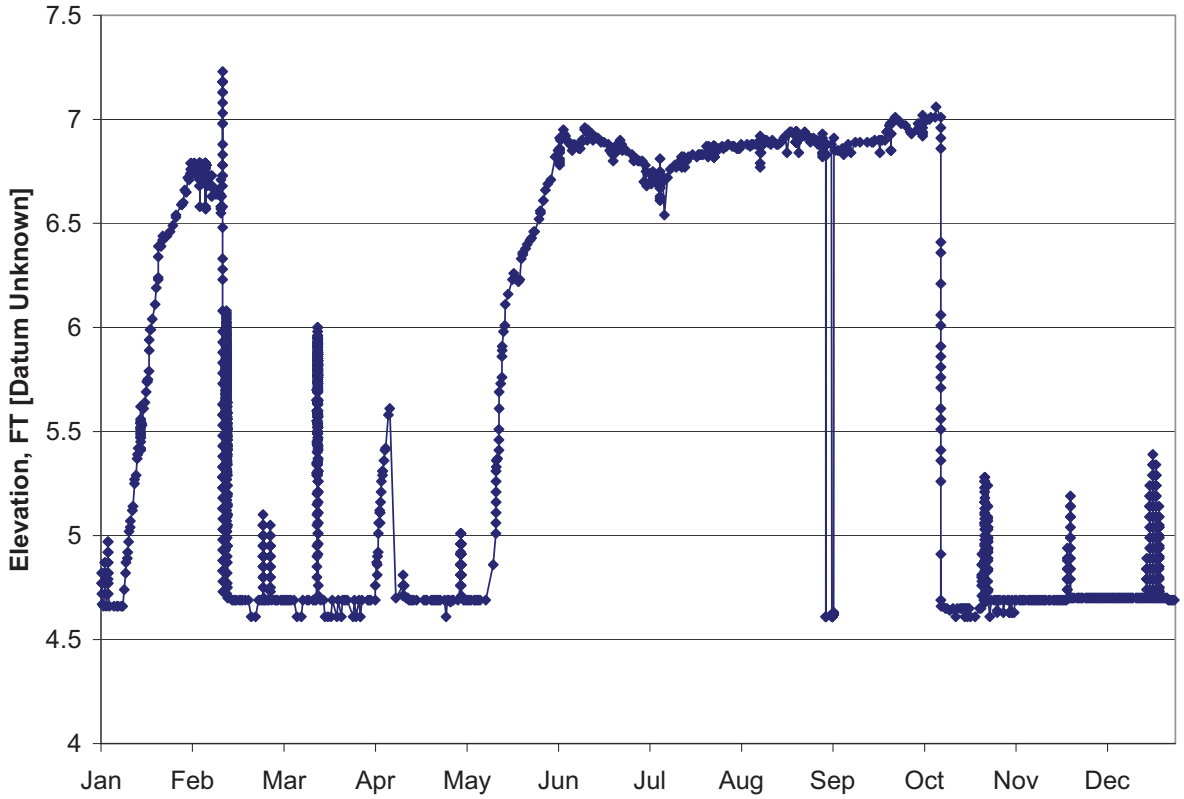

Figure 5.7. J Street 793 Alert Gage stage data for 2003.

5.6.3. CH2M Hill Water Level Data

CH2M Hill (2008) collected water level data in OID near the lagoon from mid-October 2007 through the first week of January 2008 and provided these to the VCWPD. Plotted in Figures 5.8 and 5.9 are measured water level at OID, NOAA tide data averaged between the Santa Monica and Santa Barbara stations, and precipitation. Two breaches occurred during the monitoring period, first on December 17, 2007 and again on January 4, 2008. The December breach appears to have occurred with an initial lagoon water level near 8.3 ft NAVD. Freshwater inflow caused the water level to rise to around 9.2 ft NAVD before the lagoon breached and water level dropped. From the plots, it appears that the lagoon emptied and equilibrated with the tide in less than 6 hours, consistent with observations at the J Street gauge discussed above.

Following the breach, water levels at OID remained tidally dominated, with no appreciable phase lag. However, the low tide level is clipped. This may have resulted from either drying of the water level gage or more likely impoundment of water within the lagoon above the tidal level due to the bathymetry of the lagoon or tidal channel. The breach closed during a neap tidal cycle around January 1, 2008, and water levels in the lagoon began to rise until the lagoon breached again on January 4.

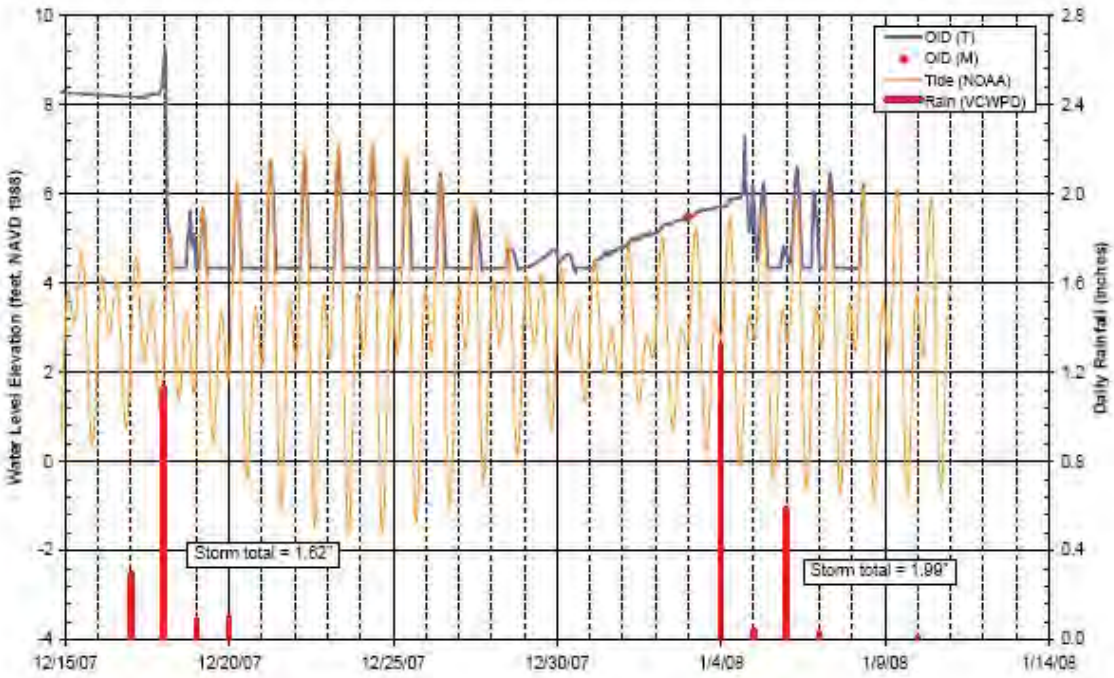

Figure 5.8. Water level in the lagoon 12/5/2007 – 1/10/2008 (CH2M Hill 2008).

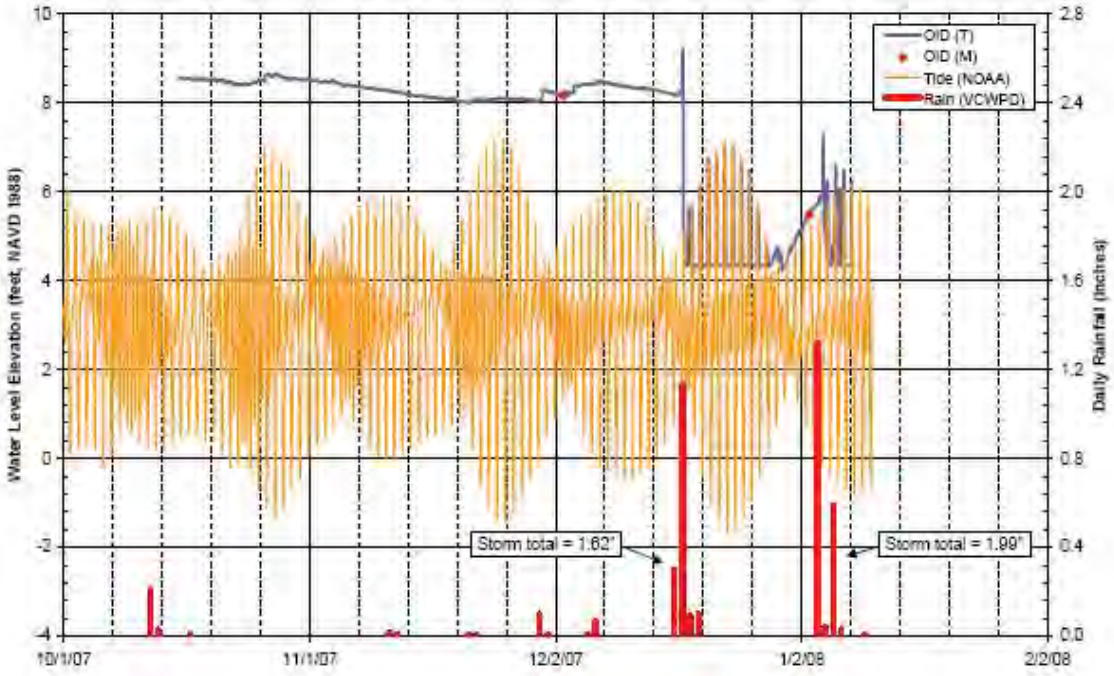

Figure 5.9. Water level in the lagoon 10/2007 – 1/2008 (CH2M Hill 2008).

5.6.4. Summary of Water Level Data

Water level data indicate that the breaches may form multiple times each year, by stormwater flows or by gradual water level rise. Where the drains meet the lagoon, a water level spike of about 1 ft has been observed just prior to breaching for moderate storm events. During recent breaches, water levels exceeded approximately 9.0 ft NAVD before breaching commenced and water level crests during breaching lasted from 30 minutes to a few hours. The water level was observed to peak above the nominal elevation of the beach.

5.7. Storm Hydrographs

Hydrographs were provided by VCWPD for the 2, 5, 10, 50 and 100-year events. Figures 5.10 and 5.11 plot the provided 2-year and 100-year event hydrographs, respectively. The storm hydrographs were applied as inputs to the lagoon hydrodynamic model to simulate storm events and evaluate outlet alternatives discussed in the next section.

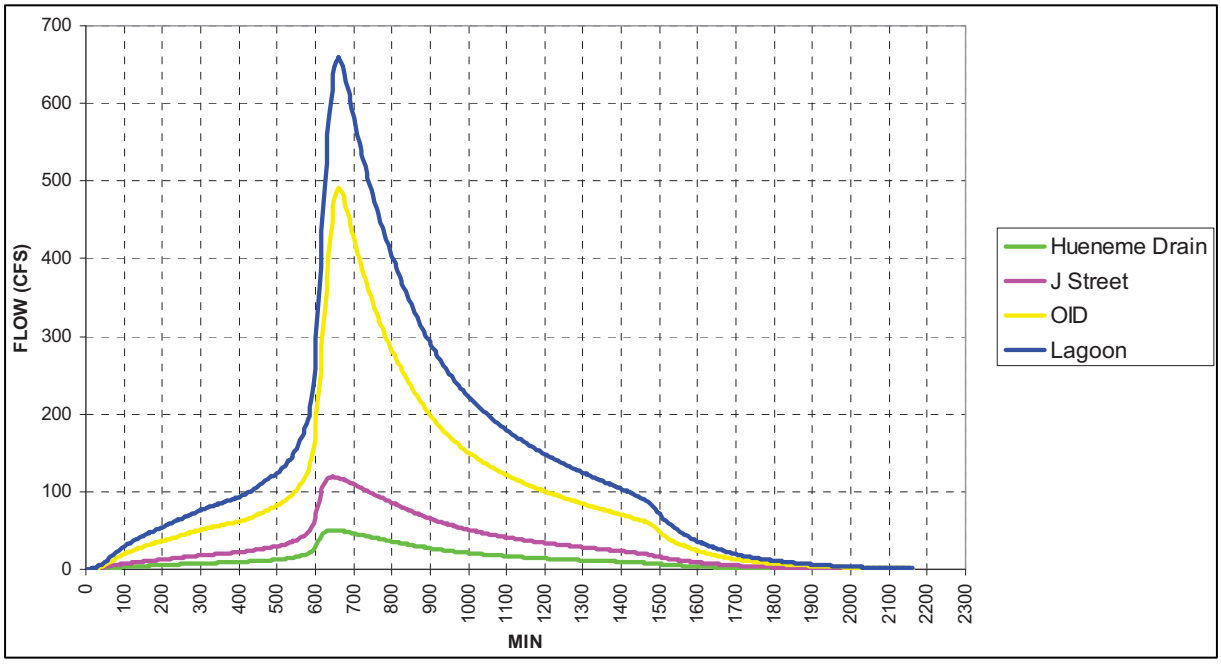

Figure 5.10. Hydrograph for 2-year event.

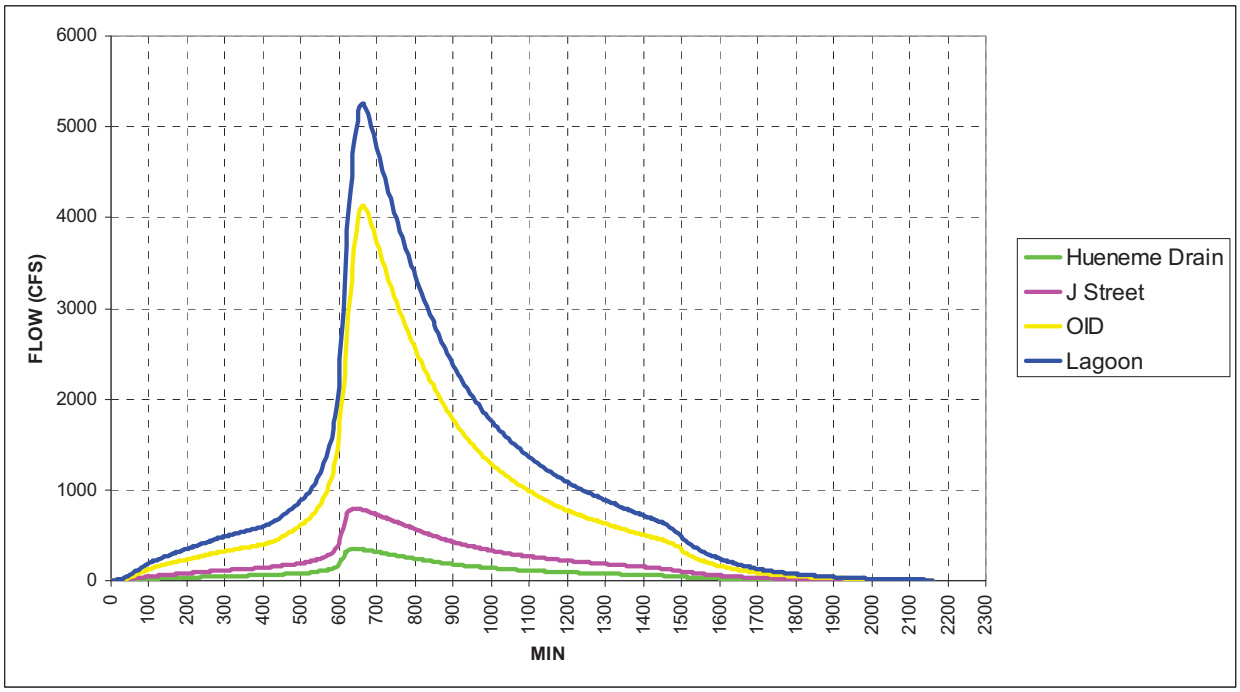

Figure 5.11. Hydrograph for 100-year event.

6. Alternatives Analysis

Modifications to J Street Drain channel and its outlet to the ocean may be required to reduce upstream flooding during design storms. Specifically, it is expected that the channel will be lowered by approximately 4 feet and a cutoff wall and a riprap apron installed at the channel transition to the lagoon. More active management of lagoon water levels may be required, in an emergency, to reduce impacts to the adjacent beach and lagoon dynamics. The following three outlet alternatives were therefore evaluated:

1. No Action
2. Beach Maintenance
3. Emergency Mechanical Breaching

Evaluation of a permanent installation, such as a jettied inlet or weir structure, was not considered because of the desire to avoid significant alteration of lagoon dynamics such as hydroperiod and geomorphology and the excessive cost of maintaining an inlet. This section describes numerical modeling and analysis that were undertaken to evaluate the feasibility, potential benefits, and impacts of these three alternatives.

6.1. Description of Outlet Alternatives

6.1.1. No Action Alternative

This alternative represents the unmanaged outlet condition, where the lagoon is allowed to breach and close as it has since mechanical breaching ceased in 1992. This alternative would result in no direct impacts to lagoon dynamics since breaching and closure of the lagoon would not be directly changed. Lagoon hydroperiod, which varies with beach elevation and water level, would be unaffected. Due to the dynamic nature of the lagoon, the geometry and depth of the lagoon will continue to change.

The No-Action alternative is disadvantageous because it offers no method for VCWPD to respond to unanticipated changes in the lagoon and upstream hydrology.

6.1.2. Beach Maintenance Alternative

Maintaining a section of the beach below the nominal beach elevations as a “breach corridor” would encourage the breach to form earlier in a storm and thus would conceptually reduce the maximum water levels in the lagoon during the design storm, reducing potential flooding. The elevation of the maintained section would need to be above extreme high tide, approximately 7 ft NAVD.

Maintenance is a common practice on recreational beaches and can be performed with standard construction equipment such as a bulldozer or front-end loader. Effective maintenance requires constant action to remove wind blown sand that would accumulate within the maintained area.

Maintaining a breach corridor would increase the frequency of breaching and likely result in lower water levels in the lagoon even when the breach is closed, decreasing the existing lagoon hydroperiod. This alternative would result in impacts to the lagoon.

6.1.3. Emergency Mechanical Breaching Alternative

Creating a mechanical breach, as was performed prior to 1992, would decrease the lagoon water level to the minimum possible elevation prior to significant rainfall events and provide more rapid discharge of stormwater from the lagoon to the ocean. To minimize reduction in lagoon hydroperiod and ecological function, the emergency breach would be made prior to storm events expected to both cause flooding and naturally form a breach. Thus, this alternative would decrease the lagoon water levels sooner (likely on the order of 24 hours) than natural breaching.

Effective execution of this alternative requires continuous monitoring of the lagoon water levels, advanced prediction of significant stormwater events, a well defined emergency management plan, and the ability to rapidly mobilize equipment.

6.2. Numerical Modeling

Incorporating the site data described in previous sections, MIKE 21 numerical models were applied to simulate hydrodynamics and lagoon morphology during breaching events for the existing condition and for hypothetical lagoon conditions based on available survey and water level data. First, a hydrodynamic model of the existing lagoon system was developed. Then the hydrodynamic model was coupled with a sediment transport model capable of simulating sediment transport and bed morphology. Finally, a qualitative analysis of breach closure was performed to evaluate closure time and closure processes. The objective of the modeling was to quantify existing conditions and investigate implications for design of the J Street Drain channel and the impacts of alternatives on the lagoon.

6.2.1. Breach Formation

The model applied to quantify breaching was forced from the landward side by design hydrographs provided by VCWPD. Ocean tides were applied on the seaward model boundaries to simulate spring tide conditions. The primary sediment transport mechanism during breaching is high velocity flow in the lagoon and over the beach. Therefore, waves were not included in the breaching simulations. Additional details on the numerical models are documented in Appendix B.

The breaching model was run for the scenarios outlined in Table 6.1. Table 6.2 summarizes the maximum water level near J Street and OID, as well as the time from model start (start of the hydrographs) to the time the breach begins to take place for each scenario. Calibration and verification information is presented in Appendix B. Based on comparison with available water level data, actual breaching occurs more rapidly than simulated by the model. Thus, simulated water levels in the lagoon are slightly higher than would be observed, so the modeled breaching is a conservative approximation of actual breaching.

Table 6.1. Model scenarios.

Run	Return Period	Lagoon Initial Water Level, ft (NAVD)	Description
1	2	9	Rough channel bottom to prove ability to erode channel that has started to fill in.
2	2	9	Existing representative beach.
3	2	6	Shows breaching time with lower initial water level with existing representative beach.
4	100	9	Existing representative beach.
5	2	6	50 m maintained section near OID
6	2	6	30 m maintained section near OID
7	2	6	10 m maintained section near OID
8	2	tide	Inlet near OID
9	2	tide	Inlet near J-Street
10	100	tide	Inlet near OID
11	100	tide	Inlet near J-Street
12	100	tide	Inlet near J-Street and near OID

Table 6.2. Model result summary.

Run	Time to Breach	Peak Water Level Near J-Street, ft (NAVD)
1	9:30	11.5
2	9:30	11.5
3	10:55	11.5
4	3:40	11.8
5	4:45	8.5
6	4:35	8.7
7	5:10	9.8
8	0:00	7.9
9	0:00	7.2
10	0:00	11.8
11	0:00	8.5
12	0:00	7.2

6.2.1.1. No Action

An idealized beach/lagoon system was developed for the model domain to represent the no-action condition. Because of the dynamic nature of the lagoon, the lagoon configuration at the time of the March 2008 survey is not considered representative of typical conditions. The idealized domain was created by altering the March 2008 data to match conditions observed in the historic data, creating a relatively uniform beach (berm) with a low elevation of about 10 ft NAVD.

Idealized representative conditions were simulated in Runs 1 through 3 for both the 2-year and 100-year events. Initial water levels in the lagoon ranged from 6 ft to 9 ft NAVD for the 2-year event. The maximum water level within the lagoon is a function of beach elevation and inflow. Supercritical flow during initial breach formation in the model is handled through introduction of numerical dissipation; therefore, the rate of erosion at incipient breaching was limited to improve model stability.

Consistent with previous analysis by others, the simulations indicate that the breach would occur significantly earlier in the 100-year event than during the 2-year event and that the maximum water level is about the same for both events for the idealized representative case. Greater flow during the 100-year event causes earlier breaching than the 2-year event and leads to significantly greater sediment transport, providing greater forcing to reshape the lagoon/beach system. Figure 6.1 shows the bed level at peak flow during the 100-year event. Because the modeled beach was relatively uniform, overwash and seaward deposition occurred over a broad area near OID. The simulated flows ultimately eroded a single dominant channel. The same results were observed in the 2-year storm simulations, but on a smaller scale.

As a sensitivity test to assess the role of aeolian transport, the model was run with variable elevation along the lagoon channel between OID and J Street to represent wind-blown sand deposits. The model showed that the high sections tend to erode and the low sections tend to fill, maintaining the lagoon in its current configuration. This exercise helps show how variable infilling from aeolian transport would typically be offset by flow during storms.

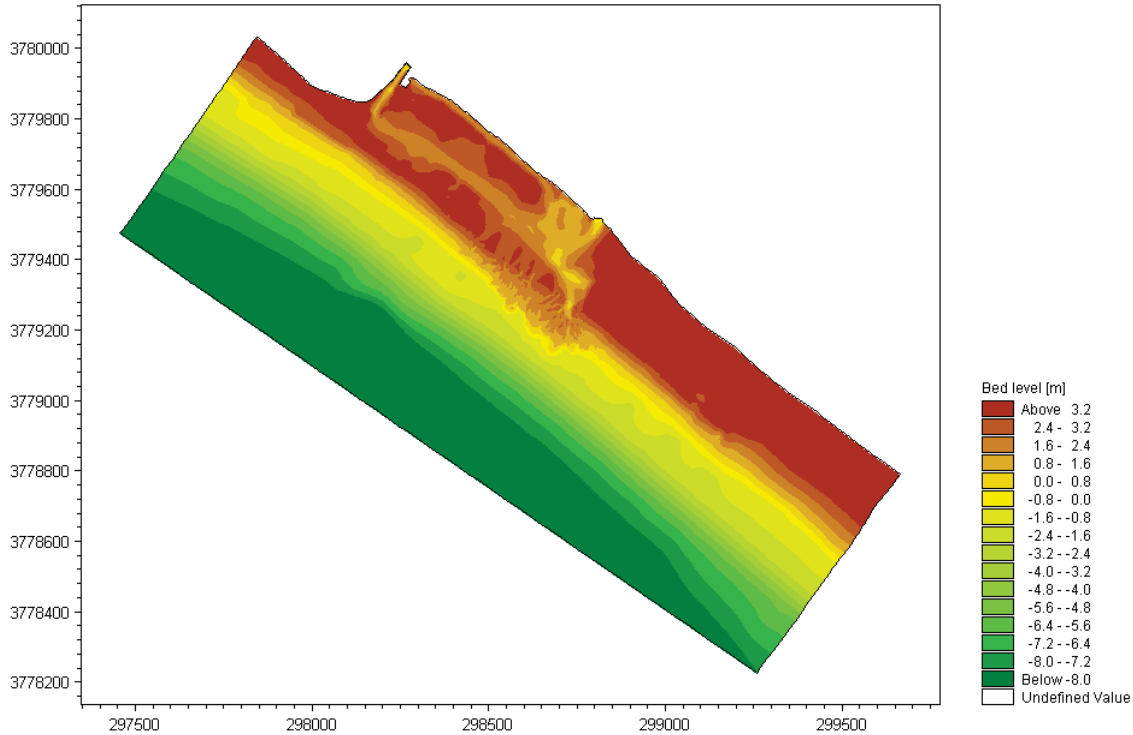

Figure 6.1. Elevation above NAVD at peak flow during the 100-year event.

6.2.1.2. Beach Maintenance

The minimum elevation at which a breach corridor could be maintained without being overtopped by the tide was judged to be approximately 7 ft NAVD. A maintained breach corridor was modeled in Runs 5 through 7. The initial water level was set about 1 ft below the beach elevation to allow sufficient difference between the wet and dry areas within the model at model start. Comparison between the existing conditions and a maintained breach corridor indicated that maintaining the corridor near OID would decrease the maximum water level in the lagoon during a 2-year storm by about 3 ft (see Run 6). The model results suggest that reducing the width of the breach corridor to less than 100 feet would significantly reduce the benefits of maintenance.

Different locations for the breach corridor were also tested with the numerical model. The analysis indicates that the water level is about 1.3 ft lower at J Street when the breach is near J Street as opposed to the breach being located near OID. Historic data and model results indicate that the beach could overtop near OID for less frequent events, even if the beach is lowered adjacent J Street. Maintaining a breach corridor at J Street may lead to loss of connection between J Street and OID and is therefore not recommended.

6.2.1.3. Emergency Mechanical Breaching

Creating a lagoon breach just prior to a storm would provide the lowest water surface elevations in the lagoon at J Street. Creating the emergency breach near OID would most likely maintain the lagoon in its current configuration. However, an emergency breach would temporarily impact hydroperiod.

The initial water level was set to the tidal boundary based on the assumption that the breach had allowed the entire lagoon to drain to the tidal elevation, as described in Appendix B. This assumption states that the lagoon drains to tidal elevation just as it would after discharge from a storm has ceased. There could be areas within the lagoon at higher elevations based on actual bathymetry of the lagoon at time of breach.

At peak discharge with a breach simulated near OID, modeled lagoon water levels at J Street reached about 7.9 ft NAVD for the 2-year storm. With the inlet near J Street the peak water levels at J Street reached 7.2 ft NAVD for the 2 year storm.

During the 100-year storm for the idealized representative beach the inlet forms early in the hydrograph, well before peak flow, essentially creating the same case as modeled for the emergency breach with the inlet near OID. At peak discharge with a breach simulated near OID, modeled lagoon water levels at J Street reached about 11.8 ft NAVD for the 100-year storm. With the inlet near J Street the peak water levels at J Street reached 8.5 ft NAVD for the 100-year storm.

Further investigation into inlet location was carried out to determine the impact of closure of the channel between J-Street and OID. At peak discharge for this case, modeled lagoon water levels at J Street reached about 7.2 ft NAVD for the 100-year storm.

6.2.2. Breach Closure

In addition to developing a better understanding of how the breach forms, we set out to better understand how it closes. There are several processes (long-shore transport, cross-shore transport, wind-blown transport, tidal exchange, runoff, etc.) that likely contribute to breach closure. Breach closure is dynamic occurring over a duration controlled by the ambient forcing. It is hypothesized that cross-shore transport is the predominant mechanism and have employed SBEACH as a tool to test that hypothesis.

The SBEACH model only considers closure due to waves. Tide was included so that the waves acted on a variable water level. Considering the small tidal prism, waves are a more dominant forcing than tidal currents. Therefore, tidal currents in the breach were excluded, although they may act to change the length of time the breach is open. The model helped with examination of the long term wave-induced sediment transport into the breached section of the beach.

6.2.2.1. Closure Model Results

The closure model presents qualitative insight into the process of breach closure. The model shows that waves can cause closure of the breach within a relatively short period of time (within 2 to 4 weeks). Observations also indicate that this time scale is accurate. The dynamic nature of

cross shore transport, coupled with variability in waves and tides, makes prediction of actual closure time complex. The model also assumes that there is no additional discharge from the drain or tidal currents. Both of which could act to increase time the breach remains open.

These model results serve to indicate that wave forced cross-shore transport would fill the breach within the timescale witnessed. More exact time for the breach to close and whether or not the breach would stay closed is dependent on the wave conditions at the time as well as other physical processes not included in the model. More detailed model results are included in Appendix B.

7. Discussion

7.1. Lagoon Geography and Morphology

Historic aerial photography, surveys, and maps reveal that the lagoon is naturally dynamic and that flows from OID, J Street and Hueneme drains continue to shape the lagoon. Human modifications to upstream hydrology and beach sediment transport have contributed to the formation of the existing lagoon.

Lagoon morphology is forced by upstream inflow, waves, tides, aeolian transport, and anthropogenic factors. A lagoon appears to have been historically present as part of the natural drainage system of the now channelized OID. That lagoon did not extend to the limits of the current lagoon between J Street and OID.

Both two-inlet and single-inlet lagoon configurations are apparent from the available information. Lack of recent mechanical breaching has contributed to tendency of the lagoon to breach at one location. The breach tends to form near OID where the largest volume of flow originates.

Flow rates peak in the lagoon during breaching, when greater velocities last until the water surface in the lagoon has equilibrated with the ocean tide. After the water surface in the lagoon is at the same level as the ocean, flow is controlled by the tides and ambient flow from the drains. Areas of rapid sediment transport are primarily confined to the breach and narrow sections (channels) in the lagoon.

7.2. Water Level in the Lagoon

Water levels in the lagoon during rain storms is a function of the initial water level, beach conditions (elevation, width), and inflow. Flow rates through the lagoon peak at more than 5000 CFS for the 100-year return period. The initial water level in the lagoon can range from the tidal (ocean) water level up to about 10 ft NAVD (lagoon full). Extreme high tide levels in the ocean frequently exceed 7 ft NAVD but rarely exceed 8 ft NAVD.

Analyses of existing conditions, including results of numerical models and analysis of available data, show that the water level in the lagoon generally exceeds 9 ft NAVD prior to breaching. Lowering the maximum elevation of the beach by creating a breach corridor would decrease the pre-storm water level in the lagoon. In comparison, creating an emergency mechanical breach before a storm provides an even lower pre-storm water level. As the intensity of the storm increases, the upstream flood-reduction benefits of decreasing the pre-storm water level in the lagoon decrease because flow during the onset of the storm acts to create a breach well before peak flow.

7.3. Potential Impacts of Proposed Alternatives

This list of considerations is not intended to be an exhaustive list but rather a brief discussion of some conceptual impacts. The environmental impact assessed at a later time based in part on results of this analysis.

Construction of the drainage system, cessation of mechanical breaching, and other human activities actively influence physical processes in the existing lagoon. Leaving the lagoon in this condition would seem to have the least physical or environmental impact. However, the dynamic nature of the lagoon suggests that it may undergo significant changes regardless of human influences.

7.3.1. No Action

Allowing the lagoon system to continue to breach in an unmanaged manner would result in no significant change to lagoon dynamics or hydroperiod. However, the No-Action alternative does not guarantee that the future lagoon configuration (geometry, water depth, hydroperiod, etc.) would be the same as the existing configuration. For channel design purposes, water levels within the lagoon at 10 ft NAVD must be considered prior to breaching and peak water level of 12 ft NAVD must be considered during a 100-year storm.

7.3.2. Beach maintenance

Maintaining a section of beach at a lower than naturally occurring elevation as a "breach corridor" would control the range of water levels within the lagoon, decreasing the lagoon hydroperiod. Maintaining breach corridors at multiple locations would encourage multiple breaches, reducing the flow between OID and J Street. The flow between OID and J Street is essential to maintaining the shallow lagoon environment that connects the drains.

7.3.3. Emergency Mechanical Breaching

Emergency mechanical breaching allows management of lagoon water levels when needed, reduces impacts to lagoon hydroperiod, and appears to be the most feasible outlet alternative.

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Appendix A – Coastal Processes Review

Various sources of existing information were gathered and reviewed to develop an understanding of the project design, history of the lagoon, the behavior of similar systems, and key physical processes affecting the coupled behavior of J Street & Oxnard Industrial Drains, the lagoon, Ormond Beach, and the nearshore Pacific Ocean.

A1. Wind

Wind data were obtained from the National Data Buoy Center (NDBC). Average hourly winds were analyzed for NDBC Station 46053 offshore Santa Barbara (Figure A.1) for the period of 1996 through 2007 and NDBC Station 46025 offshore Santa Monica (Figure A.2) for the period of 1997 through 2007. Daily average winds at Naval Base, Port Hueneme (Figure A.3) were analyzed for the period from 1996 through 2008 with significant gaps in coverage. Wind directions are displayed following standard meteorological convention.

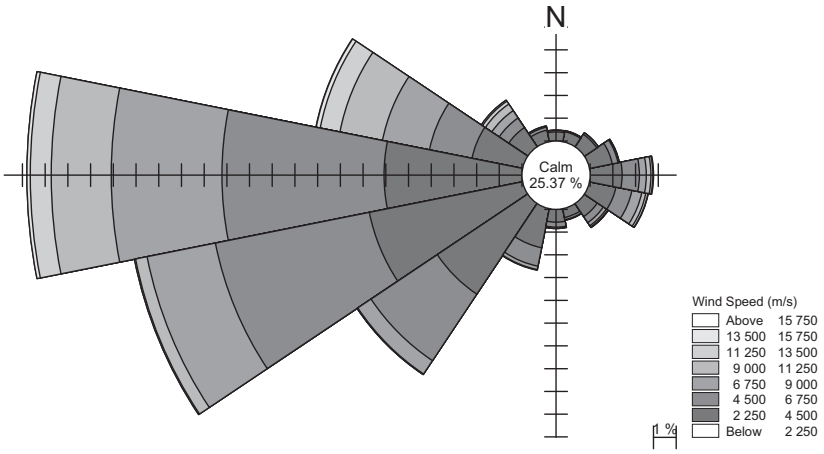


Figure A.1. Wind rose for Santa Barbara, Station 46053.

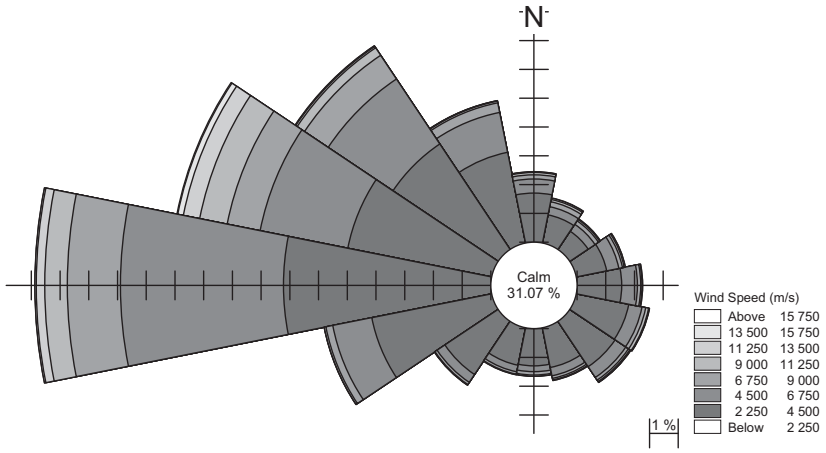


Figure A.2. Wind rose for Santa Monica, Station 46025.

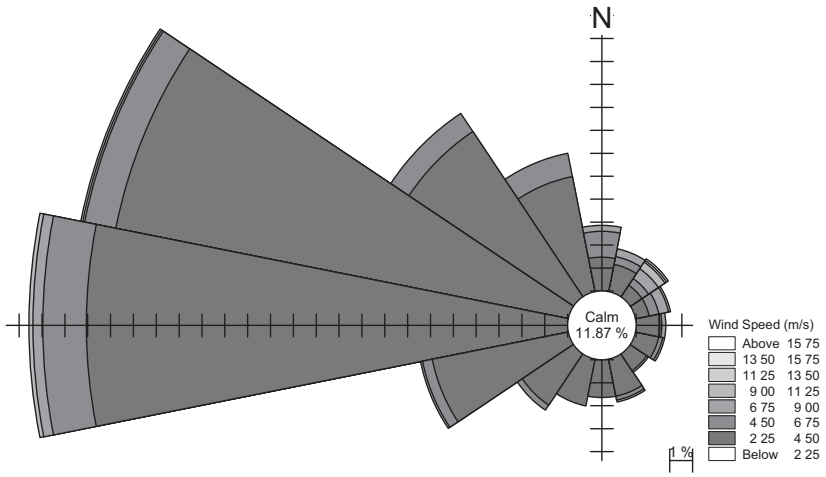


Figure A.3. Wind rose for Port Hueneme.

A2. Waves

Ten years of historical wave data were collected from the NDBC Station 46053 in 1,370-ft deep water offshore of Santa Barbara and Station 46025 in 2,900-ft deep water offshore in the Santa Monica Basin. Wave direction data are not available for Stations 46053 and 46025. Directional wave measurements are available for a one year historical wave record from the Coastal Data Information Program (CDIP) Station 141 in 67-ft deep water offshore of Port Hueneme; these data are plotted in Figure A.4. The Port Hueneme buoy was commissioned in 2007. Typically, a longer record is preferred for wave analysis. Data at CDIP Station 141 were compared and applied with the data at NDBC 46053 and 46025 to develop the statistical distribution of waves at the site.

Wave Information Studies (WIS) hindcast data at Station 91 in 14,500-ft deep water are available for the period from 1981 through 2004 (Tracy 2004). As plotted in Figure A.5, the WIS data show that the waves offshore are predominantly from the northwest.

Due to shoaling and refraction, local wave direction at Ormond Beach does not typically match that of offshore waves. An obvious reason for this is the shape of the coast from Point Conception to the Mexican border. Waves from the north are limited to local generation by the sheltering effect from the coastline. Waves from the west are also limited by the Channel Islands. Winds are predominantly from the west but the longest available fetch is from the southwest. The Channel Islands also cause waves from the west to refract, increasing the percentage of time waves are from the southwest.

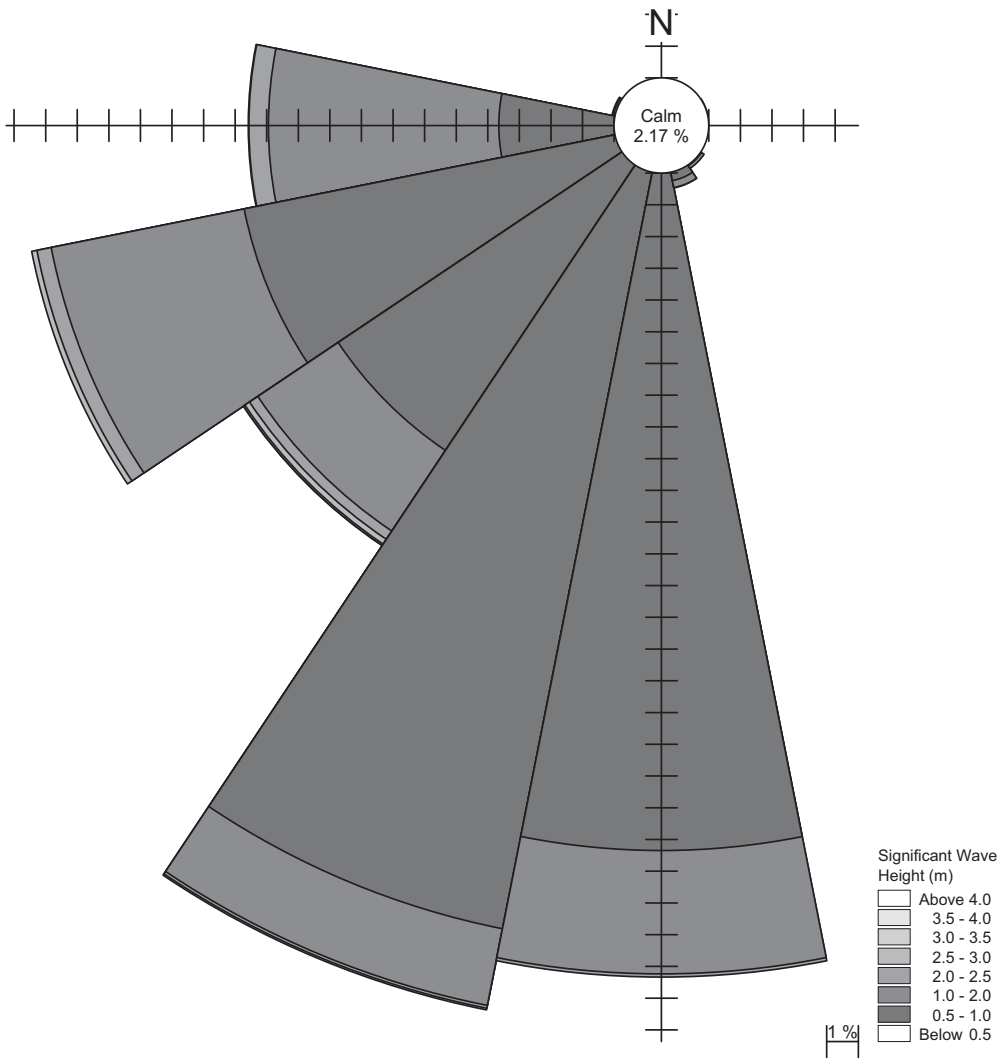


Figure A.4. Wave rose for CDIP Station 141.

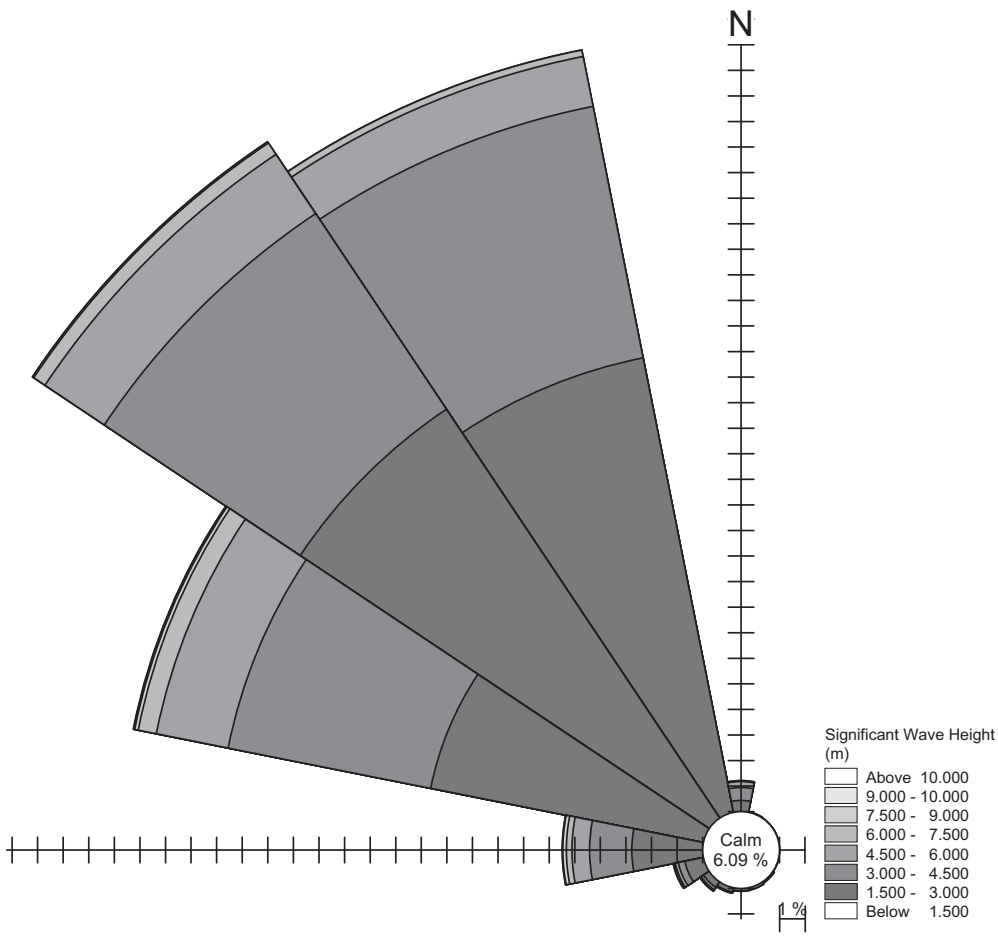


Figure A.5. Wave rose for WIS Station 91.

A3. Tides

Tidal elevation and datum information were obtained from the NOAA tide gauge in Santa Barbara, CA and at the NOAA tide gauge in Santa Monica, CA. The water level analysis, shown in Figure A.6, is based on four years of verified historical data at Santa Barbara, and ten years of verified historical data from Santa Monica. Water level statistics were calculated using the average hourly water level reported at each station. Based on these data, percent exceedance of water level was calculated. Tides in the region are predominately semi-diurnal, with two high tides and two low tides occurring per day. Tidal datums and the greater diurnal tidal range, defined as the difference between MHHW (mean higher high water) and MLLW (mean lower low water), at both gauges are summarized in Table A.1.

Water level data was collected inside the lagoon in an effort to compare with water level at the tide gauges and to calibrate the numerical model. The water level data inside the lagoon would have provided a time history of flow into the lagoon depending on the weather during deployment. Water level in the ocean is generally much lower than the elevation of the beach crest.

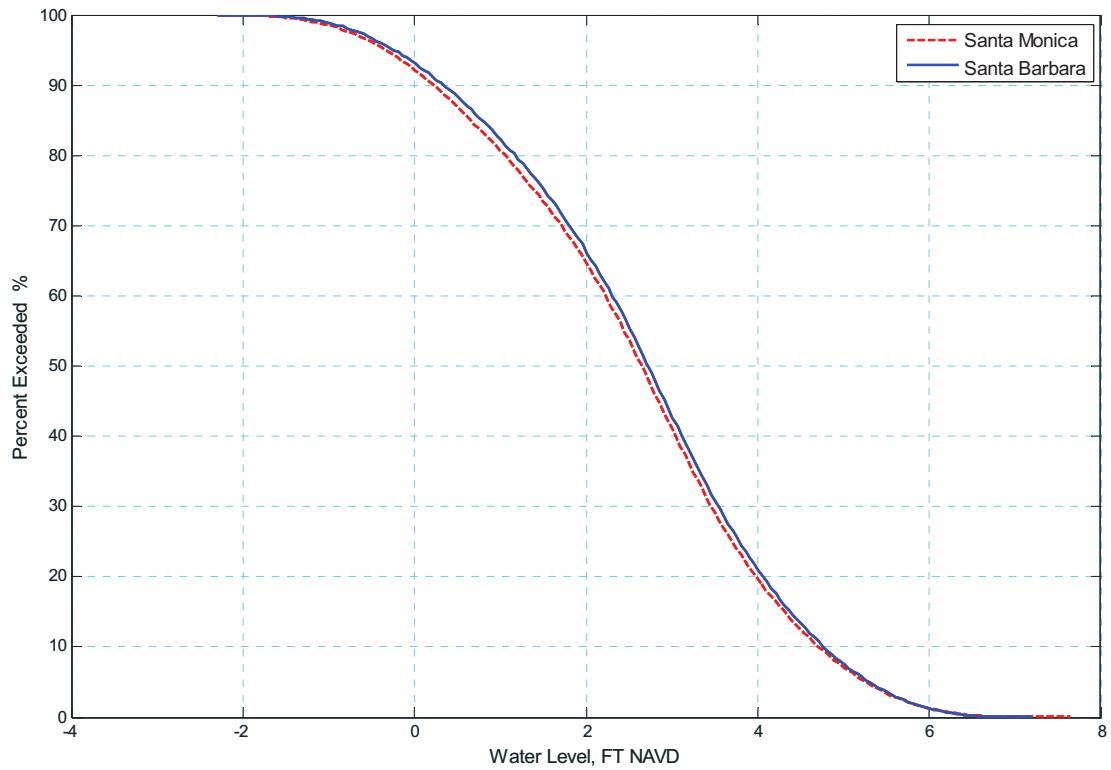


Figure A.6. Water level frequency of exceedance.

Table A.1. Tidal datums and range.

Station Name	MHHW, ft NAVD	MHW, ft NAVD	MSL, ft NAVD	MLW, ft NAVD	MLLW, ft NAVD	Tide Range, ft
Santa Barbara	5.30	4.54	2.69	0.89	-0.09	5.39
Santa Monica	5.24	4.50	2.60	0.74	-0.19	5.43

A4. Precipitation

Precipitation data was gathered from the University of California Climate Station #156 in Oxnard. Based on eight years of data the average daily precipitation rate near the proposed project site is approximately 0.95 mm/day. Monthly fluctuations are shown in Figure A.7.

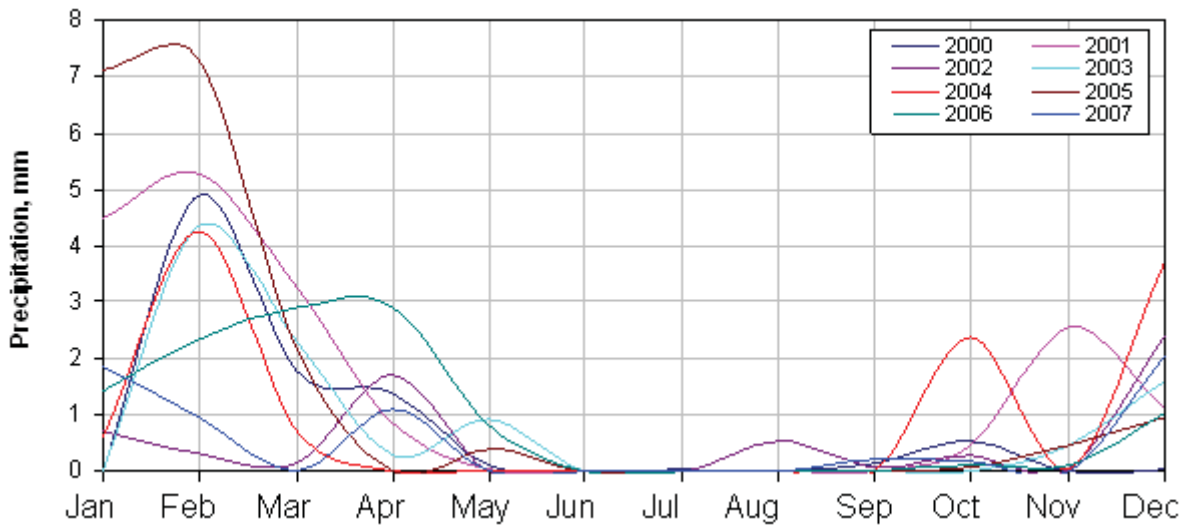


Figure A.7. Monthly precipitation fluctuations in Oxnard, CA.

A5. Upstream Sediment Load

Approximately 332 cubic yards (CY) of sediment per year enter the lagoon from the drainage channels (HDR 2008B). Industrial and Rice Road Drains contribute 95% of the sediment load to the lagoon. Details on the sedimentation study are provided in HDR (2008B).

A6. Longshore Transport

Longshore transport is the movement of sand along a coastline, forced by waves and currents. Greater wave height and/or angle of approach generally cause greater longshore sediment transport. Sediment is carried from sources updrift of Ormond Beach and from Ormond Beach to downdrift areas. Between Santa Barbara and Point Mugu, the net direction of sediment transport along the coast is to the south. Gradients in the rate of longshore transport, such as offshore losses to coastal canyons or deep draft navigation channels, are primarily responsible for beach erosion and accretion trends.

Ormond Beach is located immediately southeast of Port Hueneme, a jettied inlet that interrupts longshore transport. Sand supply for beaches in Ventura County has historically been from Ventura and Santa Clara Rivers. Longshore transport can be significantly interrupted by tidal inlets, especially during the initial phases of inlet development. Approximately 1,100,000 cubic yards (CY) of sand per year are mechanically bypassed south around Port Hueneme (Coastal Sand Management Plan 1989). Campbell and Benedet (2004) report that from 1959 to 1987 about 910,000 CY were bypassed annually around the Port in the direction of net transport. Weigel (1994) has also confirmed a similar magnitude of bypassing and further describes longshore transport in the area.

Without a continuous supply of bypassed sand to Ormond Beach from the north, ongoing transport to the south would lead to more rapid erosion at Ormond Beach and impact the lagoon system. Ormond Beach would switch from being a stable beach (not significantly accreting or eroding) to one with significant erosion. This erosion would likely narrow the beach and expose the lagoon to more frequent inundation from the Pacific Ocean. Lagoon morphology would be altered as the beach retreated and the lagoon became more frequently exposed to wave action and tidal influence.

During a site visit to Ormond Beach on February 12, 2008, HDR observed waves breaking on a small ebb shoal that had developed seaward of the channel following a breaching event. The small shoal was reworked into the beach system, as was observed on March 20, 2008. When a tidal inlet first opens, ebb and/or flood shoal typically forms. Sediment from these shoals comes from the adjacent beach and from the adjacent coastlines as fed by longshore transport. It appears that while the breach at Ormond Lagoon is open, some small component of the longshore transport is trapped in both the ebb shoal and lagoon. The small ephemeral ebb shoal created by episodic breaching has no significant effect on downdrift beaches. However, a permanent inlet (for flood control or restoration) at Ormond Beach would affect longshore transport by temporarily trapping sand in the ebb shoal and lagoon until natural bypassing commences, or by impounding sand against a hard structure such as a rock jetty.

Experience at Port Hueneme indicates that a significant effort would be required to maintain a permanent tidal inlet at Ormond Beach. Therefore, alternatives for improving J Street Drain that include a more permanent connection between the lagoon and the ocean are not advised.

A7. Cross-shore Transport

Cross shore transport refers to sand moving across the wet beach perpendicular to the shoreline (onshore and offshore). On an engineering time scale, cross shore transport is limited to a conceptual depth of closure beyond which waves do not cause significant sediment transport (Dean, Kriebel, and Walton 2002). Depth of closure is a function of the sand gain size, shape of the beach profile, and waves. According to methods by Dean, Kriebel, and Walton (2002), depth of closure can be estimated based on an annual 12-hour exceedance significant non-breaking wave height. Based on a wave record of 2 years, this definition results in a conceptual depth of closure at Ormond Beach of approximately 25 feet. Observations of profile data further support this estimate of depth of closure.

Cross-shore transport plays an important role in moving sand across the shore face, eventually closing the lagoon breach and rebuilding the beach. There are no readily available data or studies documenting cross shore transport at Ormond Beach. However, historic beach profiles at locations immediately north and south of the project site are available as part of monitoring by the BEACON. As presented in Appendix B, SBEACH was applied during the present investigation to estimate cross-shore transport and its impact on profile morphology.

A8. Aeolian Transport

Aeolian (wind-blown) sand transport is likely a significant component of the long term evolution of the lagoon. In the absence of freshwater discharge, wind-blown sand fills shallow areas of the

lagoon and narrow tidal channels during dry summer months. From review of aerial photographs and surveys, this process of infilling contributes to the range of locations where the breach has been observed to occur along the beach. Aeolian transport is known to have significantly contributed to closing of small inlets at other locations such as Mustang Island Fish Pass in Texas (Kraus and Heilman 1997).

Visual observations made during the February 12, 2008 site visit indicated that the back beach may be quickly reformed by aeolian transport after breach closure. Representative wind-blown sand transport rates were calculated based on nearby offshore wind data and representative dry beach sand samples based on multiple methods outline by Hopf and Sherman (2007). Figure A.8 shows representative calculations of wind blown sand transport by four different methods for 2006. The analysis indicated that the bulk of wind transport occurs in the winter through spring, and that gradual transport of sand occurs during the summer months.

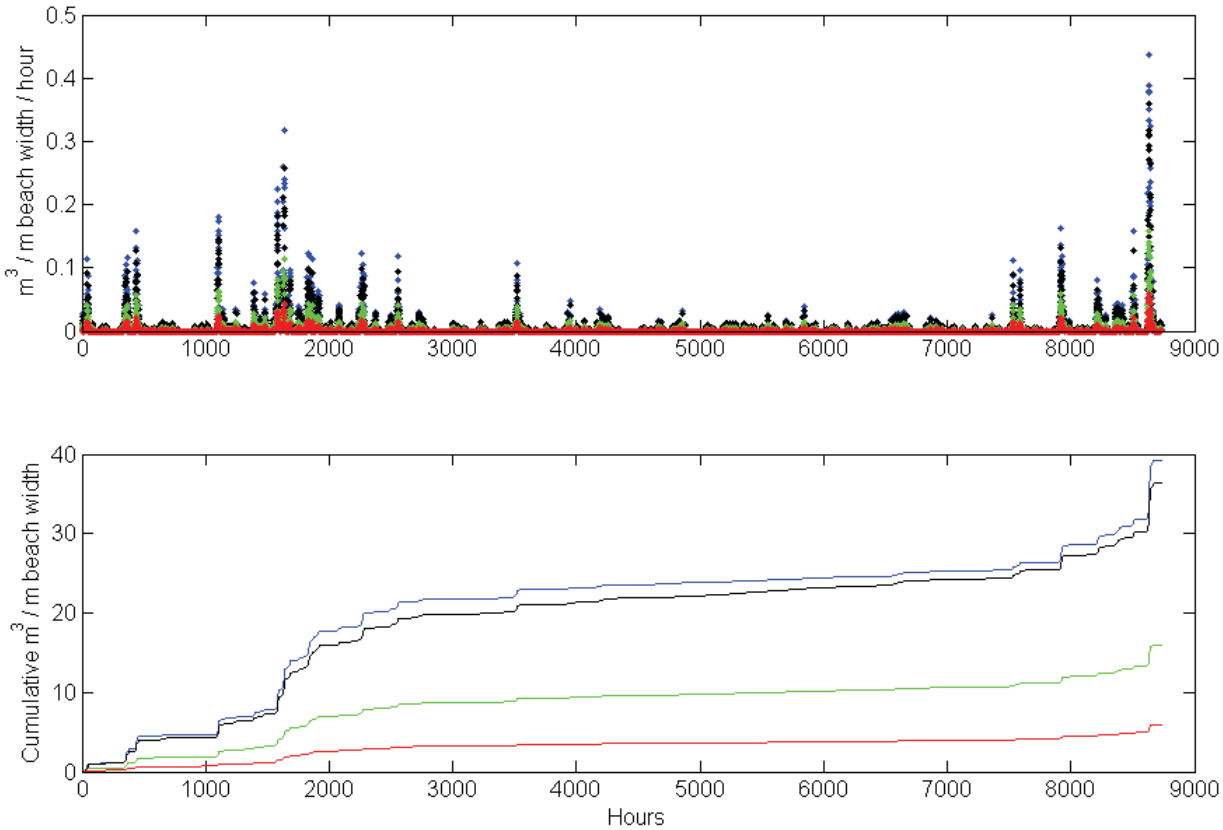


Figure A.8. Four methods for estimating wind-blown sand transport for the year 2006.

A9. Relative Sea Level Rise

IPCC (2007) predicts eustatic sea level rise over the next 100 years between 0.6 ft and 1.9 ft with a central value of 1.1 ft. The National Oceanic and Atmospheric Administration's (NOAA) Center for Operational Oceanographic Products and Services (2008) reports that historic measured relative sea level rise at the Santa Barbara tide gauge is approximately 0.91 feet per century and approximately 0.52 feet per century at Santa Monica. Relative sea level rise is the combined relative change in water level including effects of subsidence or uplift. Ground water withdrawal and oil and gas production have been named as the primary source of subsidence within the Oxnard Plain (Hanson 1992). Hanson (1992) also indicates that tectonic activity is a minor contributor to subsidence and uplift within the Oxnard Plain. Available data indicates that MHHW is rising 19% faster than MSL for a mean anticipated rise of 1.3 ft over then next century (Coastal Conservancy Undated-B).

Sea level anomalies occur when the 5 month average of the interannual variation of mean sea level is greater than 0.3 ft (NOAA 2008). The greatest anomalies on the California coastline are attributed to the El Niño and the 2000-2001 La Niña events (NOAA 2008). The anomaly during the El Niño event raised the sea level for an extended period by as much as 1.2 ft (Ryan *et al* 1999). El Niño has occurred 5 times in the observed data record and its influence is accounted for in the representative beach developed to assess flooding in the lagoon.

Historically, eustatic sea level is rising and the trend is expected to continue in the coming decades. Irrespective of improvements at J Street and Ormond Beach, sea level rise will result in long-term retreat of shorelines in the absence of additional sediment sources. One method to calculate shoreline retreat due to sea level rise was proposed by Bruun (1962). Bruun (1962) suggests that volume within the active beach will be conserved over a long period and provides an equation to calculate shoreline retreat given an equilibrium beach profile. Based on Bruun (1962) the shoreline at Ormond Beach will retreat between 40 ft to 50 ft for every 1 ft of sea level rise.

Naturally, shorelines retreat due to rising relative sea level but the beach profile will generally remain unchanged relative to MSL and shoreline position. If the supply of sediment is unchanged and the beach is not limited on its landward side, then the entire beach system will simply fall back. In this case, the elevation of the dune will be relative to sea level, meaning that if sea level rises by 1 ft then the dune crest will rise by 1 ft as will every other part of the active beach profile. If however, the sediment supply is reduced or development has been allowed to take place behind the beach, the character of the future beach becomes much more uncertain.

Development north of Port Hueneme and the considerable amount of material that is bypassed every year make it likely that sediment supply will be reduced if sea level rises considerably. A reduction in sediment being bypassed at Port Hueneme will lead to shoreline erosion at Ormond Beach. If the beach begins to erode due to lack of available sediment supply, it is likely that the lagoon will be filled with sand as the beach tries to migrate landward, requiring more rainfall to maintain the current lagoon configuration. If climate change results in lower precipitation then it is likely that the lagoon will fill to a state similar to that seen in photos taken in the 1970's.

Considering, that short term (such as El Niño events) sea level rise of 1 ft is already present in the data used to develop the representative beach for analysis purposes, the nominal elevation of the beach adjacent the lagoon will not appreciably accrete over the next 100 years if sea level rises by only 1 ft. It is more likely that shoreline erosion will become a problem over the next 100 years as coastal development continues and beaches attempt to retreat landward. Significant shoreline erosion will likely change the character of the lagoon and increase frequency of breaching but will not likely raise the elevation of the beach.

Sea level rise likely will not significantly affect the elevation of the beach adjacent the lagoon over the next 100 years. Rise of MHHW by 1.3 ft should be considered as the lower limit for lagoon water level during a storm.

A10. Aerial Photography

Historic aerial photography was obtained for the vicinity of the lagoon and photos from 1945, 1950, 1972, 1979, 1989, 1994, 2004, 2006 and 2007 were qualitatively reviewed. A shoreline survey from 1855 and navigation chart from 1945 were also reviewed. Historical conditions indicate that the lagoon was created in its current form by drainage system construction. Continued evolution and growth of the lagoon is expected to be similar to the recent past.

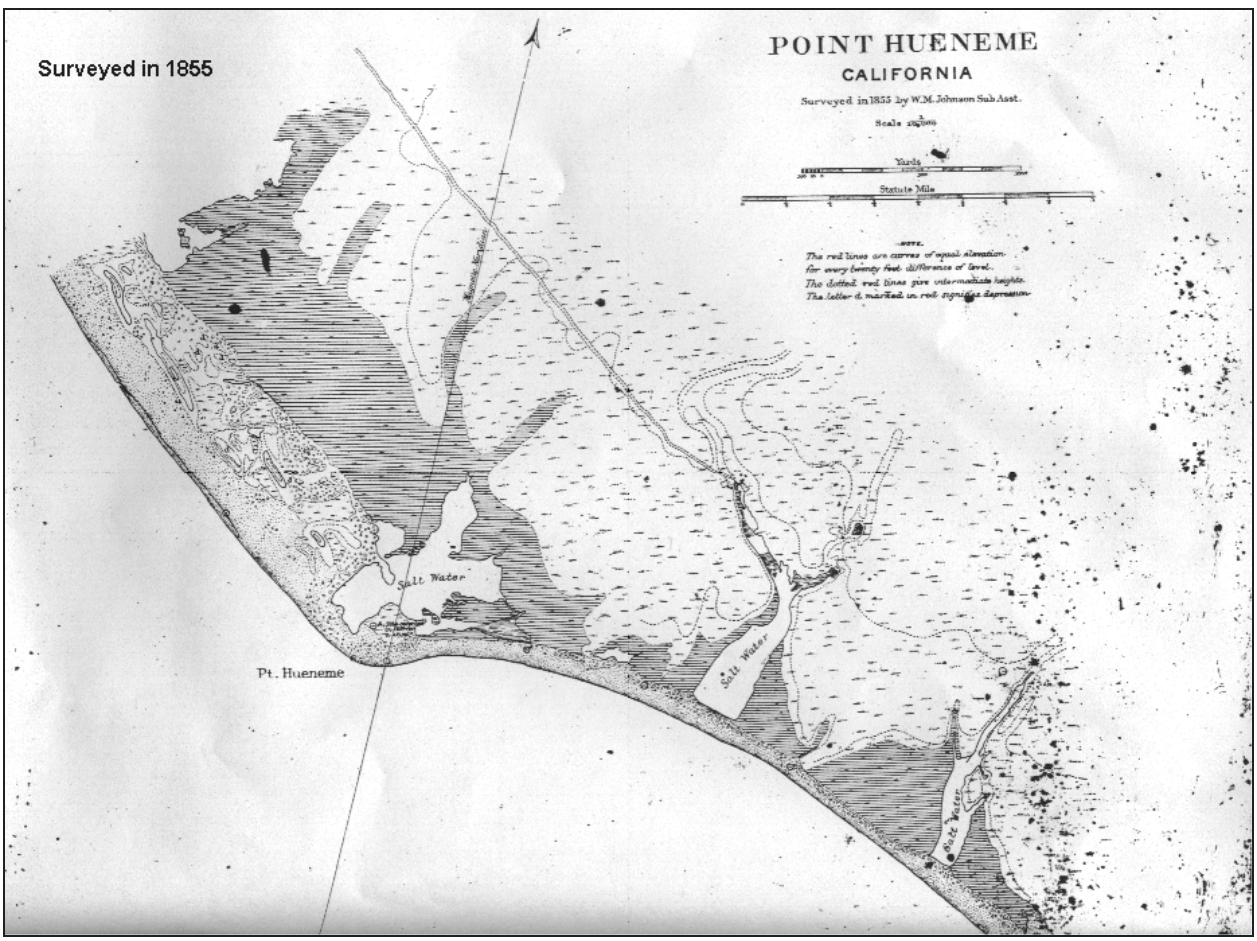


Figure A.9. 1855 shoreline survey (Johnson 1855).

Figure A.9 shows the 1855 survey, indicating that three nearby lagoons existed in 1855. Historically, a natural drainage, wetland, and lagoon existed at the current location of the OID. Portions of this lagoon and wetland features are still evident at the south end existing lagoon. The central lagoon has been filled and no longer exists. Historical drainage is now captured by the Hueneme and J Street Drains. The central and south lagoons likely breached to the Pacific Ocean following large rainfall events but did not remain permanently connected. However, the lagoons may have been open to tidal influence longer than under existing conditions because of the larger tidal prism of the lagoons and adjacent wetlands. The large lagoons shown in Figure A.9 are similar to one of the alternatives being considered by the California State Coastal Conservancy to restore wetland habitat in the area.

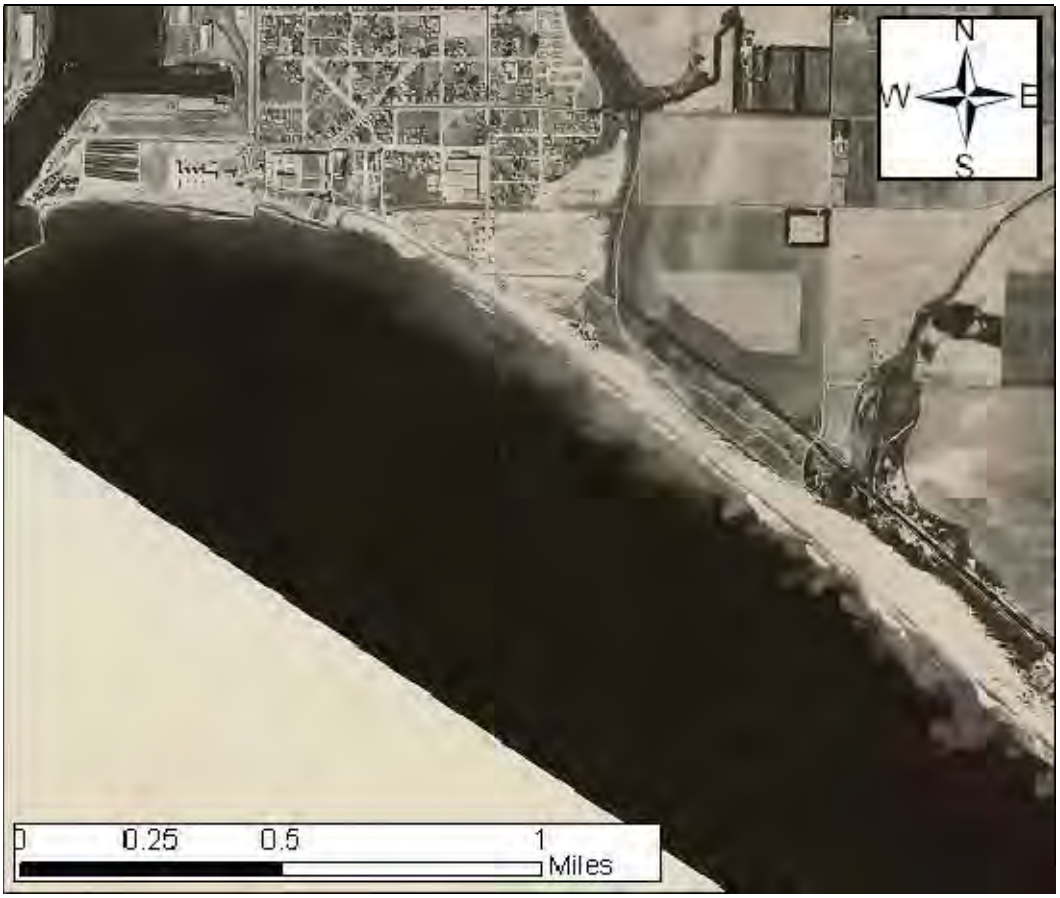


Figure A.10. Aerial photograph, 1945 (unknown).

Figure A.10 shows a 1945 aerial photograph, indicating significant development in the region, including filling of the lagoon north of J Street and creation of the Hueneme Drain and Port Hueneme. The lagoon at OID and Hueneme Drain has been channelized, with drainage routed south towards Mugu Lagoon. Prior to construction of J Street Drain in the early 1960's, flows were collected within Hueneme Drain and passed south to the Industrial Drain and beyond. The lagoon only existed at the location of the OID and did not extend northwest to the existing

location of J Street Drain. It is unlikely that the OID discharged directly to the Pacific Ocean via Ormond Beach at the time of the photograph.

Figure A.11. Aerial photograph facing J Street Drain, 1972, Copyright © 2002-2007 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org.

Figure A.11 shows the early formation of the lagoon at the outfall of J Street Drain in 1972, ten years after construction in 1962. Available information suggests that during this time the breach was periodically maintained to promote flow from J Street directly to the ocean and mechanically excavated breach is evident in the photograph. The figure also shows that water frequently drained behind the dunes and within dune swales, forming what were likely ephemeral wetlands and channels. Sediment from the dunes was likely transported from the lagoon to the ocean following storm events. Comparison between the 1972 photos and the 1945 photo indicate that discharge from the J Street Drain created the northern portions of the lagoon because direct flow from the drain to the ocean wasn't maintained at all times. Lateral spreading of the impounded water, both north and south, occurred until the J Street drainage flows scoured a path south to the Oxnard Drain, connecting the two systems.

Figure A.12. Aerial photograph between J Street and Industrial Drains, 1972, Copyright © 2002-2007 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org.

Figure A.12 shows the between J Street and Industrial Drains in 1972. Stormwater was no longer routed south, instead it flowed over Ormond Beach. The backwater at J Street Drain had not yet connected to the lagoon at Oxnard Industrial Drain (OID). Channelization of what is now OID likely increased the capacity of the lagoon to convey floodwater directly to the Pacific Ocean and prevented flooding of inland areas. These changes also likely increased the frequency and intensity of breaching by conveying more flow directly to the lagoon and beach rather than allowing for local storage in uplands and adjacent wetlands. The result was the formation of a well defined lagoon channel.

Figure A.13. Aerial photograph facing Industrial Drain, 1972, Copyright © 2002-2007 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org.

Figure A.13 shows Industrial Drain and a small developing lagoon, including portions of Hueneme Drain. Breaching has recently occurred at the lagoon formed by Industrial Drain.

Figure A.14. Aerial photograph showing J Street Drain, 1979, Copyright © 2002-2007 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org.

Figure A.14 reflects the dynamic nature and recent evolution of the lagoon system. The lagoon appeared to have been growing in 1972, but by 1979 only a weak hydrologic connection between J Street and OID had developed. Few permanent wetlands appear in the photographs from 1979.

Figure A.15. Aerial photograph showing the area between J Street and Industrial Drain, 1979, Copyright © 2002-2007 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org.

Figure A.15 shows that, in 1979, Industrial Drain had not recently flowed directly to the Pacific Ocean. The overwash features on the beach evident in 1972 are less evident, although still visible. At the time of this photograph, it had likely been at least a few months since Industrial Drain last breached without mechanical assistance. From the photograph, it appears that mechanical breaching was occurring at OID as well as at J Street.

Figure A.16. Aerial photograph, 1994 (USGS 1994).

This low resolution 1994 aerial photograph in Figure A.16 shows a significantly larger connection/lagoon between J Street and OID. This can be attributed to the lack of mechanical breaching at both J Street and OID. The lagoon appears most similar to the current configuration. Flow from J Street and OID converge at the lagoon in this photograph. The lagoon exists on the beach bounded on its landward side by development and infrastructure.

Figure A.17. Aerial photograph, 2007 (VCWPD 2007).

Figure A.17 shows that in December 2007, it had been some time since the system breached to the Ocean as evidenced by the lack of overwash features. In mid December 2007 the beach breached, connecting the lagoon to the ocean near OID. Figure A.18 shows a photograph of the breach taken on December 22, 2007. The photograph reflects significant beach scouring since December, 2007.

The historical aerial photographs support the assumption that the existing lagoon developed as a result of flow from J Street and Industrial Drains ponding on the back side of the beach until a breach occurred. Flow during the breaching events is strong enough across the entire lagoon area to transport sand from the dunes to the ocean. That frequent process, along with groundwater seepage, appears to have caused the gradual formation of a semi-permanent lagoon and wetlands evident today.

Without strong flow within the lagoon during breaching, much of the lagoon area would likely never have developed. It's probable that if both drains were provided permanent, constricted flow pathways through the beach, the lagoon would rapidly decrease in size, ultimately resulting in short channels across the beach instead of a lagoon.

Figure A.18. Breach on December 22, 2007.

Appendix B – Numerical Modeling

B1. Model Approach and Conventions

B1.1. Units, Coordinate System, Datum

All units for modeling results are presented in the Standard International (SI) system in order to maintain consistency within the MIKE21 code. Units in this appendix are all shown in SI to conform to the model standards. Results are converted for the main body of the report. Horizontal coordinates shown are in UTM Zone 11. The project horizontal datum is NAD'83. The project vertical datum is NAVD '88.

B1.2. Direction Convention

Water currents and transport are calculated as component velocities in the positive x and y directions. Current direction refers to direction of propagation (the direction towards which the current flows). Wind and wave direction follow the meteorological convention for input and output, indicating direction of origin (direction from which it travels).

B2. Seaward Breaching

The model was applied to quantify breaching is forced by hydrographs of flow from the channels into the lagoon. Tides are applied on the ocean side of the beach to simulate typical tidal conditions. The primary transport mechanism during breaching is high velocity flow in the lagoon and over the beach. Therefore, waves are not included in the breaching simulation.

B2.1. Software Description

B2.1.1. MIKE 21 Coupled Flexible Mesh Flow Model

MIKE 21 software, developed by DHI, was applied to simulate water circulation, waves, sediment transport and morphology in the lagoon-beach system. MIKE 21 is generally applicable to the simulation of hydraulic and environmental phenomena in lakes, estuaries, bays, coastal areas and seas (DHI 2008A, B, and C).

B2.1.2. Software Limitations

The following model limitations collectively increase the time the model takes to completely form the breach.

- Impermeable Bed
  - Flow can not enter the bed, weakening the sediment and increasing the rate of transport at breaching.
- Supercritical flow
  - The initial breaching flow process is supercritical. Flow during this time is numerically dissipated to simulate dissipation caused by turbulence. Increased

turbulence is not included in the sediment transport solution, leading to reduced transport during initial breaching.

- Wetting and drying
  - The model requires that the water level in adjacent cells reach a preset level prior to breaching. This acts to slow down the simulated breaching process.

B2.2. Model Domain

The breaching model domain extends from Industrial and J Street drains across the beach to approximately 10 m water depth. Figures B.1 B.4 show the domain for the representative existing condition, a maintained section of beach elevation, a lagoon with an inlet near OID and a lagoon near J Street, respectively. The breaching model domain was developed to capture morphology of the lagoon system. Very small elements are required across the breach to accurately model the process, significantly increasing computation time. The flexible meshes contain approximately 40,500 elements ranging in size from about 500 m^2 to 1 m^2.

The lagoon is not included in the verification domain to reduce computational time. Verification of sediment transport requires a much finer mesh on the beach face to capture wave induced transport and does not require elements in the lagoon. Figure B.5 shows the domain for the transport calibration model. The flexible mesh contains 36,403 elements ranging in size from about 500 m^2 to 1 m^2.

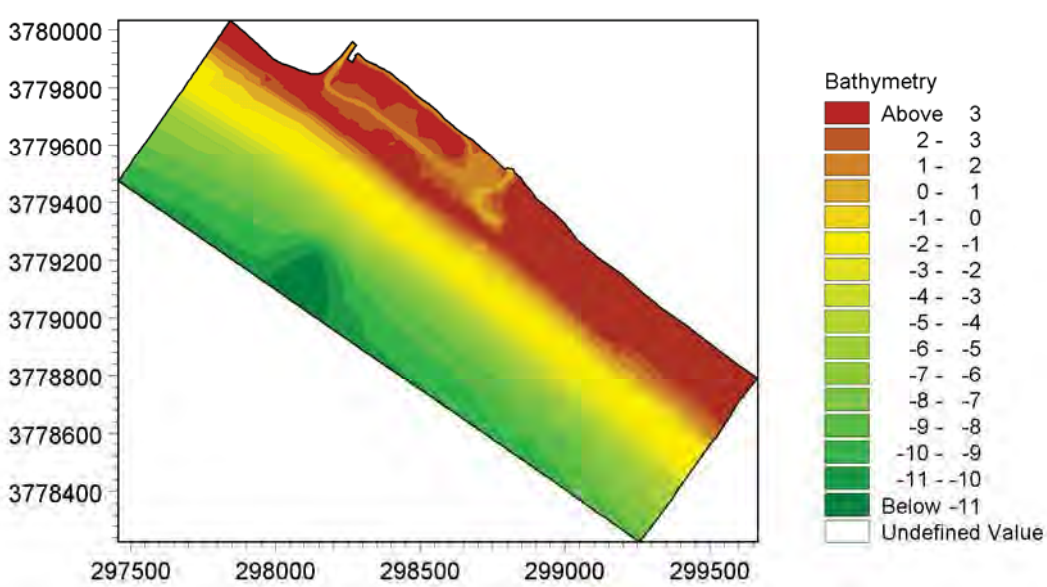


Figure B.1 - Breaching Model Domain, no action idealized beach.

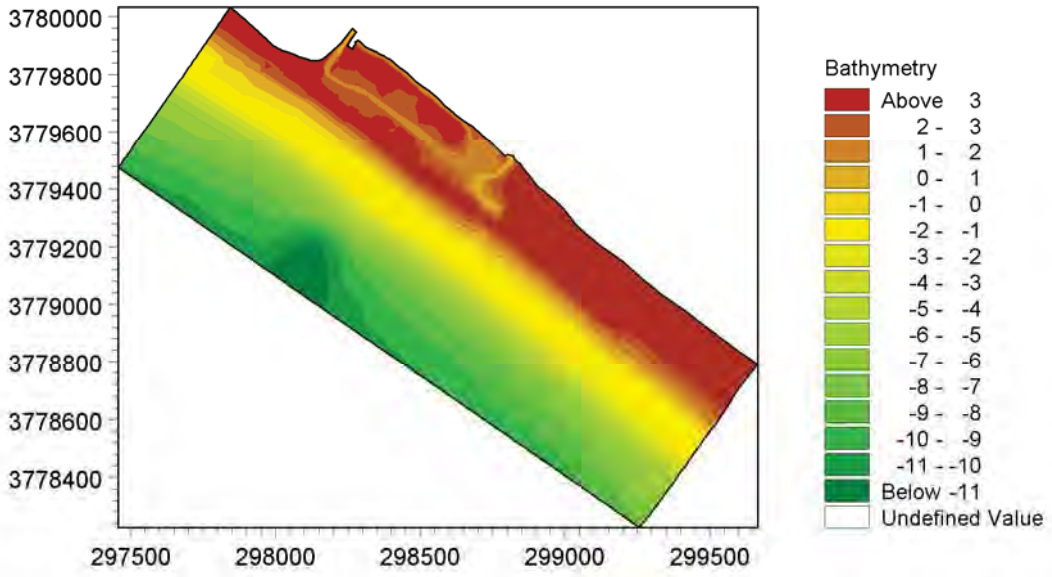


Figure B.2 - Breaching Model Domain, maintained beach.

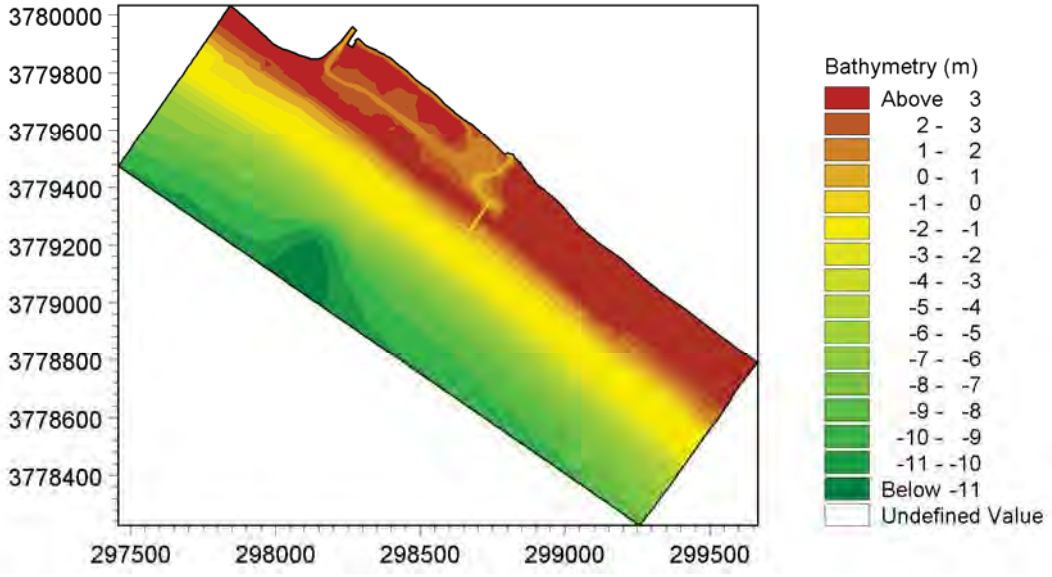


Figure B.3 - Breaching Model Domain, emergency mechanical breach near OID.

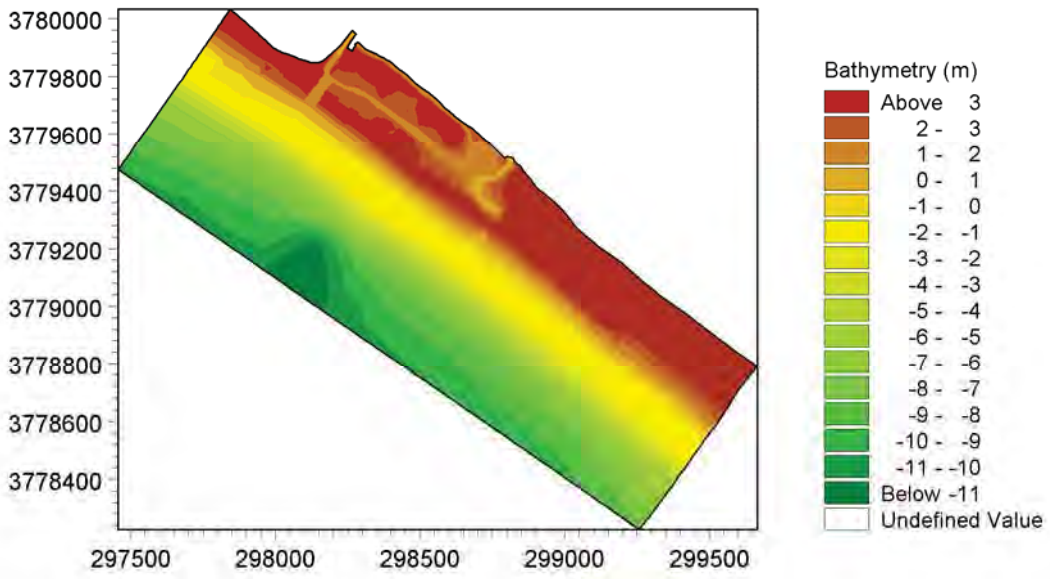


Figure B.4 – Breaching model domain, emergency mechanical breach near J Street.

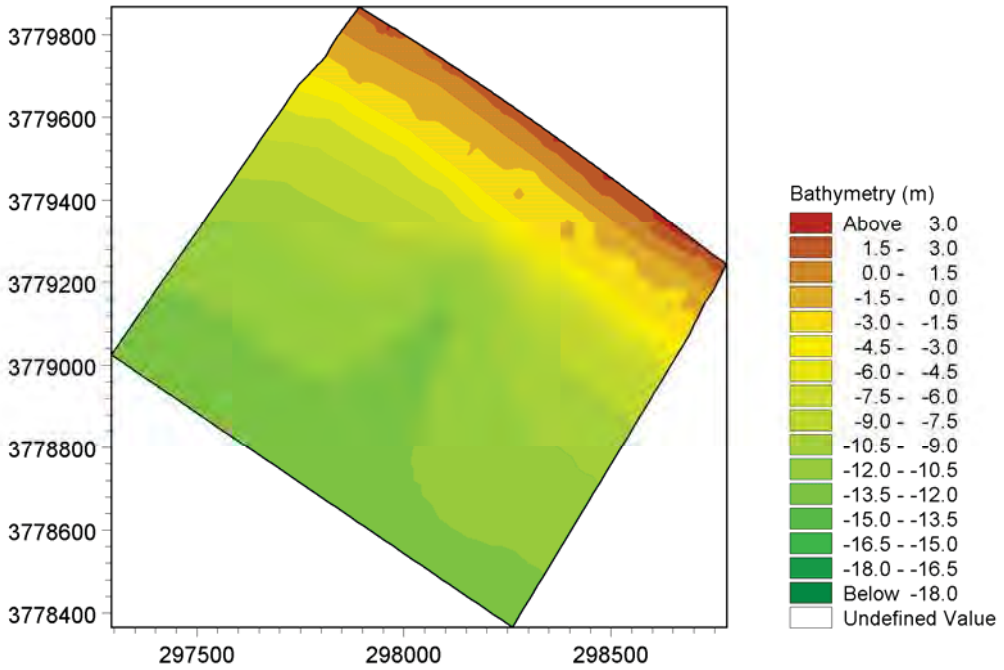


Figure B.5 – Calibration Model Domain.

B2.3. Boundary Conditions

B2.3.1. Hydrographs

Hydrographs for the existing and proposed conditions (Figures 5.10 and 5.11) were provided by VCWPD and applied as boundary conditions within the model at J Street and OID. Flows for J Street and Hueneme Drains were combined.

B2.3.2. Tidal

The open boundary on the ocean side of the domain was forced with a typical spring tide based on tidal observations at Santa Barbara shown in Figure B.6. The tidal boundary condition represents the range of tidal elevations exceeded over 90% of the time. The tidal elevation plays a role in determining the absolute depth to which the breach cuts but has little effect on the breaching process since the lagoon is generally perched above the tide.

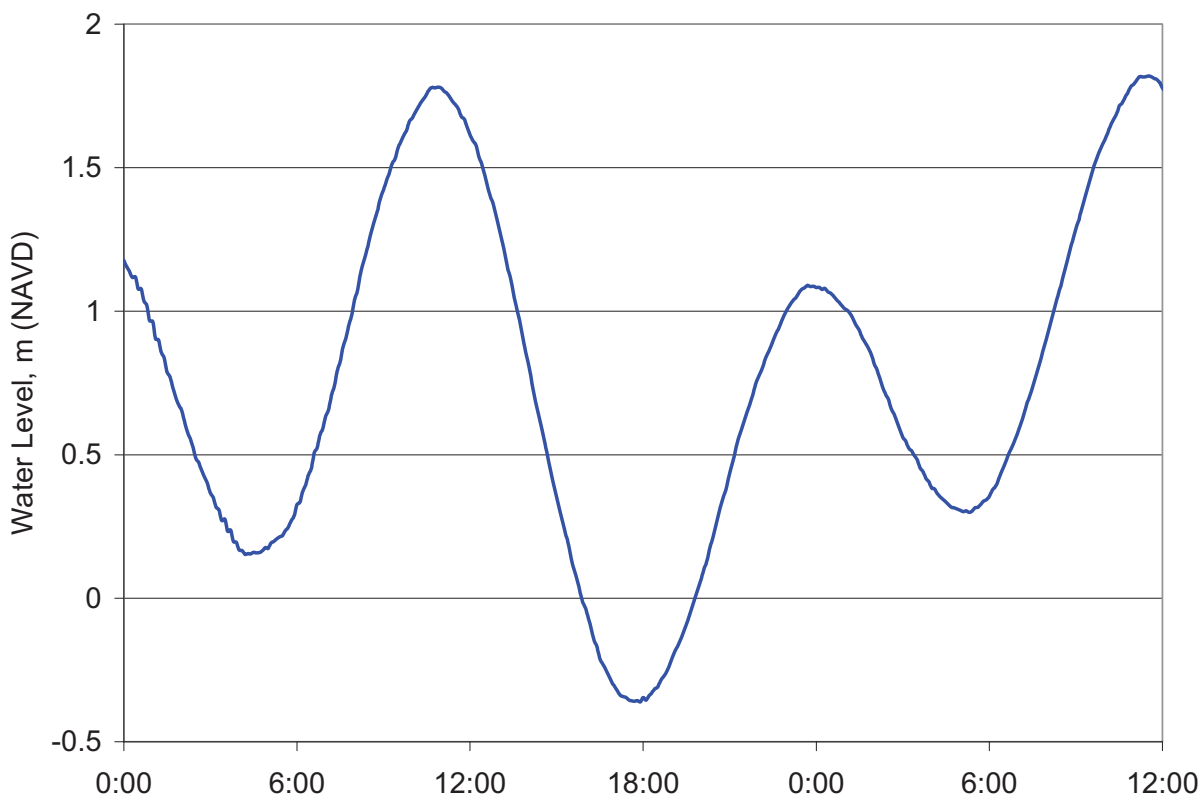


Figure B.6. Water level boundary applied during breaching.

B2.3.3. Sediment Transport

Boundary concentrations for sediment transport are set to zero such that only sediment existing within the domain at model start is available for transport. A deterministic bottom concentration boundary condition is applied (DHI 2008D).

B2.3.4. Waves

Waves from CDIP Station 141 are specified at the open ocean boundary for verification. Lateral ocean boundaries are specified as such.

B2.3.5. Salinity

Ocean boundary conditions in the salinity model are specified at 33.8 ppt, based on collected data. Boundaries at the drains are specified as having 0 ppt for the breaching model. No data is available on the salinity of water discharged from the drains to the lagoon so 0 ppt was assumed to demonstrate the salinity change during storm events.

Detailed analysis of salinity in the lagoon when the breach is closed is not possible with available data. While the breach is closed, other sources affecting salinity dominate (such as ground water, seepage through the beach, heat exchange and rain) making detailed analysis impossible with the existing data.

B2.4. Model Parameters

The horizontal eddy viscosity for the circulation models was applied using the Smagorinsky formulation (DHI 2007A). The Smagorinsky coefficient was set to 0.28 with a minimum eddy viscosity of 1.8e-6 m2/s and a maximum eddy viscosity of 1.0e10 m2/s. Density was included as a function of salinity in the seaward breaching model and was assumed to be barotropic for the closure models.

B2.5. Other Forcing

Wind was not included. The domain is small enough that wind induced flow is insignificant compared to the flow induced by the hydrographs. Closed boundaries (land) were specified as those areas above the maximum expected elevation at which water might reach or areas outside the interest of this report. Elements are allowed to flood and dry as the water level varies.
Since the boundaries to the model are at the exit of the drainage channels rainfall is accounted for by the upstream modeling effort. Local effects of rainfall will likely have little impact when compared to forcing from the drainage channels.

B2.6. Initial Conditions

Water level is initially set to the tidal elevation on the ocean side of the beach, 0.86 m NAVD. The initial water level in the lagoon was set at 6 ft NAVD or 9 ft NAVD and is specified for each completed run in Table B.2, conditions that agree with historically observed conditions in the lagoon and available beach survey data. Initial suspended sediment concentration is set to zero everywhere within the domain.

B2.7. Model Verification

Limited data were available for model verification. Verification was sufficient to develop models to assess changes in the lagoon system based on modifications to lagoon configuration and drainage channels.

B2.7.1. Waves

Waves from CDIP Station 141 are specified at the open ocean boundary. Lateral ocean boundaries are specified as such. Waves from CDIP 141 and tides at Santa Barbara were applied at the boundary of the wave model domain to simulate waves over the sampling interval. Waves were observed across the surf zone and compared to calculations. Calculated wave height and period were within the range of the observations. Figure B.7 shows wave height calculated in the simulation at the time data collection was ongoing.

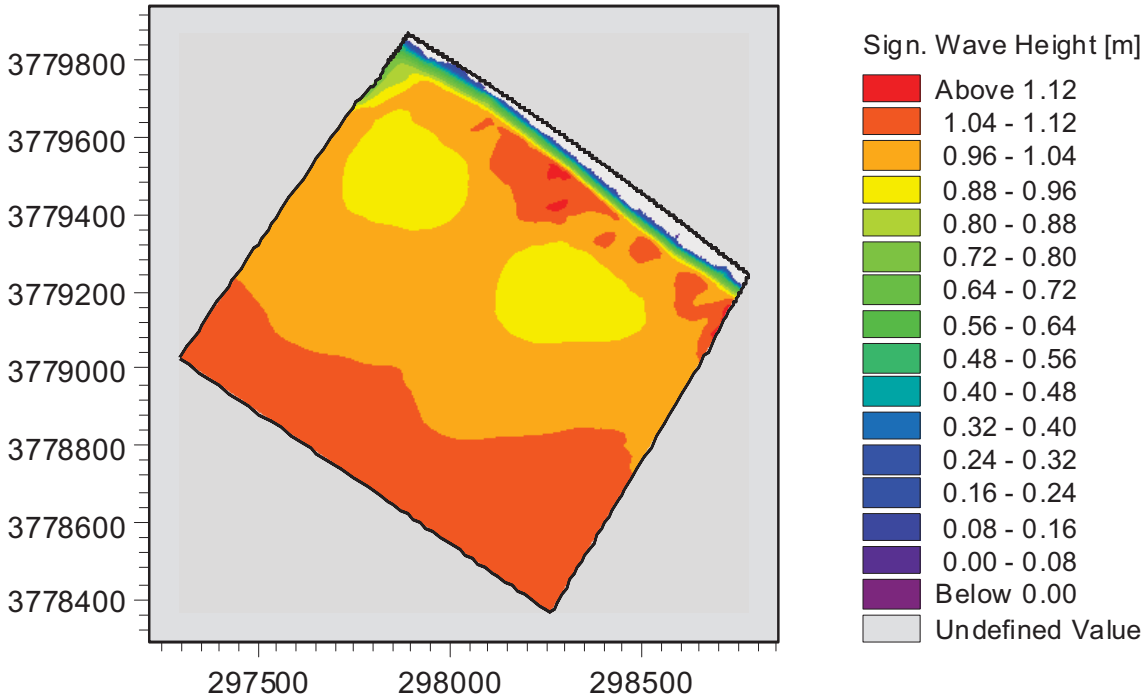


Figure B.7 – Waves during model verification.

B2.7.2. Hydrodynamics

Water level in the lagoon was measured in the hope that a breach would form during the data collection period and allow proper verification of the model: this did not occur. A sensitivity analysis of the velocity over the breach to the specified roughness coefficient was conducted to determine the appropriate Manning's n value. Sensitivity analysis suggested that the roughness would have little effect. A value of 30 was specified based on prior experience with more available data and the results of the sensitivity analysis.

The hydrodynamic model, coupled with waves and sediment transport, calculates wave setup and longshore current. Observations of longshore current ranged from 0.50 m/s to 0.65 m/s. Simulated longshore current during the observation period is shown in Figures B.8 and B.9. The region within which transport was measured is calculated to vary within 0.40 to 0.75 m/s from north to south. The simulated value is within the range of the observations.

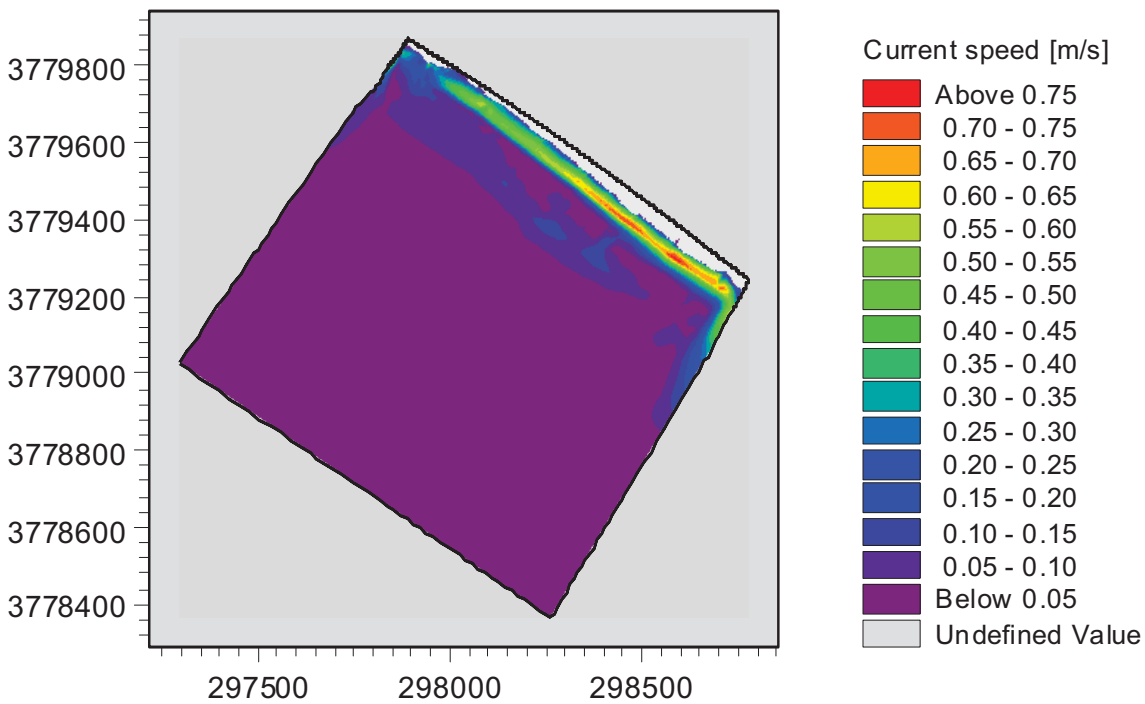


Figure B.8 – Wave and tide induced currents during model verification.

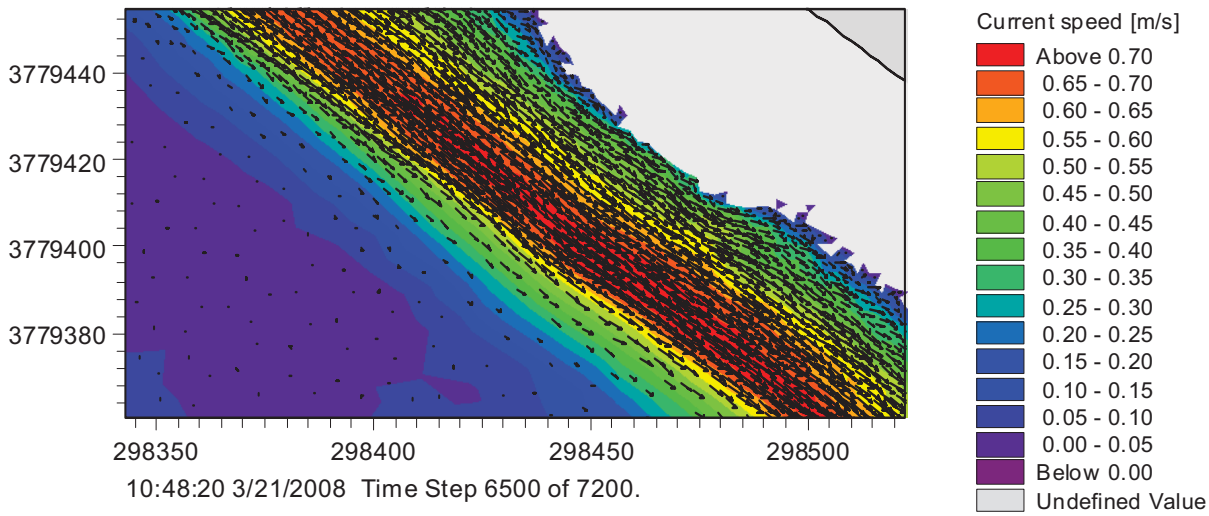


Figure B.9 – Enlarged wave and tide induced currents during model verification.

B2.7.3. Sediment Transport

Suspended sediment samples were collected to verify the sediment transport model. The samples were collected across the surf zone rather than in the breach during a storm event. Verification based on sediment suspended across the surf zone was conducted. Data collected during a breach would be the best possible source for verification, but that data was not available.

The sediment transport model calculates total load which includes suspended and bed load (DHI 2008C) while the measurements only capture suspended load. Bed load must be calculated separately to compare the computed total load to the measured suspended load. Bed load is calculated outside of MIKE21 following the method proposed by Soulsby and Damgaard (2005). Bed load is then subtracted from the modeled total load to determine total suspended load. The calculated total suspended load is then compared to the measured suspended load to estimate model accuracy. Typical sediment transport accuracy is within about an order of magnitude of observations (Davies et al 2002).

Table B.1 shows the comparison between measured and simulated total suspended sediment transport. Figures B.10 and B.11 show the magnitude of total transport near shore. The samples are an instantaneous measurement of suspended transport. Suspended transport can vary significantly over a single wave period based on the periodic oscillations of velocity and acceleration under waves. Given the typical accuracy of sediment transport models, the analysis requirements and the available data and time allowed to collect additional data, the model is considered sufficiently accurate to meet the requirements of this analysis.

Table B.1. Comparison between measured and simulated suspended transport.

Sample	Depth	Wave Height	Total Suspended Load	
			Measured	Calculated
	[m]	[m]	[m3/m]	[m3/m/s]
OL-01-04	1.2	0.7	2.28E-04	6.74E-05
OL-01-03	0.9	0.6	6.30E-04	1.58E-04
OL-01-02	0.6	0.6	1.41E-03	1.80E-04
OL-09-04	1.2	0.9	9.36E-04	1.33E-04
OL-09-03	0.9	0.5	2.43E-03	2.41E-04
OL-09-02	0.6	0.3	4.39E-03	2.15E-04
OL-09-01	0.5	0.3	3.96E-04	1.61E-04

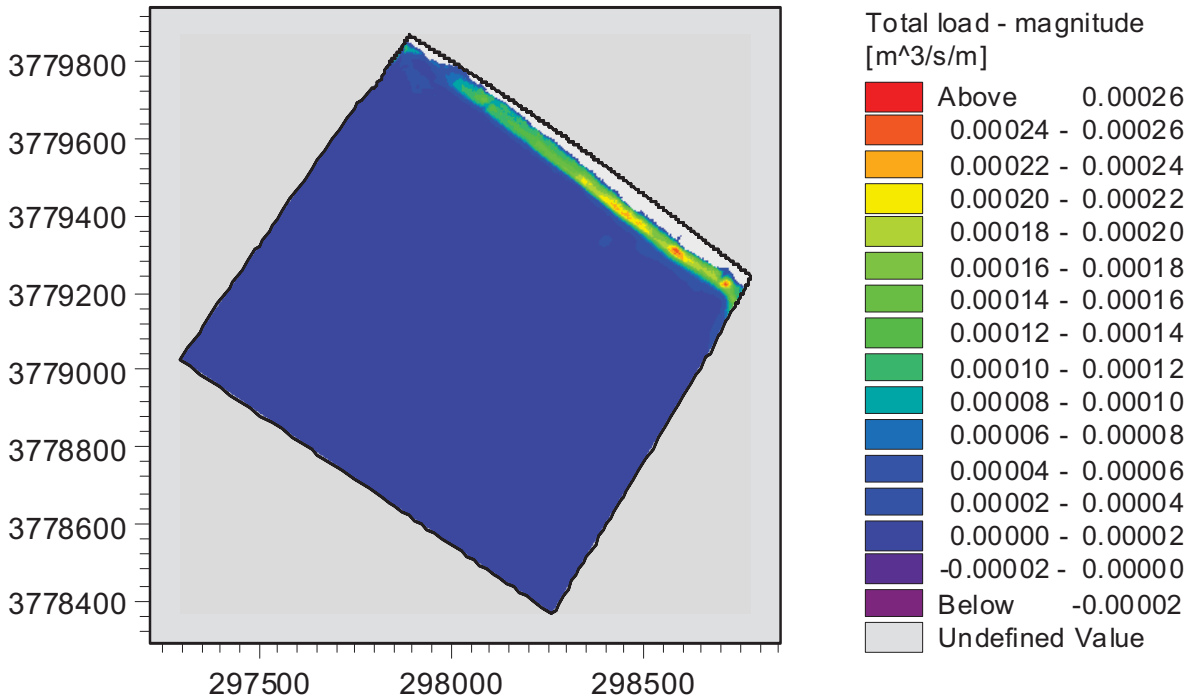


Figure B.10 – Wave and current induced sediment transport during model verification.

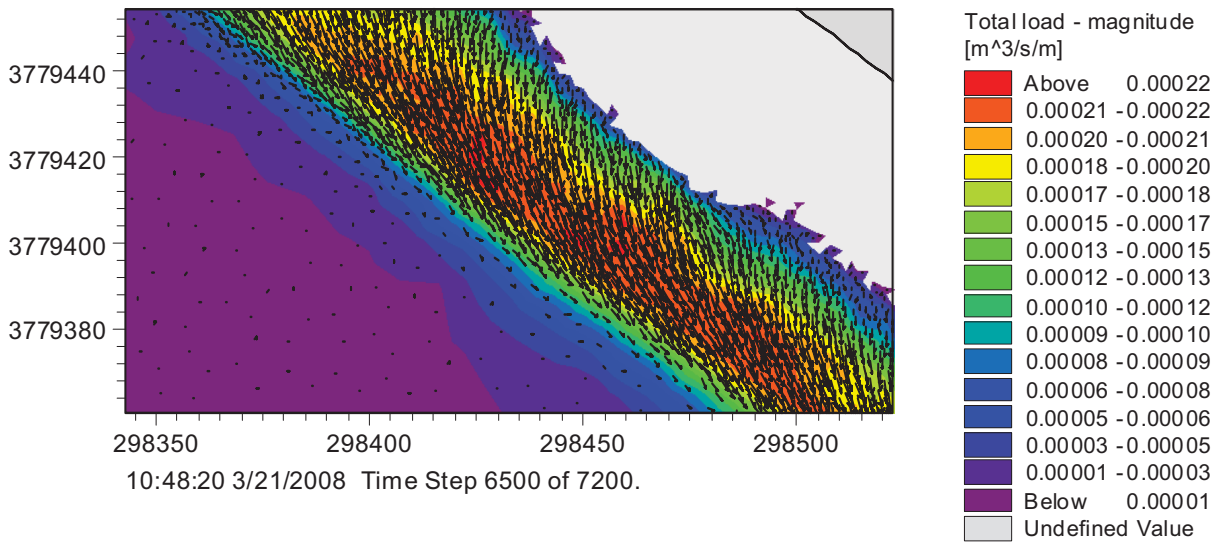


Figure B.11 – Enlarged sediment transport during model verification.

B2.7.4. Salinity

The salinity and water level collected allows a demonstration of salinity during the breaching events. The horizontal dispersion is formulated based on the scaled eddy viscosity (DHI 2008A). Figure B.12 shows simulation of salinity in the lagoon during a 2-year storm with the idealized representative beach just after peak flow.

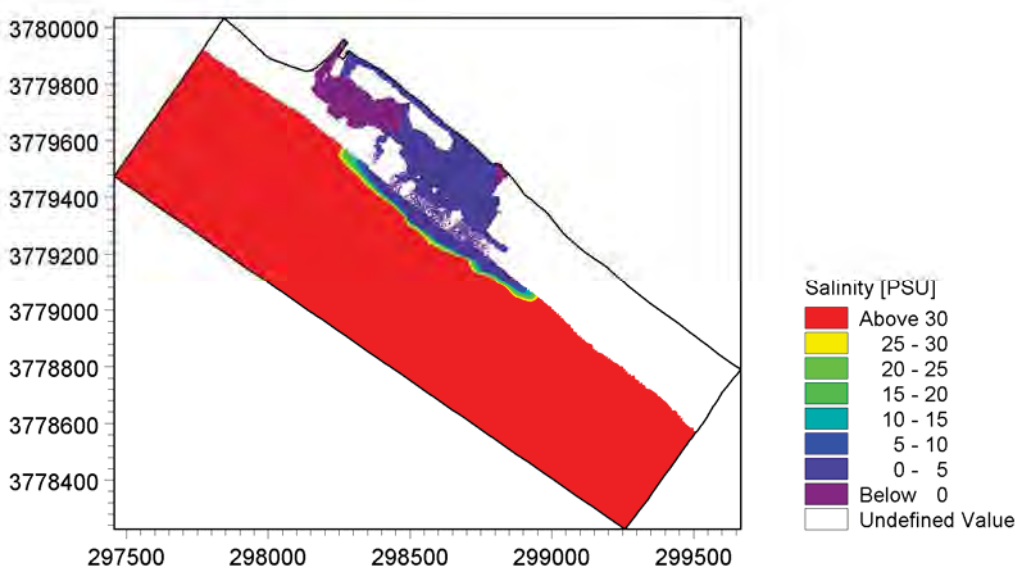


Figure B.12. Salinity at 2-year peak flow over idealized representative beach.

B2.8. Breaching Model Results

The breaching model was run for cases described in Table B.2. The time to breach from start of hydrograph and maximum water level near the outlet of J Street is documented in Table B.3.

Table B.2. Model run definition.

Run	Return Period	Lagoon Initial Water Level, m (NAVD)	Description
1	2	2.74 (9ft)	Rough channel bottom to prove ability to erode channel that has started to fill in.
2	2	2.74 (9ft)	Existing representative beach.
3	2	1.83 (6ft)	Shows breaching time with lower initial water level with existing representative beach.
4	100	2.74 (9ft)	Existing representative beach.
5	2	1.83 (6ft)	50 m maintained section near OID
6	2	1.83 (6ft)	30 m maintained section near OID
7	2	1.83 (6ft)	10 m maintained section near OID
8	2	tide	Inlet near OID
9	2	tide	Inlet near J-Street
10	100	tide	Inlet near OID
11	100	tide	Inlet near J-Street
12	100	tide	Inlet near J-Street and near OID

Table B.3. Model result summary.

Run	Time to Breach	Peak Water Level Near J-Street, m (NAVD)
1	9:30	3.5
2	9:30	3.5
3	10:55	3.5
4	3:40	3.6
5	4:45	2.6
6	4:35	2.65
7	5:10	3.0
8	0:00	2.4
9	0:00	2.2
10	0:00	3.6
11	0:00	2.6
12	0:00	2.2

B2.8.1. Idealized Representative Beach

An idealized beach/lagoon system was developed for the model domain to represent the no-action condition. The dynamic nature of the lagoon ensures that the lagoon configuration at the time of the latest survey was not representative of the longer term trend. The idealized domain was created by altering the March 2008 data through analysis of historic data, ultimately creating a uniform beach elevation where the March 2008 beach was below 10 ft NAVD.

An idealized representative beach was modeled for both the 2-year and 100-year events, with the initial water level varied between 6 ft and 9 ft NAVD for the 2-year event, and with modifications made within the domain to test erosive properties of the flow. Figure B.13 shows the water level at its peak for the 2 year event. Figure B.14 shows the bed level immediately after the 2 year event. Even though the flow overtopped a significant portion of the beach, one primary channel ultimately formed.

The results show that a significant section of the beach is overtopped during the storm and that as the discharge falls and the channel scours the flow tends toward one dominant channel. Figure B.15 shows the bed after the 100-year event, indicating the same trend as seen during the 2-year events but with significantly more transport over the beach. Aerial photos taken after the December 2007 breach indicate that the beach is in fact overtopped over a long section with a majority of the flow tending towards one dominant channel. Bed level change after the 2 year event for the domain with high and low sections included in the channel between J Street and OID shows that the deep sections are filled and the higher sections are eroded, effectively acting to maintain the current shape of the lagoon. Without flow between J Street and OID, natural channel maintenance will not occur.

Peak water level during the 100 year storm (Figure B.16) shows that the water level is slightly higher than the 2 year and overtopping occurs over more of the beach.

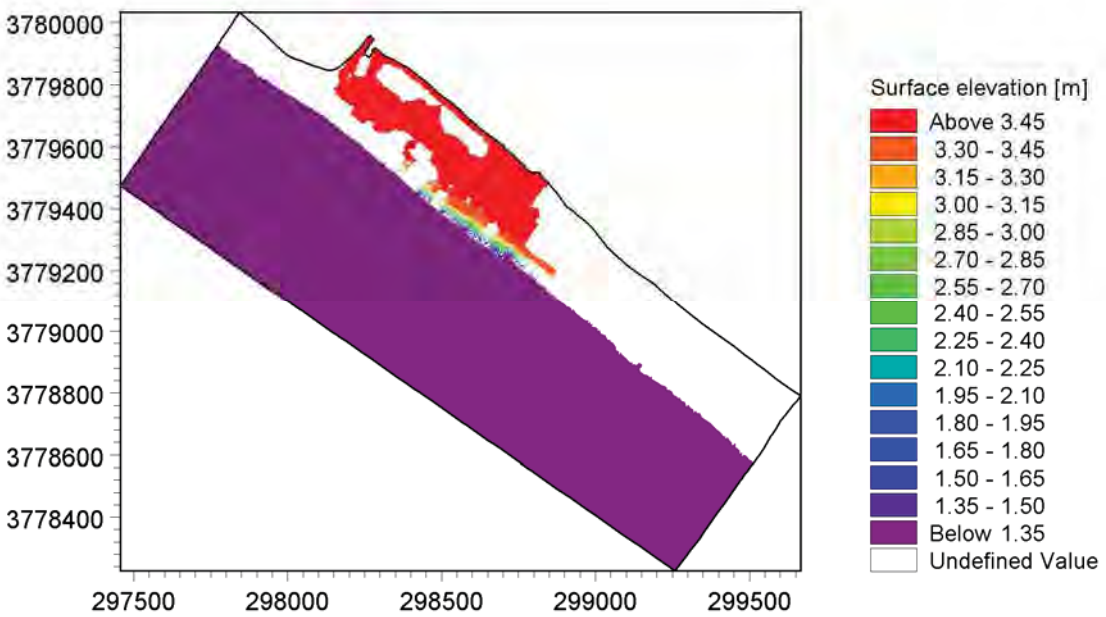


Figure B.13. Peak water level during 2-year event with representative beach.

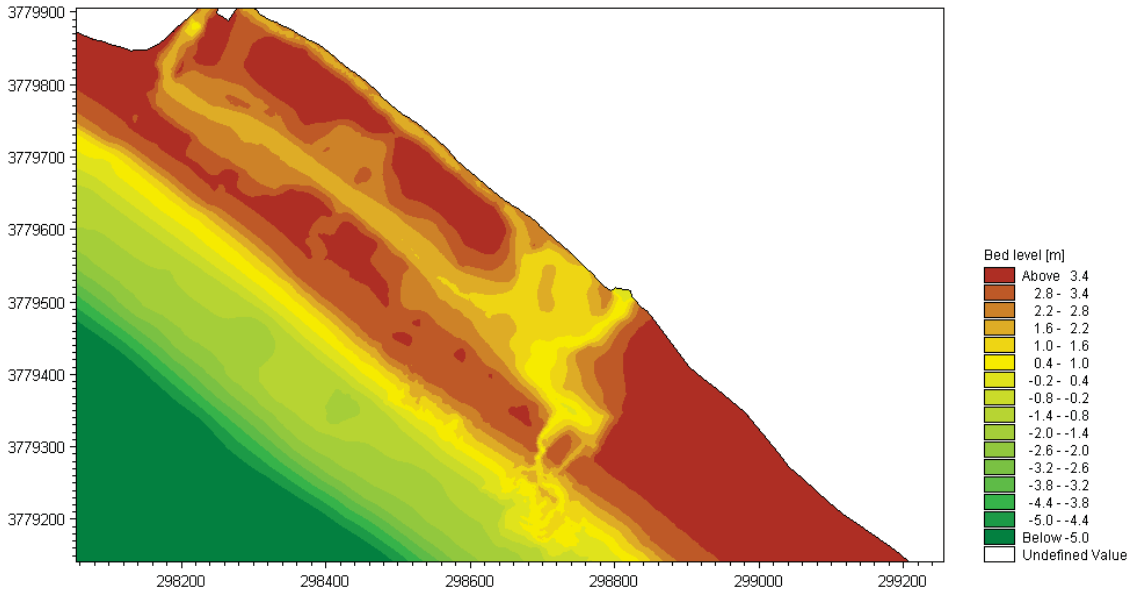


Figure B.14. Bed level at the end of the 2 year storm over the idealized beach.

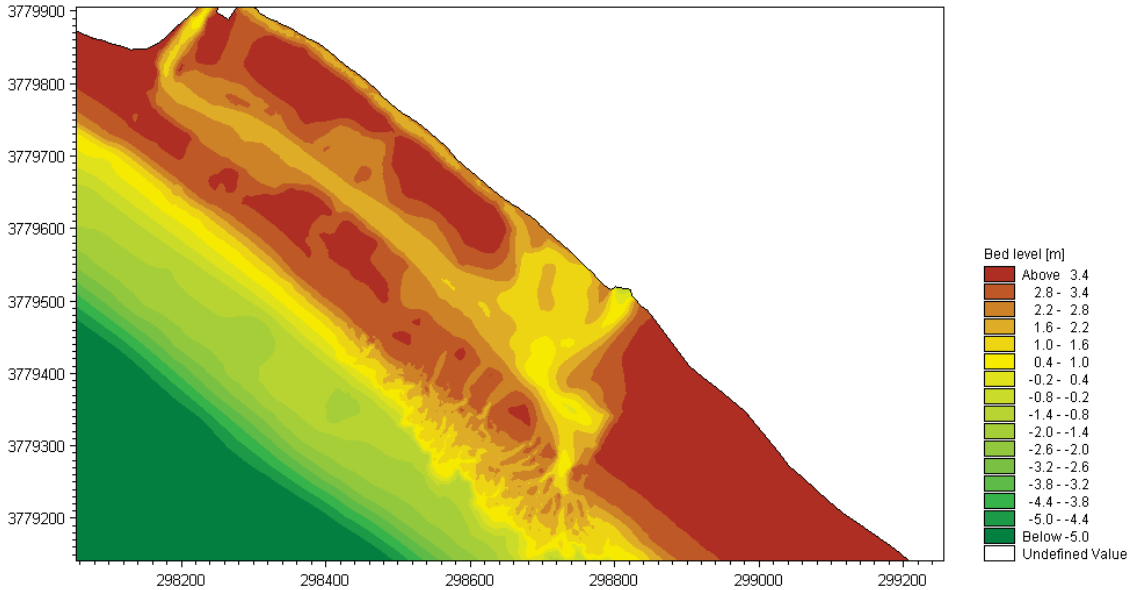


Figure B.15. Bed level at the end of the 100 year storm over the idealized beach.

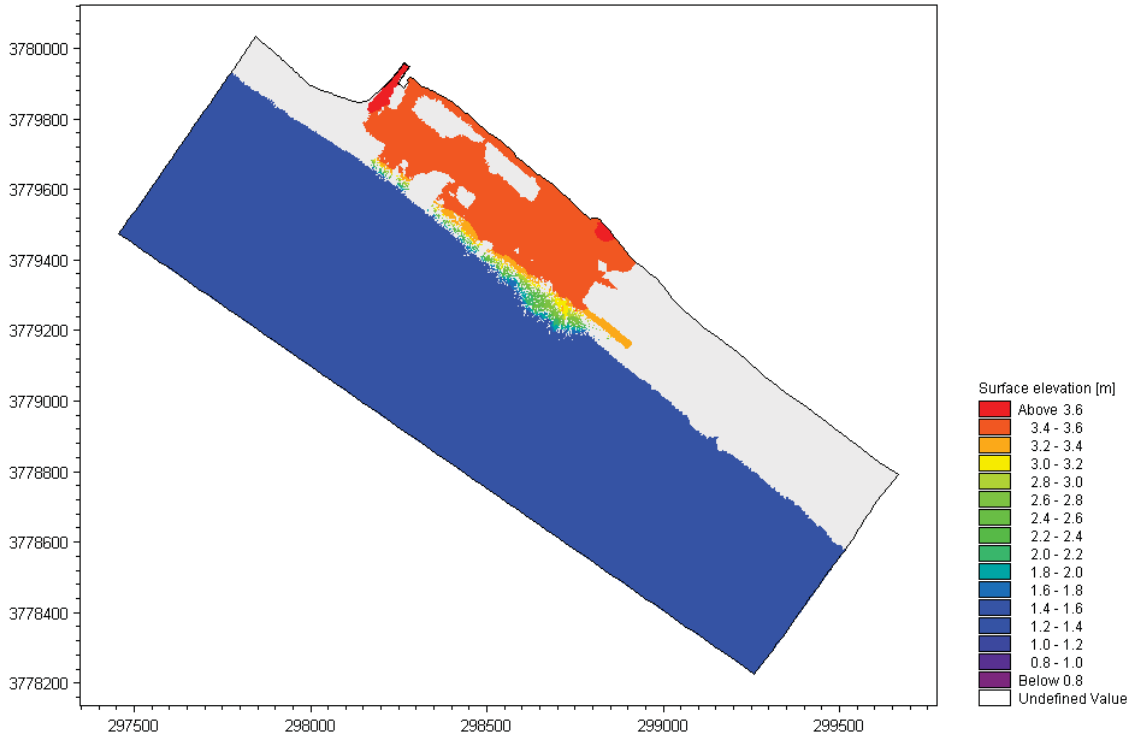


Figure B.16. Peak water level during the 100 year storm over the idealized beach.

B2.8.2. Beach Maintenance

Maintaining a section of the beach to a maximum elevation would cause a breach to form earlier in a storm and lower the maximum water surface elevation achieved at the beach. The minimum elevation to which the beach can be maintained without being opened by the tide is approximately 7 ft NAVD. The recommended location for the maintenance is near OID. Historic data and model results indicate that the beach will overtop at this location even if the beach is lowered adjacent J Street.

Comparison between the existing conditions and a 1 m (3 ft) lower beach section indicate that maintaining the beach near OID will lower the maximum water level in the lagoon during the 2 year event by about 1 m (3 ft). The model suggests that the width of the maintained section would impact the water level during the 2 year storm if the width is less than about 100 ft, but this dependency is affected by model inaccuracy related to the time it takes for the breach to form. Conservatively, the data shows that the low section of beach to be maintained needs to be about 100 ft wide. Figure B.17 shows the bed level after the 2 year event with the beach crest maintained at a low elevation. The result is similar to the existing condition with less overtopping of the overall beach section. Figure B.18 shows peak water level during the 2 year storm for a 30 m wide low section near OID.

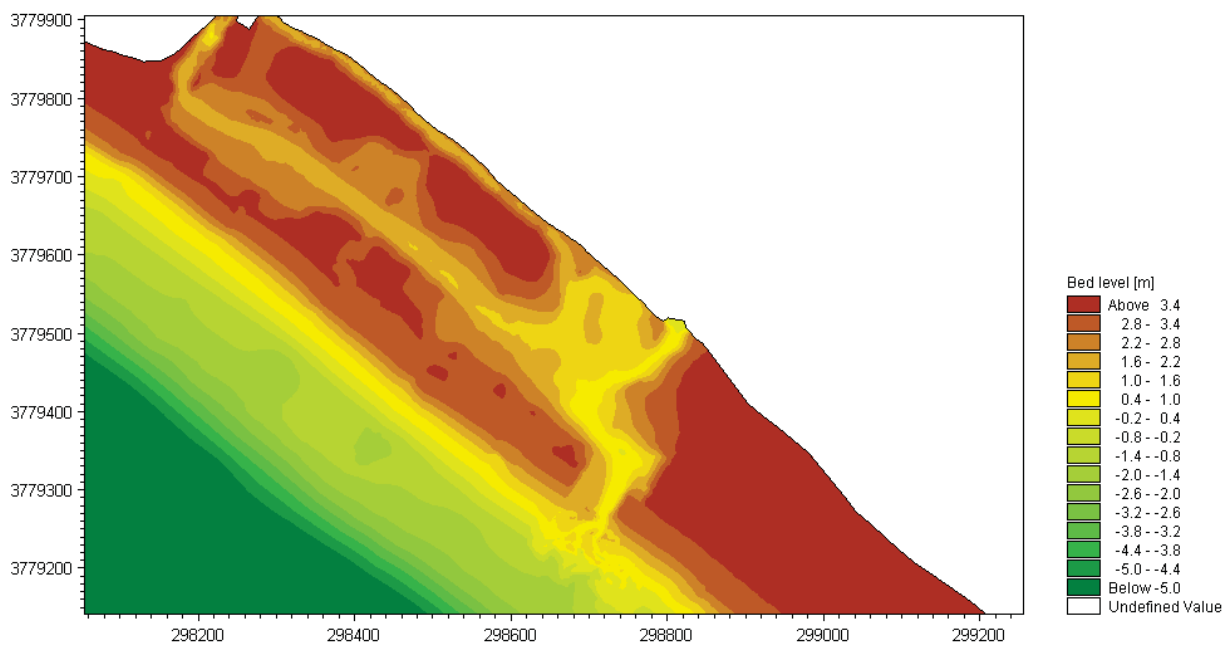


Figure B.17. Bed level at the end of the 2 year storm over the maintained beach.

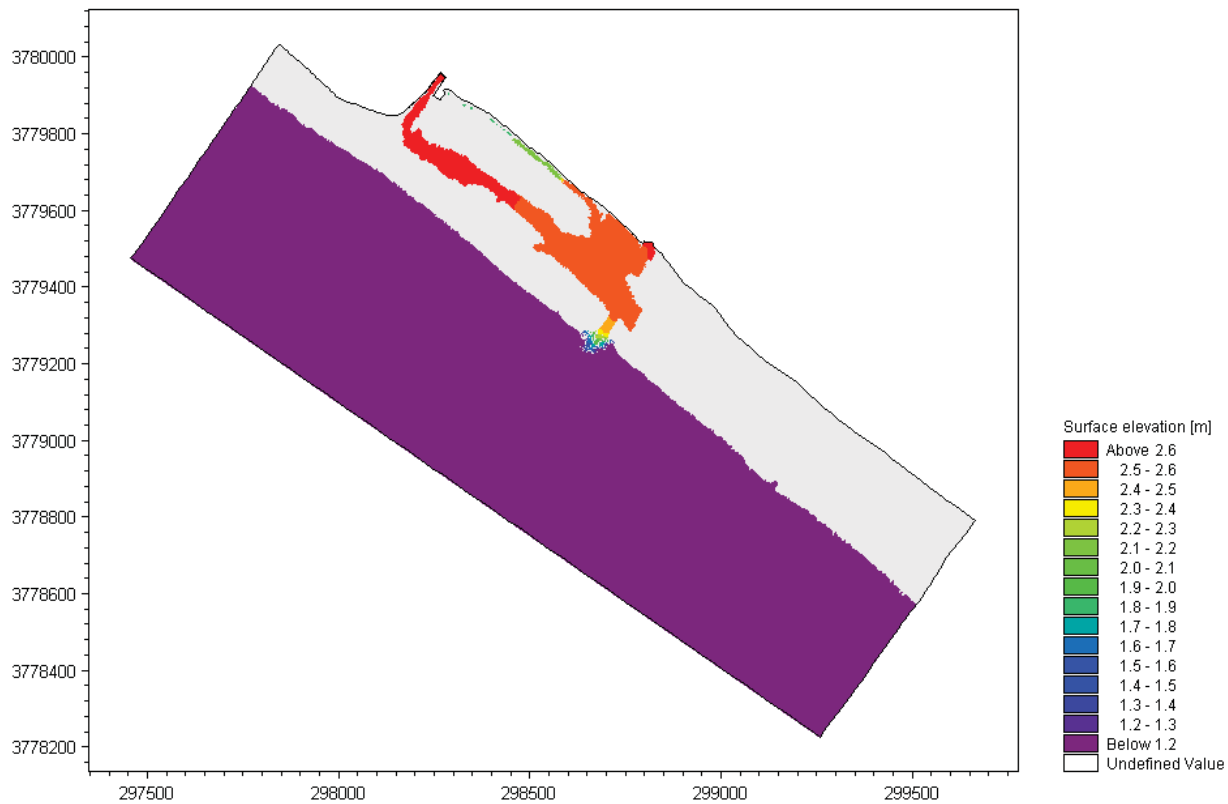


Figure B.18. Peak water level during the 2 year storm over the maintained beach crest.

B2.8.3. Emergency Breach

Figures B.19 and B.20 show the water level in the lagoon near J Street and OID for runs 8 and 9, respectively. The data show that the water level within the lagoon near the outlet fluctuates with the tide but the elevation of the bottom within the channel between J Street and OID prohibits tidal exchange beyond the channel except at the highest tides creating a perched section of the lagoon. Figures B.21 and B.22 show the bed level change in the lagoon after the 2-year event. Scour in the channel between J Street and OID is considerably more pronounced during run 9, driven by higher flow from OID than J Street. Figures B.23 and B.24 show the bed level change in the lagoon after the 100-year event

The breach/inlet will likely best be created by cutting a section of beach from the lagoon to the ocean, allowing the flow to create the breach. The model suggests that the breach would be between 10 m and 30 m wide to a depth determined by the elevation of the lagoon.

The model results show that, for a typical storm, the emergency breach produces the lowest water level of any of the assessed alternatives near J Street and that the closer the inlet is to J Street, the lower the water level there will be. The lagoon near the breach dries in the model runs below about 1.1 m, as evidenced by the missing data in Figure B.20.

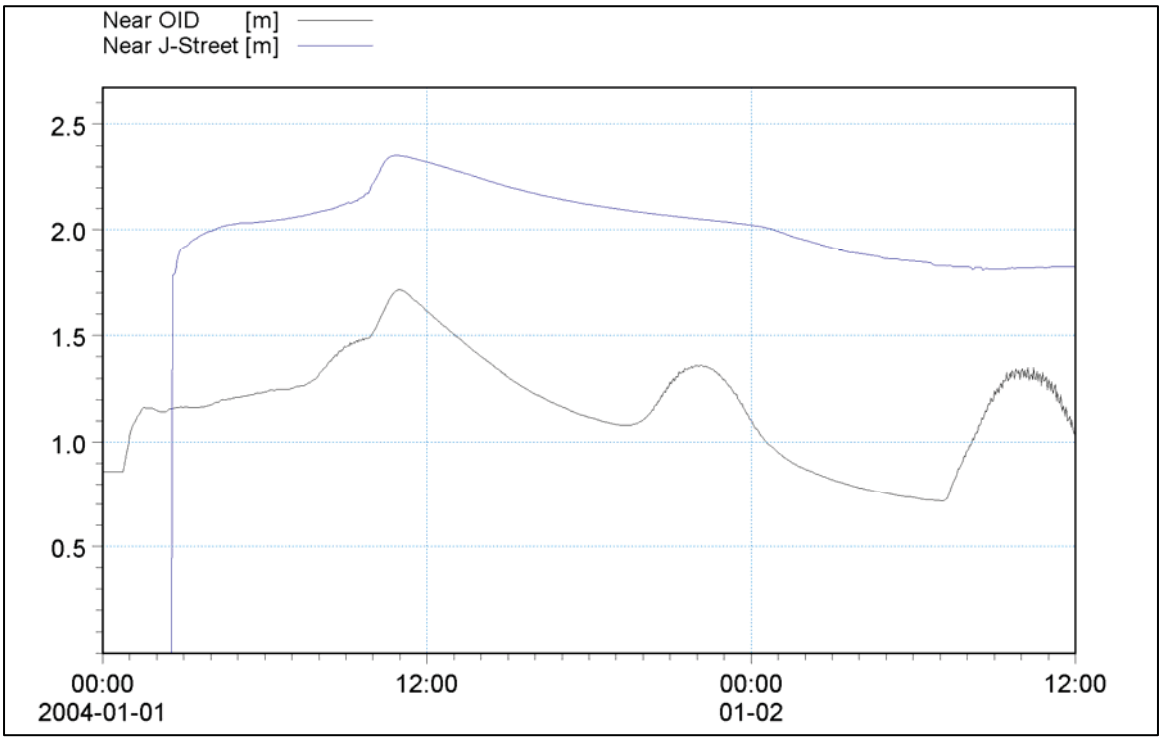


Figure B.19. Water level during the 2-year storm with an emergency breach near OID.

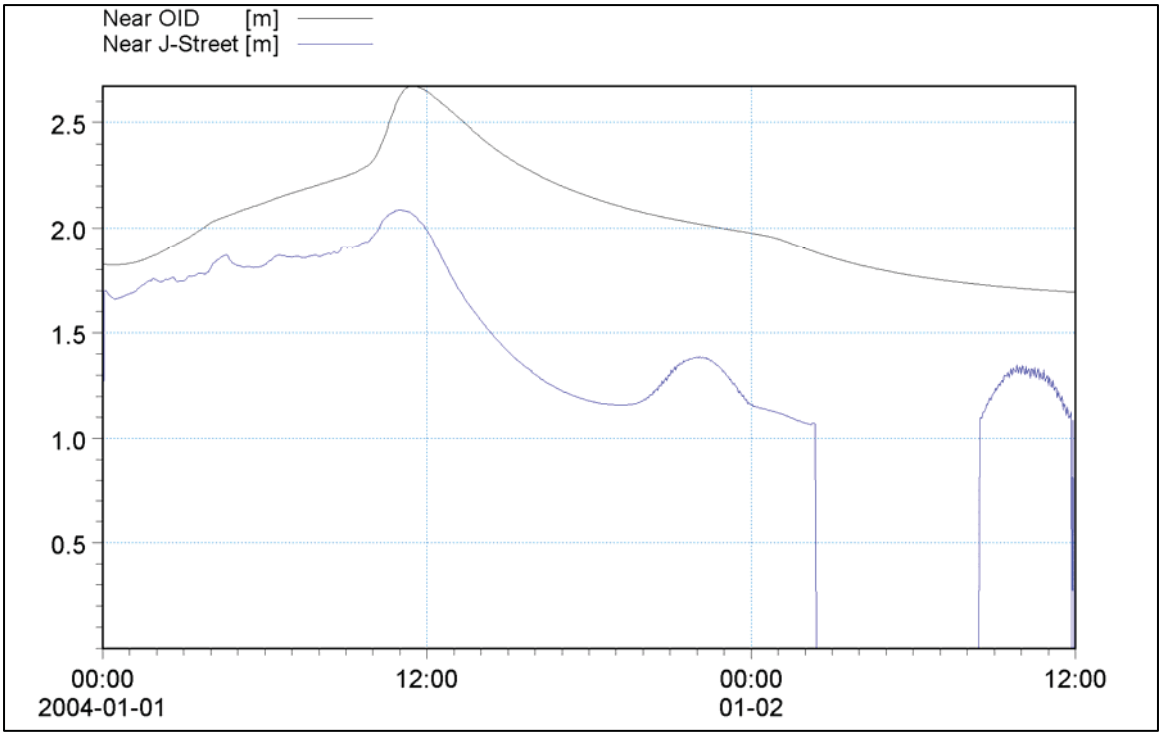


Figure B.20. Water level during the 2 year storm with an inlet near J Street.

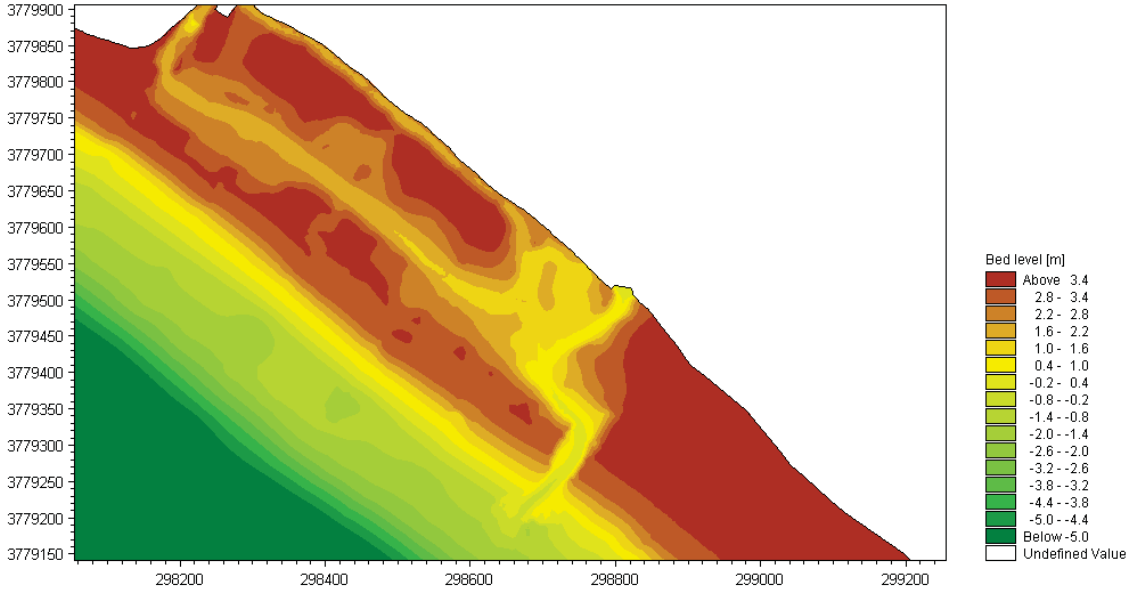


Figure B.21. Bed level after the 2 year storm with an inlet near OID.

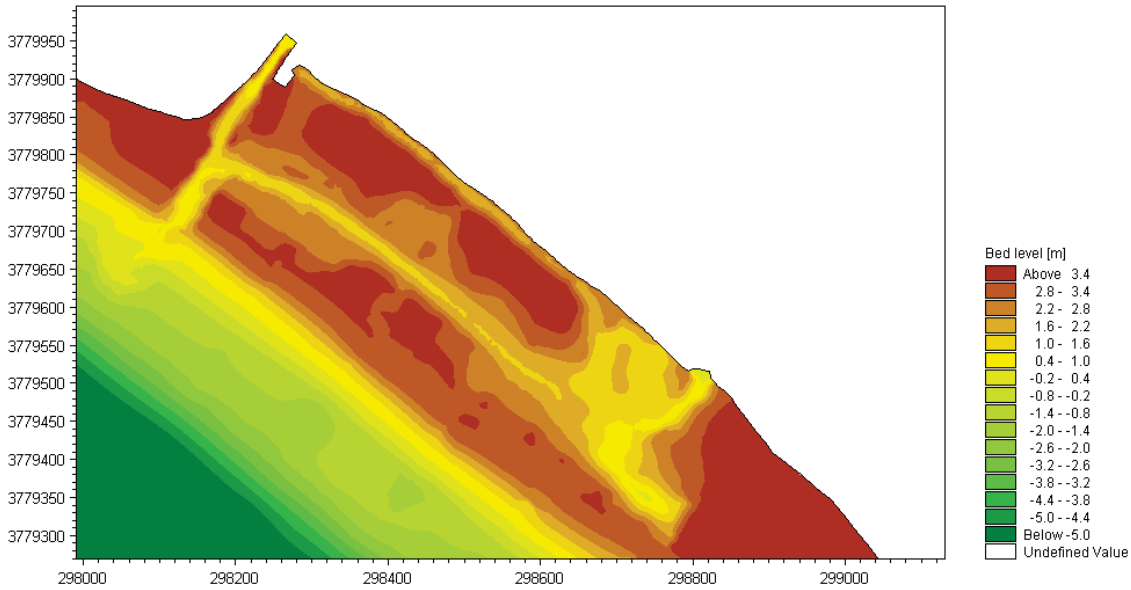


Figure B.22. Bed level after the 2 year storm with an inlet near J Street.

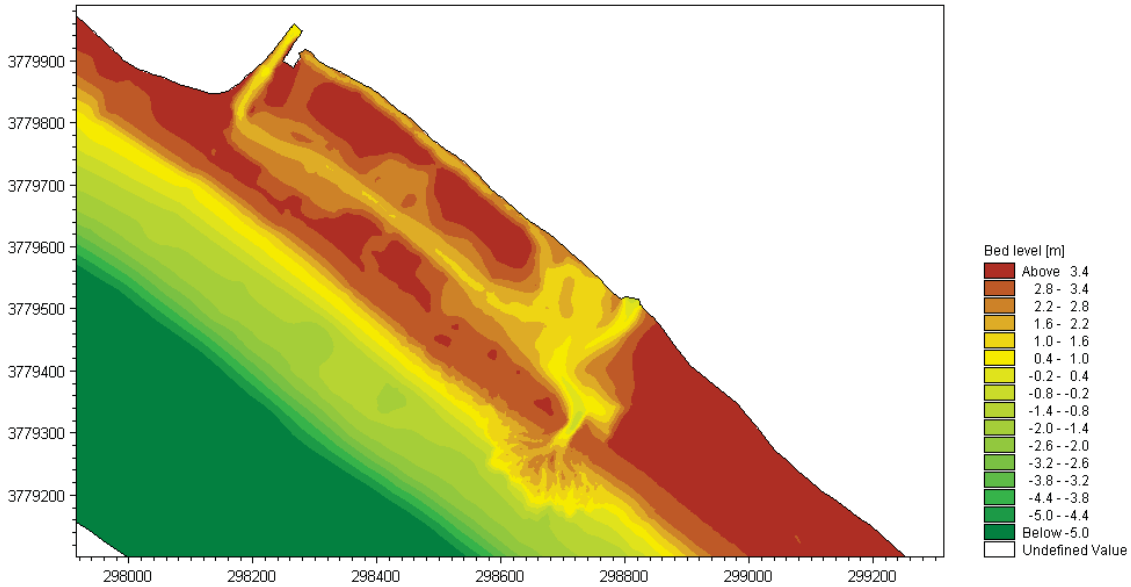


Figure B.23. Bed level after the 100 year storm with an inlet near OID.

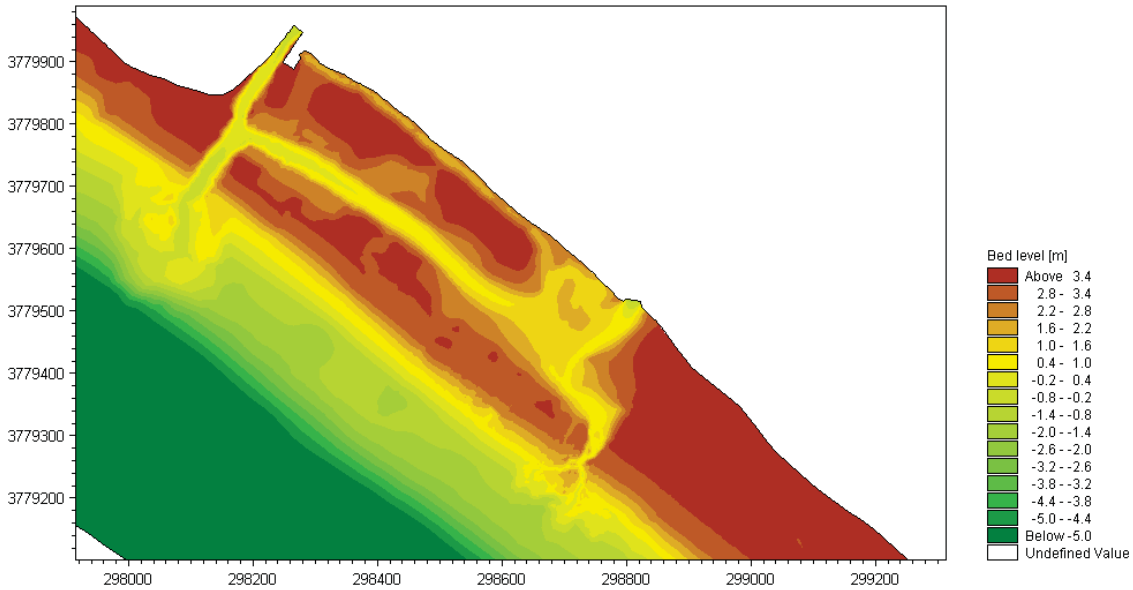


Figure B.24. Bed level after the 100 year storm with an inlet near J-Street.

B3. Breach Closure

In order to obtain a better understanding of the closure process, a cross-shore sediment transport model was applied. Since the closure of the breach is primarily due to the accretion of the beach driven by wave action, the model was forced with offshore waves and the water level varied according to tidal conditions. The model assisted with examination of the long term contribution of wave-induced sediment transport on the breached section of the beach.

B3.1. Software Description

B3.1.1. SBEACH (Storm –induced BEAch CHange)

SBEACH was developed and copyrighted by Veri-Tech, Inc., based on a version prepared by the U.S. Army Engineer Waterways Experiment Station. The model simulates cross-shore beach, berm, and dune erosion produced by storm waves and water levels (Veri-Tech 2008). SBEACH also simulates beach accretion, although it is described as highly qualitative and lacks field verification (James 1992).

B3.2. Model Domain

The closure model domain consists of a cross-shore profile of the beach, extending from an approximate elevation of 4 m to -10 m NAVD. The elevations of the model domain were chosen to extend below the depth of closure and above the highest elevation sediment would be disturbed due to wave interaction. The domain was split into 300 grid cells, each having a grid cell width of 2.5 m.

Sediment characteristics were assumed to be constant along the length of the profile. The maximum slope prior to avalanching was set to 30º and default sediment transport parameters were used.

B3.3. Boundary Conditions

B3.3.1. Waves

Waves are the primary forcing for the closure process as modeled in SBEACH. A time series of wave heights and associated peak periods were taken from Port Hueneme Nearshore wave buoy, NOAA Station 46234 (NOAA NDBC). A time series consisting of wave characteristics between February and March 2008 is used to compare with observations of the beach, performed by HDR and others, and the breach was intermittently open during that time period. Wave characteristics are listed at thirty minute intervals.

B3.3.2. Tidal

The fluctuation of water surface elevation due to tides was also represented in the model. A time series of water surface elevation was taken from the Santa Barbara, CA tide station (NOAA CO-OPS). Tidal forcing within SBEACH fluctuates along the cross-shore profile and affects wave characteristics along the profile. Tide levels are listed at one hour intervals.

B3.4. Initial Conditions

The initial profile input into the model is a cross-shore section of the lagoon-beach system including a breached portion of the beach. The initial profile is a representative cross-shore profile of the lagoon-beach system, after the lagoon water level rises, breaches the beach, and reaches quasi-equilibrium near zero net flow.

B3.5. Closure Model Results

The closure model presents qualitative insight of the process of breach closure. The model shows that waves and tides can force the closure of the breach in a relatively short period of time. As seen in Figures B.25 and B.26, cross-shore transport was simulated for approximately two weeks and one month, respectively. The plots show the initial and final cross section profiles. Difference between the profiles represents accretion of the beach. The two cases presented were both forced with a record of actual waves.

Both figures show significant accretion across the breach. The model results indicate that cross-shore transport would fill the breached section of the beach, although the time for the breach to close and whether the breach would stay closed is dependent on the wave conditions at the time as well as other physical processes not included in the model.

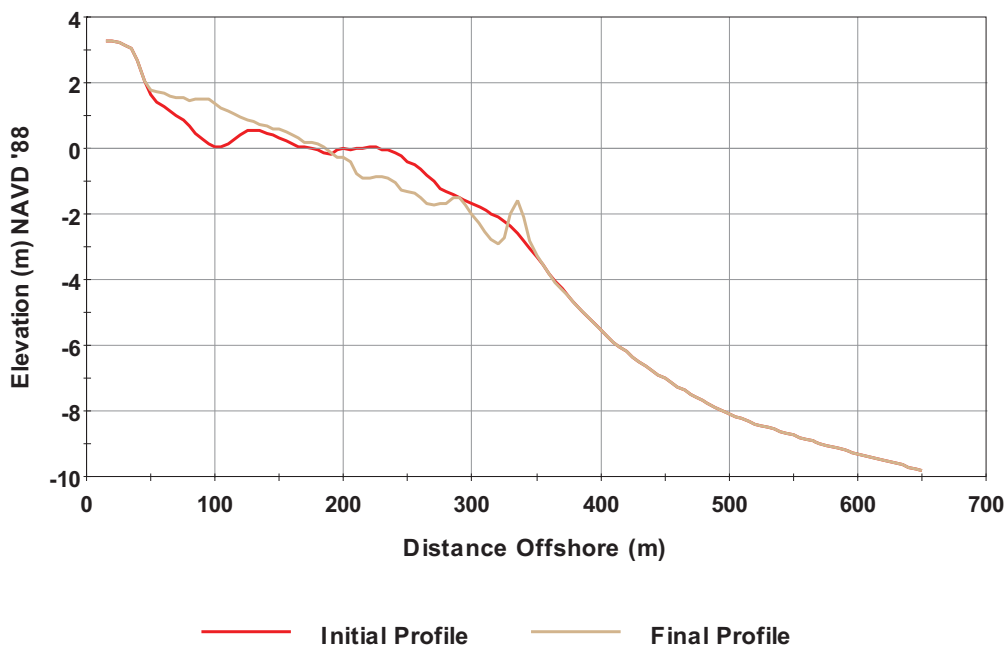


Figure B.25. Modeled cross-shore profile change, March 5 – March 20, 2008

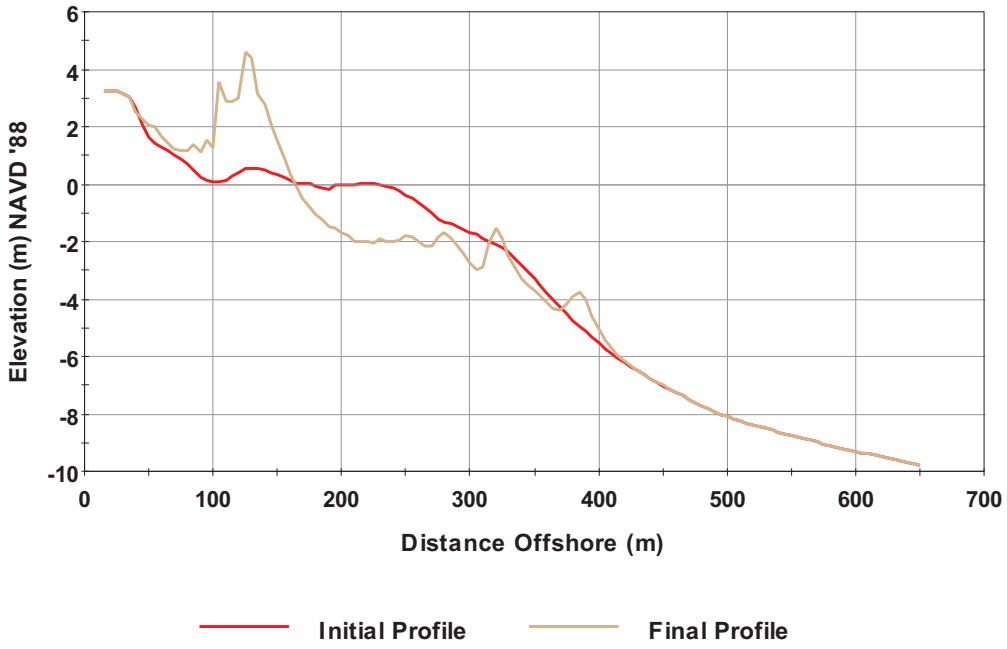


Figure B.26. Modeled cross-shore profile change, February 20 – March 20, 2008

Purpose and Use

This Addendum incorporates updated design hydrographs and supersedes analysis and conclusions as described herein.

Approach

VCWPD has performed additional analysis and provided revised individual and combined hydrographs that more closely match previous design model results (VCWPD 2008). Upon review, select revised hydrographs were applied to the MIKE 21 numerical model runs for the lagoon to evaluate impacts of the revised hydrographs on the lagoon breaching process and channel design for the 100-yr storm event.

Summary

The revised hydrographs for the 100-yr event are shown in Figures C.1. Table C.1 compares peak flows for the original and revised hydrographs. Peak flows into the lagoon for the revised hydrograph are about 500 cfs higher than in the original analysis. In the revised analysis, flows are much higher within J Street, slightly higher within Hueneme Drain, and slightly lower within the OID.

Figure C.1. Revised 100-yr hydrograph (VCWPD 2008).

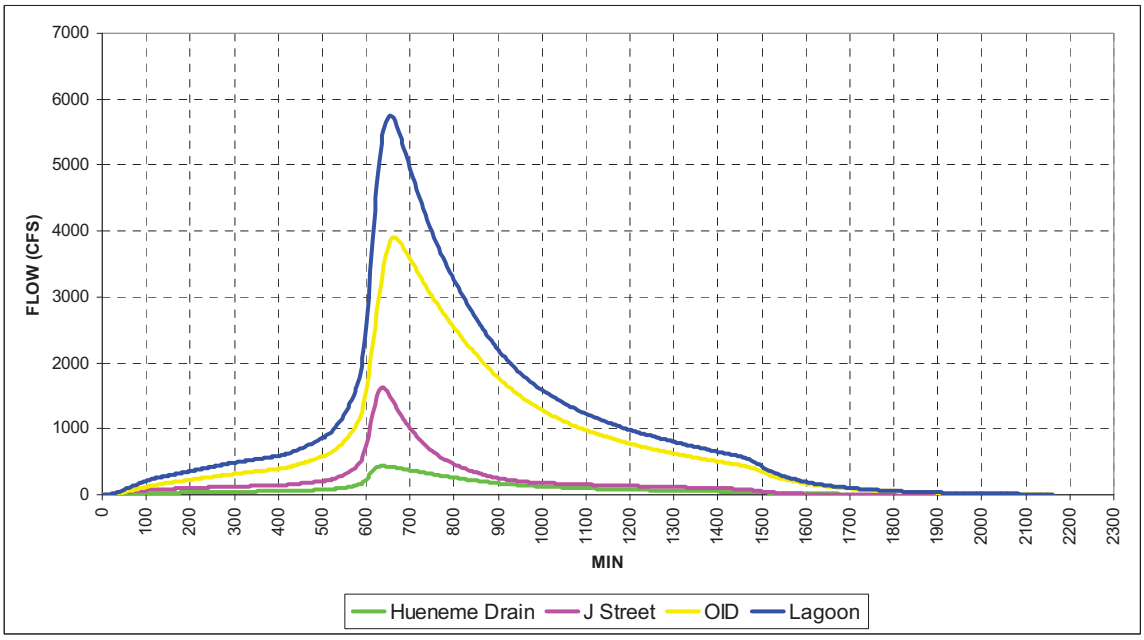


Table C.1. Comparison of 100-yr peak flow rates for original and revised hydrograph.

	100-yr Peak Flow Rate (cfs)	
Source	**Original**	**Revised**
J Street	795.2	1625.0
Hueneme	350.8	434.4
OID	4132.2	3900.8
Lagoon	5255.8	5754.4

The model runs shown in Table C.2 were performed in the MIKE21 model to simulate lagoon breaching and water level gradients within the lagoon for the new hydrographs. Peak water levels in the lagoon near J Street generally increased with the revised hydrographs.

Table C.2. Comparison of numerical model results for 100-yr peak lagoon water level.

Run	Return Period (yr)	Lagoon Initial Water Level, ft (NAVD)	Description	Peak Water Level Near J-Street, ft (NAVD)	
				Original	**Revised**
4	100	9.0	Existing representative beach.	11.8	12.1
10	100	tide	Inlet near OID	11.8	12.1
11	100	tide	Inlet near J-Street	8.5	10.8

Review of model results indicated that breaching processes are unchanged between the original and revised analysis. The lagoon breaches early in the hydrograph, well before peak flow arrives; peak flow to the lagoon in the revised analysis increased by less than about 10 percent.

Numerical modeling also indicated that the water level near J Street will be slightly higher than in the original analysis, due to higher flow rates from the revised hydrographs, particularly from J Street. Additionally, if an emergency breach were created at J Street, Run 11 indicated that peak lagoon water levels would be reduced less than as indicated in the original analysis, but still provide more than 1 ft of peak water level reduction.

Recommendations

Based on the revised analysis, the report conclusions presented in Section 2 of the Coastal Engineering Report are revised as follows:

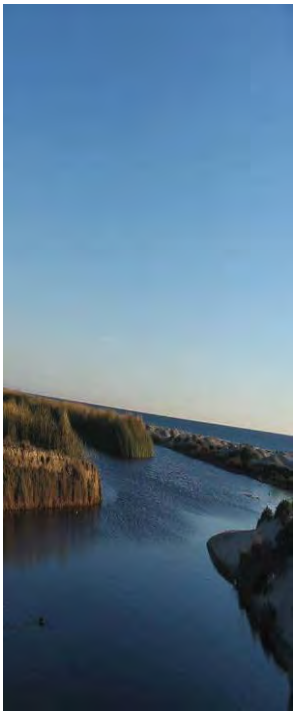
8. Water levels in the lagoon, prior to a breach, range from about 1.6 ft to 6.6 ft NGVD (4 ft to 9 ft NAVD) and have been reported to reach up to 7.6 ft NGVD (10 ft NAVD). Based on numerical modeling for the 100-year storm, peak water levels within the lagoon at J Street are expected to reach about 9.7 ft NGVD (12.1 ft NAVD) in the absence of emergency breaching.

9. Channel design should consider lagoon water levels of no less than 9.7 ft NGVD (12.1 ft NAVD). If hydraulic analysis of the improved channel indicates that this water level cannot be accommodated by the design, or if the future unanticipated events change the condition of the beach/lagoon such that the design conditions analyzed herein may be exceeded, then emergency breaching must be considered.

11. Creating an emergency breach near J-Street prior to the 100-year storm would decrease the peak water level in the lagoon near J Street from approximately 9.4 ft to 8.4 ft NGVD (11.8 ft to 10.8 ft NAVD). Emergency breaching would become less effective if performed further south of J Street.

References

VCWPD(2008). Ormond Lagoon Watershed Hydrographs Generation Using HEC-HMS. Memorandum prepared by Mark Bandurraga, October 9, 2008.



Sedimentation Study for the J Street Drain and Oxnard Industrial Drain

DRAFT Report

March 2008

Prepared for

Ventura County Watershed Protection District

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TABLE OF CONTENTS

EXECUTIVE SUMMARY ..... **ii**
1.0 BACKGROUND AND APPROACH **1**
2.0 INTRODUCTION TO RUSLE2 ..... **4**
3.0 ANALYIS OVERVIEW **4**
3.1 Data Collection 5
3.2 Site Visit 5
3.3 Climate Location Zone 6
3.4 NRCS Soil Type 6
3.5 Overland Flow Length 7
3.6 Average Slope 7
3.7 Base Management Condition 7
3.8 Additional Practice Factors 7
3.9 Post RUSLE2 Analysis 8
4.0 RESULTS **8**
4.1 Results Overview 8
4.2 Comparison to Previous Studies 11
4.3 Sensitivity Analysis 11
4.4 Future Changes and Uncertainty 12
5.0 CONCLUSIONS **12**
6.0 REFERENCES **13**

FIGURES

Figure 1: Project Location Map 2
Figure 2: Watershed Overview Map 3
Figure 3: R factor distribution zones for the US (Renard et al., 1993) 6
Figure 4: Sediment Analysis Results 9
Figure 5: Relative Grain Size Distribution in Sediment Yield 9
Figure 6: Sediment Results Map 10

TABLES

Table 1: Soil Types within Study Area 7
Table 2: Sediment Analysis Results Summary 9
Table 3: Selected Results of Previous Studies 11

ATTACHMENTS

Attachment 1 – Photo Log
Attachment 2 – RUSLE2 Input Data
Figure A – NRCS Soils Data
Figure B – Crop Data
Figure C – Land Use Data
Figure D – Topography
Attachment 3 – RUSLE2 Output Data
Attachment 4 – Digital Data (CD)

EXECUTIVE SUMMARY

Ventura County Watershed Protection District is conducting a Phase 1 preliminary design to reconstruct approximately 2.2 miles of J Street Drain from its outlet at Ormond Beach to Redwood Street in the City of Oxnard, California. To assist with evaluation of channel outfall design alternatives, a sedimentation study for J Street Drain and Oxnard Industrial Drain was required to determine the expected sediment loading that may be deposited at the channel outlet/Ormond Beach Lagoon. Analysis of areas contributing to the Ormond Beach Lagoon was conducted using the RUSLE2 program. This analysis was based on GIS data as well as field observed information.

The results indicate that on a long time-scale average approximately 341 tons (332 cubic yards) of sediment per year enters the lagoon. This result appears reasonable when compared to other study results in the region, when adjusted for slope. There is a significant range of uncertainty (±100%) associated with this result due to the variability and sensitivity of the base management conditions. The results indicate that Industrial and Rice Road Drains contribute 95% of the sediment yield and delivery to the Ormond Lagoon. Hueneme and J Street Drains together contribute the remaining 5%.The sediment delivered to the lagoon is approximately 59% sand, 26% silt and 15% clay. Future climate change could alter the sediment yield to Ormond Lagoon to approximately 546 tons/year in wet climate and 126 tons/year in a dry climate based on historical regional trends.

1.0 BACKGROUND AND APPROACH

The purpose of this study was to determine the expected sediment yield and composition of sediment from several urban and agricultural watersheds near Oxnard, California which outlet to the Ormond Beach Lagoon. The drainage system is predominantly concrete lined and therefore channel bed and bank erosion were not considered to be major sediment contributors. Evaluation of channel bed and bank erosion is not included in this report.

J Street Drain is located in the City of Oxnard, Ventura County; see Figure 1 (Project Location Map). Ventura County Watershed Protection District is conducting a Phase 1 preliminary design to reconstruct approximately 2.2 miles of J Street Drain from its outlet at Ormond Beach to Redwood Street in the City of Oxnard, California; see Figure 2 (Watershed Overview Map). To assist with evaluation of channel outfall design alternatives, a sedimentation study for J Street Drain and Oxnard Industrial Drain was required to determine the expected sediment loading that may be deposited at the channel outlet/Ormond Beach Lagoon.

The Ormond Beach Lagoon (downstream of J Street drain outlet) carries flow from the J Street Drain outlet into the Pacific Ocean. Because the Ormond Beach Lagoon is also being studied, all of the sediment inputs to the lagoon were required. This includes sediment inputs from Hueneme Drain, J Street Drain, Industrial Drain and Rice Road Drain. After a site visit and data collection using primarily GIS data, the RUSLE2 program was used to calculate the expected sediment yield from the study area.

Figure 1: Project Location Map

Figure 2: Watershed Overview Map

2.0 INTRODUCTION TO RUSLE2

The US Department of Agriculture (USDA) has developed a powerful windows based program, the Revised Universal Soil Loss Equation, Version 2 (RUSLE2) (USDA, 2007b). The RUSLE2 program uses the built-in RUSLE2 equation to calculate the average annual soil loss (in tons/acre/year) by allowing the user to describe the specific site conditions. The RUSLE2 equation has been modified since the previous USLE and RUSLE1 equations. This program includes compilation of data researched by the USDA for input to the program. It is applicable to many field conditions such as cropland, pastureland, rangeland, disturbed forest areas, construction sites, surface mine reclamation, military training lands, parks, and waste disposal areas/landfills. The primary function of the program is to calculate sediment yield from overland flow.

This program has been adopted to calculate the average annual soil loss for the study area watersheds. It presents the significant advantage over other analysis methods for this particular study in that it does not require hydrologic analysis of design storms.

The USDA-NRCS RUSLE2 equation and a discussion of the input parameters are outlined below (USDA, 2003).

$$a_i = r\ k\ l\ s\ c\ p$$

$$A \quad \sum_{n=1}^{365} a_i$$

Where,

a_i – Average daily soil loss, in tons/acre
r – Rainfall-runoff erosivity factor
k – Soil-erodibility factor
l – Slope length
s – Slope steepness
c – Cover management factor
p – Support practices factor
A – Average annual soil loss in tons/acre

A complete discussion of the theory and capabilities of the RUSLE2 program is contained in USDA (2003).

3.0 ANALYIS OVERVIEW

It was determined that due to very low slopes in the project area, the simple uniform slope calculation method would be adequate for this analysis. Using this analysis method, the following input values were required by the RUSLE2 program:

- Climate Location Zone
- NRCS Soil Type

- Overland Flow Length
- Average Slope
- Base Management Condition
- Contouring, strips/barriers, diversion/terrace, sediment basins, and/or subsurface drainage conditions

The following sections will discuss the methods used to obtain these input parameters, and the post RUSLE2 analysis.

3.1 DATA COLLECTION

The initial investigation included review of available documentation and GIS data. Preliminary sediment analysis areas were identified as possible sediment sources from aerial images. These primarily included agricultural fields, parks, vacant lots, construction areas, dirt roads and parking lots, and construction sites. Areas which were highly developed such as residential or commercial areas are not expected to contribute a significant amount of sediment to the watershed, and were therefore not included in the analysis. Additional collected data is shown in Attachment 1 (Photo Log) and Attachment 2 (RUSLE2 Input Data).

This study took advantage of Geographic Information System (GIS) analysis and therefore a priority was set on obtaining quality GIS data. The following list shows GIS data used for analysis.

- Digital topographic maps of the watersheds based on LiDAR data (Ventura County, 2001)
- Recent digital aerial photographs of these watersheds (Ventura County, 2006)
- Ventura County crop type data in GIS shapefile format (Ventura County, 2007a)
- Ventura County land use data in GIS shapefile format (Ventura county, 2007b)
- Soil survey data in GIS shapefile format (USDA, 2007a)

In addition to the GIS data, several additional sources of information were obtained:

- *J Street Drain Channel Improvement Study and Preliminary Design*, (URS, Inc., 2005)
- *City of Oxnard Floodplain Analysis Industrial Drain, Rice Road Drain, J Street Drain, Hueneme Drain, and Ormond Lagoon*, (TetraTech, Inc., 2005)
- As-built drawings for existing channels (J Street, Industrial Drain, Hueneme Drain and Rice Road Drain) (Ventura County, 2007c)

3.2 SITE VISIT

HDR conducted a field visit on January 28, 2008 to investigate these areas identified as the major potential sediment contributors. A photo log is shown in Attachment 1 (Photo Log) documenting the field visit. Land use practices were verified with the aerial images and land use/crop data. Based on the field information, the sediment analysis areas were revised to reflect the current conditions. Some of the initial areas had been developed (i.e. a farm field to homes) and were revised accordingly. The final sediment analysis areas are shown in Figure 2 (Watershed Overview Map).

3.3 CLIMATE LOCATION ZONE

Rainfall-runoff erosivity factor (r) distributions (also called R-factor) have been developed for the various zones in the United States by the NRCS. For the contiguous United States there are 120 separate zones. An R factor zone distribution map is provided in Figure 3 [R factor distribution zones for the US (Renard et al., 1993)]. Based on this map, it is determined that the study area is located in Zone 25. For verification of this information, a GIS shapefile showing the R factor for the entire United States was downloaded from NRCS/USDA website which showed isolines of annual R factor for the entire United States (USDA, 2007b). This data was in agreement with the Renard et al. (1933) R factor zone.

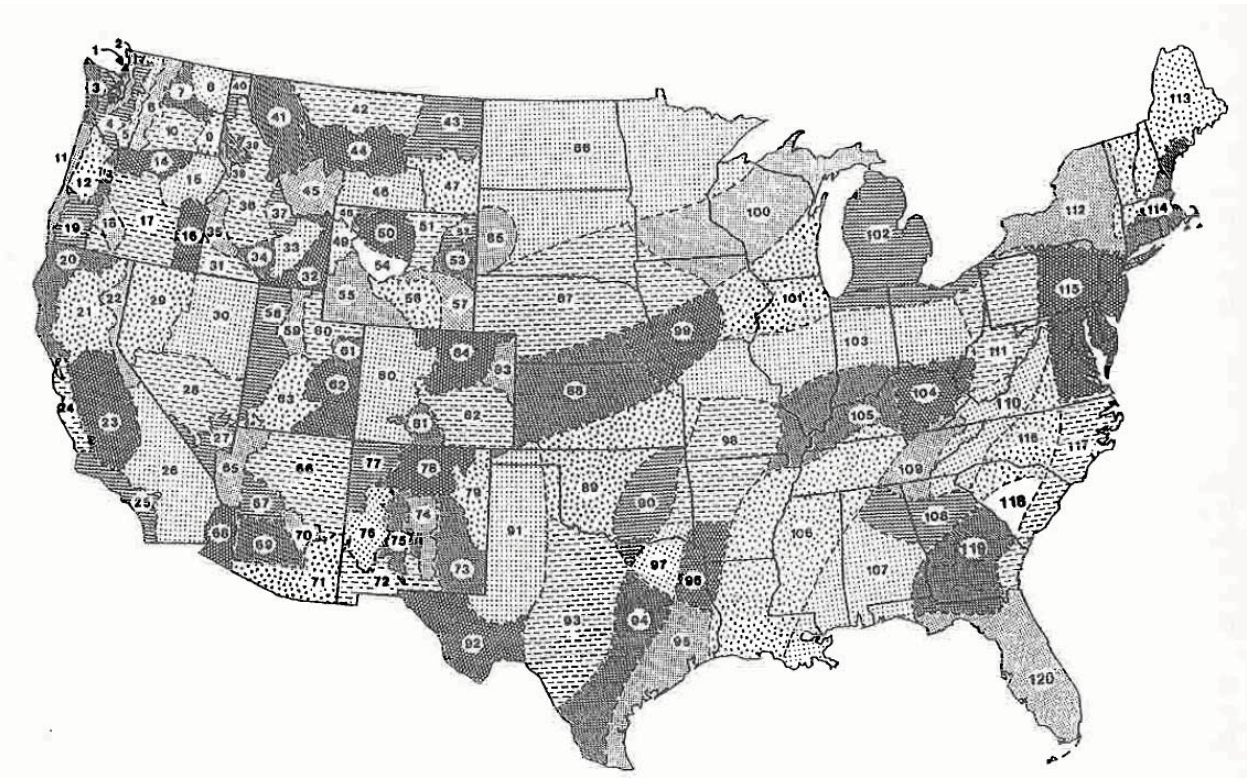

Figure 3: R factor distribution zones for the US (Renard et al., 1993)

3.4 NRCS SOIL TYPE

Soil survey data was downloaded from the NRCS website in GIS shapefile format for the soils in Ventura County (NRCS, 2007a). The soils layer was clipped to the project watershed to determine the soil types in the watershed; see Table 1 (Soil Types within Study Area). The RUSLE2 program has a database of all NRCS soil types and their properties. Using the GIS interface, the predominant soil type was determined for each sediment yield area. Soils with a single classification (i.e. sandy loam) were considered similar enough to be included in one sediment area. If one or more soil type of a different classification was found within a sediment area and comprised more than 10% of the total area, the sediment analysis area was divided to better represent the variations in soil type.

Table 1: Soil Types within Study Area

Classification	USDA Soil Type	% Sand	% Silt	% Clay	Description
Loamy Sand	Hm	83.5	9.0	7.5	Hueneme loamy sand, loamy substratum
	MeA	78.5	16.5	5.0	Metz loamy sand, 0 to 2 percent slopes
Sandy Loam	Cc	66.8	19.2	14.0	Camirillo Sandy Loam
	PcA	65.1	18.9	16.0	Pico sandy loam, o to 2 percent slopes
	Hn	67.9	19.6	12.5	Hueneme sandy loam
Loam	Cd	43.0	38.5	18.5	Camarillo Loam
	Ce	43.0	38.5	18.5	Camarillo Loam, sandy substratum
	MoA	39.8	37.7	22.5	Mocho loam, 0 to 2 percent slopes
	PsA	43.8	40.2	16.0	Pico loam, sandy substratum, 0 to 2 percent slopes
Silty Clay Loam	Pa	18.1	50.9	31.0	Pacheco silty clay loam

Source: USDA (2007).

3.5 OVERLAND FLOW LENGTH

A representative overland flowpath was determined for each sediment analysis area using the GIS interface. This determination was based on topographic information and aerial images. The GIS program was used to calculate the length of the representative flowpath.

3.6 AVERAGE SLOPE

The average slope for the representative overland flowpath was determined using the topographic information for the site (Ventura County, 2001). An upstream elevation, downstream elevation, and overland flowpath length were used to calculate the average slope for the sediment analysis area. Review of the site topography supported the conclusion that a uniform slope analysis was appropriate for this study.

3.7 BASE MANAGEMENT CONDITION

The base management condition was selected based on several data sources. These included: site visit notes and photos, Ventura County crop data (VC, 2007a), Ventura County land use data (VC, 2007b), and aerial images (VC, 2006). There is some variation within the available base management factors in the RUSLE2 program. Selection of these factors influences the sediment yield results. Generally, the most conservative, reasonable base management condition was selected for each sediment yield area.

Some of the areas were determined to be industrial land use, with a fraction of the area being bare soil. For these areas, the sediment yield obtained from the RUSLE2 program was adjusted to account for this. These areas are noted in Attachment 3 (RUSLE2 Output) for the individual sediment area results.

3.8 ADDITIONAL PRACTICE FACTORS

The RUSLE2 program allows for additional practice factors to be included in the analysis, such as contouring, strips, barriers, diversions, terraces, sediment basins, and subsurface drainage. Generally, these were not observed within the watershed and were therefore not included in the analysis. The notable exception is the contouring practices for the agricultural areas. For these areas with contoured furrows, the contouring practices and the calculated slope were inputs to the model.

3.9 POST RUSLE2 ANALYSIS

After the RUSLE2 program was run, a sediment yield was obtained for each sediment analysis area in tons/acre/year. Using the calculated area from the GIS shapefile, the total yield in tons/year was obtained. The results were also broken down into yield of sand, silt and clay, which was determined using their percentage in the predominant soil type within the sediment area times the total yield.

4.0 RESULTS

The data collected for the site was entered into the RUSLE2 program. The complete results are presented in Attachment 3 (RUSLE2 Output Data). The results are summarized in Table 2 (Sediment Analysis Results Summary) and Figure 4 (Sediment Analysis Results).

The study area watershed had an area of approximately 7948 acres, of which 2146 acres was determined to be a potential sediment yield area (the remaining was highly developed). Within the study area, there are approximately 1040 acres of agricultural land, mostly within the Rice Road Drain watershed. The elevations within the study area range from near 82 feet at the watershed head of Rice Road Drain to sea level at Ormond Lagoon.

Based on the field observations, it was observed that most of the sediment areas drained directly to concrete drain channels, paved streets, or storm drain networks. Very little sediment accumulation was observed in these channels, streets, or pipes, see Attachment 1 (Photo Log). Therefore, it was concluded that almost all sediment which left the sediment analysis areas would be transported to the Ormond Beach Lagoon without significant deposition. Additionally, with one exception, no earthen channels were observed within the system which would contribute significant amounts of sediment to the Lagoon. The one exception to this is the Industrial Drain from approximately 400 feet downstream of Hueneme Road to Ormond Lagoon, which is an earthen channel and may be subject to erosion. Site observations at this location did not indicate large-scale bank erosion; see Attachment 1 (Photo Log). However, as noted previously, this study did not consider channel bank or bed erosion in the analysis.

4.1 RESULTS OVERVIEW

Within the study area (7948 acres), approximately 341 tons of sediment per year is delivered to the lagoon; see Table 2 (Sediment Analysis Results Summary). Overall, the watersheds had an average yield of 0.16 tons/acre/year from 2146 ac of sediment yield area, although specific sediment yield areas had a yield ranging from 0.00075 to 0.97 tons/acre/year. Using an estimated unit weight of 76.1 pounds/cubic foot for unconsolidated sand, silt and clay composite, the estimated yield is 332 cubic yards (0.21 acre-feet) of sediment per year to the Ormond Lagoon. The results indicate that Industrial and Rice Road Drains contribute 95% of the sediment yield and delivery to the Ormond Lagoon; see Figure 4 (Sediment Analysis Results). Hueneme and J Street Drains together contribute the remaining 5%. Additionally, based on soil composition, the makeup of the sediment is expected to be 59% sand, 26% silt and 15% clay as noted in Figure 5 (Relative Grain Size Distribution in Sediment Yield). Graphically it is clear from Figure 6 (Sediment Results Map) that the agricultural areas contribute the most sediment to the watershed.

Table 2: Sediment Analysis Results Summary

Drain	Watershed Area ac	Sediment Yield Area ac	Avg. Yield T/ac/yr	Yield T/yr	Sand Yield T/yr	Silt Yield T/yr	Clay Yield T/yr	Yield (% of total) %
Hueneme	586	50	0.043	2.1	1.4	0.45	0.26	2%
J Street	1352	73	0.027	2.0	1.0	0.61	0.31	3%
Industrial	2776	883	0.10	89	50	24	15	45%
Rice Road	3234	1141	0.22	248	148	63	37	50%
Total	7948	2146	0.16	341	201	88	53	100%

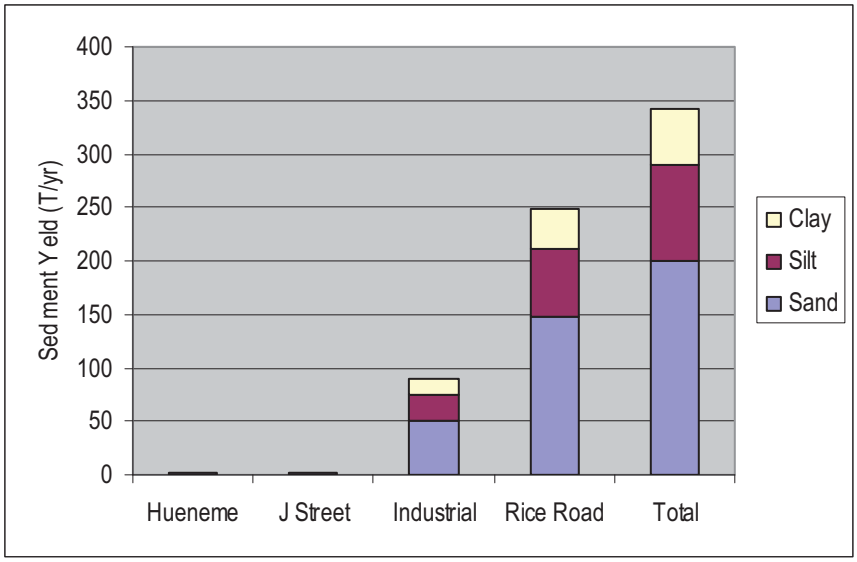

Figure 4: Sediment Analysis Results

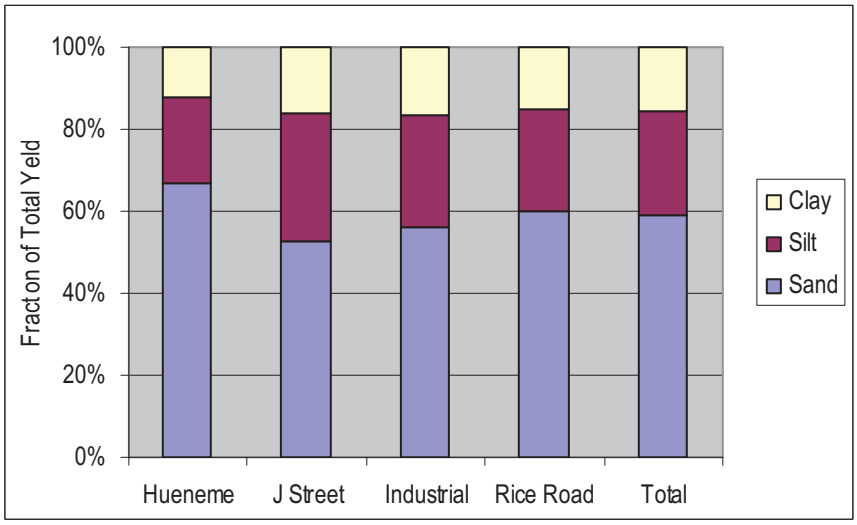

Figure 5: Relative Grain Size Distribution in Sediment Yield

Figure 6: Sediment Results Map

4.2 COMPARISON TO PREVIOUS STUDIES

The results obtained from the RUSLE2 analysis were compared to other sediment yield studies in the region. General results for sediment yield in agricultural land within southern California range from 0.4 to 23.1 tons/acre/year (Inman and Masters, 2000). Additional studies have focused on overall watershed yields for southern California rivers using gauge data (Inman and Jenkins, 1999) and modeling (USDA, 1992). Selected results from these studies are shown in Table 3 (Selected Results of Previous Studies).

For comparison, the J Street study area is 12 square miles, 18% agricultural land (60% of the non-urban area), the headwater elevation is near 82 feet, and the net sediment yield was 0.16 tons/acre/year. The results of previous regional studies indicate much higher yield rates. However, there are several distinct differences between the study area and the regional studies. The regional studies have sediment yield from mountainous areas surrounding the lowland, which are expected to have significantly higher yield rates. When adjusted for slope, the results of this study are comparable to those shown in Table 3. Additionally, an overview of the results (Attachment 3) for specific agricultural fields gives results of 0.10 to 0.97 tons/acre/year, which is similar to values quoted by Inman and Masters (2000) and Inman and Jenkins (1999), although somewhat lower.

Table 3: Selected Results of Previous Studies

						Yield (T/ac/yr)[2]			Yield (T/ac/yr)[3]
River	Develop -ment[1]	Area (mi^2)	Period of Record	% Ag. Land	Headwater Elev. (ft)	Total (1944-1995)	Dry (1944-1968)	Wet (1969-1995)	Total
Ventura	M	188	1929-1995	40	6500	4.8	1.7	7.6	12.7
Santa Clara	M	1594	1927-1995	26	9500	4.1	0.9	7.1	7.1
Calleguas Creek	N	248	1968-1995	60	4000	4.3	1.6	6.8	4.8
San Diego Creek	E	118	1977-1995	12	1900	1.6	0.8	2.3	1.8

1. E = extensively developed, M = moderately developed, N = natural.
2. Based on measured gauge data.
3. Based on RUSLE modeling (USDA, 1992).

Source: Inman and Jenkins (1999).

4.3 SENSITIVITY ANALYSIS

The results described previously contain potential sources of uncertainty, which should be considered. Because no site-specific sediment yield data was available, it was not possible to calibrate the model. Therefore an awareness of the sensitivity of the model results to the input data is important. The following input values are fairly well known due to the nature of the data available and probably present only a minimal source of uncertainty:

- Climate Location Zone
- NRCS Soil Type
- Overland Flow Length

- Average Slope

The primary source of uncertainty within the RUSLE2 input values is the base management condition (i.e. land use, crop type, farming practices, and vegetative cover). This base management condition information was not easily determined for the conditions observed at time of the site survey. There is also limited information about how these base management conditions were developed for the RUSLE2 program, and how to differentiate between similar-sounding base management titles. Additionally, the base management conditions may change over time as crops are rotated, vegetated areas are graded, and weather conditions change vegetation, etcetera.

After some sensitivity analysis, it was determined that the results may vary by as much as ±100% for the overall sediment yield results. However, the relative proportion of sediment yield between the watersheds, as well as the relative distribution of grain size is expected to be significantly more accurate.

4.4 FUTURE CHANGES AND UNCERTAINTY

This sediment study was conducted using data gathered during 2008, and approximates the expected average sediment yield at this time. Results are calculated for average annual results, which are based on a long time scale (50+ years). A single very wet year could produce sediment yield significantly higher than the calculated average, while a single dry year could produce little to no sediment yield.

Potential changes to the watershed could alter the sediment yield of the watershed, which includes potential development and urbanization. The potential development of the agricultural areas of the watershed would probably lead to a decrease in the amount of sediment delivered to the Ormond Lagoon. This is due to protection of the soil with pavement and buildings.

Climate change is a significant uncertainty in terms of the future response of the watershed. Inman and Jenkins (1999) performed an analysis of regional sediment yield data, and showed that the sediment yield for Calleguas Creek may increase by a factor of 1.6 in a wet climate, or decrease by a factor of 2.7 in a dry climate; Table 3 (Selected Results of Previous Studies). Other analyzed rivers in the region had similar responses to climate variability. Assuming similar future trends for the J Street and Oxnard Industrial Drain system, the sediment yield to Ormond Lagoon could be 546 tons/year in wet climate and 126 tons/year in a dry climate.

5.0 CONCLUSIONS

Sediment yield analysis of areas contributing to the Ormond Beach Lagoon was conducted using the RUSLE2 program. This analysis was based on GIS data as well as field observed information. The results indicate that on a long time-scale average approximately 341 tons (332 cubic yards) of sediment per year enters the lagoon. This result appears reasonable when compared to other study results in the region, when adjusted for slope. There is a significant range of uncertainty (±100%) associated with this result due to the variability and sensitivity of the base management conditions. The results indicate that Industrial and Rice Road Drains contribute 95% of the sediment yield and delivery to the Ormond Lagoon. Hueneme and J Street Drains together contribute the remaining 5%.The sediment delivered to the lagoon is approximately 59% sand, 26% silt and 15% clay. Future climate change could alter the sediment yield to Ormond Lagoon to approximately 546 tons/year in wet climate and 126 tons/year in a dry climate based on historical regional trends.

6.0 REFERENCES

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VC (2007b). Ventura County land use data in GIS shapefile format.

VC (2007c). As-built drawing records for storm drain network in Oxnard, California (J Street, Industrial Drain, Hueneme Drain and Rice Road Drain).

Attachment 1 – Photo Log

Attachment 2 – RUSLE2 Input Data

Figure A – NRCS Soils Data
Figure B – Crop Data
Figure C – Land Use Data
Figure D – Topography
RUSLE2 Input Data

Attachment 3 – RUSLE2 Output Data

RULSE 2 Results Summary
RUSLE2 Program Output

HDR | SHINER MOSELEY	Memo		
To:	Bill Young		
From:	Joel Darnell, Robert Thomas	Project:	J-Street Drain Environmental and Preliminary Design
CC:	Jerry Hauske, Dan Heilman		
Date:	3/11/2008	Job No:	75217 (Dept. 043)

RE: Coastal Processes Assessment at Ormond Lagoon and Beach

The overall goal of the J-Street Drain Environmental and Preliminary Design project is to reduce local flooding within the City of Oxnard by increasing the capacity of J-Street Drain while minimizing environmental impacts to Ormond Lagoon. This memorandum summarizes key coastal processes affecting the episodic opening and closure of the ephemeral inlet between Ormond Lagoon and the Pacific Ocean. The analysis of coastal processes was performed to improve understanding of lagoon morphology, focus field data collection needs, refine methodologies to simulate breaching of the beach, and provide a basis for evaluating potential impacts to the coupled lagoon/beach system related to project design. Information provided in this memorandum will be integrated into the final coastal engineering report.

1.0 Description and Purpose

Ormond Lagoon (lagoon) is located in the City of Oxnard, Ventura County, CA approximately one mile southeast of Port Hueneme (Figure 1). The lagoon receives storm water from J-Street Drain, Industrial Drain and Hueneme Drain. Flooding in the City of Oxnard has been attributed to the backwater effect caused when the lagoon is closed to the ocean (URS 2005). The Ventura County Watershed Protection District is therefore pursuing alternatives that will reduce the backwater effect during design flood events. A number of scenarios have been proposed to control the water levels in the lagoon and reduce flooding, some of which may alter the lagoon's hydrodynamic and geomorphologic regime.

A considerable amount of hydrologic and hydraulic study has been conducted to document the performance of the existing drainage system upstream of the lagoon. However, studies to date have generally not included characterization of the breaching process such as key processes affecting breaching, the duration that the breach remains open, and the effect the breach has on hydrodynamics and morphology of the lagoon.

Therefore, better quantification of the existing hydrodynamics and geomorphology of the lagoon and beach are needed to provide a basis for assessing environmental impacts of the proposed J-Street Drain design alternatives. The results will aid with the environmental impact assessment and permit preparation while reducing the likelihood of adverse impacts to the lagoon by allowing quantitative comparison of existing and future conditions in the lagoon.

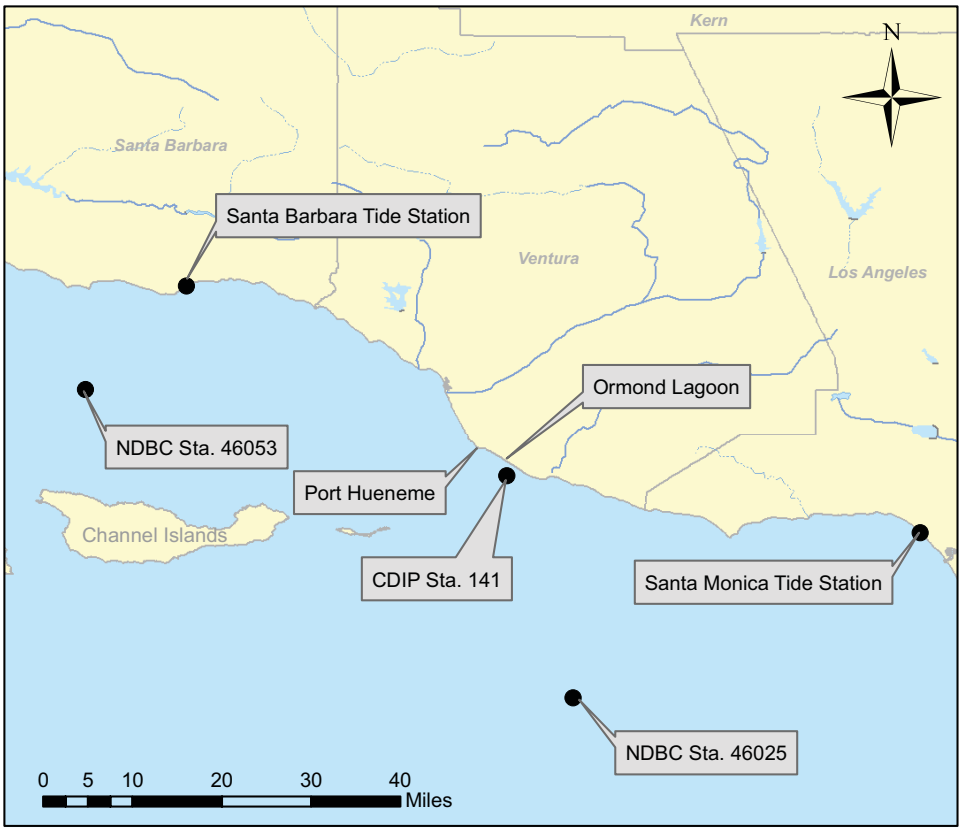

Figure 1. Location map.

2.0 Background Data

Various sources of background data were reviewed to develop an understanding of the history of the lagoon, similar systems studied by others, and key physical processes affecting the coupled drain-lagoon-beach system.

2.1 Previous Studies

Previous modeling of and reports on the drainage system including the lagoon have been conducted by the Ventura County Watershed Protection District (Su 2007), URS (2005), Tetra Tech (2005) and Pacific Advanced Civil Engineering. These efforts provide documentation of the flooding in the City of Oxnard and include different assumptions about flow and downstream boundary conditions in the lagoon.

Su's (2007) memorandum provides information on frequency of berm breaching and prior work by others. Prior to 1992, the beach at J-Street was routinely breached through mechanical means by the Ventura County Watershed Protection District, but this practice has since been halted because of environmental concerns (Su 2007). Assuming that the berm completely breaches when the storage capacity of the lagoon is reached, Su (2007) determined that the lagoon would breach during storms with a 2-year recurrence interval. During stronger storms the backwater effect of the lagoon will not substantially increase flooding because the breach occurs early in the storm. However, during weaker storms the unbreached lagoon could contribute significantly to flooding in the City of Oxnard.

URS (2005) developed a plan and preliminary design to reduce flooding in the City of Oxnard by improving flow in J-Street Drain. URS concluded that along with drainage system modifications, the backwater effect in the lagoon must be controlled to reduce flooding. URS (2005) used HEC-RAS, a one dimensional model of flow with limited sediment transport capabilities, to analyze the existing and proposed hydraulic conditions. Rather than modeling the breaching process, URS assumed that the water level in the lagoon was either a constant or that the breach was completely open to the ocean, depending on the return period of the storm considered.

Tetra Tech (2005) determined the 100-year storm event in the City of Oxnard which was partially based on a previous effort by Pacific Advanced Civil Engineering. Tetra Tech (2005) considered the flow in two dimensions using FLO-2D, a two-dimensional river flow and floodplain inundation model. They performed two dimensional modeling of the lagoon to determine at what point during a given storm the flow would breach through to the ocean. The analysis of flow in the lagoon was more detailed and likely more accurate than that performed by URS (2005), but Tetra Tech (2005) did not include erosion of the beach or an analysis of breaching processes that might elucidate potential project impacts.

An ongoing restoration project at Ormond Beach that may tie into the lagoon in the future is being led by the Coastal Conservancy with partners including Aspen Engineering, Philip Williams and Associates (PWA), Everest International Consultants, and others. The Coastal Conservancy team has experience with other restoration projects at tidal lagoons including a project completed by PWA at the Crissy Field tidal inlet and beach. There, significant data were collected over at least two years to quantify the lagoon processes (Botello et al 2004).

The results of the previous modeling efforts have characterized flow into Ormond Beach Lagoon but have specifically not addressed hydrodynamic processes in the lagoon, morphology of the lagoon or the duration of the breach after the storm. These processes are critical to assessing environmental impacts because they are likely somewhat quantifiable and predictable.

2.2 Coastal Processes

2.2.1 Longshore Transport

Longshore transport is the movement of sand along a coastline forced by waves (combined with currents) approaching at some angle to the coast. Greater wave height and/or angle of approach cause greater longshore sediment transport. Longshore transport is analogous to a river of sand moving along the coast. This river of sand carries sediment from updrift sources to Ormond Beach and from Ormond Beach to downdrift areas. The net direction of sediment transport along the California coast is south from Santa Barbara to Point Mugu. Gradients in the rate of longshore transport are primarily responsible for beach erosion and accretion. Without a continuous supply of sand to Ormond Beach from the north, transport to the south would erode the beach and lagoon system within a short time.

Ormond Beach is located immediately southeast of Port Hueneme, a jettied inlet that interrupts longshore transport. Sand supply for beaches in Ventura County has historically been from Ventura and Santa Clara Rivers (Coastal Sand Management Plan 1989). Approximately 1,100,000 cubic yards (CY) of sand per year are mechanically bypassed around Port Hueneme in the direction of net longshore transport from north to south (Coastal Sand Management Plan 1989). Campbell and Benedet (2004) report that from 1959 to 1987 about 910,000 CY per year were bypassed around the Port in the direction of net transport. Weigel (1994) has also confirmed a similar magnitude of bypassing and further describes longshore transport in the area.

Longshore transport must be maintained to prevent erosion of Ormond Beach. If, for example, sand bypassing at Port Hueneme were to cease, it is likely that the Ormond Beach would switch from being a stable beach (not significantly accreting or eroding) to one with significant erosion. This erosion would likely expose the lagoon to more frequent inundation from the ocean side and significantly increase breaching.

Longshore transport can be significantly interrupted by tidal inlets, especially during the initial phases of inlet development. During a site visit to Ormond Beach on February 12, 2008, waves were breaking on an ebb shoal that had developed since the most recent breach. That shoal will be reworked into the beach system after the breach closes. When a tidal inlet first opens, ebb and/or flood shoals typically form depending on whether the inlet is ebb or flood dominated. Sediment from these shoals comes from the adjacent beach and, on a more regional scale, from the adjacent coastlines as fed by longshore transport. It appears that while the breach at Ormond Lagoon is open, some component of the longshore transport is trapped in both the ebb shoal and lagoon. The small ephemeral ebb shoal created by episodic breaching likely has no significant permanent effect on downdrift beaches but a permanent inlet may by trapping sand in the ebb shoal and/or lagoon, which is a temporary impact until natural bypassing commences, In considering future alternatives for improving J-Street Drain that include a more permanent connection between the lagoon and the ocean, measurable alterations to beach and coastal processes should be anticipated.

2.2.2 Cross Shore Transport

Cross shore transport refers to sand moving across the beach profile perpendicular to the shoreline. It is generally agreed that, on an engineering time scale, cross shore transport is limited to a conceptual depth of closure beyond which waves do not cause significant sediment transport (Dean, Kriebel, and Walton 2002). Depth of closure is a function of the sand gain size, shape of the beach profile, and waves. The depth of closure will be applied as the effective offshore boundary for sediment transport of the Ormond Beach system. According to Dean, Kriebel, and Walton (2002), depth of closure can be estimated based on an annual 12-hour exceedance significant non-breaking wave height. This definition results in a depth of closure at Ormond Beach of approximately 25 feet.

Overall, cross shore transport is a fundamental process through which the shape of the beach profile evolves. This process transports sand across the shoreface that eventually closes the breach and rebuilds the beach. The best way to quantify this process is through rigorous data collection and modeling. There appears to be no data readily available on cross shore transport at Ormond Beach. The data collection effort previously proposed for the current effort will help calibrate and verify a numerical model of the beach and lagoon system and provide the information necessary to better understand cross shore transport.

2.2.3 Aeolian Transport

Aeolian (wind-blown) sand transport is likely a significant component of the long term stability of the lagoon. Visual observations made during the February 12, 2008 site visit indicated that the beach may be significantly reformed after breach closure by aeolian transport. Aeolian transport is known to have significantly contributed to closing of inlets at other locations, such as at the Mustang Island Fish Pass in Texas (Kraus and Heilman 1997), and could contribute to filling the lagoon without the periodic breaching that flushes sediment from the lagoon.

2.2.4 Shoreline Change

Historic aerial photographs, presented in the following section, suggest that there is minimal erosion at Ormond Beach. The effects of the sediment bypassed at the Port Hueneme entrance along with the

shadowing effects of the jetties and Channel Islands should provide for a region of stable shoreline downdrift of Port Hueneme. The Coastal Sand Management Plan (1989) indicates that this is the case, reporting an area of accretion down drift of Port Hueneme. Prior to construction of the Port Hueneme jetties, the net change in shoreline position at Ormond Beach was insignificant (Thompson 1994). Thompson (1994) also points out the dependence that the stable shoreline has on continued bypassing.

Shoreline change is of particular importance to the future of Ormond Beach Lagoon because the lagoon is bordered by developed lands, giving the lagoon no room to migrate landward as the shoreline retreats. Natural shorelines retreat and advance as natural forcing varies. In a beach's natural state, the width of the beach generally remains constant regardless of shoreline advance or retreat. However, when structural improvements are constructed landward of a retreating shoreline, such as at Ormond Beach, the landward boundary of the beach becomes stationary, resulting in decreasing beach width. This problem is evident around the developed world and should be considered as part of future plans for J-Street Drain.

2.2.5 Relative Sea Level Rise

The National Oceanic and Atmospheric Administration's (NOAA) Center for Operational Oceanographic Products and Services (2008) reports that relative sea level rise at the Santa Barbara tide gauge is approximately 0.91 feet per century and approximately 0.52 feet per century at Santa Monica. Relative sea level rise should be included in the long term planning of improvements at J-Street Drain, but will not significantly affect the result of short term hydrodynamic or morphologic analyses of the lagoon for the purpose of drainage design.

2.3 Historic Aerial Photography

Historic aerial photography has been obtained for the vicinity of Ormond Beach Lagoon. Aerial photographs from 1945, 1950, 1972, 1979, 1989, 1994, 2004, 2006 and 2007 were qualitatively reviewed. A shoreline survey from 1855 and navigation chart from 1945 were also reviewed. Historical conditions indicate that the lagoon was created by J-Street Drain. Continued evolution and growth of the lagoon is expected to be similar to the recent past.

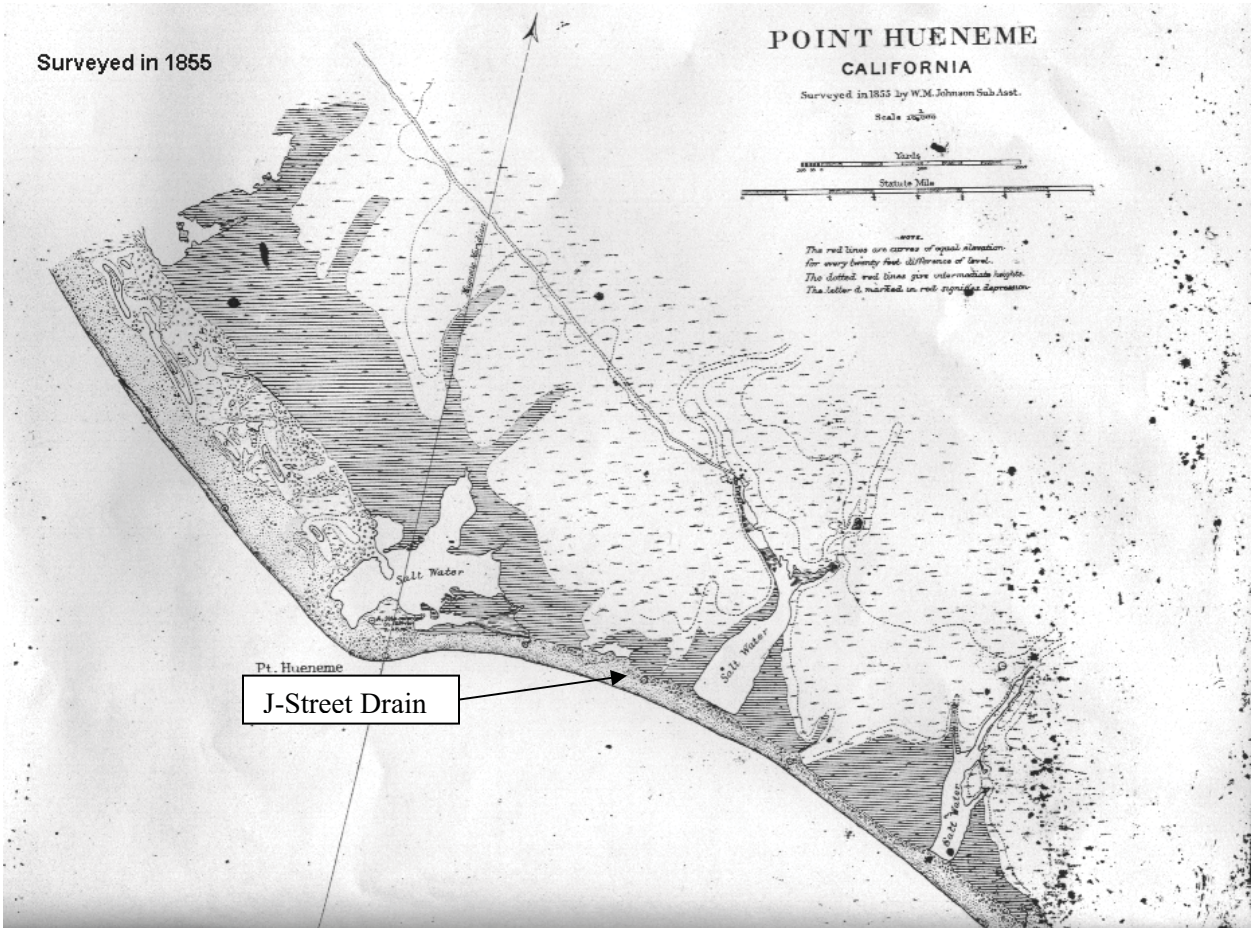

Figure 2. 1855 shoreline survey (Johnson 1855).

The 1855 survey (Figure 2) shows that three nearby lagoons existed in 1855. One of the lagoons/ponds appears to be near where J-Street is today. Another appears to be near where Industrial Drain is today. It appears that the lagoons were connected to the Pacific Ocean during large rainfall events but that the connections may not have been permanent. Historically, the connections likely remained open longer than under existing conditions because of the larger tidal prisms or surface areas available to receive tidal exchange. The large lagoons shown on this map are similar to one of the alternatives being considered by the Coastal Conservancy to restore wetland habitat in the area.

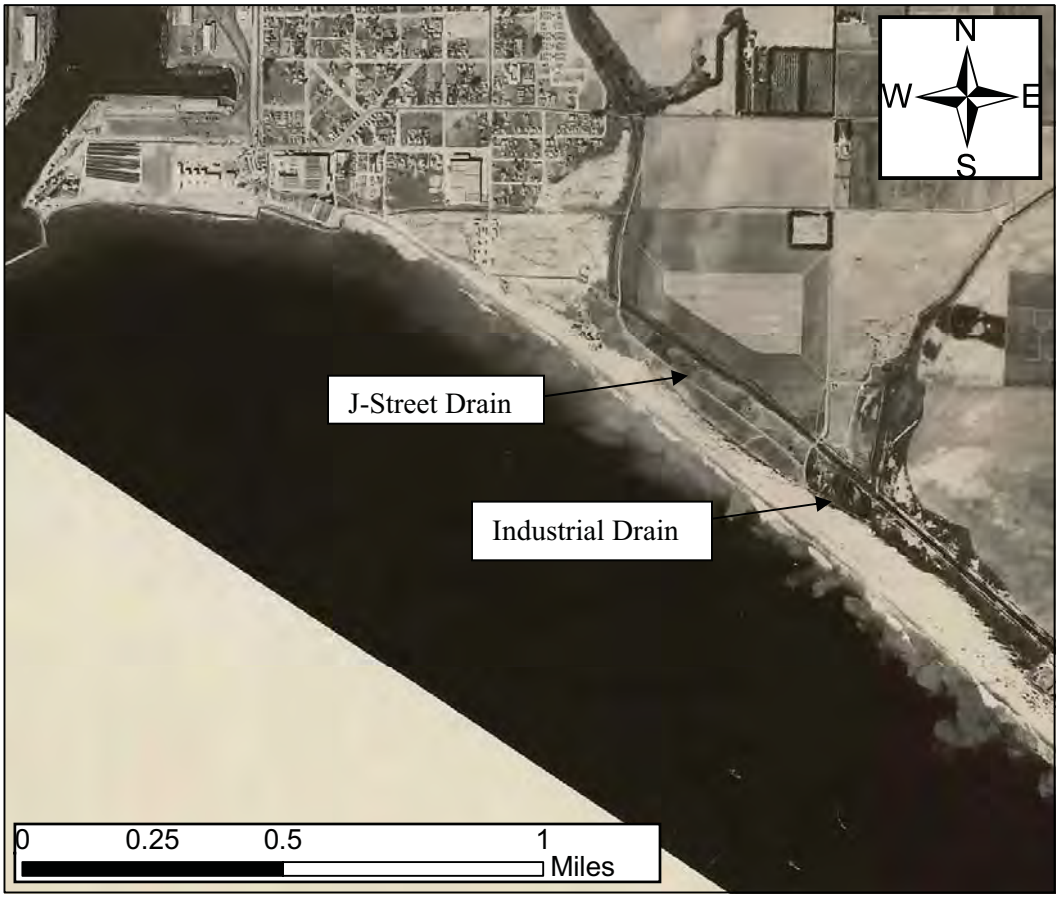

Figure 3. Aerial photograph, 1945 (unknown).

The 1945 aerial photograph shown in Figure 3 documents significant development in the region, including filling of the lagoon north of J-Street and creation of the Hueneme Drain. It appears that the lagoon at Industrial Drain is smaller compared to the 1855 survey, but it is important to note that the data provided in the 1855 survey may not be accurate. J-Street Drain had not yet been constructed in 1945. The lagoon only exists at Industrial Drain and did not extend northwest to the existing location of J-Street Drain.

Figure 4. Aerial photograph facing J-Street Drain, 1972 (Permission requested).

Figures 4 and 5 show the early formation of the lagoon at the outfall of J-Street Drain in 1972. Along with these photographs, available information suggests that during this time the breach was being periodically maintained (URS 2005) to promote flow from J-Street directly to the ocean. Prior to construction of J-Street Drain in the early 1960's, flows likely were collected within Hueneme Drain and passed south to the Industrial Drain and beyond.

In Figure 4, note that water had drained behind the dunes and within dune swales, forming what were likely ephemeral wetlands. Sediment from the dunes was likely transported from the lagoon to the ocean when connected. Comparison between the 1972 photos and the 1945 photo indicates that the J-Street Drain created the lagoon because direct flow from the drain to the ocean wasn't maintained.

Figure 5. Aerial photograph between J-Street and Industrial Drains, 1972 (Permission requested).

Figure 5 is an aerial of the area between J-Street and Industrial Drains in 1972. The backwater at J-Street Drain has not yet connected to the lagoon at Industrial Drain. Channelization of what is now Industrial Drain likely increased the capacity of the lagoon and prevented more permanent flooding of inland areas. This channelization likely increased the frequency of breaching by conveying more flow directly to the lagoon rather than allowing for local storage upland.

Figure 6. Aerial photograph facing Industrial Drain, 1972 (Permission requested).

Figure 6 shows Industrial Drain and a small lagoon including portions of Hueneme Drain. It is obvious that an overwash has occurred at the lagoon in the recent past adjacent Industrial Drain.

Figure 7. Aerial photograph showing J-Street Drain, 1979 (Permission requested).

Figure 7 reflects the dynamic nature of the lagoon system. The lagoon appeared to have been growing in 1972, but by 1979 the lagoon still had not developed to a point at which J-Street and Industrial Drains flow into what is now the Ormond Lagoon.

Figure 8. Aerial photograph showing the area between J-Street and Industrial Drain, 1979 (Permission requested).

Figure 8 shows that, in 1979, Industrial Drain had not recently flowed directly to the Ocean. The overwash features on the beach evident in 1972 are less evident, although still visible . At the time of this photograph, it had likely been at least a few months since Industrial Drain last breached.

Figure 9. Aerial photograph, 1994 (USGS 1994).

The 1994 photograph in Figure 9 shows the lagoon becoming larger between J-Street and Industrial Drain. The lagoon in 1994 exists in the basic configuration that it exists today. Flow from J-Street and Industrial Drains converge into the Ormond Beach Lagoon. The lagoon exists entirely on the beach bounded on its landward side by development and infrastructure.

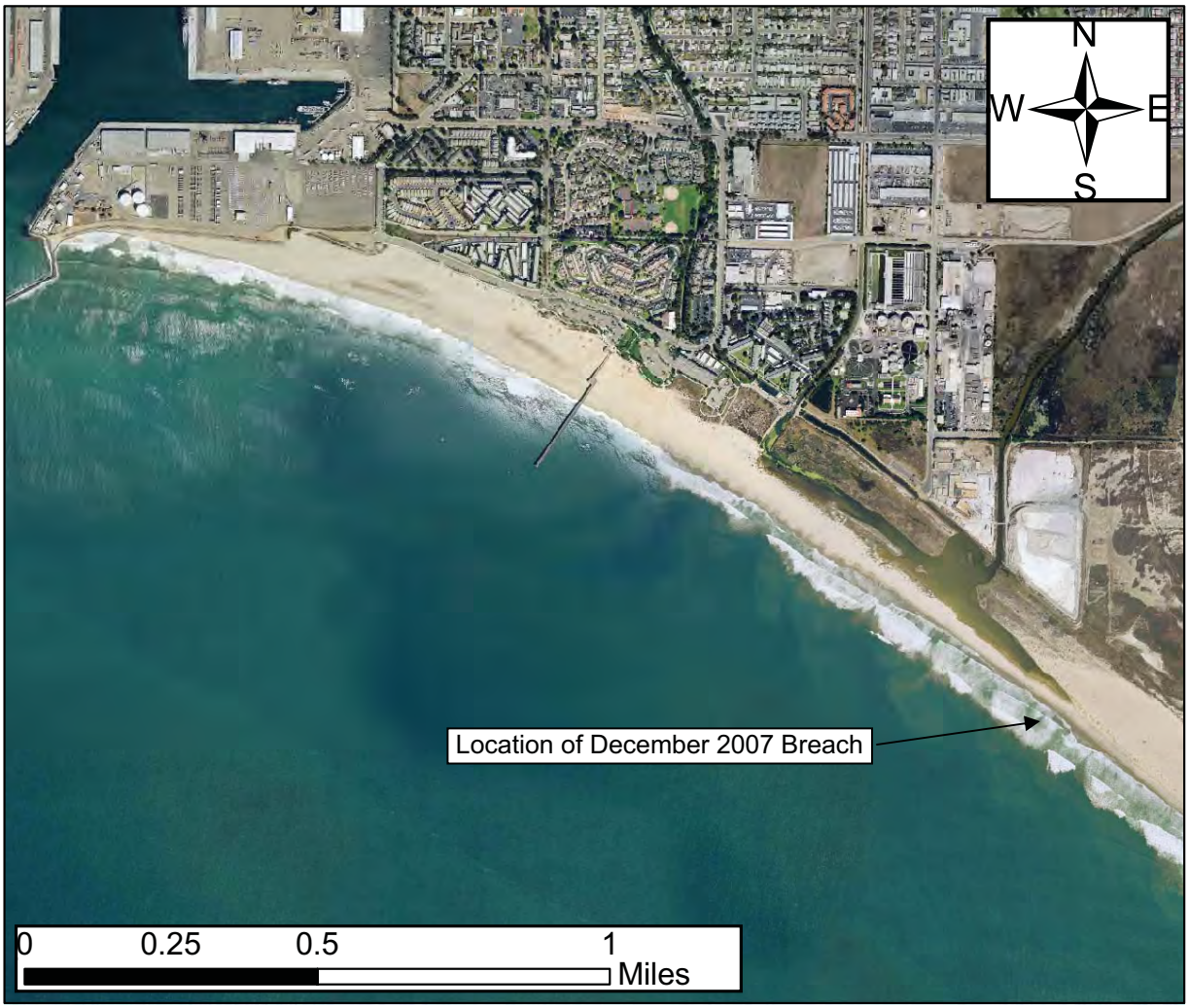

Figure 10. Aerial photograph, 2007 (VCWPD 2007).

Figure 10 shows that in December 2007, it had been some time since the system breached to the Ocean as evidenced by the lack of overwash features. In mid December 2007 the beach breached, connecting the lagoon to the ocean near Industrial Drain. Figure 11 shows a photograph of the breach taken on December 22, 2007. The photograph reflects significant beach erosion since December, 2007.

The historical aerial photographs support the assumption that Ormond Beach Lagoon developed as a result of flow from J-Street and Industrial Drains ponding on the back side of the beach until a catastrophic breach occurs. Flow during the breaching events is likely strong enough across the entire lagoon area to transport sand from the dunes to the ocean. That periodic flow appears to have caused the gradual formation of a semi-permanent lagoon.

Without strong flow within the lagoon during breaching, much of the lagoon area would likely never have developed. It's probable that if both drains provided permanent, constricted flow pathways to the beach, the lagoon would rapidly decrease in size, ultimately resulting in short channels across the beach instead of a lagoon.

Figure 11. Breach on December 22, 2007 (photo from site visit 2/12/2008).

3.0 Literature Review of Coastal Breaching

A review of available literature was conducted to provide background on work completed at other sites and methods applied to analyze lagoon breaching dynamics. The literature reviewed will aid in the upcoming numerical modeling phase, particularly the literature that specifically describes breaching models and sediment transport. This documentation of the literature review is not intended to educate the reader on the specifics of each paper, but rather to direct interested parties to the sources of specific knowledge.

Coastal breaching models have been developed by Basco and Shin (1999), Kraus (2003), Tuan, Verhagen, and Visser (2006), Tuan (2007), Mohamed (2001), Faeh (2007), Srinivas and Dean (1996) and Odd, Roberts, Visser (1998) and Maddocks (2000). Applicable general sediment transport work has been conducted by Madsen and Wood (2002), Myrhaug and Holmedal (2003), Fredsøe and Deigaard (1992), Davies *et al* (2002), Baldock *et al* (2005), Ogston and Sternberg (2002), Smith (2002), Soulsby and Damgaard (2005), and Yu, Sternberg, and Beach (1993).

Case studies evaluating lagoon and beach breaching on the California coast and around the world have been conducted in detail by Kraus (2002), Hansen *et al* (2007) and others. Most of the literature relevant to coastal breaching focuses on a breach occurring during extreme weather events from elevated storm surge levels so that water is flowing from the ocean rather than to the ocean. Stone Lagoon (Kraus 2002) is one example of a case similar to that at Ormond Beach Lagoon in that it breaches seaward.

Big Lagoon and Stone Lagoon in California are connected to several small streams and are prone to breach during or near the end of the rainy season (Joseph 1958). The combined water volume from the stream discharge and runoff during the rainy season gradually raise the water level and cause breaching from the lagoon to the ocean by seepage and failure. The surface area of these lagoons is too small to maintain the necessary velocity for the breach gorge to be self-scouring. A breach occurs in Big Lagoon when the water elevation reaches approximately 3 to 4 m above MSL; however, it does not breach as often as Stone Lagoon because of the larger drainage area at Stone Lagoon.

4.0 Meteorological and Oceanographic Data

Data required to interpret the physical processes forcing morphological development at Ormond Beach lagoon are identified and summarized in the following section.

4.1 Wind

Wind plays a primary role in the lagoon's development through driving nearshore waves, surface currents and aeolian transport. Wind data was obtained from the NOAA's National Data Buoy Center (NDBC). Average hourly winds were analyzed for NDBC Station 46053 offshore Santa Barbara (Figure 12) for the period of 1996 through 2007 and NDBC Station 46025 offshore Santa Monica (Figure 13) for the period of 1997 through 2007. Daily average winds at Naval Base, Port Hueneme (Figure 14) were analyzed for the period from 1996 through 2008 with significant gaps in coverage. Wind directions are displayed following standard meteorological convention.

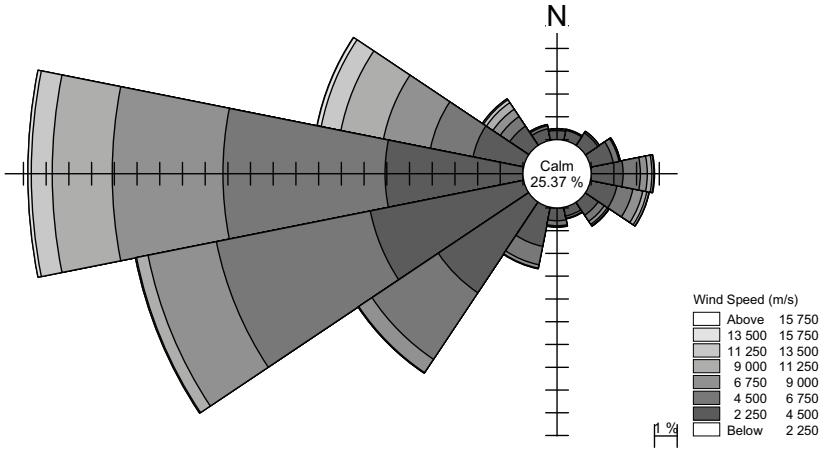

Figure 12. Wind rose for Santa Barbara, Station 46053.

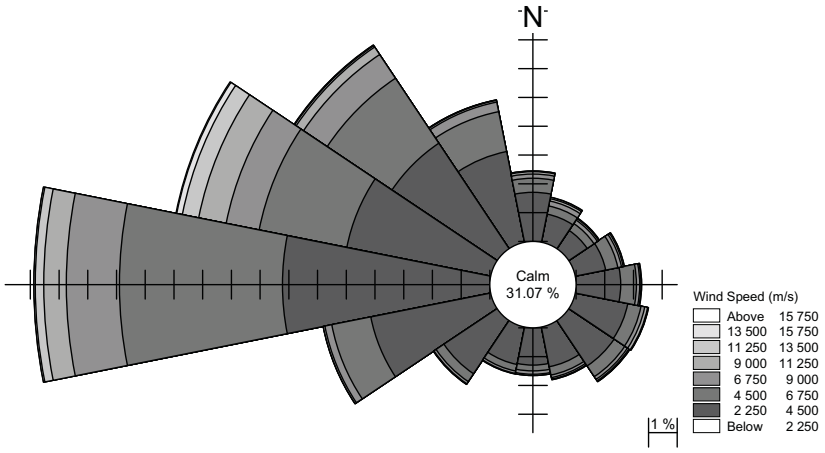

Figure 13. Wind rose for Santa Monica, Station 46025.

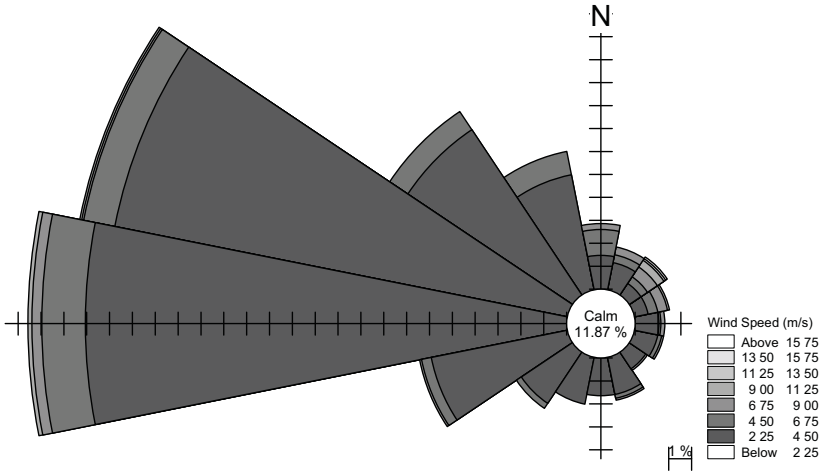

Figure 14. Wind rose for Port Hueneme.

4.2 Waves

Waves were characterized offshore of the proposed project site. Waves drive longshore and cross shore transport at Ormond Beach. These processes coupled with tides and flow from the drainage system force closure of the breach. Wave data will be applied to force the numerical model and estimate the rate at which the breach closes for alternative designs.

Ten years of historical wave data were collected from the NDBC Station 46053 in 1,370-ft deep water offshore of Santa Barbara and Station 46025 in 2,900-ft deep water offshore in the Santa Monica Basin. Wave direction data are not available for Stations 46053 and 46025. Directional wave measurements are available for a one year historical wave record from the Coastal Data Information Program (CDIP) Station 141 in 67-ft deep water offshore of Port Hueneme; these data are plotted in Figure 15. The Port Hueneme buoy was commissioned in 2007. Typically, a longer record is preferred for wave analysis. Data at CDIP Station 141 were compared and applied with the data at NDBC 46053 and 46025 to develop the statistical distribution of waves at the site.

Wave Information Studies (WIS) hindcast data at Station 91 in 14,500-ft deep water are available for the period from 1981 through 2004 (Tracy 2004). As plotted in Figure 16, the WIS data show that the waves offshore are predominantly from the northwest. Wave transformation from offshore is complicated by the shoreline geometry along this section of the California coastline and presence of the Channel Islands.

Local wave direction at Ormond Beach does not typically match that of offshore waves. An obvious reason for this is the shape of the coast from Point Conception to the Mexican border. Waves from the north are limited to local generation by the sheltering effect from the coastline. Waves from the west are also limited by the Channel Islands. Winds are predominantly from the west but the longest available fetch is from the southwest. The Channel Islands also cause waves from the west to refract, increasing the percentage of time waves are from the southwest. Models of waves developed for the breaching model will account for these effects.

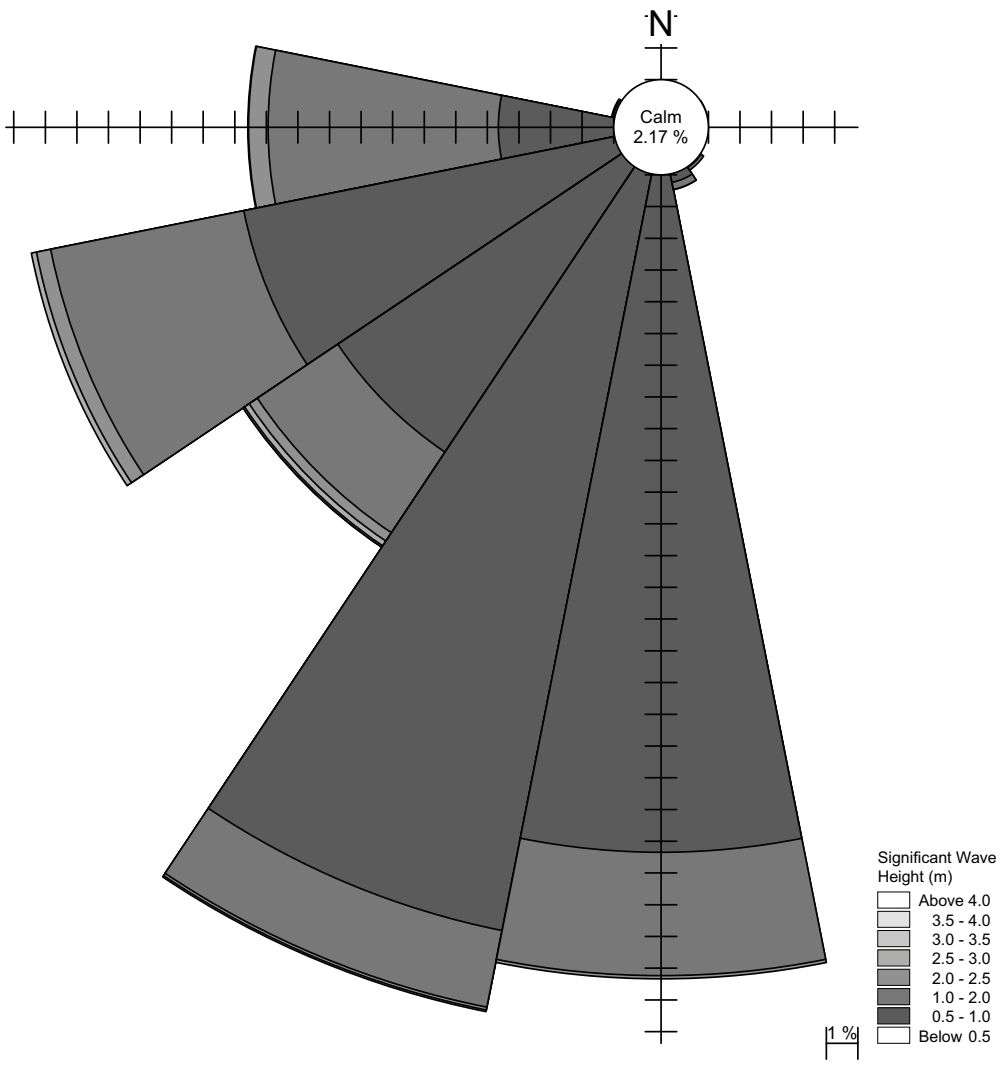

Figure 15. Wave rose for CDIP Station 141.

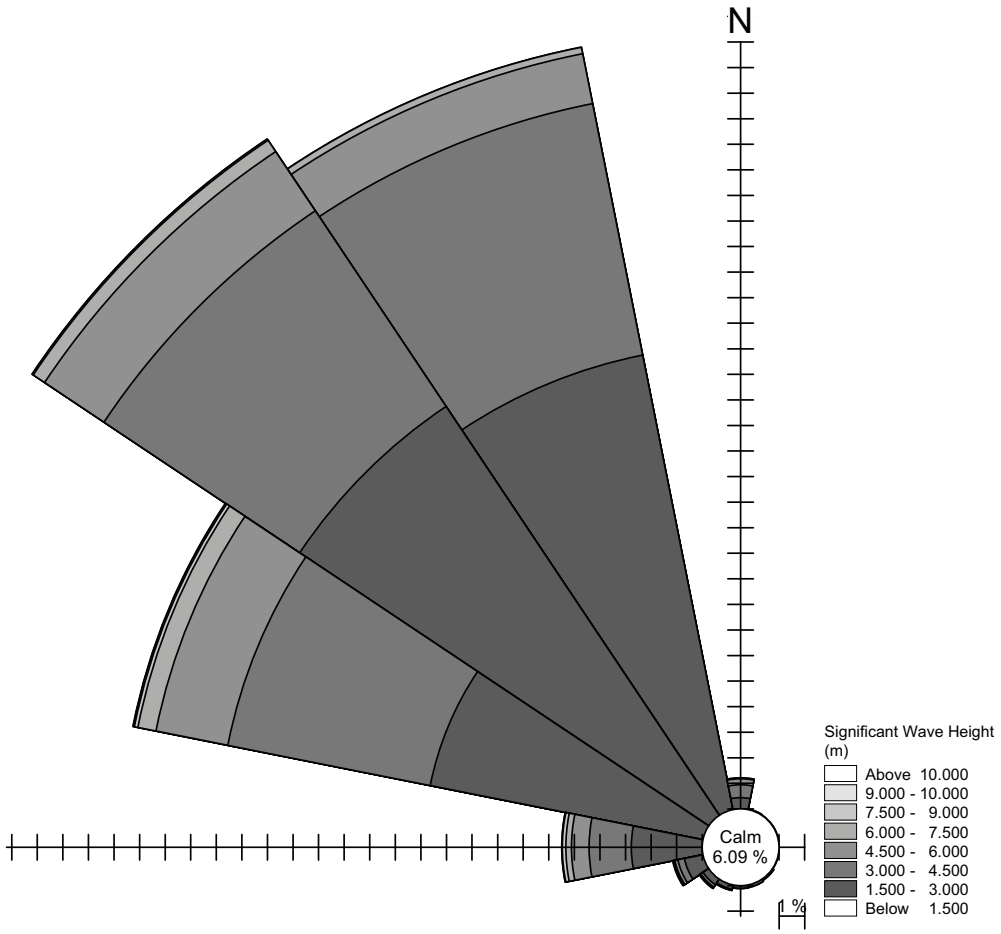

Figure 16. Wave rose for WIS Station 91.

4.3 Tides

Tidal elevation and datum information were obtained from the NOAA tide gauge in Santa Barbara, CA and at the NOAA tide gauge in Santa Monica, CA. The water level analysis, shown in Figure 17, is based on four years of verified historical data at Santa Barbara, and ten years of verified historical data from Santa Monica. Water level statistics were calculated using the average hourly water level reported at each station. Based on these data, percent exceedance of water level was calculated. Tides in the region are predominately semi-diurnal, with two high tides and two low tides occurring per day. Tidal datums and the greater diurnal tidal range, defined as the difference between MHHW (mean higher high water) and MLLW (mean lower low water), at both gauges are summarized in Table 1.

Water level data will be collected inside the lagoon to compare with water level at the tide gauges and to calibrate the numerical model. The water level data inside the lagoon may provide a time history of flow into the lagoon depending on the weather during deployment. Water level in the ocean is generally much lower than the elevation of the beach crest, discussed in more detail in Section 5.0.

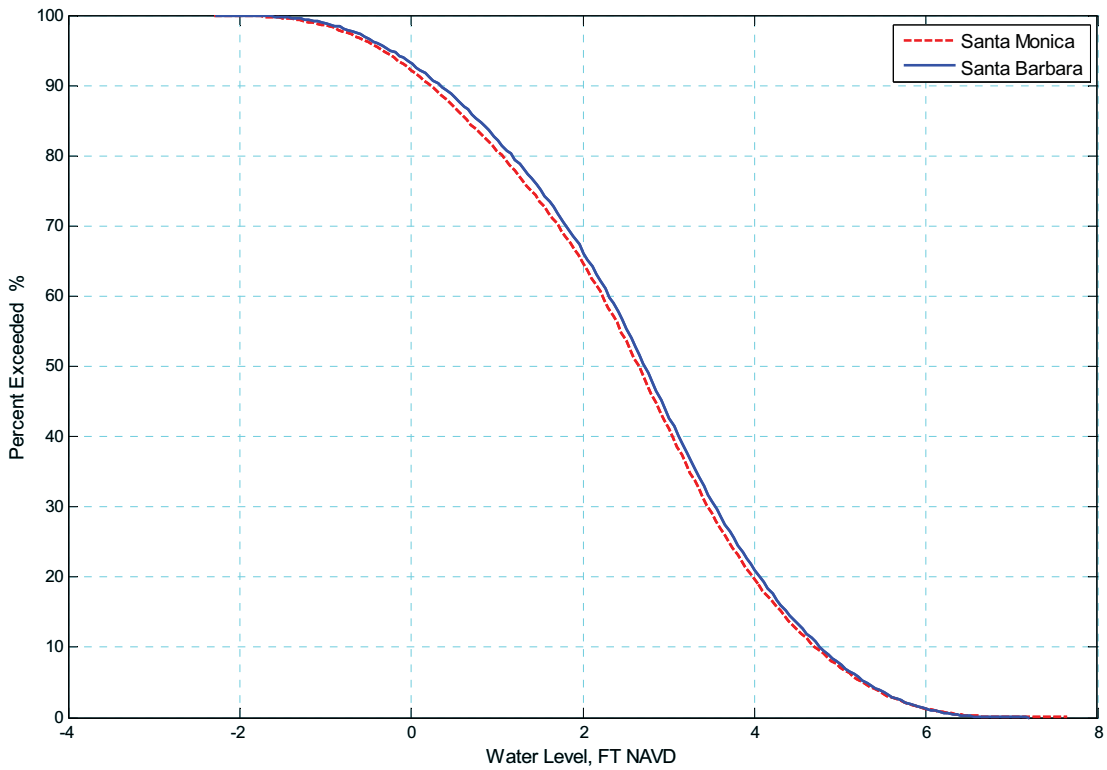

Figure 17. Water level frequency of exceedance.

Table 1. Tidal datums and range.						
Station Name	**MHHW FT (NAVD)**	**MHW FT (NAVD)**	**MSL FT (NAVD)**	**MLW FT (NAVD)**	**MLLW FT (NAVD)**	**Tide Range FT**
Santa Barbara	5.30	4.54	2.69	0.89	-0.09	5.39
Santa Monica	5.24	4.50	2.60	0.74	-0.19	5.43

4.4 Salinity

Some water conductivity data have been provided by Mark Pumford with the City of Oxnard. Salinity in the lagoon is controlled primarily by freshwater inflow, evaporation, and tidal inflow. When the breach is open, salinity in the lagoon is probably the same as the Ocean (averaging around 33 parts per thousand (PPT)). After the breach closes, salinity varies with environmental forcing. Salinity data will be collected to calibrate the numerical models and to calibrate data collected by the City of Oxnard.

5.0 Topography and Bathymetry

LIDAR data for Ormond Beach obtained from TOWILL surveying, mapping and GIS services in July 2001 have been reviewed. Based on this topography, the minimum continuous elevation of the beach seaward of the lagoon is over +10 feet, NAVD. In the area of the preferred breach, south of Industrial Drain, the beach width appears to be less and the elevations are somewhat lower. There is a narrow strip of missing data that may indicate that the beach was breached during the time of the survey.

Observations made during the February 12, 2008 site visit indicate the beach is much lower in the vicinity of the breach, but new are required to quantify the difference.

In general, the data show smooth, parallel contours along the beach. The topographic data do not cover wet areas of the lagoon. Additional aerial survey data are anticipated, but limited surveying within the lagoon should also be performed to define flow paths and for use in hydrodynamic modeling of the lagoon.

Bathymetric data are available for the California coastline including nearshore Ormond Beach from the NOAA National Geophysical Data Center (NGDC) (2008). The data were collected between 1933 and 2001. Data are not available very near the shoreline and in the surf zone. The Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) profiles have been reported to be available but have not yet been obtained. Beach profile survey data should be collected to characterize the near shore beach profile to closure depth.

6.0 Breaching Process Overview

Breaching at the Ormond Lagoon is caused by buildup of water originating from J-Street, Hueneme and Industrial Drains, referred to herein as seaward breaching. Most research into breaching of a beach or barrier island is forced by high coastal water levels and wave induced erosion during severe coastal storms. Except at the existing breach area, the tide must exceed +10 feet NAVD before shoreward breaching is likely to occur. The tide level has not reached the dune crest elevation during the available tide record starting at 1933 when the Santa Barbara gauge was installed. The maximum tide recorded at the Santa Barbara gauge was +7.26 feet NAVD. Under a very extreme event, large waves could overtop the dunes, but they are unlikely to cause a breach unless associated with significant rainfall. Further analysis of waves during the modeling phase will help quantify this possibility; regardless, the dominant breaching process is seaward and is caused by storm water flooding.

Tuan (2007), following Gordon (1990), describes the breaching process of coastal lagoon barriers due to overflow induced by heavy rain, as follows:

> "The lagoon breakout stage is observed to consist of three distinct stages. In the first stage, a preferred scour channel (initial channel) is formed and cuts backwards across the barrier. The flow is subcritical in the breach section and supercritical on the down slope. The second stage commences when a crescent-shaped weir forms in the main sand plug followed by a series of steps in the channel. The breach width increases rapidly as the breach flow is highly turbulent and supercritical. Once the main sand plug has been washed out completely, the final stage begins with a slower rate of breach deepening and widening."

After the breach is completely established, tidal exchange between the lagoon and ocean acts to maintain the breach. Waves transport sediment onshore and the varying tide and wave run-up distribute the sediment along the shoreface. Swash transport, similar to transport under a small bore, effectively carries sediment into the breach. When tidal flow in the inlet is insufficient to remove all of the sand being transported by the waves, the breach will begin to close.

Visual observation of Ormond Beach Lagoon suggests that the description provided by Tuan (2007) and Gordon (1990) generally describes the breaching process. The challenge now is to quantify how breaching induces morphologic change in the lagoon and how cross shore processes close the breach and modify the lagoon.

7.0 Conceptual Assessment of Lagoon Morphology

Ormond Beach Lagoon is a dynamic system with morphology forced by upstream inflow, waves, tides, aeolian transport, and anthropogenic factors. A lagoon appears to have been historically present as part of the natural drainage system of the now channelized Industrial Drain. That lagoon did not extend to the limits of the current lagoon between J-Street and Industrial Drains.

Hydrodynamics in the lagoon are forced by inflow from the three drains prior to breaching. During this period it is likely that flow into the lagoon at the transition from the drain to the lagoon is significant during heavy rainfall. This flow appears adequately described by previous models. The flow in the lagoon during this time is probably insignificant and not capable of mobilizing and transporting sediment except very near the drains.

During the breaching process, flow is likely at its greatest everywhere in the lagoon. This period of high velocity everywhere will only last until the water surface in the lagoon has equilibrated with the ocean.

After the water surface in the lagoon is at the same level as the ocean, flow is controlled by the tides and flow from the drains. Areas of high transport (velocity) are probably confined to the breach and narrow sections (channels) in the lagoon. Over a very long period with the breach open, it is likely that channels would form, rather than the shallow lagoon system.

Flow from J-Street, Hueneme, and Industrial Drains created the lagoon in its current state through catastrophic breaching events. Those events enabled sufficient velocity in all parts of the lagoon to encourage sediment transport, effectively creating the environmental habitat that is at issue. Available data suggest that if the lagoon were to be breached permanently, channels would predominantly convey the flow and sand would fill the shallow areas, significantly changing the character of the lagoon from it's current state to resemble the photos from the 1970's (see Figures 4 through 8).

The existing data and previous studies have enabled this qualitative assessment of the breaching process and lagoon morphology and, as such, its accuracy is dependent on the limited data presented. The planned numerical model of hydrodynamics and morphology of the lagoon will help to quantify the breaching process and provide the necessary information on which reliable estimates of environmental impact can be formulated for considered design alternatives.

8.0 Findings and Recommendations

The following findings and recommendations are provided for consideration during permitting, design, and analysis of potential impacts.

1. Limited topographic data and site data are available for the lagoon.
   - Sufficient far field data are available from various sources including topography and bathymetry away from the site.
   - Environmental forcing data away from the site are also available. Analysis must be conducted to adequately transform available data to the project site.
   - Bathymetric and topographic data must be collected to accurately describe the beach/lagoon system. Aerial data will be applied to fill the space between topographic data with the topographic data being applied to rectify the aerial data.
   - Water level, salinity, total suspended solids and grain size distribution of beach sediments must be collected to help describe processes at the site and calibrate models to accurately assess existing conditions and impacts of proposed alternatives.

2. Site data (such as Aerial photographs, limited survey data, limited salinity data, etc.) are available, but there has been limited study by others on lagoon dynamics to date.
   - The lagoon has typically been considered as a boundary condition in the numerous upstream efforts that focused on evaluating flooding; the system has not been analyzed with the goal of assessing impacts to the lagoon.
   - Previous efforts have quantified flow from the drainage system into the lagoon.
   - Planned coastal modeling and data collection efforts will quantify the existing lagoon hydrodynamics and morphology sufficiently to assess potential impacts of project alternatives to the lagoon.

3. Lagoon evolution has been driven by drainage system modifications.
   - Historically the lagoon did not exist as it does today. Seaward breaching processes have created the lagoon.
   - Lagoon evolution is a dynamic process; the lagoon will likely continue to evolve dependent on environmental forcing.
   - Drainage system modifications are primarily responsible for creation of the lagoon.
   - Even minor changes in flow could result in major impacts to the lagoon.
   - Upstream flow drives breaching events, making identification of appropriate accurate current and future hydrographs essential.
   - Coastal modeling and data collection will provide information necessary to accurately predict how proposed alternatives will impact the lagoon.

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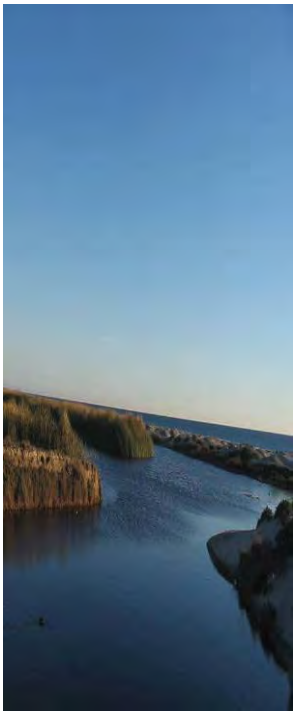

J Street Drain

Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon

Draft Final Report

August 2011

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TABLE OF CONTENTS

Executive Summary ..... **ii**
1.0 Background and Approach **1**
2.0 Sediment Transport Modeling **3**
2.1 Model Geometry 3
2.2 Boundary Conditions 4
2.3 Hydrology 5
2.4 Bed Gradations and Sediment Modeling 7
3.0 Modeling Results **9**
3.1 Steady State 9
3.2 Sedimentation Analysis 9
3.4 Discussion 12
4.0 Conclusions **13**
5.0 References **14**

FIGURES

Figure 1: HEC-RAS Cross Section Layout 2
Figure 2: HEC-RAS Downstream Boundary Tidal Series 4
Figure 3: 2-Year Storm Hydrograph 5
Figure 4: 5-Year Storm Hydrograph 6
Figure 5: 100-Year Storm Hydrograph 6
Figure 6: Lagoon J Street Drain Outlet Grain Size Distribution 7
Figure 7: Transect OL01 Berm Grain Size Distribution 8
Figure 8: Sediment Transport Modeling Results: Two Consecutive 2-Year Storm Events 10
Figure 9: Sediment Transport Modeling Results: 5-year Storm Event 11
Figure 10: Sediment Transport Modeling Results: Consecutive 5-Year and 100-Year Storm Events 12

EXECUTIVE SUMMARY

Ventura County Watershed Protection District has designed a new J Street Drain concrete channel with an outlet about 2.5 feet lower than the existing channel outlet elevation at the Ormond Beach Lagoon. Since the lagoon bottom elevation is approximately at the same elevation as the end of the existing concrete channel, there is a concern that water will be ponded for a long time where the lowered channel meets the existing lagoon bottom elevation. The purpose of this study is to evaluate what storm event would erode the existing lagoon bottom and create an equilibrium slope that will allow the proposed J Street Drain to positively drain to the ocean.

Sediment transport modeling with HEC-RAS and known storm event hydrographs were used to identify flow conditions that would allow J Street Drain to drain to the ocean. It was determined that two consecutive 2-year flood events (occurring in one season) would eliminate the ponded condition. In addition, one 5-year event would achieve the same results.

In each case, the sediment transport modeling was started from the time of a berm breach such as occurred during January 2010. The action of ocean waves builds up a sand berm at the beach. When the berm becomes substantial, it blocks the flow of water from the lagoon into the ocean. Ventura County Watershed Protection District intends to maintain a berm elevation at a designated breach location. This will facilitate berm breaching whenever the water surface elevation in the lagoon exceeds that elevation. The elevation for the maintained berm will be determined from an inland flooding study; the Watershed Protection District has maintained the berm recently at elevation 6.5 feet ± NGVD 1929, 6 inches above the water surface elevation in the lagoon. Based on survey data taken in 2010, when the berm breaches, the elevation of the berm is reduced to about 1.0 feet ± NGVD 1929. This was the starting berm elevation used for the sediment transport modeling. Note that at the lagoon location, 0 feet NGVD 1929 = 2.42 feet NAVD 1988.

Once the lagoon bottom elevation has been reduced to the elevation of the concrete channel outlet between the channel outlet and the designated berm breach location, it is not expected that it will fill in again because the sediment load from the J Street Drain watershed is very low. However, during the time that the berm is re-built by the natural action of the ocean waves, the outlet of J Street will be inundated. In addition, because the tidal cycle peaks twice each day and the peak tide exceeds the channel outlet elevation, the channel outlet will be inundated at least twice per day even after berm breaching and erosion of the bottom material in the lagoon.

1.0 BACKGROUND AND APPROACH

The purpose of this study is to investigate the development of an equilibrium lagoon channel bottom slope between the outlet of the proposed J Street Drain channel improvements and the Pacific Ocean at Ormond Beach Lagoon. The proposed Phase 1 improvements to J Street Drain generally consist of replacement of approximately 2,800 feet of existing trapezoidal open channel with a deeper and wider-bottom concrete rectangular channel. The improvements will lower the channel outlet approximately 2.5 feet below the existing channel bottom. This will create a sump condition since the existing lagoon bottom elevation (elevation 3.0 feet ± NGVD 1929) is at about the same elevation as the outlet of the existing J Street channel. There are no plans to excavate within the lagoon beyond the project limits in order to create a slope to drain; the primary reason for not excavating is to avoid impacts to endangered tidewater goby and its critical habitat as well as to endangered California least tern foraging habitat.

This study attempts to determine what hydrologic conditions (storm event) would create sufficient flow conditions to erode the lagoon bottom and create an equilibrium slope between the end of the proposed concrete channel and the ocean. To accomplish this, a hydraulic model was created for the J Street Drain, from approximately 500 feet upstream of the concrete channel outfall to a designated lagoon outlet into the Pacific Ocean. The United States Army Corps of Engineers (USACE) Hydraulic Engineer Center River Analysis System (HEC-RAS) software was used to model the channel reach. HEC-RAS includes a module for modeling of sediment transport, which was used to determine movement of lagoon bed material during various flow events.

The natural action of the ocean waves builds up a sand berm on the beach that periodically blocks the lagoon outlet, preventing J Street drainage from reaching the ocean and preventing tidal flow from entering the lagoon. Ventura County Watershed Protection District indicated the intent to maintain a berm elevation at a designated breach location approximately 800 feet southeast of the J Street Drain concrete channel outfall. The elevation for the maintained berm will be determined from an inland flooding study; the Watershed Protection District has maintained the berm recently at elevation 6.5 feet ± NGVD 1929, 6 inches above the water surface elevation in the lagoon. Based on this, it was assumed for this study that a berm breach would occur at the identified location and exist prior to sediment model runs. HEC-RAS modeling used a combination of hydrographs representative of runoff for the J Street Drain and the Hueneme Drain (see Figure 1). The downstream water surface boundary influence was based on tidal elevations obtained from the National Oceanic and Atmospheric Administration (NOAA).

A number of different inflowing hydrographs were used to define either a single storm event or series of storm events that would create a channel within the lagoon with positive drainage from the J Street Drain concrete channel outfall to the Pacific Ocean. Results from those sediment transport models were reviewed to interpret the sensitivity of the model to input data and the inundation frequency of the J Street Drain outlet.

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HEC-RAS Cross Section Layout

FIGURE 1

Ventura County | J Street Drain | Sediment Transport Study for Proposed Outlet at Ormond Beach Lagoon

2.0 SEDIMENT TRANSPORT MODELING

The USACE HEC-RAS model, version 4.1, was selected for hydraulic and sedimentation modeling of the J Street Drain and Ormond Beach Lagoon. HEC-RAS provides a seamless integration of sediment modeling modules within the widely accepted one-dimensional hydraulic modeling platform.

2.1 MODEL GEOMETRY

Aerial topography information obtained by HDR was used to create the hydraulic model. A three-dimensional surface was created from topography flown in 2008 in conjunction with bathymetric data for Ormond Beach Lagoon collected in 2008. Bathymetry data used in surface creation was obtained from the *J Street Drain Coastal Engineering 2008 Beach and Lagoon Monitoring Program* study, prepared by Coastal Frontiers Corporation for HDR. HEC Geo-RAS was used within Arc GIS to cut cross sections from the three-dimensional surface used in the hydraulic modeling. J Street Drain concrete channel and riprap dissipater geometry were obtained from *"J" Street Drain Improvements Phase I (2011)* construction plan documents, and were manually entered into HEC-RAS. A final downstream cross section was established in the Pacific Ocean assuming a wide flat plain located below mean sea level. All elevation data presented in this report is referenced to the NGVD 1929 datum, unless otherwise specified. Figure 1 illustrates the HEC-RAS cross section layout used in the modeling.

A berm breach was assumed to occur approximately 800 feet southeast of the J Street Drain concrete channel outfall. A mechanical breach location was identified in survey information from Ventura County Watershed Protection District, taken in January 2010. The modeled berm breach location was based on the same location. Modeled breach geometry was manually entered into HEC-RAS berm cross sections. Berm breach widths were established to be approximately 130 feet to 220 feet wide based on the 2010 berm breach survey. A narrow 50-foot low-flow channel was created through breach sections to maintain low flow channel continuity with the lagoon. Breach invert elevations were established at elevation 1.0 feet ±, similar to breach invert elevations identified in the 2010 survey.

Manning's roughness coefficients used in the hydraulic modeling were calculated using criteria in *Guide for Selecting Manning's Roughness Coefficients for Natural Channels and Flood Plains* by the United States Department of Transportation, Federal Highway Administration (FHWA). A roughness coefficient (n value) of 0.024 was used for all bare sand channels and 0.04 for all vegetated channel and overbank areas. The Manning-Strickler equation was used to calculate the n value for the proposed riprap at the end of the J Street Drain concrete channel. Assuming 4-ton riprap with a mean diameter of 4.5 feet, the calculated n value is 0.051. An n value of 0.015 was used for all J Street Drain concrete channel.

Channel bank points were established at the top of the proposed concrete J Street Drain channel obtained from design plans. Earthen channel bank points were located at the extents of the low-flow channel created in the topographic cross sections as described above. This was done to develop consistent channel hydraulics for sediment transport calculations.

Ineffective flow areas were used to eliminate flow areas outside of the active flow path throughout the model. Flow expansion and contraction was accounted for with application of ineffective flow areas upstream and downstream of the breach location and at the earthen channel outfall into the lagoon.

2.2 BOUNDARY CONDITIONS

A steady state HEC-RAS plan was created to compare model results for the 100-year flood with results from a previously completed Water Surface Pressure Gradient (WSPG) program analysis. For the HEC-RAS modeling, a mixed flow regime was simulated with an upstream water surface elevation established at normal depth in the concrete channel and a downstream water surface elevation at mean sea level (elevation 0.16 feet NGVD). The mean sea level elevation for the downstream boundary was obtained from the NOAA Santa Monica tidal gage (Station 9410840), one of the closest tidal gages to the J Street Drain location.

Sediment transport modeling uses a "quasi-unsteady" flow regime and requires a downstream water surface boundary condition and an upstream inflowing sediment load. NOAA tidal information from the Santa Monica gage was used to create a downstream boundary tidal series. Mean higher high water, mean high water, mean low water, and mean lower low water elevations were used to represent the typical series of high and low tides. Figure 2 illustrates a representative repeating tidal series which peaks twice per day. Figure 2 was based on tidal graphs found in the Santa Monica gage station data but edited to include the high and low reference elevations just cited. Figure 2 represents the repeating cycle used for the sediment transport model downstream boundary.

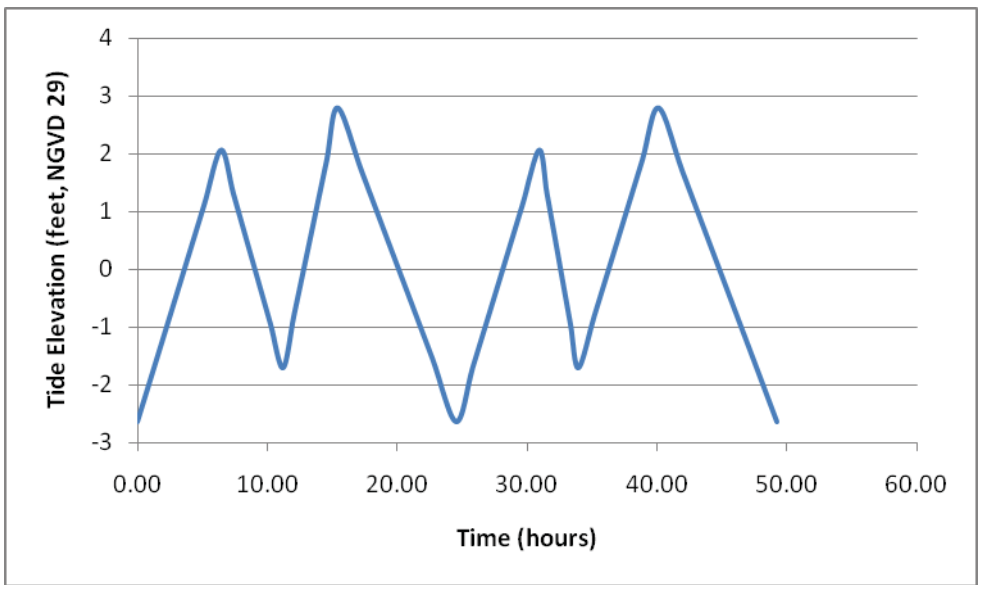

Figure 2: HEC-RAS Downstream Boundary Tidal Series

Each sediment transport model described in this report was run with a tidal series starting both at low tide (-2.63 feet) and at high tide (2.79 feet). It should be noted that when two storm events were modeled in sequence, the tide series was re-set at the appropriate high or low tide at the beginning of each storm event.

Inflowing sediment load was assumed to be zero for the J Street Drain. Previous analysis completed by HDR, in *Sedimentation Study for the J Street Drain and Oxnard Industrial Drain,* based on the United States Department of Agriculture RUSLE2 computer program, identified minimal sediment delivery from the watershed through the J Street Drain. Annual sediment yield for J Street Drain and Hueneme Drain combined was approximately 17 tons per year or about 5 percent of the total estimated annual load to the

lagoon. This inflowing sediment load was assumed to be insignificant to sediment transport occurring within the lagoon during a breach cycle as discussed in more detail later.

2.3 HYDROLOGY

For the steady state discharge modeling for the 100-year event, the design discharge provided by Ventura County Watershed Protection District (2,127 cfs at the outfall of the J Street Drain concrete channel) was used. This flow rate includes runoff from Hueneme Drain.

Sediment transport modeling required "quasi-unsteady" flow data, which was input as a hydrograph broken into 5-minute periods. Ventura County Watershed Protection District provided hydrograph information to HDR for the J Street Drain and Hueneme Drain for the 2-year, 5-year, 10-year, 50-year, and 100-year storm events. Flows of interest, based on sediment modeling performance, were the 2-year, 5-year, and 100-year storm events, which are shown in Figure 3, Figure 4, and Figure 5, respectively.

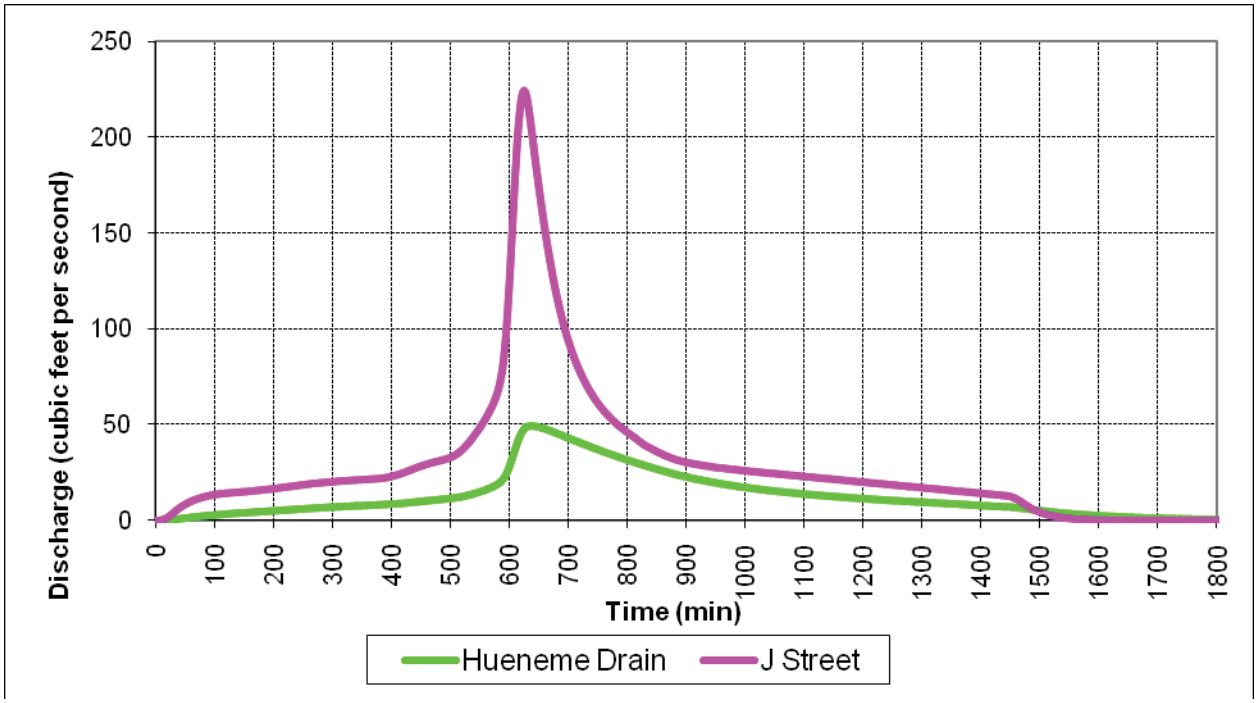

Figure 3: 2-Year Storm Hydrograph

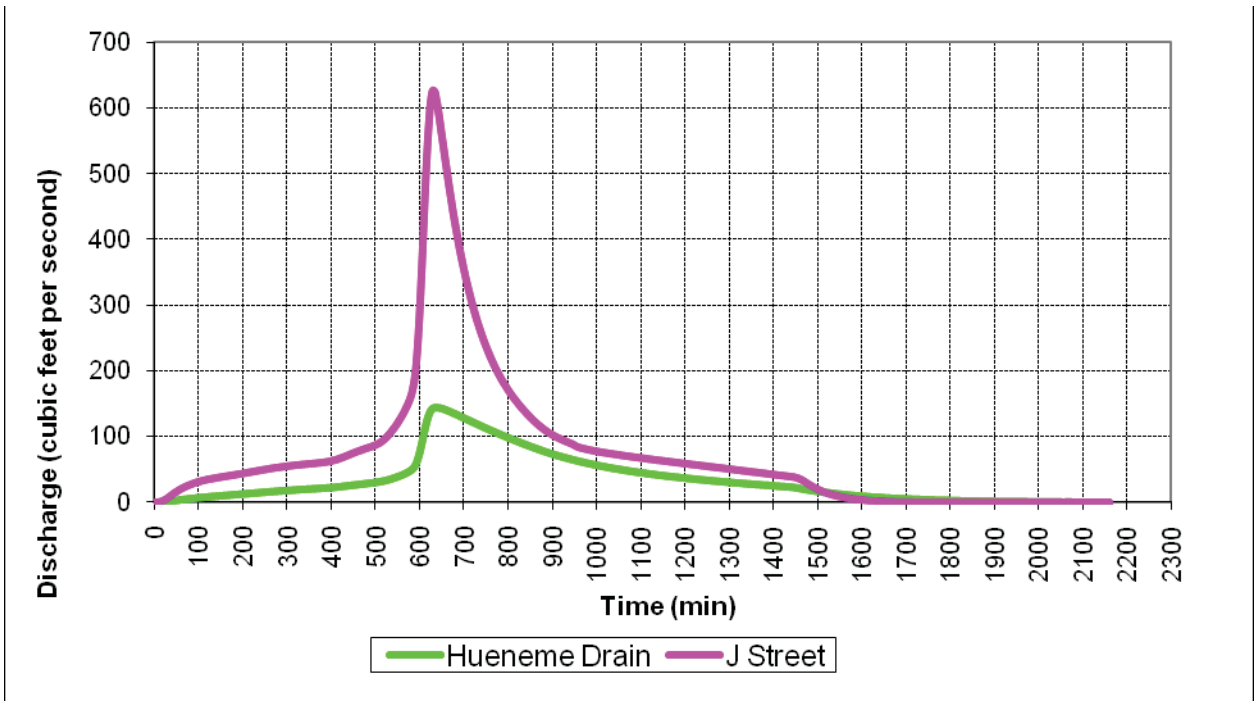

Figure 4: 5-Year Storm Hydrograph

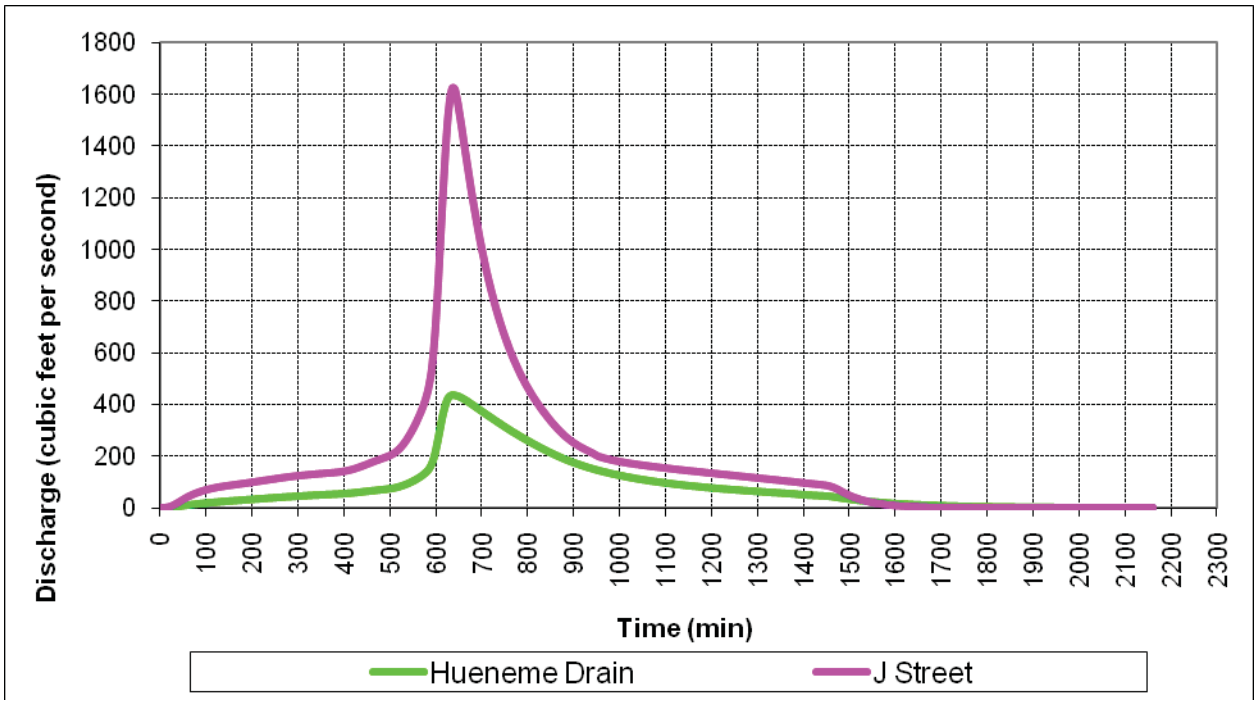

Figure 5: 100-Year Storm Hydrograph

The J Street Drain hydrograph was input into the upstream HEC-RAS river station 1813. Hueneme Drain flows were input into the model as a lateral flow series at river station 1407. Hueneme Drain and J Street Drain hydrographs were allowed to combine with coincident peaks, to be consistent with the hydrograph plots provided by the Watershed Protection District.

2.4 BED GRADATIONS AND SEDIMENT MODELING

Sediment sampling and analyses were reported in the *J Street Drain Coastal Engineering 2008 Beach and Lagoon Monitoring Program* study prepared by Coastal Frontiers for HDR. This data was used to identify grain size distributions representative of the outlet of J Street Drain channel in the lagoon and the beach berm area. Berm area grain size distributions were taken from Transect OL01 data in the report. Figure 6 is a screen capture of the grain size distribution used in sediment modeling for the J Street Drain outlet in the lagoon and Figure 7 is a screen capture of the grain size distribution used to represent the berm area. Lagoon J Street Drain outlet grain size distributions were applied between river station 503 and river station 1273. Transect OL01 berm grain size distributions were applied between river station -82 and 293.

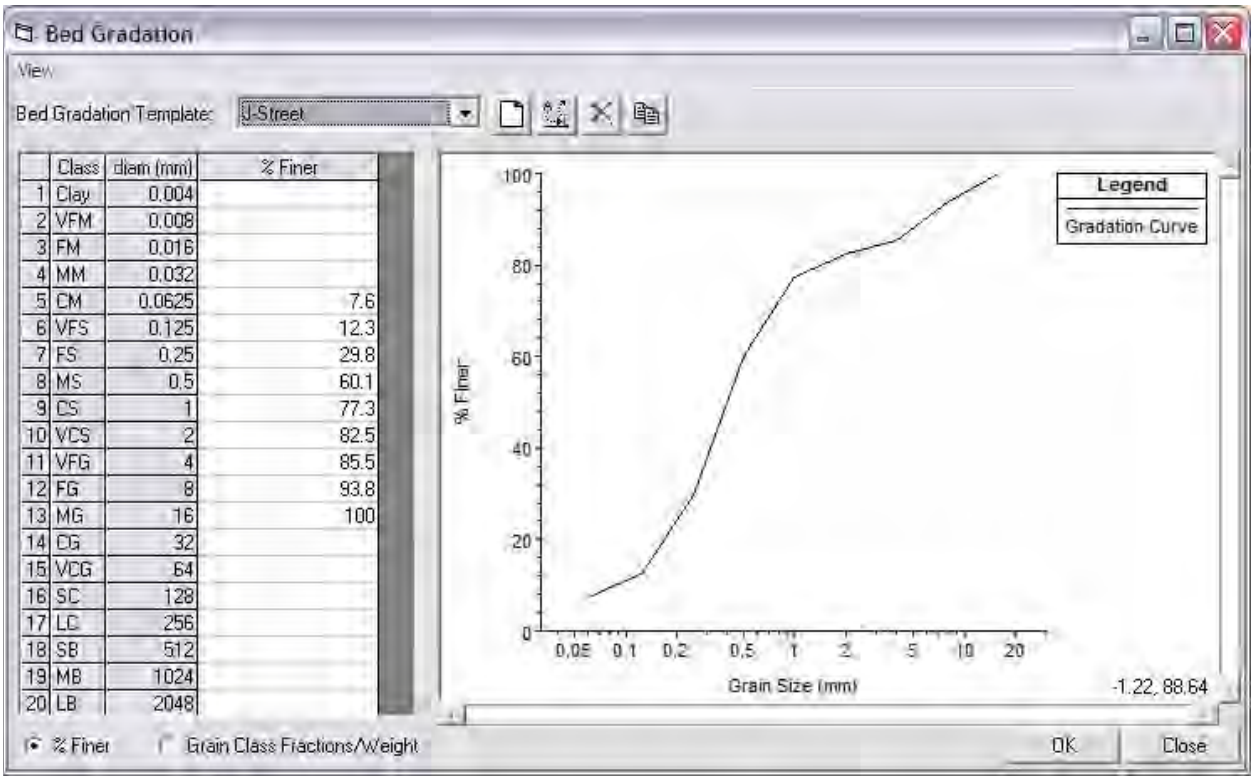

Figure 6: Lagoon J Street Drain Outlet Grain Size Distribution

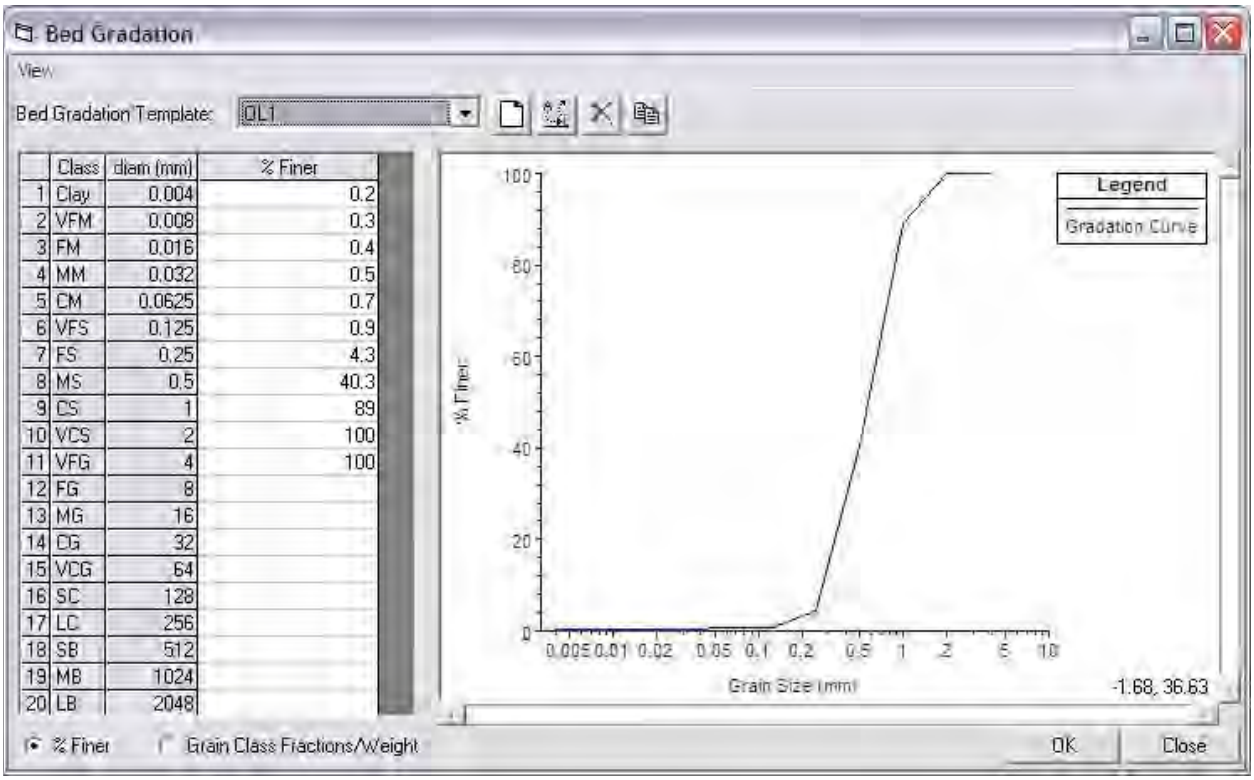

Figure 7: Transect OL01 Berm Grain Size Distribution

Various sediment transport equations were investigated to determine the appropriate equation for the J Street Drain sediment transport study. Ultimately, the Laursen-Copeland method was determined to represent the system most accurately. This transport method is the only option available in HEC-RAS which accounts for silt sized material. Bed sorting calculations were completed using the Exner 5 method. Particle fall velocity was calculated using the Report 12 method. The Report 12 method is the undocumented fall velocity default method in HEC-RAS. It computes fall velocity as a function of particle shape factor. Cross section weighting was set to 100 percent on the main cross section, rather than averaging hydraulic parameters from surrounding cross sections. This option appeared to improve model stability. A pass through boundary was established at the model outlet (river station -82) to eliminate unrealistic deposition of material in the ocean.

Erosion and deposition limits were defined at the bank station points as discussed in Section 2.1 of this report. The focus of this analysis was on the development of a low-flow channel through the lagoon to maintain positive drainage, which supported the selection of erosion and deposition limits in the model. The concrete and riprap portions of the J Street Drain were erosion-limited by application of a 0-foot sediment reservoir depth. Stations downstream of river station 1306 were assigned a sediment reservoir depth of 10 feet below initial invert elevations.

3.0 MODELING RESULTS

3.1 STEADY STATE

HEC-RAS modeling was initiated with a steady state plan to verify hydraulic result agreement with previous analyses. A 100-year water surface elevation at the outfall of the J Street Drain was calculated to be elevation 7.9 feet ±. Previous WSPG software analyses, used in J Street channel design, calculated a water surface elevation at the outfall of 7.4 feet ±. Approximately 500 feet upstream of the J Street Drain outfall, the HEC-RAS water surface elevation was 8.0 feet ±, and the WSPG water surface was 7.9 feet ±. Minor variations in results likely exist due to more refined downstream geometry for the HEC-RAS modeling, variation in starting water surface elevation, as well as differing methods in the programs for calculation of rapidly varied flow conditions and expansion and contraction of flow. However, the results converge within acceptable limits and indicate HEC-RAS results are similar to previous analyses.

3.2 SEDIMENTATION ANALYSIS

A number of hydrologic series were run through the HEC-RAS model to determine a storm event which would erode and transport enough material from the existing lagoon bed to create positive drainage to the Pacific Ocean following an initial berm breach. All storm series were run with the tide series beginning at both low tide and high tide. After a number of model iterations, it was determined that positive drainage of the J Street Drain was achieved with two consecutive 2-year storms. Figure 8 illustrates the sediment transport results of two consecutive 2-year storm events for both high and low tide starting conditions. The phrase “two consecutive storms” implies that the storm events occur in one season. It is assumed that once breached, the berm does not build up again until the end of the storm season.

For the purpose of this study, the two 2-year storms were run consecutively over a 70-hour period. The plotted 2-year consecutive storm sequence assumes that the breach condition exists prior to the storm event and throughout the duration of the approximatley 70-hour two-storm hydrologic series. Minor variations in results can be seen, resulting from the variation in tidal downstream control sequencing. Tidal sequencing can be completed for infinite initial conditions; however, the high and low tide initial conditions provide a good representation of model bounds. There is a high point of elevation 0.68 feet ± at river station 1096 in the high tide scenario; however, due to the complex nature of sediment modeling, this result was still viewed as a reasonable indicator for positive drainage.

To recap, the sediment tranport simulation was based on two consecutive 2-year storms run consecutively in the model over a 70-hour period. It is expected that the results would be similar for two storms separated within a single season if the berm did not build up between the storms. Although not modeled explicitly, it is also judged that if the first 2-year storm occurred after a berm breach and then the berm reformed, a second 2-year storm in a later year would be able to achieve the equilibrium slope in the lagoon if the berm was breached prior to the second 2-year event.

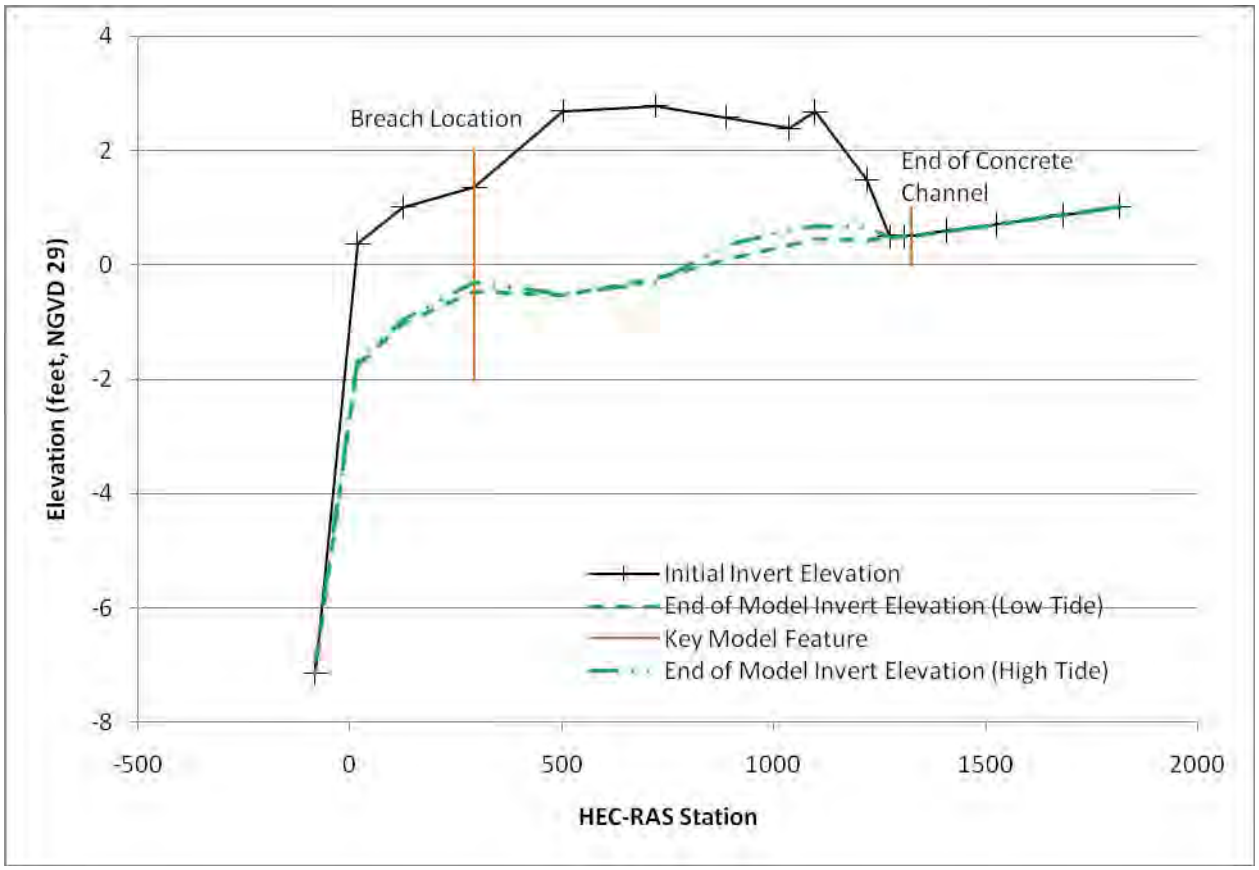

Figure 8: Sediment Transport Modeling Results: Two Consecutive 2-Year Storm Events

A single 5-year storm also created positive drainage through the lagoon for the J Street Drain and Hueneme Drain outfalls. Figure 9 illustrates the sediment transport model results for both high and low tide initial conditions. Modeled results assume an initial breached condition, which is maintained throughout the approximately 36-hour single-storm hydrologic series. Minor variations in sediment results between high and low tide initial conditions are illustrated. Bed elevations are slightly higher on the berm compared to the lagoon at the breach location due to changes in bed material gradations and modeling refinement limitations. The one-dimensional sediment transport model is generally considered an erosion and deposition trend indicator as opposed to a method to produce precise and accurate bed elevations over time or at the end of a simulation.

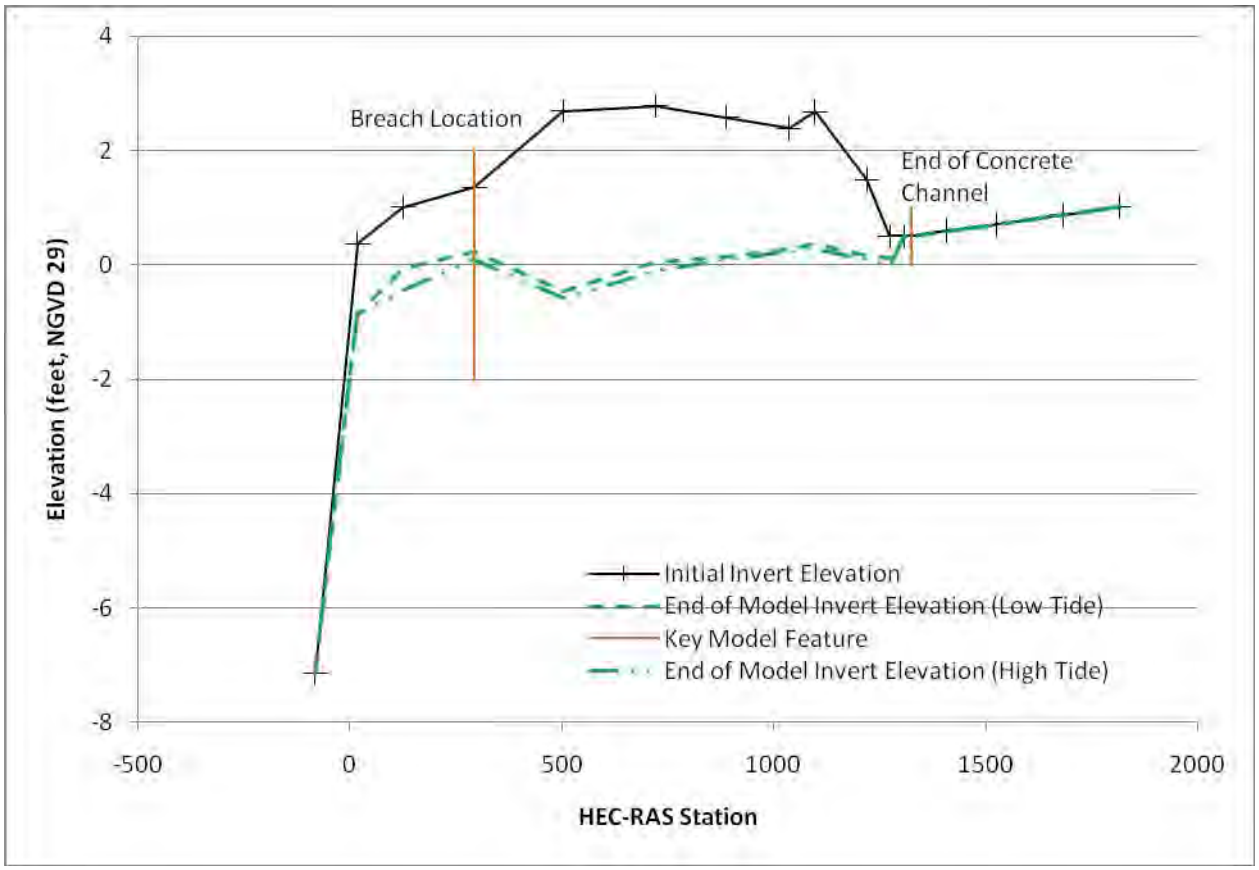

Figure 9: Sediment Transport Modeling Results: 5-year Storm Event

Finally, a flow series consisting of a 5-year storm followed immediately by a 100-year storm was modeled to simulate an extreme scour condition. This configuration represents a situation where existing sediment above the proposed J Street Drain outfall elevation has been washed out of the lagoon and a high-flow flood event occurs immediately thereafter. Figure 10 illustrates both the high and low tide initial condition results for the 5-year storm followed by the 100-year storm series.

The resulting maximum scour invert elevation in the lagoon is at elevation -4.2 feet ±. It is noted that the end of simulation invert elevations at the breach location are higher than in the lagoon, but it should be recognized that the model is primarily configured for low-flow events. It is expected that extensive time spent on modeling refinements would most likely result in a smoother profile with somewhat less overall scour elevation results.

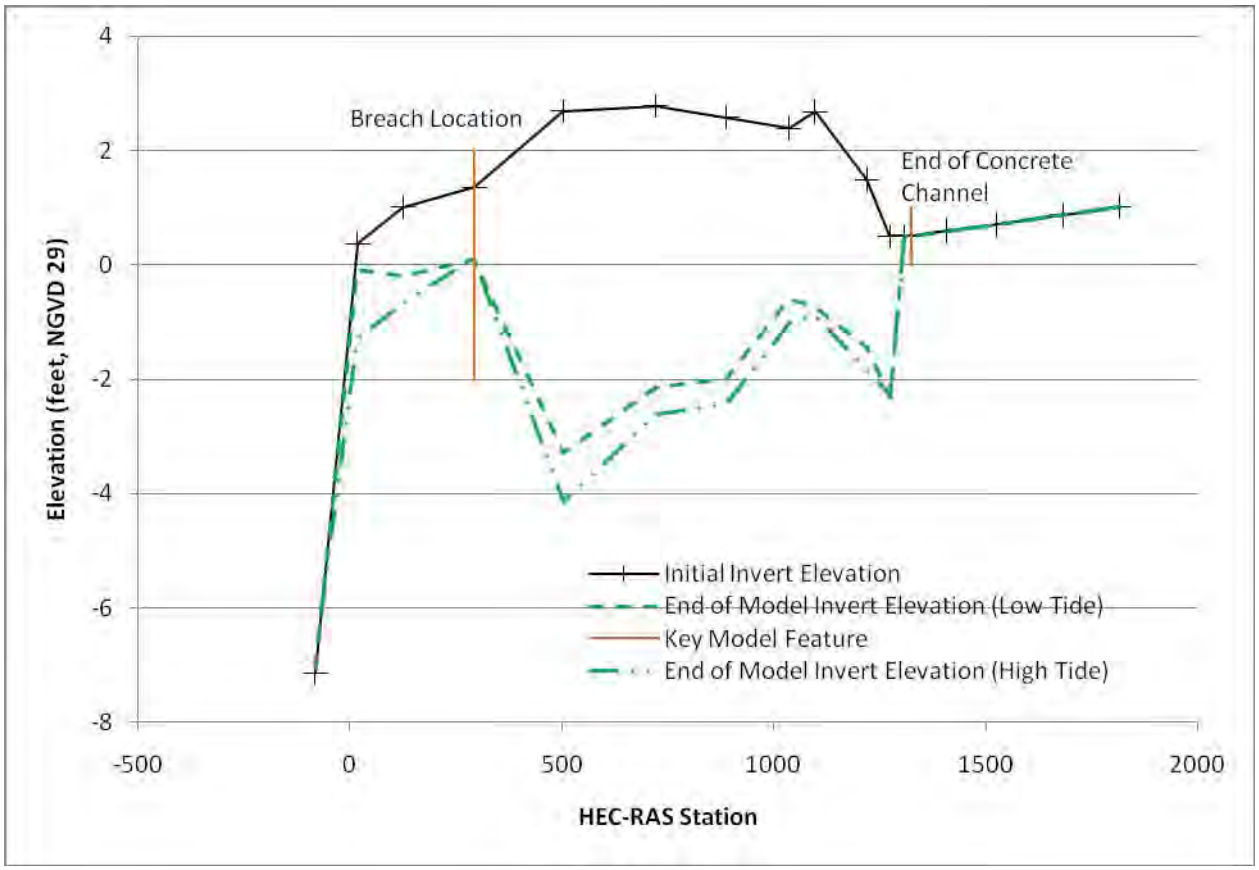

Figure 10: Sediment Transport Modeling Results: Consecutive 5-Year and 100-Year Storm Events

3.4 DISCUSSION

Sediment transport modeling identified two threshold conditions at which the lagoon bottom downstream of the proposed J Street Drain concrete channel outfall would erode to maintain positive drainage for the proposed improvements. Either two consecutive 2-year storm series or a single 5-year storm series would create a low-flow channel capable of maintaining positive drainage. The probability of a 2-year flood event in a given year is 50 percent. The probability of two consecutive 2-year storms occurring in any given year is approximately 25 percent. The probability of a 5-year storm occurring in a given year is 20 percent. The probability of a 5-year flood event occurring within a 3-year period is approximately 50 percent.

Sediment transport modeling results are highly dependent on several key assumptions. In all modeling, an initial berm breach condition was assumed. Without intervention, a breach condition is highly variable depending on flow conditions within the lagoon and the development of the beach berm by the ocean waves. A controlled breach location with a maintained elevation will facilitate conditions similar to those used in the modeling. It should also be noted that scour from tidal flows in and out of the lagoon through the breach was not considered for this analysis.

Given the proximity of the proposed J Street Drain outfall elevation to mean sea level, tidal cycles have a large impact on sediment transport capacity of the system. Even in a fully-breached lagoon berm condition, the J Street Drain will likely be inundated twice a day from tidal action. When a berm is present, the channel is also likely to be inundated to some extent over a long period, from lagoon backwater.

Based on previous analyses discussed in *Sedimentation Study for the J Street Drain and Oxnard Industrial Drain*, a total inflowing load potential of 17 tons per year was calculated for J Street Drain and Hueneme Drain. This load is insignificant compared to the total load (5,000 tons) leaving the sediment transport model in the two consecutive 2-year storm series. Annual inflowing load represented approximately 0.30 percent of the out-flowing storm sediment load, and as such, was assumed to be negligible.

Peak storm event modeling for an extreme scour condition resulted in a maximum scour elevation of -4.2 feet ±. This would indicate potential for general scour degradation of approximately 5 feet at the toe of the J Street Drain outfall riprap pad. It is recommended to provide scour protection of at least 10 feet for the toe of the riprap.

4.0 CONCLUSIONS

The proposed improvements to J Street Drain will lower the existing channel outlet to an elevation of 0.5 feet NGVD 1929. The current Ormond Beach Lagoon bottom at the channel outlet is at elevation 3.0 feet ±. Without excavating a drainage outlet in the lagoon, the lagoon bottom will be higher than the channel outlet after project construction. This will create a condition where J Street Drain will not be able to completed drain through the lagoon. Sediment transport modeling illustrates that if a breached berm condition exists for Ormond Beach Lagoon, it is possible for a new low-flow channel to form in the lagoon. This new low-flow channel would effectively lower portions of the lagoon bottom and maintain positive drainage from the J Street Drain outfall to the Pacific Ocean. Both cases of either two consecutive 2-year storm series or a single 5-year storm series were found to create this low-flow channel. These results are based on a breached condition existing throughout the storm hydrograph. In a maintained breach scenario, and following either storm series just mentioned, the J Street Drain outlet would likely only be inundated until the lagoon elevation exceeds elevation 6.0 feet, during storm events, and twice a day during tidal action.

5.0 REFERENCES

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Ventura County Watershed Protection District (2011). "J" Street Drain Improvements Phase 1 Construction Design Plans.

Technical Memo

To: Kirk Norman	
From: Bill Young	**Project:** J Street/Oxnard Drains Numerical Hydraulic Model
CC:	
Date: 9-30-11	**Job No:** 75217

PROJECT LOCATION

The project area encompasses J Street Drain, Oxnard Industrial Drain and Hueneme Drain with the surrounding inland areas, located in the city of Oxnard, California as outlined below.

INTRODUCTION

This Technical Memo presents the two-dimensional inland hydraulic analysis over a domain extending from E. Hueneme Road south to the Pacific Ocean, J Street Drain to the west and Edison rail spur to the east. This hydraulic model consists of numerical analysis to account for physical changes to the beach, different flow rates, and inland flow up to E. Hueneme Road. The model is run to approximate flooding that occurred during the January 17-18, 2010 storm and to simulate the approximate 100 year return period storm. Resulting data will be compared to flooding conditions observed along Perkins Road. The existing pump station at the Southerly end of Perkins Road will be reviewed for potential contributions to the observed flooding. In addition, the appropriately groomed berm height will be determined based on analysis of the results.

PROJECT DESCRIPTION

The purpose of this Memo is to describe the procedure used to develop a model domain to extend from E. Hueneme Road south to the Pacific Ocean. The model extends from J Street Drain to the west to Edison rail spur to the east. The model includes surface water flow from upland areas adjacent to J-Street, Hueneme, and Oxnard Industrial drains, as well as discharge through the lagoon across the beach into the Pacific Ocean. The hydrographs used for the model were supplied by the Ventura County Watershed Protection District (District) and were utilized to simulate approximately the January 17-18, 2010 storm. The storm caused flooding in the Ormond Lagoon area after more than 2 inches of rain fell in 24-hours but the berm did not breach. The 100-year storm event is also included in the model. The data (hydrographs and rainfall) provided by the District also includes Oxnard Industrial Drain (OID), Hueneme Drain, and J Street Drain, and is used to validate the model results.

ANALYSIS

MIKE 21 Release 2011 SP4, developed by DHI was used to build the model domain for the subject project. MIKE 21 Flow Model is a modeling system for 2D free-surface flows and is generally applicable to the simulation of hydraulic and environmental phenomena in lakes, estuaries, bays, coastal areas and seas.

All units for modeling results are presented in the Standard International (SI) system in order to maintain consistency within the MIKE21 code. Units in the MIKE 21 results are all shown in SI to conform to the model standards. Results are converted to English units for the main body of the report.

The following data was used to build the model domain in MIKE 21:

Topography and Bathymetry

Bathymetric data for the domain area being studied was built using topographic aerial survey data collected and supplied by Coast Surveying, Inc in July 2010, which was based on California Coordinate System (CCS27), Zone V, 1927 NAD, and NGVD 29. In addition, as-built plans for Oxnard Industrial Drain (OID), Hueneme Drain, and J Street Drain were used to build the channel sections within the bathymetry file.

Hydrologic Data

The hydrographs for the January 17, 2010 storm and the 100-year events as shown in figures below were supplied by Ventura County Watershed Protection District and were applied as inputs to the inland grid model to simulate storm events.

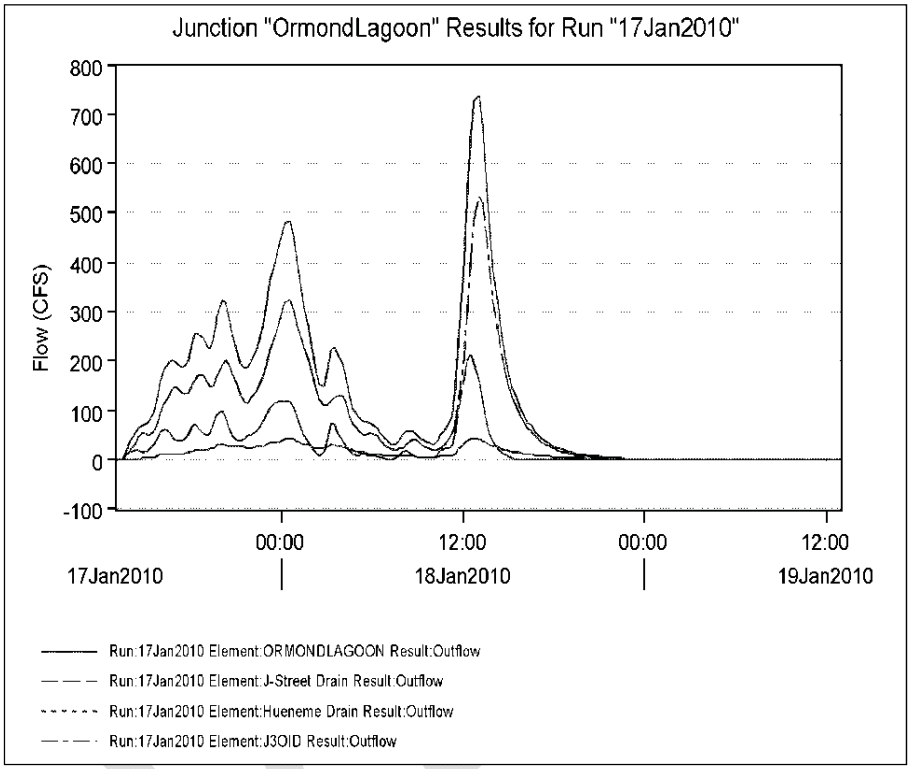

Figure 1: Hydrograph for the January 17-18, 2010 event

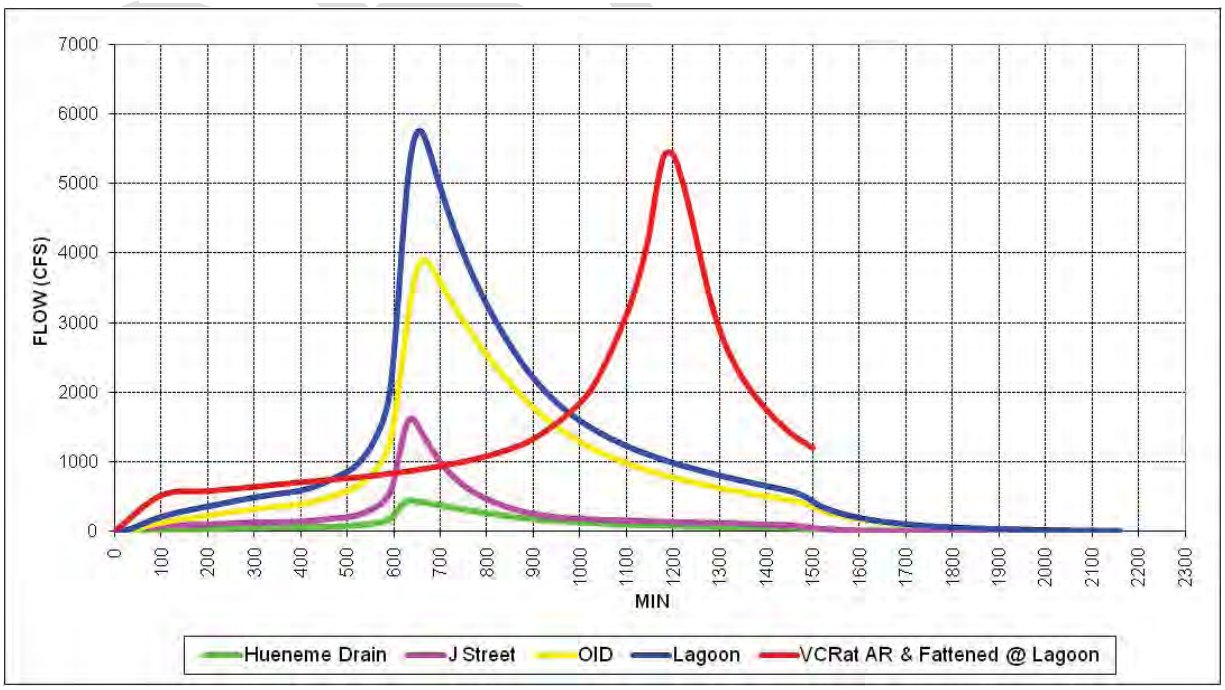

Figure 2: Hydrograph for the January 2010 100-year event

Bed Friction

The values used for the resistance, or bed frictions (Manning's n-values) are: 0.03 - 0.04 for open areas and 0.0125 - 0.025 for hardscaped areas.

Initial Surface Elevation

The model was calibrated to an elevation of 8.5 feet on Perkins Road, as was measured when the January 17-18, 2010 event occurred. The initial surface elevation was adjusted until the desired elevation was reached on Perkins Road.

Analysis of the January 2010 event yielded results that described the flooding pattern that occurred due to this storm event and the berm not breaching. The calibrated initial surface elevation from this event was used to run the 100-year event, and determine the groomed lagoon elevation that will be required in order to minimize impacts to the area.

RESULTS

Based on the input parameters discussed above, the following information describes and graphically presents the resulting data of the MIKE 21 model. Figure 3 represents the

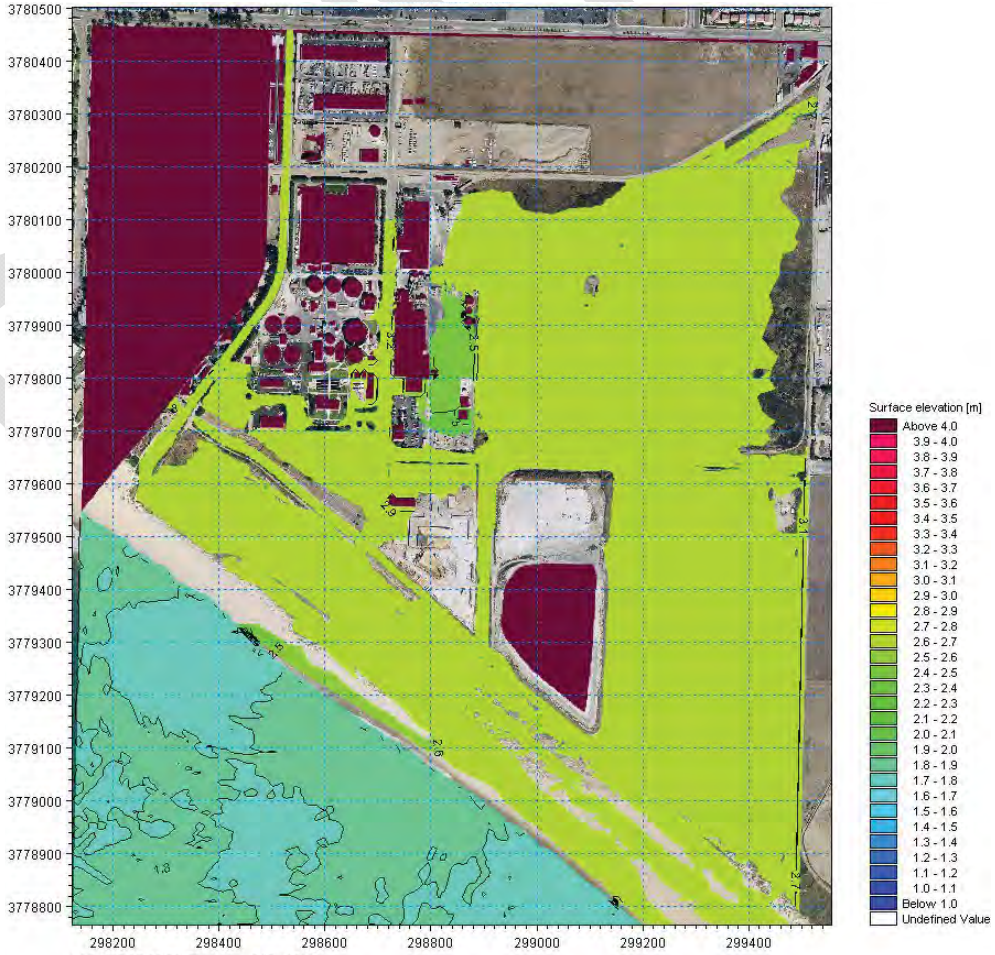

Figure 3: Peak flow during the January 17-18, 2010, with berm closed

results of the model run with conditions as experienced during peak flooding on January 18, 2010. The depth and extent of flooding is comparable to flooding conditions observed in the area on January 18, 2010. As evident from Figure 3 above, the inland flooding around the wastewater treatment plant and the paper plant, as well as on Perkins Road was very similar in pattern to what was actually observed during that storm event.

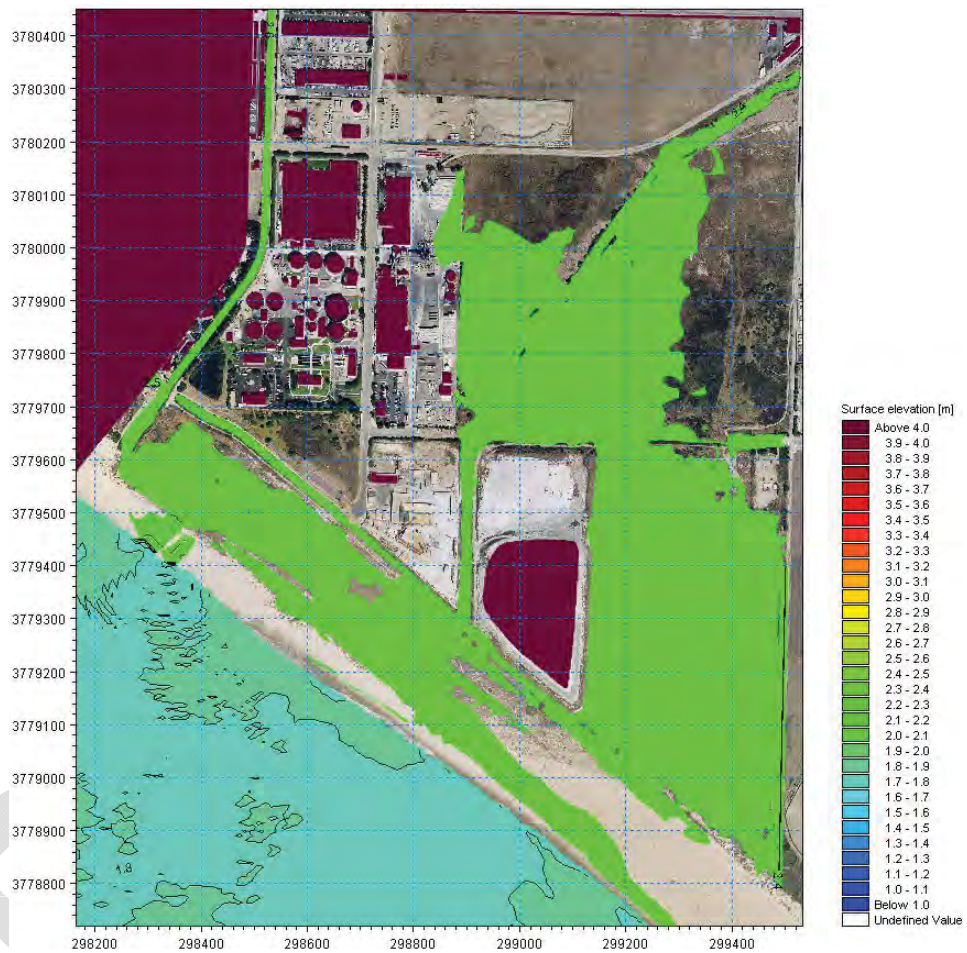

Figure 4: Peak flow during the January 17-18, 2010 storm, with berm groomed to elevation 6.5'

Figure 4 shows the reduced flooding that would have occurred if the berm were groomed to elevation 6.5 feet NGVD at the peak flow (approximately 20 hours into the storm event) without full breaching of the berm. Upon inspection of the two results (Figures 3 and 4), the inland flooding around the wastewater treatment plant and the paper plant, as well as surrounding areas was significantly minimized when the berm was groomed to elevation 6.5 feet (1.98 meters) for the January 17, 2010 storm event. In addition, Perkins Road appears to be dry as shown in Figure 4, when the berm is groomed.

In order to minimize the impacts of a 100-year flood storm event, the berm elevation is recommended to be groomed at elevation 6.5 feet NGVD, based on the analysis of the results.

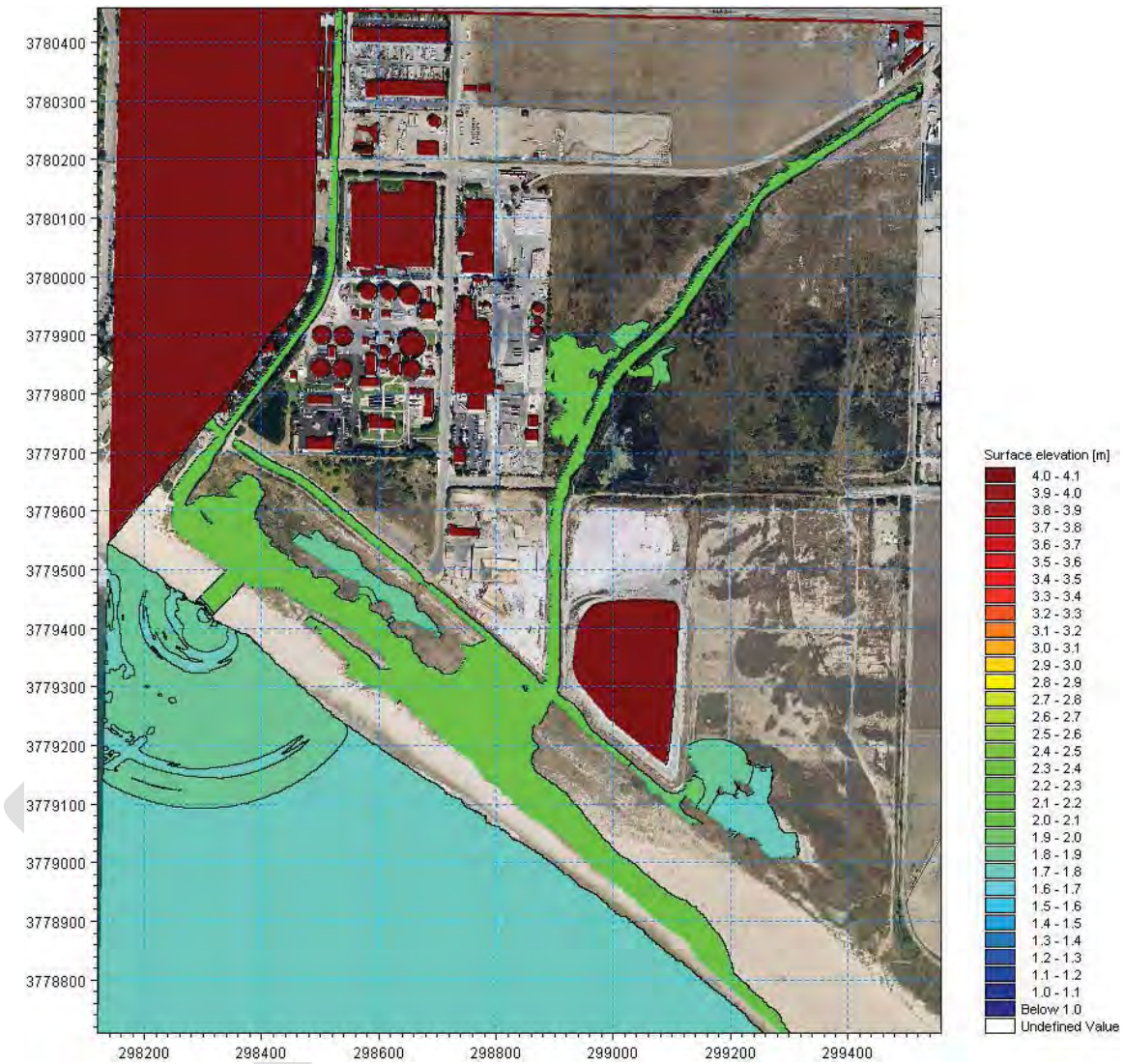

Figure 5: 100-Year Storm event with berm groomed to elevation 6.5'

Figure 5 presents the results of the Mike 21 model analysis for a 100-year storm with the berm groomed at elevation 6.5 feet NGVD. Figure 5 is a screen capture of the model flooding approximately 3 hours into the storm event when the berm first breaches naturally. The subsequent results of this breach will erode the sand berm in this area allowing the lagoon to become tidal. Under tidal conditions the lagoon water surface can quickly rise and fall with the ocean water surface.

Biological Technical Report

J Street Drain Project
Ventura County, California

July 2008
Revised September 2011

Prepared for

Ventura County Watershed Protection District
800 South Victoria
Ventura, California 93009-1610

Prepared by

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TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 PROJECT DESCRIPTION AND LOCATION 1

2.1 PROJECT LOCATION 1
2.2 PROJECT DESCRIPTION 1
2.3 PURPOSE, NEED, AND PROJECT OBJECTIVES 7
2.4 PROJECT CHARACTERISTICS 7
2.5 CONSTRUCTION 8
2.6 OPERATIONAL – BEACH ELEVATION MANAGEMENT PLAN 17
2.7 PROJECT TOPOGRAPHY 18
2.8 PROJECT SOILS 18

3.0 SURVEY METHODOLOGY AND LIMITATIONS 21

3.1 LITERATURE SEARCH 21

4.0 BIOLOGICAL RESOURCES 21

4.1 VEGETATION COMMUNITIES 21
4.1.1 Coastal Brackish Marsh 22
4.1.2 Southern Coastal Salt Marsh 22
4.1.3 Open Water 22
4.1.4 Southern Foredune 27
4.1.5 Eucalyptus Woodland 27
4.1.6 Disturbed Habitat 27
4.1.7 Urban/Developed 28
4.2 BOTANICAL SPECIES 28
4.3 WILDLIFE SPECIES 28
4.3.1 Potential and Known Fish Species 28
4.4 RAPTOR HABITAT, NESTING, AND FORAGING 28

5.0 U.S. ARMY CORPS OF ENGINEERS AND CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTIONAL AREAS 31

5.1 COASTAL COMMISSION JURISDICTIONAL AREAS 31

6.0 SENSITIVE BIOLOGICAL RESOURCES 32

6.1 SENSITIVE VEGETATION COMMUNITIES 32
6.2 SENSITIVE BOTANICAL SPECIES 32
6.3 SENSITIVE WILDLIFE SPECIES 33

7.0 WILDLIFE DISPERSAL CORRIDOR OR LINKAGES 43

8.0 OTHER REGULATORY REQUIREMENTS 44

8.1 RAPTOR HABITAT, NESTING, AND FORAGING (MBTA) 44
8.2 CITY OF OXNARD GENERAL PLAN 44
8.3 CITY OF PORT HUENEME GENERAL PLAN/CONSERVATION/ OPEN SPACE/ENVIRONMENTAL RESOURCES ELEMENT 45

9.0 DIRECT AND INDIRECT IMPACTS 45

9.1 DIRECT IMPACTS 45
9.1.1 Vegetation Communities/Habitats 45
9.1.2 Sensitive Botanical Species 46
9.1.3 Sensitive Wildlife Species 51
9.1.4 USACE and CDFG Jurisdictional Areas 54
9.2 INDIRECT IMPACTS 59
9.2.1 Sensitive Vegetation Communities 59
9.2.2 Sensitive Wildlife Species 59
9.2.3 Raptor Habitat, Nesting, and Foraging 60
9.2.4 Water Quality 60
9.3 OTHER REGULATORY REQUIREMENTS 60
9.3.1 City of Oxnard General Plan 60
9.3.2 City of Port Hueneme General Plan 60

10.0 MITIGATION MEASURES 60

10.1 DIRECT/INDIRECT IMPACTS 60
10.1.1 Vegetation Communities/Habitat 60
10.1.2 Botanical Species 61
10.1.3 Wildlife Species 61
10.1.4 USACE, CDFG, and CCC Jurisdictional Areas 62
10.1.5 Raptor Habitat, Nesting, and Foraging 62
10.1.6 Water Quality 63

11.0 BIBLIOGRAPHY 63

Appendices

Appendix A Site Photographs
Appendix B Botanical Species Observed
Appendix C Wildlife Species Observed
Appendix D California Least Tern/Snowy Plover Protocol Survey
Appendix E USACE and CDFG Jurisdictional Wetland Delineation
Appendix F Potential Sensitive Species Table
Appendix G 2009 and 2010 California Least Tern Breeding Survey Reports
Appendix H 2009 and 2010 Western Snowy Plover Breeding Survey Reports

Figures

Figure 1. Project Regional & Vicinity Map 3
Figure 2. Project Survey Area 5
Figure 3a. Coffer Dam Construction – Phase 1 9
Figure 3b. Coffer Dam Construction – Phase 2 11
Figure 3c. Coffer Dam Construction – Phase 3 13
Figure 3d. Coffer Dam Construction – Phase 4 15
Figure 3d. Coffer Dam Construction – Phase 4 15
Figure 4. Topography and Soils 19
Figure 5a. Northern Survey Area Vegetation 23
Figure 5b. Southern Survey Area Vegetation 25
Figure 6. Tree Locations 29
Figure 7. Critical Habitat and Observed Sensitive Wildlife Species 37
Figure 8. Wildlife Movement Areas 41
Figure 9a. Project Impacts Northern Vegetation Communities 47
Figure 9b. Project Impacts Southern Vegetation Communities 49
Figure 10. Project Impacts to Critical Habitat and Observed Sensitive Wildlife Species 55
Figure 11. Project Impacts Federal/State Jurisdictional Areas 57

Tables

Table 1. Summary of Vegetation Communities within the Project Survey Area 22
Table 2. Summary of USACE, CDFG, and CCC Jurisdictional Areas 31
Table 3. Project Impacts to Vegetation Communities 46
Table 4. Project Impacts to Tidewater Goby Critical Habitat 53
Table 5. Project Impacts to Federal/State Jurisdictional Areas 54
Table 6. Project Impacts to Federal/State Jurisdictional Areas and Required Mitigation 62

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1.0 INTRODUCTION

At the request of the Ventura County Watershed Protection District (District), HDR Engineering, Inc. (HDR) conducted a general biological survey and vegetation mapping for the J Street Drain Project (Figure 1). The biological survey work completed for this report includes a baseline site survey, an inventory of the plants and animals observed onsite, and an assessment of the vegetation communities(s) associated with the project. The purpose of this study was to: (1) assemble a vascular plant and vertebrate animal inventory of the site, and (2) determine whether any sensitive species or vegetation communities could be impacted by development of the proposed project.

2.0 PROJECT DESCRIPTION AND LOCATION

2.1 PROJECT LOCATION

The project site is located along J Street, which is on the border of the City of Oxnard and City of Port Hueneme in Ventura County (Figure 1). The project site continues into the Ormond Beach Lagoon, which is located south of the J Street Drain (Drain). The predominant surrounding land uses consist of residential development on each side of J Street, some commercial uses near Hueneme Road, and the Oxnard Wastewater Treatment Plant (OWTP) near the lagoon. General site photos are located in Appendix A.

2.2 PROJECT DESCRIPTION

The existing Drain is a trapezoidal concrete-lined channel located along the centerline of J Street, and begins upstream at the Redwood Street crossing and terminates downstream at the west boundary of the Ormond Beach Lagoon (Figure 2). The facility also includes culverts under the street crossings at the following locations:

- Redwood Street
- Teakwood Street
- Yucca Street
- Bard Road
- Pleasant Valley Road
- Clara Street
- Hueneme Road
- Railroad crossing – Ventura County Railroad (VCRR)

The existing concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station and the remaining earthen portion continues downstream before turning east at the sand berm.

The Ventura County Watershed Protection District (then known as the Ventura County Flood Control District) was formed on September 12, 1944, when the California State Legislature approved the Ventura County Flood Control Act. The District was formed, in part, to provide for the control and conservation of flood and stormwaters and for the protection of watercourses, watersheds, public highways, life and property in the District from damage or destruction from these waters. On January 1, 2003, the name was changed to the Ventura County Watershed Protection District (District) to reflect changes in community values, regulatory requirements, and funding opportunities. The District's mission is to protect life, property, watercourses, watersheds, and public infrastructure from the dangers and damages associated with flood and stormwaters. Goals of the District include:

- Comprehensive, long range watershed planning
- Collaboration with watershed stakeholders
- Administration of adopted regulations, policies, and resolutions
- Responsible and accountable use of public resources
- Excellence in public service

The District possesses jurisdictional authority over any channel containing runoff with a peak flow rate of more than 500 cubic feet per second (cfs) during a 100-year storm. Laterals and side drains contributing runoff to the jurisdictional channels (referred to as "redline" channels) are under the jurisdiction of the state and or appropriate local agency (City of Oxnard for this project). However, lateral and side drain connections to jurisdictional channels must obtain an encroachment permit from the District and provide sufficient information and engineering studies to show that the connection does not negatively impact the conveyance capacity of the jurisdictional channel.

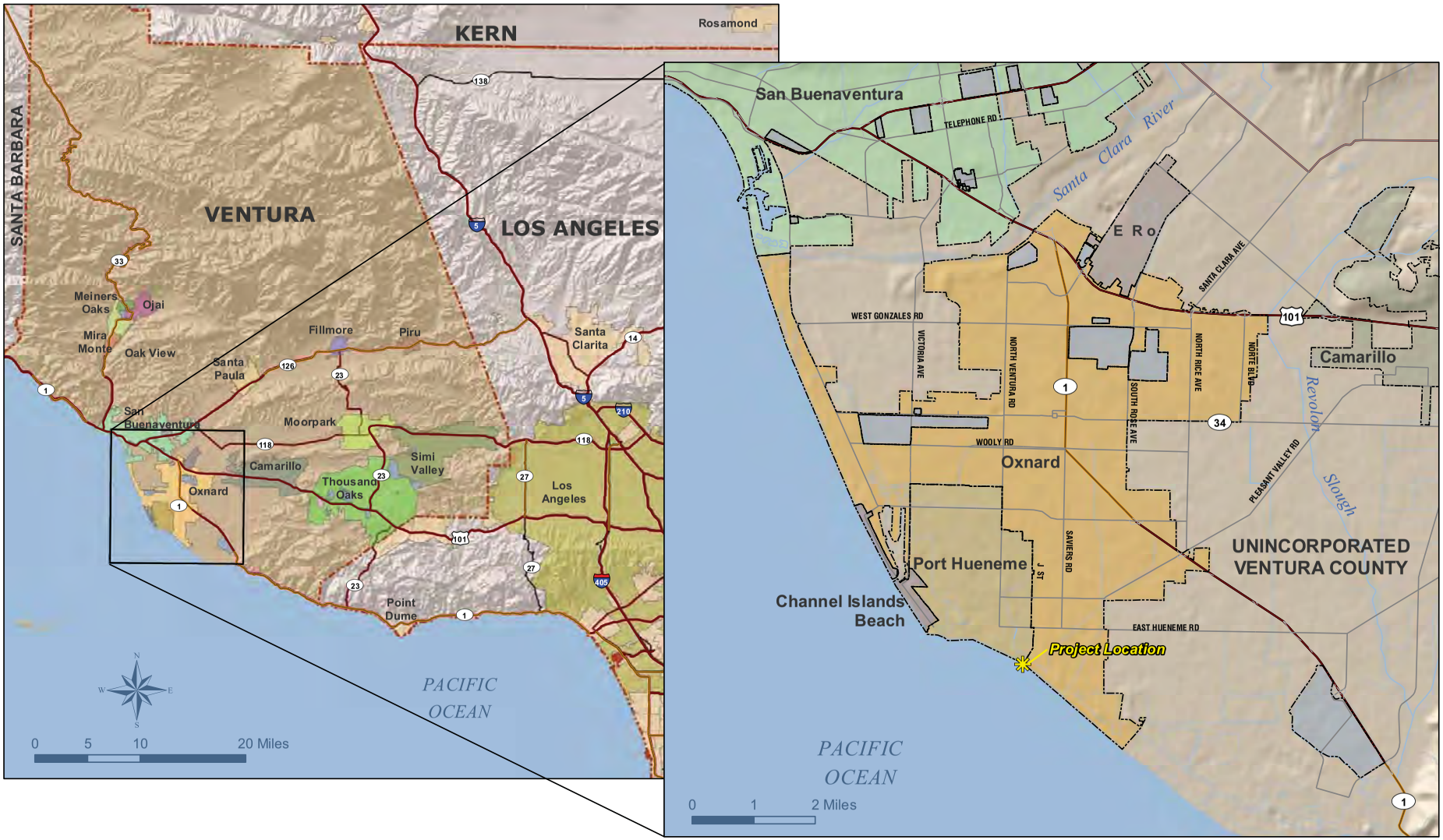
In order to identify and focus long range priorities within the District an Integrated Watershed Protection Plan (IWPP) was prepared. The objectives of the IWPP include:

- To provide a systematic process for the inclusion of projects into the District's Capital Improvement Plan over its five-year planning period; and
- To improve the long-range District planning process for the 20-year period subsequent to the Capital Improvement Plan by allocating projected revenues to identified projects. The IWPP also provides Level-of-Service evaluation that identifies the need for additional project funding to achieve desired flood mitigation goals.

According to studies sponsored by the District, the area surrounding the J Street Drain is anticipated to flood during a severe rain event. The J Street Drain Channel Improvement Study and Preliminary Design (URS 2005) estimates that the capacity of the J Street Drain to be 500-600 cfs, which could be exceeded during a ten-year flood event. Flood damages were estimated using the depth of flooding in the residential and commercial areas along J Street, the structural value data obtained from the District, and the 1975 revised depth-damage curves for residential and small business structures calculated by the Federal Insurance Administration (FIA). The benefit cost analysis (BCA) was conducted using estimated pre-project flood damages and losses to calculate benefits. Based on calculations a total of $55.7 million was estimated as the damage that would result from a 100-year flood in the J Street Drain Channel.

In addition to the Drain capacity, the outlet of the Drain is sometimes constrained by a sand berm that can reach over 7 feet in height surrounding the Ormond Beach Lagoon. The sand berm hinders the direct flow path of the J Street Drain channel to the Pacific Ocean. The berm currently directs the water to the east. If there is no opening to the ocean then water ponds in the Lagoon and can reach up the Drain to Hueneme Road.

The sand berm at the Ormond Beach Lagoon was periodically manually breached prior to 1992 by the District to create a discharge path directly to the ocean and prevent water and silt buildup in the channel. However, this practice was stopped in 1992 due to environmental concerns and restrictions. Natural breaching also occurs under existing conditions when the water surface reaches an elevation of 7.5 to 8 feet mean sea level (msl). Therefore, the sand berm at the Ormond Beach Lagoon breaches naturally under existing conditions.



Source: G:\Projects\75217 J Street\map_docs\mxd\BTR\BTR_Regional_Vicinity_Jst.mxd | Last Updated: 05 25 2011

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Project Regional & Vicinity Map

FIGURE 1

J Street Drain Ventura County Watershed Protection District Biological Technical Report

Source: ESRI; 2006 | G:\Projects\75217 J Street\map docs\mxd\BTR\SiteMap J StBTR.mxd | Last Updated : 08-15-2011

Project Survey Area

FIGURE 2

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2.3 PURPOSE, NEED, AND PROJECT OBJECTIVES

Purpose and Need

The purpose of the proposed project is to provide flood protection to the 100-year flood level for the area surrounding J Street Drain. The need is evidenced by the studies that show the Drain has a current capacity to handle a ten-year flood event without overtopping the channel. Without the increase in flood protection the local area would continue to be susceptible to flooding, as well as federal requirements to purchase flood insurance for properties within the 100-year flood zone after Federal Emergency Management Agency (FEMA) remaps the project area in the future.

Along with the proposed increase in drain capacity, the proposed project also includes a Beach Elevation Maintenance Plan (BEMP). The BEMP identifies a set of environmental conditions that might cause flooding during a storm event. Once these conditions are observed, a predetermined list of actions would be implemented to ensure the opening of the lagoon outlet when the water surface reaches a target safe elevation. The Ormond Beach Lagoon inlet normally remains in a semi-closed condition due to sand accretion on Ormond Beach, but during most winters it breaches naturally to allow free outflow during storms and some high tides. The BEMP is a guideline to assist the District in responding to the potential flood threat caused by persistence of the sand berm during potentially damaging storm events of varying magnitudes. The BEMP defines a maximum safe beach height, and provides for a coordinated response to groom the sand berm at a pre-specified location immediately prior to a predicted storm event.

Project Objectives

The District's primary objectives of the project include:

- Flood control protection – increase drain capacity for 100-year flood flow;
- Maintain the existing functional characteristics of the Ormond Lagoon;
- Ensure project compatibility with future Ormond Beach Lagoon restoration plans;
- Minimize the disturbance to tidewater goby habitat downstream of the J Street lined channel, as well as snowy plover and California least tern nesting areas on Ormond Beach;
- Minimize operation and maintenance requirements, especially during storms; and
- Minimize effects on water quality of the lagoon.

2.4 PROJECT CHARACTERISTICS

The proposed project would involve increasing the capacity of the existing channel to reduce flooding in residential and commercial areas of Oxnard and Port Hueneme. The existing trapezoidal concrete-lined channel has a variable depth averaging 4 feet deep with a bottom width varying from 20 to 30 feet with 1:1 side slopes.

Channel Portion

Upstream

The proposed J Street Drain would involve converting the existing trapezoidal concrete channel into an open rectangular channel with an invert 2.5 to 4 feet below the existing channel bottom. The existing

trapezoidal channel would be widened and deepened to increase the capacity; the channel walls would be vertical and top of the channel open. The existing culverts under the street crossings (listed above) would also be replaced by larger structures to improve flow conveyance. The existing concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station and the remaining earthen portion continues downstream before turning east at the beach.

Downstream

The existing J Street Drain Channel concrete lining terminates approximately 50 feet south of the Hueneme Drain Pump Station, near the Hueneme Drain confluence. Because the concrete lined portion of the channel invert would be lowered 2.5 to 4 feet to create the required capacity, excavation would continue downstream towards the sand berm. The finished invert would be daylighted via an earthen ramp to the lagoon at a 10:1 slope over a distance of up to 40 feet. A 10-foot thick layer of four-ton rock riprap would be placed horizontally at the end of the concrete drain and below the earthen ramp to dissipate energy flow. It is anticipated that the movement of water (tidal and drain flow) would ultimately result in an equilibrium elevation within the channel transition area.

Beach Outlet Portion

No alterations are proposed to the Ormond Beach Lagoon. The lagoon would continue to function as it does now with periodic natural breaching.

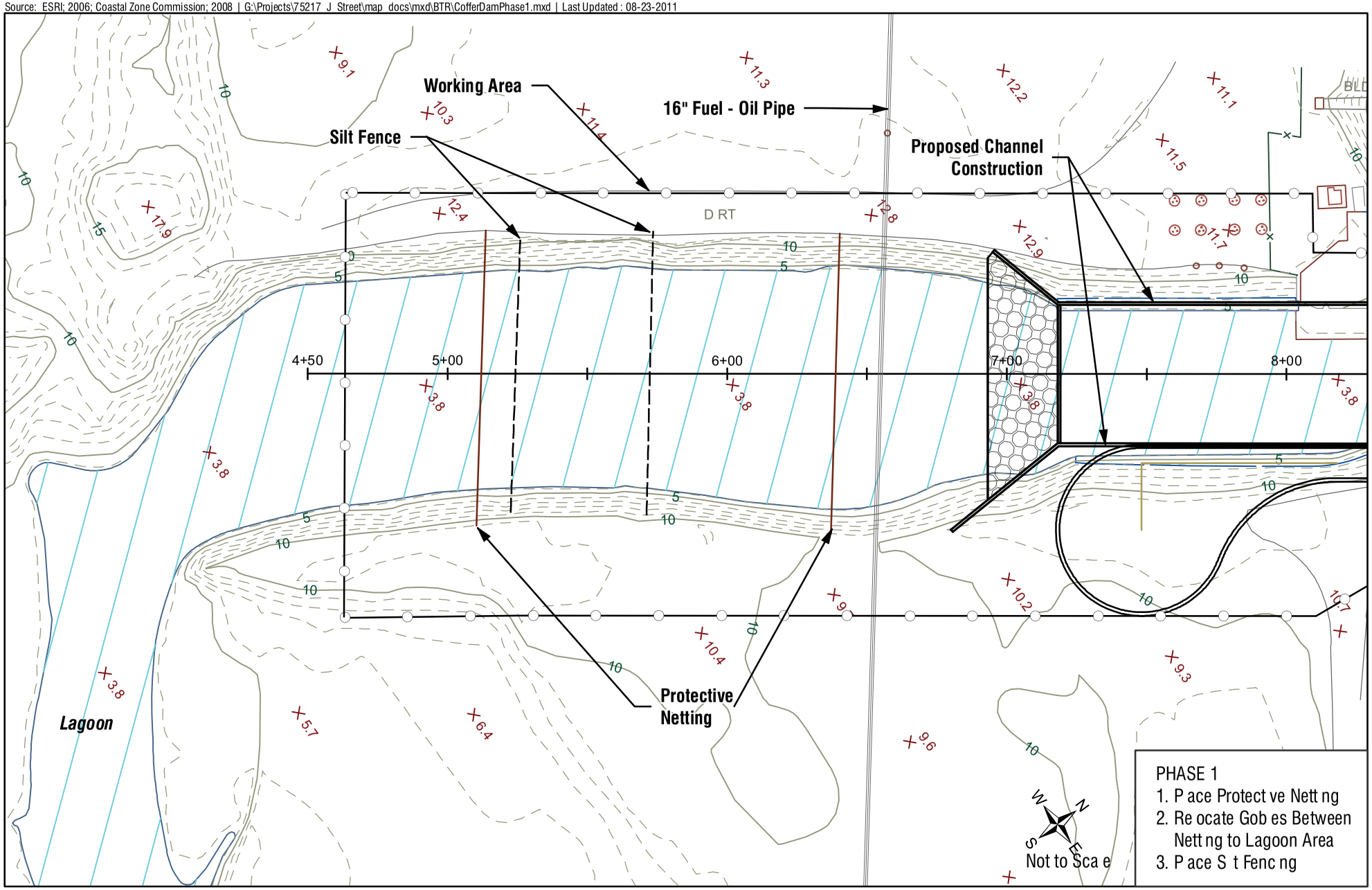
2.5 CONSTRUCTION

The demolition of the existing drain and construction of the new, higher capacity drain, will take place in phases. At this stage of the engineering design it is anticipated that the demolition and construction would start at the southern end of the Drain, south of Hueneme Road and move northward in phases. The initial construction activities include installation of groundwater dewatering wells, a coffer dam, and channel flow bypass. The groundwater dewatering wells will be approximately 15 to 20 feet deep, and placed along the work area of the J Street Drain. These wells will be installed and removed as construction moves upstream. Once installed, these wells will be attached to temporary pumps to extract groundwater for discharge into the Perkins Drain. The groundwater will be tested in accordance with the requirements of the Regional Water Quality Control Board (RWQCB) prior to placement into Perkins Drain. If the pumped groundwater is determined to be acceptable, it would then be allowed to be discharged. This will ensure that no surface water contamination would result from dewatering.

The electric power to run these pumps will be supplied from the existing Hueneme Drain Pump Station. The rate of groundwater pumping would be at the discretion of the project contractor, though it is recommended that the groundwater level should be 2 feet below the construction work area.

A coffer dam will be placed across the channel at the south end of the construction area. The coffer dam will block tidal flow into the work area. Figures 3a through 3d illustrate the proposed coffer dam. Block nets would be installed immediately upstream and downstream of the proposed coffer dam site to isolate it, and all native fish between the nets, including the endangered tidewater goby, will be relocated beyond the downstream net before coffer dam installation begins. The coffer dam and block net will be removed after project completion. This work will be conducted by approved, qualified biologists who will verify that all fish have been removed from the work area prior to the start of further construction.

Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\BTR\CofferDamPhase1.mxd | Last Updated : 08-23-2011



Coffer Dam Construction - Phase 1

FIGURE 3a

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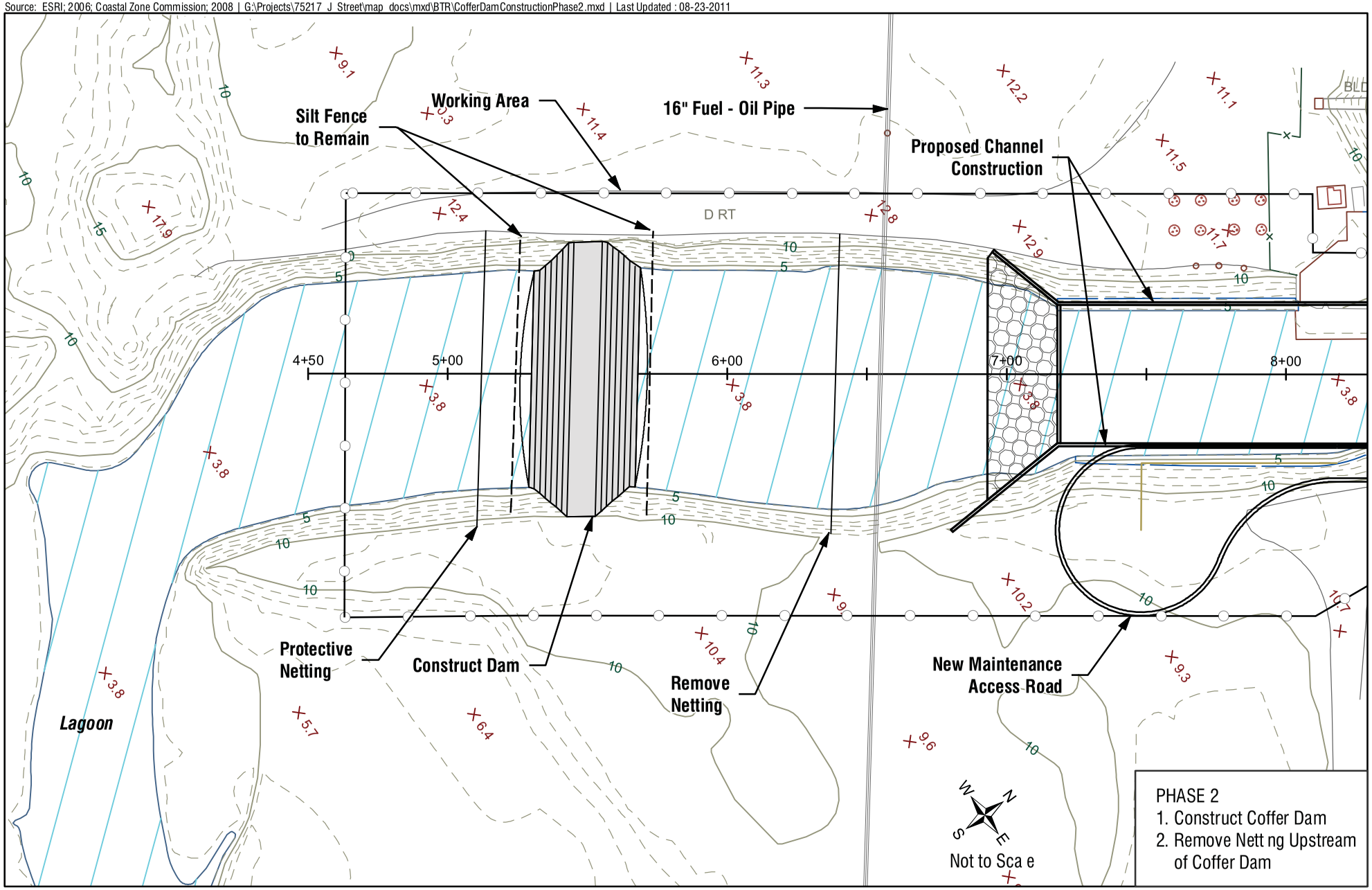
Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\BTR\CofferDamConstructionPhase2.mxd | Last Updated : 08-23-2011



Coffer Dam Construction - Phase 2

FIGURE 3b

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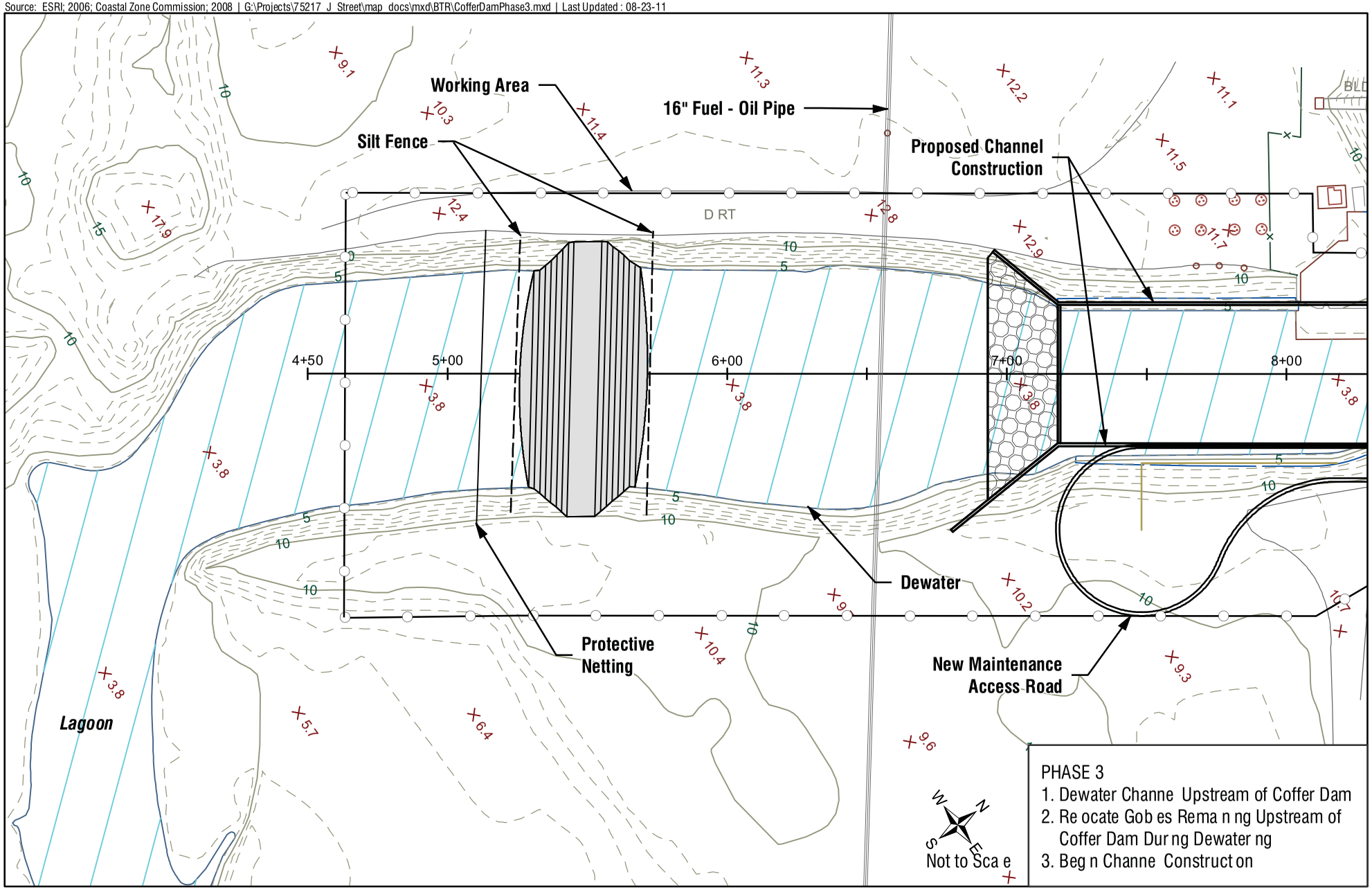
Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217_J_Street\map_docs\mxd\BTR\CofferDamPhase3.mxd | Last Updated : 08-23-11



Coffer Dam Construction - Phase 3

FIGURE 3c

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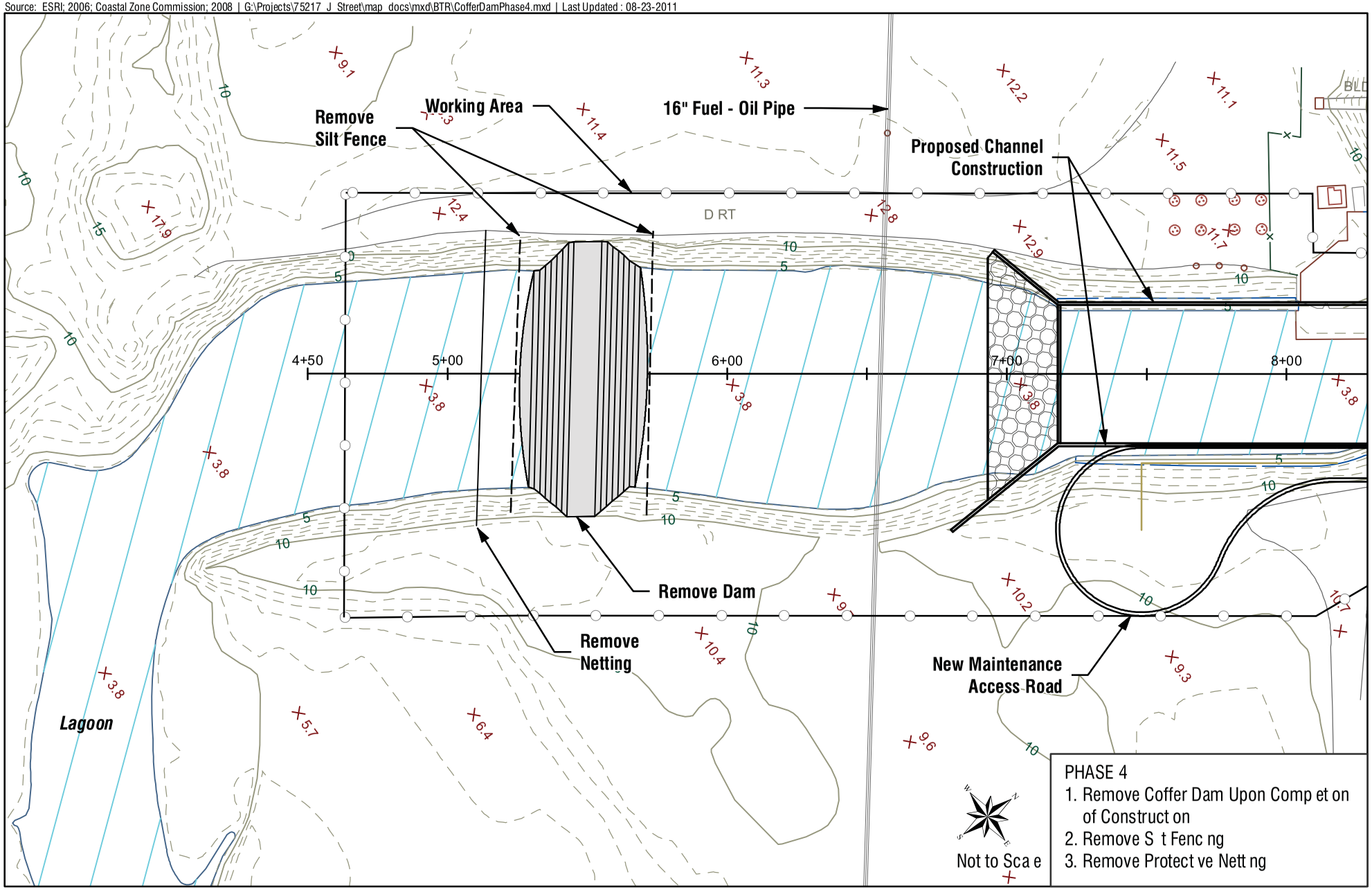
Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\BTR\CofferDamPhase4.mxd | Last Updated : 08-23-2011



Coffer Dam Construction - Phase 4

FIGURE 3d

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The channel flow bypass will be a diversion installed to allow for any channel flow to bypass the construction area and enter the Perkins Drain. In addition, the Hueneme Drain Pump Station will pump water from the Hueneme Drain across the J Street Drain to the Perkins Drain during construction at the south end of Phase I. Once the initial construction activities of installation of groundwater wells, coffer dam, and channel bypass are completed, fish remaining within the channel section upstream of the coffer dam can be relocated and demolition can begin.

Demolition will initially start with adjacent fencing removal and landscape removal if necessary. After the permanent fencing is removed, temporary fencing will be installed along adjacent properties to limit access to the work area and ensure public safety. Demolition will consist of utilizing heavy equipment to break up and remove the concrete from the existing drain. Access to the area south of Hueneme Road will be from Hueneme Road via the District maintenance road on the east side of the drain. The contractor may decide to use the drain itself as an access way after entering the District right-of-way at Hueneme Road. The concrete will be broken on site for transport but the contractor will be required to find an appropriate location to grind the concrete further for appropriate recycling (as required by Ventura County ordinances).

After the concrete is removed, existing soil will be excavated to the appropriate dimensions for safe shoring (if necessary) and proper installation of subdrains and forms for the new drain. The excavated material will be removed by the contractor and hauled away from the site via a City-approved haul route (which is dependant on the ultimate location secured by the contractor). Some soils may remain on site for backfilling once the new drain is installed. Materials, including subdrain materials, reinforcing bar, and the concrete for the new drain will be delivered to the site via the approved access route from Hueneme Road. The work will only occur during hours approved by the City of Oxnard, which are anticipated to be from 7 am to 7 pm on weekdays.

Once each phase of the new drain is complete, the permanent perimeter fencing will be reinstalled. Any landscaping damaged outside of District easement on private property, will be replaced. Where the adjacent property is owned by the City, the landscaping will be replaced by the City under agreement with the District. Maintenance of the adjacent landscaping is the responsibility of the local jurisdiction once the materials are installed.

2.6 OPERATIONAL – BEACH ELEVATION MANAGEMENT PLAN

The Ormond Beach Lagoon inlet normally remains in a semi-closed condition due to sand accretion on Ormond Beach, but during most winters it breaches naturally to allow free outflow during storms and some high tides. These events do not drain the lagoon entirely, as urban runoff and high tides contribute fresh and salt water flows. To date, there has been one instance of the inlet remaining closed during a minor storm event and causing upstream flooding, this took place on January 18, 2010. This event flooded the OWWTP, which was at risk of releasing untreated sewage effluent into the surrounding waterways, roads, and residential properties due to electrical failure of inundated equipment. To prepare for the reoccurrence of the combination of the outlet being closed, the lagoon water surface being above a high threshold level, and a storm being forecast, a Beach Elevation Management Plan (BEMP) has been developed as part of the proposed J Street Drain project. The BEMP defines a maximum safe beach height, and provides for a coordinated response to groom the sand berm at a pre-specified location immediately prior to a predicted storm event. Implementation of the BEMP will generally occur outside of the breeding bird season between September 16 and March 14. On rare occasions, the BEMP may be implemented after March 14 with mitigation measures in place to protect breeding birds.

The purpose of the BEMP is to protect the lives and well-being of the communities and industrial facilities along J Street Drain and Ormond Beach Lagoon by maintaining downstream water levels below a predetermined safe elevation.

The BEMP is a guideline to assist the District in responding to the potential flood threat caused by persistence of the sand berm during potentially damaging storm events of varying magnitudes. It should be noted that the BEMP would be implemented when conditions warrant, which may be more than once annually, to avoid an emergency. Therefore, implementation of the BEMP would constitute a new maintenance activity associated with operation of the proposed project.

Management Procedure

The grooming would be performed by a tracked dozer designated by the O&M Deputy Director in coordination with the District Director or his/her designee. Once the O&M Deputy Director determines that the BEMP threshold criteria have been met, the dozer shall be pre-positioned at the south side parking lot of Port Hueneme Beach Park. As soon as the BEMP is enacted, the dozer operator accompanied by District environmental staff would move the dozer to the designated beach grooming location, and shave the sand berm down to the maximum safe beach elevation. The dozer access path to the groom location would be the same as the one currently used by lifeguards from Port Hueneme Beach Park. Access to the beach from this point would avoid the nesting sites used by California least terns and western snowy plovers in 2008 (Davenport 2008, Hartley 2009 and 2010, Smith 2009 and 2010). The grooming width would measure approximately100 feet parallel to the coastline. The removed sands would be placed on the beach adjacent to the groomed area. The grooming procedure would be completed within several hours, including removal of equipment from the beach. The designated grooming area would be permanently marked with rods driven deep into the sand. Elevation markings would be depicted on the rods. The grooming location would be coordinated with USFWS to limit potential impact to habitat areas.

During the grooming operation, the work site would be secured by the District to prevent interruption by or injury of the general public. Members of the Ventura County Sheriff Department or lifeguards, as well as their designees, may assume responsibility for the protective duty.

2.7 PROJECT TOPOGRAPHY

The general topographic character of the project survey area is flat with an approximately 21-foot elevation change from north to south. This area ranges in elevation from approximately 24 feet AMSL at the northern end of the project boundary to 3 feet AMSL at the southern end within the Ormond Beach Lagoon (Figure 4). The lagoon is approximately 8 feet AMSL with a depth of surrounding water from 4 to 6 feet. Beach elevation ranges from approximately 8 feet AMSL along the north to sea level at the south.

2.8 PROJECT SOILS

Historically, the project survey area was used generally for agricultural practices. Agricultural fields intruded into area wetlands in the 1920s including the Ormond Beach Lagoon and extensive drainage canals were constructed in the 1930s. In the 1950s and 60s, heavy industrial facilities were sited within wetlands associated with the Ormond Beach Lagoon, as well. Currently the project alignments traverse various types of land uses including residential and commercial. The project alignment contains eight different soil types that are mapped and listed in Figure 4. The map shows soils within 500 feet of the project boundary.

Source: U.S. Department of Agriculture, Natural Resources Conservation Service, Second | G:\Projects\75217 J Street\map docs\mxd\BTR\SoilMap_J St BTR.mxd | Last Updated: 05/25/2011

Topography and Soils

FIGURE 4

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3.0 SURVEY METHODOLOGY AND LIMITATIONS

A baseline biological field survey of the project site and a portion of the surrounding area including the Ormond Lagoon (project survey area) were surveyed by HDR Senior Biologist Shannon Allen and HDR Assistant Biologist Allegra Simmons on April 28, 2008 between the hours of 0830 to 1700 and on April 29, 2008 between the hours of 0830 to 1750. Weather conditions were conducive for surveying on both days with clear skies, temperatures ranging from 65 to the low 70s, and winds between 7-9 mph. All accessible areas of the project survey area were directly examined in the field.

The purpose of the survey was to identify and delineate existing and adjacent vegetation communities, potential wildlife habitats, and locate and map (if detected), any sensitive biological resources. All vascular plants and vertebrate animals encountered during this field effort were documented and are listed in Appendices B and C. Specific on-site vegetation communities were mapped in situ using an aerial photograph (Figure 4). Due to the size and shape of the project survey area, it was necessary to divide the project into northern and southern survey areas. The northern survey area consists primarily of the existing J Street Drain, which is a concrete-lined channel, beginning at Redwood Street and continuing south to Hueneme Road (Figure 5a, Photographs 1 and 2 in Appendix A). The full length of the drain is fenced off and is bound to the east and west by residential development. The southern survey area includes an approximately 2,600-foot portion of J Street Drain that continues south of Hueneme Road and flows into the Ormond Beach Lagoon (Figure 5b, Photographs 3 through 5 in Appendix A).

3.1 LITERATURE SEARCH

A California Natural Diversity Database (CNDDB) search was conducted as part of the background research for the parcels that intersect the proposed alignment. Several sensitive wildlife species are known to occur within the project survey area such as, the California least tern (*Sterna antillarum browni*), snowy plover (*Charadrius alexandrinus nivosus*), and tidewater goby (*Eucyclogobius newberryi*). The CNDDB search did not identify any sensitive botanical species as occurring within the project survey area; however, several are known to occur within the general vicinity of the site. These include Ventura marsh milkvetch (*Astragalus pycnostachyus var. lanosissimus)*, and salt marsh bird's-beak (*Cordylanthus maritimus ssp. maritimus*). The CDFG California Wildlife Action Plan Report was reviewed for regional species status and information (UC Davis 2007). More specifically, Chapter 9, South Coast Region was reviewed as it covers the southern half of Ventura County.

Nomenclature used in this report follows Hickman (1993) and Holland (1986) for flora and vegetation. Sensitive plant status follows Skinner and Pavlik (1994), CDFG (2002), and USFWS (2008). Animal nomenclature is taken from Stebbins (2003) for reptiles and amphibians, American Ornithologist's Union (1983, as updated) for birds, and Jameson et al. (1988) for mammals.

4.0 BIOLOGICAL RESOURCES

4.1 VEGETATION COMMUNITIES

Vegetation types or plant communities are assemblages of plant species that usually coexist in the same area. The classification of vegetation communities is based upon the life form of the dominant species within that community and the associated flora. Specifically, vegetation classification systems used in this report follow those of Holland (1986). Species names follow Hickman (1993) and Roberts et al. (2004). Currently, the project survey area supports 53 plant species within the following seven vegetation communities: coastal brackish marsh, southern coastal salt marsh, open water, southern foredunes,

eucalyptus woodland, disturbed habitat, and urban developed (Figures 5a and 5b). These vegetation communities are described in Sections 4.1.1 through 4.1.7. Each vegetation community has been evaluated for its quality based on the community structure and species diversity. Habitat qualities range from low to high quality. Table 1 summarizes vegetation community acreages.

Table 1. Summary of Vegetation Communities within the Project Survey Area

Habitat Type	Existing Acreage
Coastal Brackish Marsh	2.98
Disturbed Habitat	6.76
Urban/Developed	32.44
Eucalyptus Woodland	1.18
Open Water	2.27
Southern Coastal Salt Marsh	8.26
Southern Foredune	2.6
Total	**56.49**

4.1.1 Coastal Brackish Marsh (Holland Code #52200)

Coastal brackish marsh (CBM) is generally located at the interior edges of coastal bays, estuaries, lagoons, and adjacent to salt marshes. CBM areas are dominated by dense coverage of perennial, emergent, herbaceous monocots up to 6 feet tall. Within the project survey area, CBM is restricted to the Ormond Beach Lagoon (Figure 5b, Photograph 6 in Appendix A). The dominant indicators in this area include cattails (*Typha angustifolia*), saltgrass (*Distichlis spicata*), and American tule (*Scirpus acutus var. occidentalis*). The marsh supports large stands of cattails and tules with pockets of open water. The habitat is considered medium to high quality; however, the area is frequently used by pedestrians, dogs, and homeless individuals.

4.1.2 Southern Coastal Salt Marsh (Holland Code #52120)

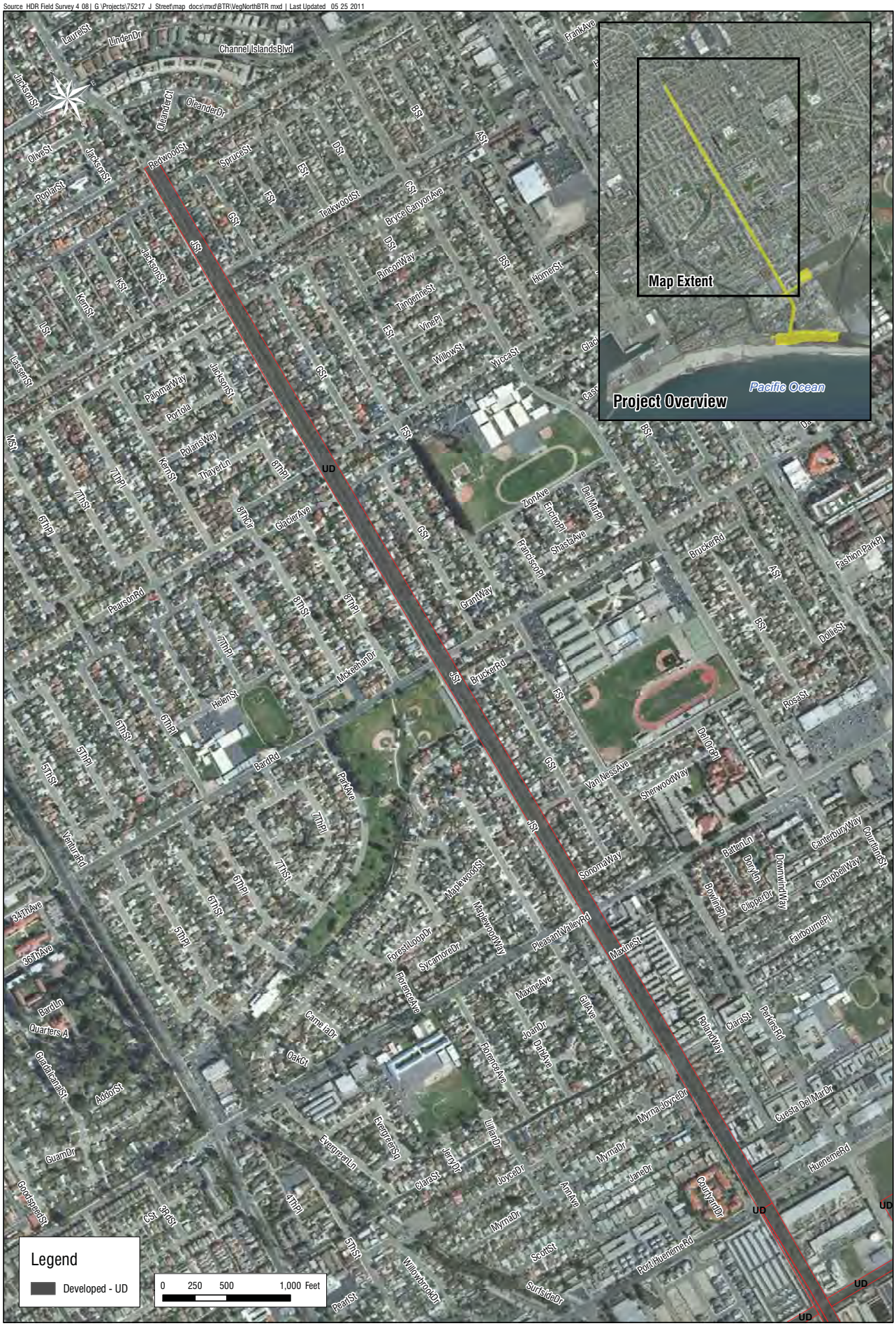
Southern coastal salt marsh (SCSM) is a highly productive, salt-tolerant vegetation community that forms a low dense herbaceous cover. A majority of the species in the community are active in the summer and dormant in the winter. This vegetation community is found along sheltered inland margins of bays, lagoons, and estuaries, which are subject to regular tidal inundation by salt water.

The northern survey area is developed and has no SCSM. The southern survey area is predominantly SCSM with indicators that include saltgrass, alkali heath (*Frankenia salina),* and beach bur (*Ambrosia bipinnatifida*) (Figure 5b, Photograph 7 in Appendix A). The vegetation community is considered medium to high quality.

4.1.3 Open Water (Holland Code #13100)

Open water (OW) is usually associated with areas such as bays, lagoons, salt marsh, freshwater marsh and areas that receive high amounts of moisture. These areas generally lack emergent vegetation.

Source HDR Field Survey 4 08 | G \Projects\75217 J Street\map docs\mxd\BTR\VegNorthBTR mxd | Last Updated 05 25 2011



Northern Survey Area - Vegetation

FIGURE 5a

Source: HDR Field Survey 4 08; Google Earth 2008 | G:\Projects\75217_J_Street\map_docs\mxd\BTR\VegSouthBTR.mxd | Last Updated: 08 15 2011

Southern Survey Area - Vegetation

FIGURE 5b

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The northern survey area has no OW. The southern survey area has several large areas of OW. These are generally located within the southern portion of the J Street channel and Ormond Beach Lagoon (Figure 5b, Photographs 5, 6, and 9 in Appendix A). OW is also associated with a manmade canal located along the northern and northwestern boundary of the lagoon. As previously mentioned in Section 4.1.1, OW occurs within the central portion of the CBM. The OW is medium quality habitat.

4.1.4 Southern Foredune (Holland Code #21230)

Similar to active coastal dunes, southern foredunes (SFD) have relatively favorable conditions that allow for the establishment of plants, which reduce the amount of blow sand and partially stabilize the dunes. Groundwater is generally more available for SFD than for active coastal dunes, which supports vegetative cover.

The northern survey area has no SFD. In the southern survey area, several patches of vegetation qualify as SFD (Figure 5b). These are specifically located along the northern and northwestern boundaries of the Ormond Beach Lagoon (Photograph 8 in Appendix A). Indicators in this community include beach bur, beach suncup (*Camissonia cheiranthifolia*) and in some areas, salt grass and Indian sweet clover (*Melilotus indicus*). The northwestern SFD is high quality while the northern patches are of a more disturbed nature (i.e., foot traffic) and would be considered medium quality.

4.1.5 Eucalyptus Woodland (Holland Code #11100)

EW is usually associated with landscaped areas around homes or roadways. The primary indicator in EW is eucalyptus (*Eucalyptus* spp.), which is a non-native tree species from Australia. The understory is sparse and mostly dominated by leaf litter and weedy species including brome grasses (*Bromus spp.*) and tocalote (*Centaurea melitensis*).

The northern survey area has several large eucalyptus trees which line the concrete channel. However, these single individuals do not qualify as woodland and are not mapped as such. Instead, these are identified on the tree map (Figure 6). Located within the southern survey area, two relatively small patches of eucalyptus woodland (EW) line the existing J Street channel (Figure 5b). These EW patches occur on the east and west sides of the drain located south of Hueneme Road (Photograph 9 in Appendix A). EW is considered medium quality vegetation as it provides potential roosting and nesting habitat for raptors.

4.1.6 Disturbed Habitat (Holland Code #11300)

Disturbed Habitat (DH) is defined as areas of native vegetation that have been impacted by grading, dumping, or any other human related impact that disturbs the vegetation. DH occurs primarily along the eastern border and in the northwestern portion of the southern survey area (Figures 5a and 5b, Photograph 10 in Appendix A). This area has been disturbed primarily by the use of motor vehicles, which has promoted the growth of invasive weedy species such as brome grasses, hottentot fig (*Carpobrotus edulis*), and Mediterranean mustard (*Hirschfeldia incana*). Disturbance in portions of these areas has compacted the soils. Past dredging efforts within the canal in the Ormond Lagoon have resulted in the disposal of fill dirt in the northwestern portion of the lagoon. This accumulation of fill dirt has raised the elevation of the site, thereby changing the access to ground water for native marsh plant species. Consequently, this area has been replaced by weedy species such as Mediterranean mustard, and Indian sweet clover. This vegetation is considered low quality.

4.1.7 Urban/Developed (Holland Code #12000)

The entire northern survey area is located amongst urban/developed (UD) land uses, including streets, residences, and businesses (Figure 5a). The project alignment located within the northern survey area consists of a concrete lined channel, this area is considered UD. Within the southern survey area, UD occurs as the continuation of J Street channel (Figure 4). This habitat generally consists of weedy and ornamental plant species, such as bromes and oleander (*Nerium oleander)*. UD does not occur within the lagoon portion of the survey area. These UD areas have no biological resource value.

4.2 BOTANICAL SPECIES

Fifty-three vascular plant species were observed during the survey (Appendix B). The plants detected are representative of CBM, SCSM, SFD, and DH, and are relatively common in this area. Sensitive plant species were not observed during the general biological survey conducted in April 2008. This is discussed in detail in Section 6.0, Sensitive Biological Resources, of this report.

4.3 WILDLIFE SPECIES

Twenty-six wildlife species were observed during the survey, either directly or as a result of signs of occupancy (tracks, scats, etc.) (Appendix C). The fauna observed on-site are representative of CBM, SCSM, SFD, and DH. Sensitive species detected on or adjacent to the site are discussed in detail in Section 6.0, Sensitive Biological Resources. Additional protocol surveys were conducted for California least tern, western snowy plover, and light-footed clapper rail (Appendix D).

4.3.1 Potential and Known Fish Species

The Project Completion Report (2007) prepared for the Hueneme Pump Station Reconstruction Project identified several fish species known to inhabit the Ormond Beach Lagoon and J Street Drain. These species include tidewater goby (*Eucyclogobius newberryi*), topsmelt (*Antherinops affinis*), sailfin molly (*Poecilia latipinna*), California killifish (*Fundulus* parvipinnis), staghorn sculpin (*Leptocottus* armatus), striped mullet (*Mugil cephalus*), common carp (*Cyprinus carpio*), western mosquitofish (*Gambusia affinis*), goldfish (*Carassius auratus*), green sunfish (*Lepomis* cyanellus), long-jawed mudsucker (*Gillichthys mirabilis*), rainwater killifish (*Lucania parva*), and crayfish (*Procambarus clarki*). The tidewater goby is the only sensitive fish species known to occur within or in the vicinity of J Street Drain. This species is discussed further in Section 6.3, Sensitive Wildlife Species. During the HDR general biological survey, no fish species were identified.

4.4 RAPTOR HABITAT, NESTING, AND FORAGING

Several species of migratory birds were observed during the general biological survey (Appendix C), specifically within the southern survey area. However, during the general biological survey, nesting and foraging raptors were not observed. Within the lagoon portion of the project area, open space provides foraging habitat for raptors. Along the project alignment, larger individual trees would provide nesting habitat for raptors.

5.0 U.S. ARMY CORPS OF ENGINEERS AND CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTIONAL AREAS

The project survey area contains three vegetation communities including CBM, SCSM, and OW which are generally considered U.S. Army Corps of Engineers (USACE) and/or CDFG jurisdictional areas. In addition, the project survey area contains portions of UD habitat that is considered waters of the United States and waters of the State associated with the Drain. In order to delineate state and federal jurisdictional areas within the project alignment, a jurisdictional delineation was conducted by HDR Engineering, Inc. (Appendix E). Jurisdictional areas that occur within the project survey area are summarized in Table 2.

Table 2. Summary of USACE, CDFG, and CCC Jurisdictional Areas

Federal/State Jurisdictional Areas	Existing Acres (Project Survey Area)
Federal Waters of the U.S. and Waters of the State - Concrete Channel	7.9
Federal Waters of the U.S. and Waters of the State - Natural Substrate	2.73
Federal Wetlands	6.83
CDFG Wetlands	10.92
CCC Jurisdictional Areas[1]	15.73
Total	**N/A**

[1] Within the project survey area, a portion of USACE and CDFG jurisdictional areas occur within the Coastal Zone. As identified in Section 5.1 below, the CCC wetland definition requires at least *one* of the parameters required by the USACE and CDFG. Approximately 15.73 USACE and CDFG jurisdictional areas located within the Coastal Zone are considered CCC jurisdictional areas.

BEMP Access Area

The access route to and on the beach for the beach elevation management activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. Beach elevation maintenance would occur within the high tide line (HTL) which is used to delineate the upper boundary of USACE jurisdiction. The HTL is identified on Figure 11. The BEMP would not occur within CDFG jurisdictional areas.

5.1 Coastal Commission Jurisdictional Areas

In addition, all wetlands located within the project survey area are within the jurisdictional boundaries of the California Coastal Commission (CCC) (Table 2). The CCC relies on the definition of "wetland" as set forth in Section 30121 of the Coastal Act which states:

> *"Wetland" pertains to lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.*

The CCC Administrative Regulations (Sections 13577 (b)) provides a more explicit definition:

> *Wetlands are lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes,*

> *and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats.*

The Coastal Zone extends from south of Hueneme Road to the Pacific Ocean. Thus, the portion of the proposed project located south of Hueneme Road is within CCC jurisdiction. The project survey area includes USACE and CDFG jurisdictional areas within the Coastal Zone. As identified above, the CCC wetland definition requires at least *one* of the parameters required by the USACE and CDFG. Therefore, USACE and CDFG jurisdictional areas located within the Coastal Zone are considered CCC jurisdictional areas.

BEMP Access Area

The access route to and on the beach for the beach elevation management activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. Beach elevation maintenance will occur within CCC jurisdiction.

6.0 SENSITIVE BIOLOGICAL RESOURCES

The following sections summarize the sensitive vegetation communities, and botanical and wildlife species that occur or have the potential to occur within the survey areas.

6.1 SENSITIVE VEGETATION COMMUNITIES

Vegetation communities (habitats) are generally considered "sensitive" if: (a) they are considered rare within the region by various agencies including USFWS, CDFG, and other local agencies; (b) if they are known to support sensitive animal or plant species; and/or (c) they are known to serve as important wildlife corridors. Sensitive habitats are typically depleted throughout their known ranges, or are highly localized, and/or fragmented. The project survey area contains four sensitive vegetation communities: CBM, SCSM, OW, and SFD as defined under definitions (a) through (c) discussed above.

BEMP Access Area

The access route to and on the beach for the beach elevation management activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. The BEMP Access Area does not support sensitive vegetation communities.

6.2 SENSITIVE BOTANICAL SPECIES

Sensitive plants include any and all those listed by USFWS and CDFG, candidates for listing by the USFWS and CDFG, and/or are considered sensitive by the CDFG, and/or the California Native Plant Society (CNPS). Sensitive plants also include the categories of rare and narrow endemic. The general biological survey was conducted in early spring (April). A summary of the potential species that could occur in the survey areas are provided in Appendix F. The table includes the plant species, suitable habitat, and the potential for the species to occur on site. During the general biological survey no sensitive plant species were identified; however, potential habitat occurs on-site for the Ventura marsh milk vetch

and salt marsh bird's beak. These two plant species are found in coastal dunes, marshes, and swamps and require well drained soils in areas with high water tables. The well drained sandy soils of the lagoon area and adjacent sand dunes combined with the high water table provides potential habitat for the species.

Within Ventura County, several tree species are considered sensitive and are protected by the Ventura County Tree Ordinance. Although the City of Oxnard does not have a specific tree protection ordinance, a general tree survey was conducted to identify and map individual trees occurring within/adjacent to the project area (Figure 6). Four tree species were identified within/adjacent to the project area and include ash (*Fraxinus sp.*), Brazilian peppertree (*Schinus terebinthifolius*), various eucalyptus (*eucalyptus spp*), and Mexican fan palm (*Washingtonia robusta*) (Appendix B).

BEMP Access Area

The access route to and on the beach for the beach elevation management activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. The BEMP Access Area does not support sensitive plant species.

6.3 SENSITIVE WILDLIFE SPECIES

Sensitive animals are species or subspecies listed as threatened, endangered, or being evaluated (proposed) for listing by the USFWS and by the CDFG, and/or are considered sensitive by the CDFG. A sensitive designation includes those listed as rare or of "Special Concern," and includes a number of migratory bird species as protected under the Migratory Bird Treaty Act (MBTA). A CNDDB search identified the following sensitive wildlife species with the potential to occur within the J Street Drain area: California least tern, snowy plover, light-footed clapper rail, and tidewater goby. In addition, over 60 brown pelicans were observed using the lagoon during the general biological survey for the project. These species are also discussed in Appendix F.

Belding's Savannah Sparrow

Federal Status: Candidate
State Status: Endangered

Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) was designated in 1974 by the state of California as a state-listed endangered species and by the USFWS as a category two candidate for classification as an endangered or threatened species under the Federal Endangered Species Act. Endemic to salt marshes, this species resides year round in the SCSM of Southern California from Goleta in Santa Barbara County south to El Rosario, Baja California Mexico (American Ornithologist Union 2000).

SCSM dominated by pickleweed (*Salicornia* sp.) characterize Belding's savannah sparrow nesting habitat. Belding's savannah sparrow forage on the succulent buds of pickleweed, females use the twigs for nest building, and males use the plant as song perches (Massey 1979). Tidal influence is required to maintain salt marsh vegetation and hydrology in order to keep upland plants and birds from replacing Belding's savannah sparrow and its habitat (Zembal and Hoffman 2002). Breeding territories can be very small and nesting birds may be clumped together in a near colonial fashion. The semi-colonial manner in which Belding's savannah sparrow nest is a result of their specific habitat requirement for monotypic stands of pickleweed. Belding's savannah sparrow nest only within pickleweed patches; however, foraging often occurs relatively far from established breeding territories. Due to limited availability of suitable pickleweed stands, nests are generally clustered in proximity to each other.

No Belding's savannah sparrows were identified within the project area during any of the biological field surveys conducted for the proposed project. Given the number and timing of survey activities, Belding's savannah sparrow should have been detected if it was breeding within the survey area. Therefore, since no Belding's savannah sparrows were identified at the time of survey, it is not anticipated that this species would occur within the project area.

BEMP Access Area

The access route to and on the beach for the beach elevation management activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. It is not anticipated that Belding's savannah sparrow would occur within the BEMP access area.

California Brown Pelican

Federal Status: Formerly Endangered, delisted December 17, 2009
State Status: Formerly Endangered, delisted June 3, 2009

California brown pelicans are large birds with adults weighing about 4.5 to 11 pounds and having a wingspan of over 2 meters. California brown pelicans are smaller than white ones, but California brown pelicans are larger than other browns. Adults are large, grayish-brown birds with long, pouched bills. They have a white or yellowish head and dark body. Immature birds are dark with a white belly (USFWS 2008).

The California brown pelican is a warm weather species that thrives near coasts and on islands. They generally use the rocky islands along the California coast for their group, or "colonial," nest sites. These islands typically feature steep, rocky slopes with little vegetation, and they must be without terrestrial predators or human disturbances. Nearby high quality marine habitat is also essential. Pelicans generally rely in part on the actions of marine predators such as sharks, salmon, and dolphins to force schools of fish to the surface where the pelicans can catch them. Pelicans will breed only in areas with enough food to support the breeding colony. Roosting and resting, or "loafing," sites where brown pelicans can dry their feathers and rest without disturbance are also important (USFWS 1983).

Brown pelicans build large, bulky nests on the ground or in bushes and lay an average of three eggs, which the parents take turns tending during the incubation process. Pelicans are known to live for approximately 30 years, but the average may be much less than that due to predation, disease, starvation, etc. Brown pelicans received severe exposure to DDT and other contaminants through consumption of contaminated fish. As was the case with many birds, this exposure resulted in the production of eggs with thin eggshells that were unable to withstand the weight of the parent during incubation, resulting in crushed eggs instead of healthy chicks. As a consequence, the number of chicks produced each year declined dramatically, and the population was severely reduced (USFWS 1983).

Other factors, including local food shortages and human disturbance, also contributed to the decline of the species. Pelicans require undisturbed habitat and abundant supplies of fish, particularly during the breeding season. If nesting pelicans are startled while on the nest, their abrupt departure often crushes their eggs. If sufficient food supplies are not readily available, pelicans will abandon breeding colonies. Factors contributing to decreased food availability include commercial fishing and naturally-occurring increases in ocean water temperature (USFWS 1983). California brown pelicans were observed within the project survey area and are discussed further in Section 9.1.3, Sensitive Wildlife Species.

BEMP Access Area

The access route to and on the beach for the beach elevation management activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. Although brown pelican are known to bask approximately 900 feet to the south of the beach elevation maintenance area, they do not nest in the vicinity.

California Least Tern

Federal Status: Endangered
State Status: Endangered

The California least tern is our smallest tern and measures approximately 9 inches long. Adult birds have a light gray back and a black cap and nape; their forehead is white. Adult birds have an orange-yellow bill with a dark tip. In contrast, first summer birds have dark feet and bill.

Between San Francisco Bay and San Diego Bay, the California least tern is anticipated to occur throughout the coastal zone of California. California least terns commonly forage in coastal wetlands, bays, and near the surf zone. Additionally, the species has been observed foraging in fresh water along Southern California rivers such as the Santa Margarita and San Luis Rey Rivers (Davenport 2007). This species nests on coastal sandy bare areas; e.g., beaches, sand bars, and salt flats.

Based on the annual breeding season survey of California least terns, four general sites were monitored in Ventura County during the 2007 nesting season (Marschalek 2008). The monitored sites include McGrath State Beach, Ormond Beach, Hollywood Beach, and Point Mugu. At Ormond Beach, a maximum of 50 pairs of California least terns were documented in 2007. Based on the 1993 annual breeding season survey (Caffrey 1994), the Ormond Beach site was divided into three sites; Perkins, Middle, and Edison. During the 1993 nesting season, 14 pairs of California least terns were observed at the Edison site and three pairs observed at the Perkins site. The Ormond Beach site of 2007 appears to coincide with what was called the Edison site during the 1993 survey. Based on Marschalek (2008), the Perkins Site does not appear to have been monitored in 2007. However, during the 2007 nesting season, two nests were observed on the beach, seaward of the J Street Estuary (Smith 2008). In 2009, surveys documented 44 nests. Thirty-five nests hatched young and 24 fledglings were recorded. All of these nests were west of the Reliant power plant with three located on the narrow strip of beach between the J street estuary and the outer beach (Smith 2009). In 2010, surveys documented 48 nests. Thirty-five nests hatched young and 14 fledglings were recorded. All but one of these nests were well east of the project area, in the vicinity of the Reliant power plant (Smith 2010). Although the species is federally listed, critical habitat has not been designated by the USFWS.

A focused California least tern survey was conducted in the southern survey area (Appendix D). During the survey, California least terns were not observed nesting within the project survey area. Due to the heavy disturbance occurring within the project survey area (i.e., pedestrian traffic, domestic animals), it is unlikely that California least terns would attempt to nest there. However, California least terns were identified using the dune habitat located south of the project survey area and across the lagoon (Figure 7).

Nests with un-hatched eggs were observed within the dune habitat adjacent to the project survey area. The entire lagoon, including the project survey area, is heavily used by foraging California least terns that are feeding nestlings and fledglings. According to the Programmatic Biological Opinion prepared for the Hueneme and J Street Drain Reconstruction, California least terns that nest at Ormond Beach arrive in early to mid-May, and all summer residents and migrating terns leave the area by late August to mid-

September. California least terns forage over Ormond Beach Lagoon and the ocean immediately offshore during their seasonal migrations and during breeding (USFWS 2004).

BEMP Access Area

The access route to and on the beach for the beach elevation management activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. The BEMP access and maintenance area occurs within known foraging habitat for the California least tern and adjacent to known nesting habitat for the California least tern.

Western Snowy Plover

Federal Status: Threatened
State Status: None

In Southern California, the western snowy plover is our smallest plover and is approximately 6 inches long. The snowy plover is very pale in coloration and has a partial breast band and a dark ear patch. This species is active during the day (Davenport 2007).

Based on museum records in the United States, the western snowy plover breeds along the west coast from Washington to California, and includes some inland localities. The distribution of western snowy plovers continues along the west coast into Baja California, Mexico (USFWS 2007). Western snowy plovers inhabit sandy beaches, mud flats, and saltpans. They nest in the upper reaches of beaches, flats, and pans above the ordinary high water mark. During the early 1980s, within Southern California, the snowy plover was considered fairly common, but somewhat local and declining (Garrett and Dunn 1981). Based on information compiled by the Point Reyes Bird Observatory (PRBO), 117 western snowy plovers were documented at Ormond Beach during the 2004-2005 winter season (PRBO, unpublished winter survey data, 2006). Unfortunately, the data was not separated into specific locations. Thus, it cannot be determined where at Ormond Beach the birds were observed.

Based on breeding season data, an average of 20 western snowy plovers were observed at Ormond Beach during the 2007 breeding season. In addition, 19 nests were observed during the 2007 breeding season (Gocal 2008). None of the 19 nests observed in 2007, were located within the project area.

Based on information held in the California Natural Diversity Data Base, nesting western snowy plovers have been documented adjacent to Ormond Lagoon (CDFG 2007). One of the records (Occurrence No. 39) indicated that a general nesting area of western snowy plovers is located approximately 1.5 miles southwest of Port Hueneme. At this general location, numerous nests have been documented. Other nesting western snowy plovers have been documented just north of the inlet to the Channel Island Harbor, four miles southwest of Oxnard (Occurrence No. 123). Breeding season surveys of Ormond Beach were conducted in 2009 and 2010 (Appendix H). In 2009, 33 nests were recorded of which 18 successfully hatched. All but one are east of the lagoon (Hartley 2009). In 2010, 27 nests were recorded of which 19 successfully hatched. All are east of the lagoon in the vicinity of the Reliant power plant. Ten nests were located northwest of the plant, 12 nests were on the southeast side, and 5 nests were found in the salt panne east of the plant (Hartley 2010).

Suitable habitat for western snowy plover occurs within and adjacent to the southern survey area. In 2005, the USFWS designated critical habitat for the plover at Ormond Beach (CA-19B subunit) (USFWS 2005). Ormond Beach is located west and adjacent to the project survey area. However, in 2005, USFWS removed a portion of Ormond Beach from the critical habitat designation for the plover.

Source: USFWS | G:\Projects\75217_J_Street\map_docs\mxd\BTR\SensitiveSpeciesHab.mxd | Last Updated : 08-15-2011

Critical Habitat and Observed Sensitive Wildlife Species

FIGURE 7

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Specifically, the area extending from the J Street drainage north to the southern jetty of Port Hueneme due to the heavily disturbed nature of the area (Figure 6). According to the Programmatic Biological Opinion prepared for the Hueneme and J Street Drain Reconstruction, western snowy plovers are known to use Ormond Beach to breed and forage from Arnold Road to the Perkins Road estuary, which is adjacent to the eastern project survey boundary (USFWS 2004). A focused survey was conducted for this species and none were identified within the project survey area. The absence of nesting plover within the project survey area is likely due to heavy disturbance occurring within the lagoon area (i.e., pedestrian traffic, domestic animals). Nesting plovers were observed adjacent to the project survey area on the west side of the Ormond Beach Lagoon (Figure 7). The survey is discussed in further detail in Appendix D.

BEMP Access Area

The access route to and on the beach for the beach elevation management activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. The BEMP access route and maintenance area occurs within designated critical habitat for the western snowy plover and provides potential breeding and foraging habitat but is located approximately 1,200 feet north of the two most recent nest observations.

Light-footed Clapper Rail

Federal Status: Endangered
State Status: Endangered

The light-footed clapper rail (*Rallus longirostris levipes*) is large compared to other rails in coastal, Southern California (approximately 14 inches long). The plumage of this species is variable. However, the brown feathers on the back typically have grayish edges. The cheeks of the light-footed clapper rail are brownish gray. The light-footed clapper rail vocalizes mainly at dusk and dawn; but may be heard at any time during the day or night.

Suitable habitat for the rail occurs within most of the coastal fresh and saltwater marshes of central to Southern California. Although most records of this species occur within chord grass (*Spartina* sp.*)* and, pickleweed (*Salicornia* sp.*)* dominated marshes, this species also uses cattail (*Typha latifolia)* and bulrush (*Scirpus* sp.) dominated freshwater and brackish marshes.

The migratory behavior of clapper rails is poorly known. Most populations of clapper rails are considered non-migratory (Eddleman and Conway 1998). However, populations located in the northeast are largely migratory (Stewart 1954, Meanley 1985, and Sibley 1993 as in Eddleman and Conway 1998). The light-footed clapper rail is apparently a non-migratory resident of coastal salt and freshwater marshes (USFWS 1985). However, dispersal movements of up to 21 kilometers have been documented (Zembal et al. 1985). Therefore, some flexibility in mobility should be anticipated for the light-footed clapper rail. Flexibility in movement between suitable sites is also supported by the presence of just one subspecies of clapper rail from Santa Barbara County, California to San Quintine Bay, Baja California, Mexico (USFWS 1985).

Based on the annual breeding season survey of the light-footed clapper rail, Ormond Beach lagoon has not been monitored for this species (Zembal et al. 2007). Based on this report, the closest monitored population of light-footed clapper rails occurs at Point Mugu. From 2000 to 2007, the population of rails at Point Mugu has ranged between 7 and 17 individuals. Pair status remains unknown at Point Mugu.

A protocol survey for the light-footed clapper rail was conducted within the southern survey area between April 2008 and June 2008. Although suitable nesting and foraging habitat for the species occurs within the project survey area (Figure 8 and Appendix D), none were observed during the protocol survey.

BEMP Access Area

The BEMP access route and maintenance area does not occur within suitable habitat for the light-footed clapper rail.

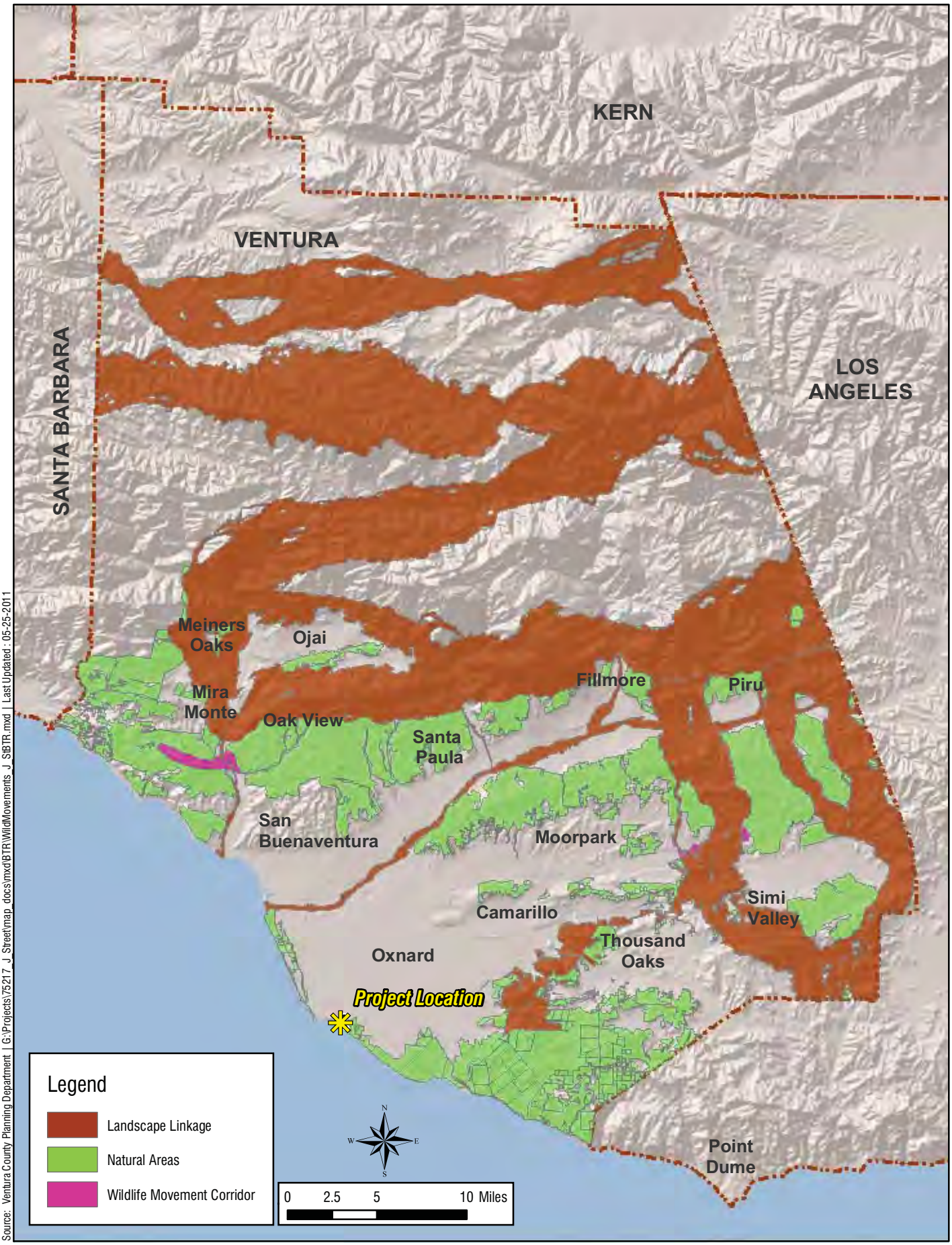
Tidewater Goby

Federal Status: Endangered
State Status: Species of Special Concern

The tidewater goby (*Eucyclogobius newberryi*) is a small, elongate, grey-brown fish with dusky fins not exceeding 50 millimeters standard length (mm SL). The species, which is endemic to California, is typically found in coastal lagoons, estuaries, and marshes with relatively low salinities (approximately ten parts per thousand [ppt]). Its habitat is characterized by brackish shallow lagoons (1 to 2 meters) and lower stream reaches where the water is fairly still but not stagnant. Tidewater gobies enter marine environments if sandbars are breached during storm events. The species' tolerance of high salinities (up to 60 ppt for shorter time-periods) likely enables it to withstand the marine environment, allowing it to colonize or reestablish in lagoons and estuaries following flood events (USFWS 2007).

The tidewater goby is primarily an annual species in central and Southern California. Reproduction peaks from late April or May to July and can continue into November or December depending on the seasonal temperature and rainfall. Male gobies create burrows where one female enters for 1-3 days. Fertilized eggs are attached to a burrow wall and left by the females. Male gobies guard and tend to the embryos for 9-11 days. Once the embryos hatch they take on a planktonic form and the male goby abandons the young. Young gobies become benthic again when they reach a standard length of 16-18 mm (Regents 2003).

Historically, the tidewater goby occurred in at least 110 California coastal lagoons from Tillas Slough near the Oregon border to Agua Hedionda Lagoon in northern San Diego County. The southern extent of its distribution has been reduced by approximately eight miles. The species is currently known to occur in about 85 locations, although the number of sites fluctuates with climatic conditions. Today, the most stable populations are in lagoons and estuaries of intermediate sizes (2 to 50 hectares) that have remained relatively unaffected by human activities. The decline of the tidewater goby can be attributed primarily to urban, agricultural, and industrial development in and surrounding the coastal wetlands and alteration of habitats from seasonally closed lagoons to tidal bays and harbors. Some extirpations are believed to be related to pollution, upstream water diversions, and the introduction of exotic fish species (most notably sunfishes and black basses [*Centrarchidae*]). These threats continue to affect some of the remaining populations of tidewater gobies. Tidewater gobies have recently been observed in Mugu Lagoon, Ventura County, from which this species was previously presumed extirpated due to degraded water quality. Stable tidewater goby populations have persisted over time, in other waterbodies (e.g., Santa Clara River, Ventura County) (Personal communication with USFWS 2011).



Source: Ventura County Planning Department | G:\Projects\75217_J_Street\map_docs\mxd\BTR\WildMovements_J_SBTR.mxd | Last Updated : 05-25-2011

Wildlife Movement Areas

FIGURE 8

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The Ormond Beach Lagoon is designated as critical habitat for the tidewater goby (USFWS 2008). The recovery plan for tidewater goby identified that the species has occupied this area as recently as 2004 (USFWS 2005). This species was observed in J Street Drain, adjacent to the Hueneme Drain Pump Station, during reconstruction of the pump station in 2005 and 2006. The southernmost portion of the project, located at the outlet of J Street Drain to the lagoon, occurs within the critical habitat (Figure 6).

BEMP Access Area

The access route to and on the beach for the beach elevation management activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. The BEMP access route and maintenance area does not occur within suitable habitat for tidewater goby.

7.0 WILDLIFE DISPERSAL CORRIDOR OR LINKAGES

Wildlife movement corridors, also called dispersal corridors or landscape linkages, are linear features whose primary wildlife function is to connect at least two significant habitat areas (Beier and Loe 1992). Other definitions of corridors and linkages are as follows:

1. A corridor is a specific route that is used for movement and migration of species. A corridor may be different from a linkage because it represents a smaller or narrower avenue for movement. "Linkage" shall mean an area of land that supports or contributes to the long-term movement of wildlife and genetic material.
2. A linkage is a habitat area that provides connectivity between habitat patches as well as year-round foraging, reproduction, and dispersal habitat for resident plants and animals.

Wildlife corridors and linkages are important features in the landscape, and the viability and quality of a corridor or linkage are dependent upon site-specific factors. Topography and vegetative cover are important factors for corridors and linkages. These factors should provide cover for both predator and prey species. They should direct animals to areas of contiguous open space or resources and away from humans and development. The corridor or linkage should be buffered from human encroachment and other disturbances (e.g., light, loud noises, domestic animals) associated with developed areas that have caused habitat fragmentation (Schweiger et al. 2000). Wildlife corridors and linkages may function at various levels depending upon these factors and, as such, the most successful of wildlife corridors and linkages would accommodate all or most of the necessary life requirements of predator and prey species.

Width and connectivity are assumed to be the primary factors of a good corridor (Forman 1987). With that connectivity should also be included the concept of stepping stone reserves for pollinators, seed dispersers, and other flying species such as birds, bats, and insects (Soulé 2003). The level of connectivity needed to maintain a population of a particular species would vary with the demography of the population, including population size, survival and birth rates, and genetic factors such as the level of inbreeding and genetic variance (Rosenberg et al. 1997). Areas not considered as functional wildlife dispersal corridors or linkages are typically obstructed or isolated by concentrated development and heavily traveled roads, known as chokepoints. One of the worst scenarios for dispersing wildlife occurs when a large block of habitat leads animals into cul-de-sacs of habitat surrounded by development. These habitat cul-de-sacs frequently result in adverse human/animal interface.

No regional biological corridors or linkages were identified within the project alignment (Figure 8). Therefore, no identified corridors or linkages would be impacted by project implementation. However, the lagoon portion of the project area is considered a natural area by the Ventura County General Plan.

This natural area, consisting of coastal wetlands and lagoons, provides shelter, forage, and nesting areas for birds, fish, mollusks, crabs, seals, and other marine organisms and plants (Ventura County General Plan Section 1.5). The Ormond Beach Lagoon, and adjacent dune/beach area, is staging area for migratory birds, such as the California least tern, killdeer (*Charadrius vociferus*), and black-necked stilt (*Himantopus mexicanus*). In addition, the Lagoon could provide a potential local corridor for tidewater goby as they are known to disperse to other lagoons during major storm events if their current lagoon is breached. Due to project implementation, a small area of natural areas could be impacted.

8.0 OTHER REGULATORY REQUIREMENTS

8.1 RAPTOR HABITAT, NESTING, AND FORAGING (MBTA)

The Migratory Bird Treaty Act (MBTA) makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 Code of Federal Regulations (C.F.R.) Part 10, including feathers, or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R. 21). Sections 3505, 3503.5, and 3800 of the CDFG Code also prohibit the take, possession, or destruction of birds, their nests, or eggs. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered take and is potentially punishable by fines or imprisonment (CDFG 1995).

8.2 CITY OF OXNARD GENERAL PLAN

The Open Space Element was first required to be a part of city and county general plans in 1973. With the exception of the Land Use Element, the Open Space Element is broadest in scope. The Open Space Element overlaps the issues of agriculture, natural resources, recreation, and enjoyment of scenic beauty discussed in the Land Use Element; the concern for preservation of natural resources and managed production of resources discussed in the Conservation Element; and the question of open space for public health and safety discussed in the Safety Element.

The Conservation Element has also been required since 1973 for the purpose of establishing a management plan for natural resources to prevent waste, destruction and neglect. It provides for the "conservation, development and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals and other natural resources."

Local Coastal Program

The City has an adopted Local Coastal Program consisting of a Coastal Land Use Plan and Coastal Zoning Regulations and Maps. The Coastal Zone boundary extends generally 1,000 yards inland from the sea. The Coastal Zone has been divided into four planning areas: McGrath/Mandalay Beach, Oxnard Shores, Channel Islands and Ormond Beach. Recreational uses are predominant in the McGrath/ Mandalay area; urban residential uses are concentrated in the Oxnard Shores area. The Channel Islands area contains the Channel Islands Harbor. The Ormond Beach area is separated from the rest of the City's Coastal Zone by the City of Port Hueneme, and is currently an industrial area. Further details and existing land use designations and policies are contained in the Coastal Land Use Plan.

8.3 CITY OF PORT HUENEME GENERAL PLAN/CONSERVATION/OPEN SPACE/ ENVIRONMENTAL RESOURCES ELEMENT

The City's open space element emphasizes the preservation of open space land specifically utilized for the preservation of natural resources, managed production of natural resources, outdoor recreation, and the public health and safety. According to the City's General Plan, the purpose of conserving open space is to provide visual relief from urban congestion, to protect wildlife, to provide opportunities for recreation and to conserve resources.

Local Coastal Plan

The California Coastal Act is intended to protect the natural and scenic qualities of the California coastal zone. The coastal zone includes both Coastal Program land and water area. Approximately one-half of Port Hueneme's land area lies within the California coastal zone. Over half of the City area within the zone is part of the U.S. Naval Construction Battalion Center (USNCBC). Except for USNCBC property, the area within the coastal zone is subject to the California Coastal Act.

Port Hueneme's current Local Coastal Plan (LCP) was certified by the California Coastal Commission in 1998. The LCP exists as an amendment to the existing General Plan and discusses the allowable land uses and applicable coastal resource issues for the planning areas within the City's coastal zone. The LCP continues to be implemented as the primary planning document for the coastal zone. Consistent with the coastal act's basic goal to "protect, maintain, and, where feasible, enhance and restore" the coastal zone, the Port Hueneme LCP identifies attainable goals and objectives specifically related to local conditions. The current LCP acts as the baseline for the revised program included as part of this General Plan Update.

9.0 DIRECT AND INDIRECT IMPACTS

Impacts assessed to biological resources from the project include direct and indirect impacts. Direct impacts are those that affect the biological resources such that those resources are not expected to recover to their pre-impacted state (e.g., permanent development of a site through grading and building of structures). Direct impacts may be considered temporary or permanent (e.g., the installation of a pipeline is considered a direct and temporary impact, whereas the construction of a building is considered a direct and permanent impact). Indirect impacts occur secondary to the project's direct impacts, such as changes in general plant composition due to loss of substrate or other factors that may affect resources such as noise, dust, and lighting. Indirect impacts may be considered temporary or permanent depending upon the situation; for example, the dust or noise levels associated with the construction of the new building is considered an indirect and temporary impact, whereas the support functions of a structure (such as the parking lot), would have indirect and permanent impacts such as lighting and storm water runoff.

9.1 DIRECT IMPACTS

9.1.1 Vegetation Communities/Habitats

The majority of the proposed J Street Drain project consists of UD. Within the northern survey area, the Drain is a concrete lined ditch with surrounding residential and commercial development. Project implementation within the northern survey area would occur entirely within the concrete-lined channel, which is developed (Figure 9a). Therefore, no impacts to sensitive vegetation communities within the northern survey area would occur. However, the southern survey area supports four sensitive vegetation communities: CBM, SCSM, OW, and SFD. One sensitive vegetation community, OW, would be impacted by project implementation (Table 3 and Figure 9b). EW located on the west side of the Drain

and within the southern survey area would be impacted by construction activities. EW located on the eastern side of the Drain would not be impacted by the proposed project. The impacted area of EW is located within the City of Port Hueneme. Construction activities located within the lagoon portion of the project area would result in an impact to OW. Impacts to OW habitat would be considered significant and require mitigation. Disturbed habitat areas are not considered sensitive; therefore, impacts to this vegetation community would be less than significant.

Table 3. Project Impacts to Vegetation Communities

Habitat Type	Existing Acreage Within the Survey Area	Project Impacts (acres)
Coastal Brackish Marsh (CBM)	2.98	0.0
Disturbed Habitat (DH)	6.76	0.54
Urban/Developed (UD)	32.44	6.73
Eucalyptus Woodland (EW)	1.18	0.13
Open Water (OW)	2.27	1.80
Southern Coastal Salt Marsh (SCSM)	8.26	0.0
Southern Foredune (SFD)	2.6	0.0
Total	**56.49**	**9.20**

BEMP Access Area

The access route to and on the beach for the beach elevation maintenance activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. The BEMP Access Area does not support sensitive vegetation communities. Therefore, no significant impacts to sensitive habitat are anticipated.

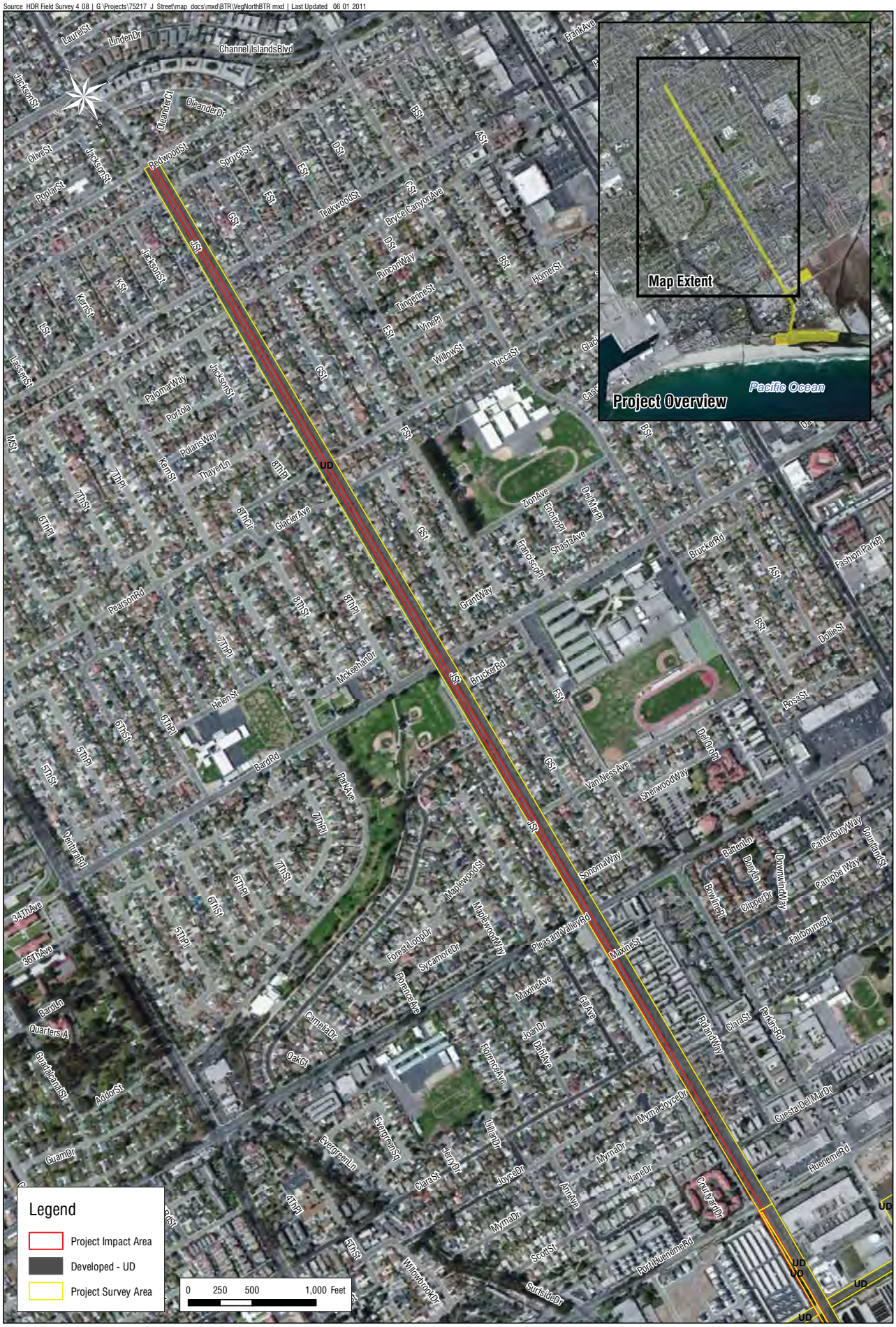
9.1.2 Sensitive Botanical Species

Potential for two sensitive botanical species to occur on-site include Ventura milkvetch and saltmarsh bird's beak. Appropriate habitat occurs within the southern survey area of the project site within the southern foredunes located along the northeastern boundary of the lagoon and in the northwestern corner of the project survey area. Implementation of the proposed project would not impact SFD within the project survey area. In addition, during the general biology survey (conducted during the growing season) these species were not observed on-site. The milkvetch is a perennial species and would have been detected at the time of the survey. There were no species of bird's beak observed during the survey. Therefore, impacts to sensitive plant species would be considered less than significant.

BEMP Access Area

The access route to and on the beach for the beach elevation maintenance activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. The BEMP Access Area does not support sensitive plant species. Therefore, no significant impacts to sensitive plant species are anticipated.

Source HDR Field Survey 4 08 | G \Projects\75217 J Street\map docs\mxd\BTR\VegNorthBTR mxd | Last Updated 06 01 2011



Project Impacts - Northern Vegetation Communities

FIGURE 9a

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Source: HDR Field Survey 4 08; Google Earth Aerial 2008 | G:\Projects\75217_J_Street\map_docs\mxd\BTR\veg_impacts.mxd | Last Updated: 08 15 2011

Project Impacts - Southern Vegetation Communities

FIGURE 9b

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9.1.3 Sensitive Wildlife Species

Belding's Savannah Sparrow

Despite the presence of SCSM, no Belding's savannah sparrows were observed within the project area during any of the biological field surveys conducted for the proposed project. Given the number and timing of survey activities, Belding's savannah sparrow should have been detected if it was breeding within the survey area. Since no Belding's savannah sparrows were identified during survey, the proposed project is not anticipated to substantially affect the species. Impacts would be less than significant.

BEMP Access Area

The access route to and on the beach for the beach elevation maintenance activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. No Belding's savannah sparrows were observed on-site. Therefore, no impacts to Belding's savannah sparrow are anticipated.

California Brown Pelican

During the general biological survey and the focused California least tern and western snowy plover survey (Appendix D), the formerly endangered California brown pelican was observed foraging within the general vicinity of the southern survey area. California brown pelicans were commonly observed bathing in the lagoon and basking on the sand spit that separates Ormond Lagoon from the Pacific Ocean. The pelicans were observed along the southeastern boundary and outside of the survey area. In May, three to five California brown pelicans were observed in this area. By mid June, the number of California brown pelicans had grown to more than 60 birds. Given the proximity of this site to Anacapa Island (a major nesting area for the species), the number of California brown pelicans using this area should be anticipated to increase (Appendix D). However, suitable nesting habitat for the species does not occur within the project survey area. Therefore, impacts to nesting brown pelicans would not occur and impacts to this species would be considered less than significant.

BEMP Access Area

The access route to and on the beach for the beach elevation maintenance activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. Basking California brown pelicans may be temporarily disturbed by manual beach grooming, however no potential nesting habitat would be impacted. Therefore, no significant impacts to California brown pelican are anticipated.

California Least Tern

A focused California least tern and western snowy plover survey was conducted within the southern survey areas of the project site. Potential nesting and foraging habitat for the California least tern occurs on-site. However, the proposed project would not impact potential tern nesting habitat due to the distance between the potential nesting habitat and the project impact area. Additionally, although suitable habitat for this species occurs within the southern survey area, the species was not observed nesting on-site during the protocol survey. The absence of nesting California least terns, including the area of impacted SFD, may be attributed to the frequency of human disturbance. Therefore, direct impacts to potential tern habitat would be less than significant.

Approximately 0.31 acres of foraging habitat for the California least tern occurs within the project area. Should construction occur within the breeding season, indirect impacts (i.e., construction noise, lighting, etc.) to the species may occur. In addition, sediment eroded as a result of construction activities may enter the lagoon and potentially increase the turbidity of the water. This would significantly impact the ability of California least terns to forage in the lagoon. Therefore, impacts to the California least tern foraging habitat would be considered significant and require mitigation.

BEMP Access Area

The access route to and on the beach for the beach elevation maintenance activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. Although the proposed route and beach grooming location occurs within and adjacent to nesting and foraging habitat for the California least tern, access to the beach from this point will avoid all nesting sites used by California least terns in 2008 (Davenport 2008), 2009 (Smith 2009) and 2010 (Smith 2010). The BEMP will generally be implemented outside of the nesting season between September 16 and March 14 greatly reducing the potential for direct impact to CLT. In the event that implementation is required after March 14, there is a slight potential for impacting nesting tern if present within the BEMP maintenance area. Potential impacts to nesting California least tern would be considered significant and require mitigation.

Western Snowy Plover

Suitable habitat for the western snowy plover occurs within the southern survey area. The proposed project would not impact SFD located on-site, which is considered potential plover nesting habitat. In addition, a focused survey was conducted for the species and none were observed on-site or within the project survey area. The absence of plover within the project survey area, and specifically within onsite SFD, may be attributed to the frequency of human disturbance. Therefore, direct impacts to potential plover habitat would be less than significant. However, nesting plovers were observed adjacent to the site and project implementation could result in temporary indirect impacts to the species. Direct impacts to western snowy plover would not occur due to project implementation.

BEMP Access Area

The access route to and on the beach for the beach elevation maintenance activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. The proposed route and beach grooming location occurs within designated critical habitat for the western snowy plover. However, this route and beach grooming location will avoid all nesting sites used by western snowy plovers in 2008 (Davenport 2008), 2009 (Hartley 2009) and 2010 (Hartley 2010). Temporary impacts to open sandy beach critical habitat resulting from beach elevation maintenance are anticipated to recover naturally. The BEMP will generally be implemented outside of the nesting season between September 16 and March 14 greatly reducing the potential for direct impact to WSP. In the event that implementation is required after March 14, there is a slight potential for impacting nesting plover if present within the BEMP maintenance area. Potential impacts to nesting snowy plover would be considered significant and require mitigation.

Light-footed Clapper Rail

Suitable habitat for the light-footed clapper rail occurs within the southern survey area (Figure 4 in Appendix D). However, the species was not observed within or adjacent to the project survey area during protocol surveys. Impacts to the light-footed clapper rail would not occur due to project implementation.

In addition, a large population of California ground squirrels (*Spermophilus beecheyi*) inhabits the southern survey area (peninsula) of the project site. California ground squirrels may prey on the eggs and chicks of ground nesting birds such as light-footed clapper rails. The suitable nesting area is also degraded due to the presence of exotic invasive plants (e.g., sweet clover, crab grass (*Cynodon dactylon*), and ice-plant (*Carpobrotus* sp.). These influences have reduced the size of suitable habitat within the project survey area.

BEMP Access Area

The access route and beach grooming location would occur within beach habitat. These areas are not located within potential nesting and foraging habitat for the light-footed clapper rail. Therefore, no impacts to the light-footed clapper rail would occur as a result of BEMP implementation.

Tidewater Goby

Suitable tidewater goby habitat occurs within the southern survey area at the outlet of J Street Drain to the lagoon. The Ormond Beach Lagoon has been designated as critical habitat for the federally endangered tidewater goby. The northern survey area consists of a concrete channel and does not qualify as suitable goby habitat. In the southern survey area, the project proposes to install a cofferdam within the lagoon. This area would be drained and used in the construction of the southern portion of the drain, the riprap energy dissipater, the 40-foot sand ramp, and for the construction work area. The ramp would begin at the terminus of the concrete drain and would serve as a transition between the newly constructed drain and the natural substrate of the lagoon. Riprap would be buried with native soils during construction. Natural sand substrates are used by gobies for burrowing during breeding. The drained portion of the lagoon, including the 40-foot ramp, would occur within potential burrowing habitat for the tidewater goby and, therefore, would directly impact designated critical habitat for the species (Table 4 and Figure 10).

Table 4. Project Impacts to Tidewater Goby Critical Habitat

Tidewater Goby Critical Habitat	Existing Acres in Survey Area	Project Impacts
On-site	18.1	0.571

[1] Impacts to tidewater goby habitat would be temporary.

It should be noted that the deepening of the channel (approximately 4 feet) would change the existing water levels in the Lagoon. However, the Lagoon is a dynamic system where the water levels fluctuate and with consideration of the proposed depth and extent of the Drain improvements would not result in a significant impact to Lagoon water levels or to the tidewater goby.

Impacts to goby habitat would be temporary within the confines of the cofferdam (including the sand ramp) and would eventually return to a more natural state as influenced by tidal movement and other lagoon conditions. Erosion of soils or other materials into the lagoon during construction may also temporarily increase water turbidity which would result in an impact to goby foraging. Any impacts to tidewater goby habitat, including critical habitat, are considered significant. Therefore, project implementation would result in significant impacts and mitigation is required.

BEMP Access Area

The BEMP access route and maintenance area occur within beach habitat, which is not considered potential habitat for tidewater goby. Therefore, no impacts to tidewater goby are anticipated.

9.1.3.1 Raptor Habitat, Nesting, and Foraging

Although nesting or foraging raptors were not observed during the general biological survey, potential nesting and foraging habitat occur within the project area (e.g., eucalyptus woodland). A portion of EW is located along the west side of the existing Drain in the southern survey area. This area would be impacted during construction. Should migratory birds, including raptors, occupy or nest in the EW during construction, a significant impact would result. In addition, several species of migratory birds were observed nesting and foraging within the lagoon portion of the project survey area. Impacts to migratory birds, including raptors, would be considered significant.

BEMP Access Area

The BEMP access route and maintenance area occur within beach habitat. This area has little to no vegetation or trees that would support migratory birds, including raptors. The access route is anticipated to use the established lifeguard patrol route, which is used daily by lifeguard patrol vehicles. Therefore, less than significant impacts to migratory birds, including raptors, would result from BEMP implementation.

9.1.4 USACE and CDFG Jurisdictional Areas

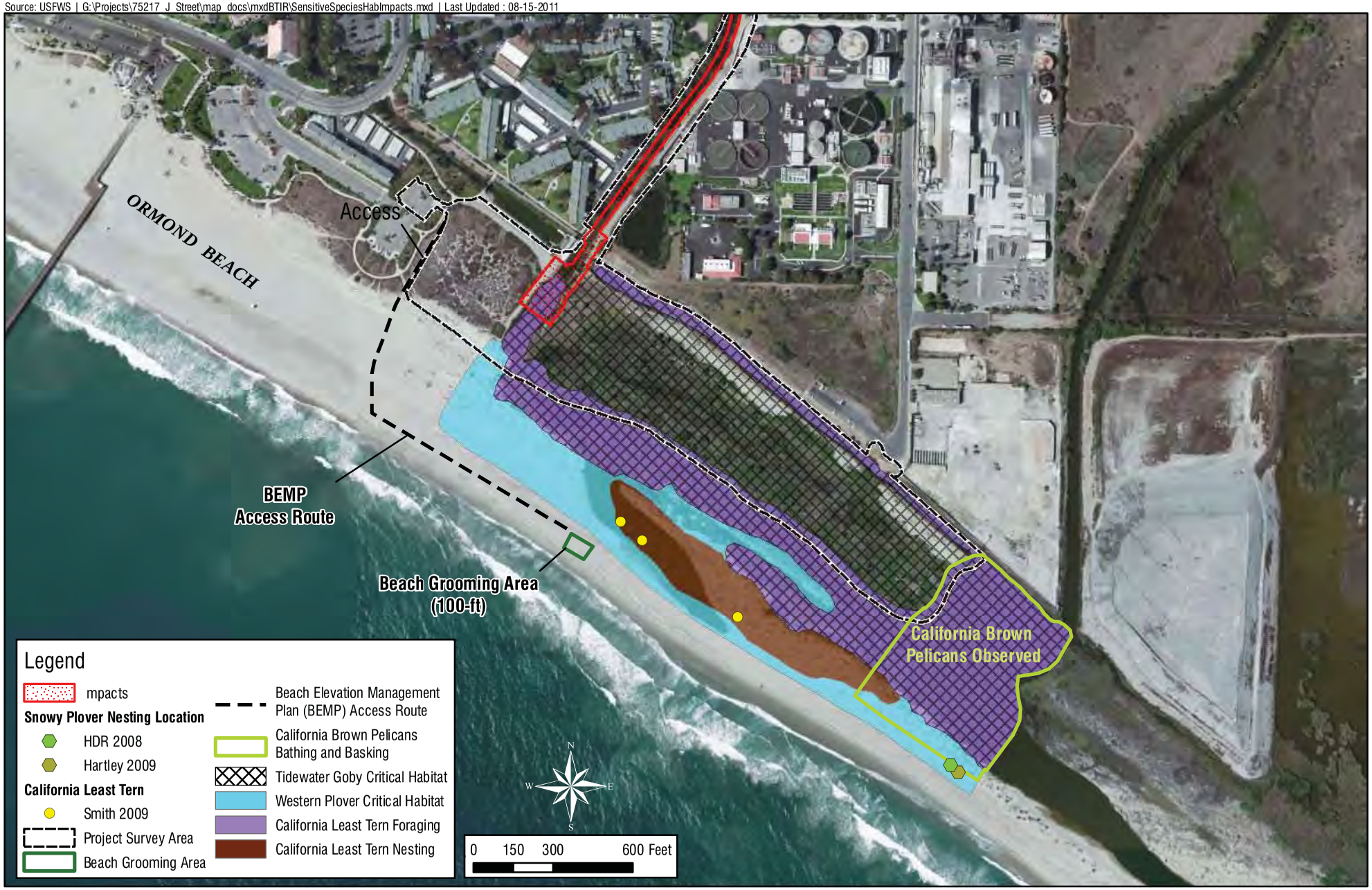
Any measurable modifications to the drainage or dredge to the watercourse could result in impacts, necessitating permitting for temporary or permanent impacts. The proposed improvements to the drain would temporarily impact federal/state jurisdictional areas (Table 5 and Figure 11). It should be noted that impacts to federal/state jurisdictional areas would occur primarily within the existing concrete-lined channel. As the channel is concrete-lined, federal and state agencies may decline to take jurisdiction over this portion of the project. However, the southern portion of the project occurs within the natural soil substrate of the lagoon. It is anticipated that federal and state agencies will take jurisdiction over this area. Improvements to the drain would include removal of the existing concrete channel, replacement of existing rock riprap, lowering the elevation of the drain, and modifying the contour of the channel to a rectangular configuration. Additional impacts would include the installation of a cofferdam within the Lagoon and the subsequent pumping/draining of ground and lagoon water within the construction/work area. Construction activities would impact the natural substrate of the Lagoon (Figure 11). As a result of these improvements, temporary impacts would occur to federal waters of the U.S and state.

Table 5. Project Impacts to Federal/State Jurisdictional Areas

Federal/State Jurisdictional Areas	Existing Acres (Project Survey Area)	Project Impacts[1]
Federal Waters of the U.S. and Waters of the State - Concrete Channel	7.9	7.90
Federal Waters of the U.S. and Waters of the State - Natural Substrate	2.73	0.29
Federal Wetlands	6.83	0.00
CDFG Wetlands[2]	10.92	0.00
CCC Jurisdictional Areas	15.73	4.811
Total	**N/A**	**8.193**

[1] Project impacts to state and federal jurisdictional areas would be temporary.
[2] CDFG and CCC jurisdictional area totals include USACE wetland and waters of the U.S. acreages.
[3] Mitigation for project impacts to jurisdictional areas would be satisfied through restoration of temporary impacts.

Source: USFWS | G:\Projects\75217_J_Street\map_docs\mxdBTIR\SensitiveSpeciesHabImpacts.mxd | Last Updated : 08-15-2011



Project Impacts to Critical Habitat and Observed Sensitive Wildlife Species

FIGURE 10

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Source: HDR Wetland Delineation; Google Earth 2008 | G:\Projects\75217_J_Street\map_docs\mxd\BTR\WetlandSouthImpacts_v2.mxd | Last Updated: 08.15.2011

Project Impacts - Federal/State Jurisdictional Areas

FIGURE 11

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As previously stated, the majority of project impacts would occur to an existing concrete-lined channel. By replacing the existing channel with a higher capacity channel, impacts to water conveyance would be mitigated. However, during construction impacts to water quality would potentially occur and require mitigation. The natural substrate located southwest of the concrete-lined channel would be impacted by the proposed project and mitigation is required.

BEMP Access Area

The access route to and on the beach for the beach elevation maintenance activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. No impacts to CDFG jurisdiction will occur from implementation of the BEMP. As previously discussed, the BEMP would occur within the HTL which is used to delineate the upper boundary of USACE jurisdiction (Figure 11). Implementation of the BEMP would temporarily impact 0.57 acre of USACE non-wetland waters. Temporarily impacted areas of beach are subject to tidal changes and wave action that will rapidly restore the beach to a natural state. Therefore, no significant impacts are anticipated and no mitigation is proposed.

9.1.4.1 CCC Jurisdictional Areas

As previously identified, USACE and CDFG jurisdictional areas located south of Hueneme Road qualify for CCC jurisdiction as they are located within the Coastal Zone. Temporary impacts to CCC jurisdictional areas would occur upon project implementation (Table 5). Impacts to CCC jurisdictional areas would be considered a significant impact and would require a Coastal Zone Development Permit from the CCC.

BEMP Access Area

The access route to and on the beach for the beach elevation maintenance activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. Implementation of the BEMP would result in 0.57 acre of temporary impacts to CCC jurisdiction. Temporarily impacted areas of beach are subject to tidal changes and wave action that will rapidly restore the beach to a natural state. No mitigation is proposed.

9.2 INDIRECT IMPACTS

9.2.1 Sensitive Vegetation Communities

Construction of the proposed project would occur within and adjacent to sensitive vegetation communities (OW, CBM, SFD, SCSM). Construction activities would result in potentially significant indirect impacts to these habitats (erosion, intrusion of workers/equipment, etc.) and mitigation is required.

9.2.2 Sensitive Wildlife Species

Over 60 California brown pelicans were observed using the eastern boundary of the southern project survey area for basking and bathing. However, the project survey area does not support potential breeding habitat for the pelican therefore not breeding habitat for the California brown pelican would be impacted. The California least tern uses the site heavily for foraging (Figure 9). Breeding pairs were observed nesting adjacent to the project survey area boundary. In addition, western snowy plover were

observed nesting adjacent to the project survey area. To minimize impacts to the California least tern and western snowy plover, it is recommended that construction occur outside of the breeding season (March to September). The breeding season for raptors and some MBTA-covered species is February 1 to August 15. Should construction occur within the breeding season, indirect impacts (i.e., construction noise, lighting, erosion, etc.) to the species would occur. In addition, sediments eroded as a result of construction activities may enter the lagoon and potentially increase the turbidity of the water. This would significantly impact the ability of California least terns to forage in the lagoon. Impacts to the California least tern and western snowy plover would be considered significant and require mitigation.

9.2.3 Raptor Habitat, Nesting, and Foraging

The project survey area contains suitable habitat for nesting and foraging migratory bird species, including raptors. Noise generated from construction activities due to project implementation may have an indirect impact on nesting migratory birds. Therefore, indirect impacts to nesting migratory birds, including raptors, would be considered significant and requires mitigation.

9.2.4 Water Quality

Water quality in jurisdictional areas can be adversely affected by surface water runoff and sedimentation during construction. The use of petroleum products (e.g., fuels, oils, and lubricants) and erosion of cleared land during construction could potentially contaminate surface water. Water quality in aquatic systems and terrestrial species that depend on these resources may be adversely affected. Impacts to water quality would be significant unless mitigated.

9.3 OTHER REGULATORY REQUIREMENTS

9.3.1 City of Oxnard General Plan

The proposed project is located within the jurisdiction of the City of Oxnard General Plan. Therefore, the project would be required to adhere to all goals and policies as identified in the General Plan. Failure to adhere to these goals and policies would be considered significant.

9.3.2 City of Port Hueneme General Plan

A portion of the proposed project is located within the jurisdiction of the City of Port Hueneme General Plan. Therefore, the project would be required to adhere to all goals and policies as identified in the General Plan. Failure to adhere to these goals and policies would be considered significant.

10.0 MITIGATION MEASURES

10.1 DIRECT/INDIRECT IMPACTS

10.1.1 Vegetation Communities/Habitat

Seven vegetation communities occur within the project survey area. Four of these vegetation communities are sensitive (OW, CBM, SFD, and SCSM). Of these, the proposed project would impact OW (Table 3). To mitigate for potential impacts to offsite sensitive vegetation communities during construction, fencing shall be placed along the Environmentally Sensitive Areas (ESA) adjacent to construction areas to prevent indirect impacts to sensitive habitats. Mitigation for direct impacts to OW habitat are recommended at a

1:1 ratio (i.e., restoration of the temporarily impacted habitat). It is also recommended that biological monitoring occur during construction activities to prevent indirect impacts. The biological monitor shall work with the contractor to implement specific mitigation measures required while working within/adjacent to ESAs. Installation of orange habitat fencing is recommended to avoid direct and indirect impacts to these areas. It is also recommended that staging areas, including lay down areas, equipment storage, etc be located outside ESAs to avoid impacting these sensitive areas. OW habitat restoration shall include replacement on the lagoon bottom of the top 12 inches of original soil to ensure suitable conditions for tidewater gobies and benthic fauna.

10.1.2 Botanical Species

Implementation of the project would not result in impacts to sensitive botanical species. Therefore, no mitigation is recommended.

10.1.3 Wildlife Species

- California least terns and western snowy plover were observed adjacent to the site. If feasible, construction will occur outside of the breeding season (March 15 to September 15). If construction occurs during breeding season, phase 1 project initiation through coffer dam installation shall be completed before May 1 to avoid direct impacts to foraging terns. In addition, a preconstruction clearance survey would be required within 300 feet of suitable habitat. If nesting birds are found, all construction activities shall be prohibited within a 300-foot buffer area surrounding the nest location until young have fledged. The qualified biologist shall ensure that the buffer area is appropriately defined with flagging and/or other means of suitable identification.
- To prevent a decrease in the foraging success of California least terns or western snowy plover, as well as to protect tide water goby, silt fencing will be installed during construction between the project area and waters of Ormond Lagoon to prevent runoff entering the lagoon. For project activities within waters of Ormond Lagoon, dual silt fencing should be installed around each work area to prevent/decrease the clouding of water within the lagoon as a result of runoff.
- Designated critical habitat for the tidewater goby occurs within the southern survey area of the project site (Table 4 and Figure 10). As recently as 2004, the species has been observed within the lagoon portion of the project area. It is assumed that goby are present and mitigation measures would be required during construction. Therefore, it is recommended that prior to the installation of the cofferdam, a permitted [10 (a) (1) (a)] tidewater goby biologist would need to capture and relocate gobies. To avoid impacts to tidewater goby eggs, Phase 1 project initiation through coffer dam installation shall be completed before May 1, as the peak breeding season for this species extends from late spring through early summer, and again in late summer through early fall. The biologist shall also be present during and after dewatering to ensure all gobies and other native fish are relocated to the lagoon prior to construction. A suitable number of biologists working under the supervision of the permitted biologist shall be present during and immediately after the dewatering phase to ensure that all gobies are detected. The temporary cofferdam shall remain in place throughout construction south of Hueneme Road to prevent tidewater goby from entering the construction area. In addition, the surface water pumps installed for the dewatering of the work area would be screened (<5 mm mesh size). A permitted tidewater goby biologist would also be required to remove any goby that may enter the work area from upstream.
- Although night construction is not anticipated, in the event that it becomes necessary, all lighting will be shielded to prevent illumination of the beach.

- In the event that the BEMP must be implemented between March 15 and September 15, a qualified biologist will conduct nesting surveys within the access route and maintenance to ensure that nesting birds are not present. If nesting WSP or CLT are present, FWS will be consulted prior to initiating the BEMP.

Implementation of the above mitigation measures will reduce potentially significant impacts to TWG, CLT and WSP to less than significant levels.

10.1.4 USACE, CDFG, and CCC Jurisdictional Areas

Temporary impacts to federal/state waters and CCC jurisdictional areas would occur as a result of project implementation. Temporary impact areas will be restored to existing contours and revegetated where applicable (Table 6). Water quality impacts resulting from the proposed project would require implementation of best management practices (i.e., straw waddles, silt fencing, etc.). Consultation with the wetland/wildlife agencies would be required. Impacts to federal/state waters would require a Section 404 permit with a RWQCB Section 401 Water Quality Certification. For impacts to CDFG jurisdictional areas, a Section 1600 Series Streambed Alteration Agreement would be required. Impacts to CCC jurisdictional areas would require a Coastal Zone Development Permit from the Coastal Commission.

Table 6. Project Impacts to Federal/State Jurisdictional Areas and Required Mitigation

Federal/State Jurisdictional Areas	Existing Acres (Project Survey Area)	Project Impacts[2]	Restoration (acres)
Federal Waters of the U.S. and Waters of the State - Concrete Channel	7.9	7.90	7.90
Federal Waters of the U.S. and Waters of the State - Natural Substrate	2.73	0.29	0.29
Federal Wetlands	6.83	0.00	0.00
CDFG Wetlands[1]	10.92	0.00	0.00
CCC Jurisdictional Areas	15.73	4.811	4.81
Total	**N/A**	**8.19**	**8.19**

[1] CDFG and CCC jurisdictional area totals include USACE wetland and non-wetland waters of the U.S. acreages.
[2] Project impacts to state and federal jurisdictional areas would be temporary.

Implementation of the above mitigation measures will reduce potentially significant impacts to USACE, CDFG and CCC jurisdictional areas to less than significant levels.

10.1.5 Raptor Habitat, Nesting, and Foraging

Nesting raptors, such as red-tailed hawks and other migratory birds are protected under the federal Migratory Bird Treaty Act. If construction occurs during the bird breeding season (defined roughly as February 1 to September 15), a preconstruction bird survey is recommended. If nesting birds are identified, a 300-foot construction buffer is recommended to avoid indirect impacts to nesting birds. For construction activities within urbanized areas, the monitoring biologist may reduce buffer widths depending on the level of tolerance of the bird species. For example, if a pair of house finches are identified nesting in a tree adjacent to the project and within a highly urbanized area (i.e., street side or residential), it can be assumed that the species is tolerant to urban disturbance. Noise abatement and/or seasonal restrictions may be required, as necessary.

Implementation of these mitigation measures would reduce the project's direct impact to nesting raptors or migratory birds to below a level of significance.

10.1.6 Water Quality

Since the project is adjacent to the Ormond Lagoon the project would be required to incorporate mitigation measures to divert and treat runoff so that no adverse impacts would occur to jurisdictional areas. The proposed project would also be required to prepare a Storm Water Pollution Prevention Plan, which would include construction and post-construction BMPs for reducing the levels of pollutants in runoff associated with the project. These may include but are not limited to silt fence, straw wattles, sand bags, etc. In consultation with the biological monitor, these measures would be implemented concurrent with construction activities.

Implementation of the above mitigation measures will reduce potentially significant indirect impacts to water quality to less than significant levels.

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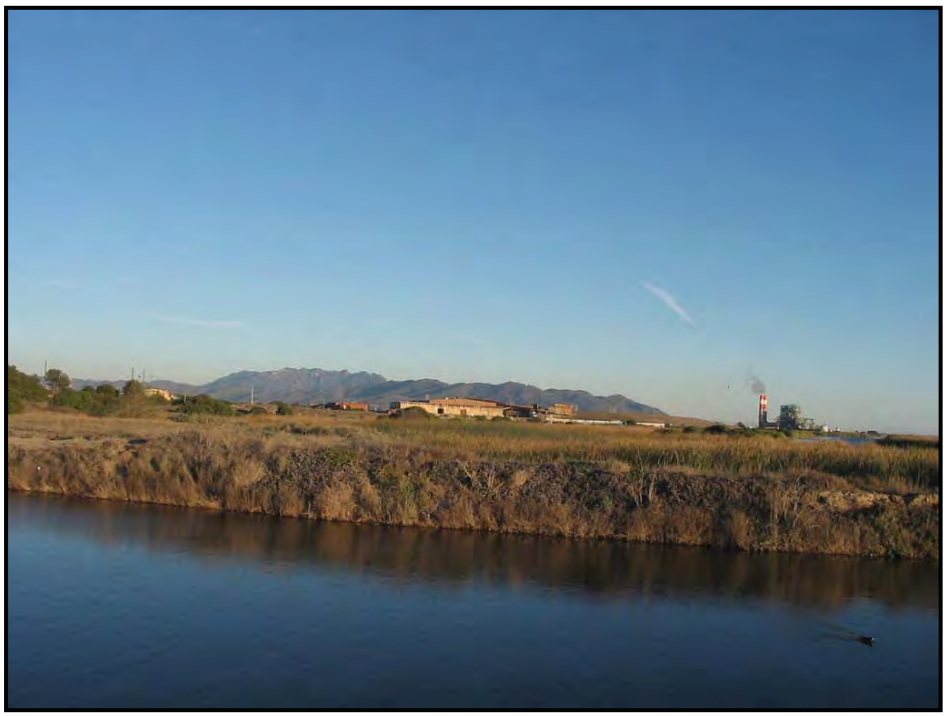
APPENDIX A
Site Photographs

Photograph 1. Northern Survey Area, concrete-lined J Street Drain. Oleander lines the chain link fence.

Photograph 2. Northern Survey Area, oleander lines the chain link fence. Brazilian peppertree and eucalyptus spp. are adjacent to the drain alignment.

Photograph 3. Southern Survey Area, view of J Street Drain along the western boundary of project survey area.

Photograph 4. Southern Survey Area, foot bridge entrance to Ormond Beach Lagoon located at the terminus of Perkins Road (southern portion of survey area).



Photograph 5. Southern Survey Area, southeasterly view of the Ormond Beach Lagoon.

Photograph 6. Southern Survey Area, coastal brackish marsh and open water located within the Ormond Beach Lagoon.

Photograph 7. Southern Survey Area, southern coastal salt marsh located within the Ormond Beach Lagoon.

Photograph 8. Southern Survey Area, southern foredunes located in the western portion of the survey area.

Photograph 9. Southern Survey Area, northeasterly view of J Street Drain near outlet to Ormond Beach Lagoon. Note planted eucalyptus spp. along drainage channel.

Photograph 10. Southern survey area, disturbed habitat.

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APPENDIX B
Botanical Species Observed

APPENDIX B

Species Observed on the J Street Drain Project Site

Scientific Name	Common Name
Acacia longifolia	Sydney golden wattle
Ambrosia bipinnatifida	beach bur
Ambrosia psilostachya	western ragweed
Anagallis arvensis *	scarlet pimpernel
Arundo donax *	giant wild reed
Atriplex semibaccata *	Australian saltbush
Avena fatua *	wild oat
Baccharis pilularis	coyote brush
Baccharis salicifolia	mule fat
Bromus diandrus *	ripgut brome
Bromus rubens *	foxtail brome
Cakile maritima	searocket
Camissonia cheiranthifolia	beach suncup
Carpobrotus edule *	hottentot fig
Centaurea melitensis *	tocalote
Chenopodium murale *	goosefoot
Conyza canadensis *	common horseweed
Cotula coronopifolia *	brass buttons
Cuscuta salina	salty dodder
Cynodon dactylon *	Bermuda grass
Cyperus eragrostis	umbrella plant
Distichlis spicata	desert salt grass
Echinochloa crus-galli	Japanese millet
Erodium cicutarium *	red-stem stork's-bill
Eucalyptus spp. *	eucalyptus
Frankenia salina	alkali heath
Fraxinus sp.	ash
Gazenia sp. *	gazenia
Gnaphalium canescens	cudweed
Gnaphalium sp.	cudweed
Heliotropium curvassavicum	wild heliotrope
Heterotheca grandiflora *	telegraph weed
Hirschfeldia incana	Mediterranean mustard
Hordeum murinum *	wild barley
Lolium multiflorum *	Italian ryegrass
Melilotus albus *	white sweet clover
Melilotus indicus *	Indian sweet clover
Mesembryanthemum chrystallinum	ice plant
Myoporum laetum *	bastard sandlewood
Nerium oleander *	oleander
Nicotiana glauca *	tree tobacco
Polypogon monspeliensis *	rabbitfoot grass

Scientific Name	Common Name
Raphanus sativus *	wild radish
Ricinus communis *	castor bean
Rumex crispus *	curly dock
Salsola pestifer *	Russian thistle
Schinus terebinthifolius *	Brazilian peppertree
Scirpus acutus var. *occidentalis*	American tule
Sonchus asper *	sow thistle
Tamarix sp. *	salt cedar
Tetragonia tetragonoides	New Zealand spinach
Typha angustifolia	cattails
Washingtonia robusta *	Mexican fan palm

** denotes non-native*

Total 53 Species

APPENDIX C
Wildlife Species Observed

APPENDIX C

Wildlife Species Observed on the J Street Drain Project Site

Avian	
Agelaius phoeniceus	red-winged blackbird
Anas platyrhynchos	mallard
Calypte anna	Anna's hummingbird
Ardea herodias	great blue heron
Carpodacus mexicanus	housefinch
Cathartes aura	turkey vulture
Charadrius vociferus	killdeer
Columbia livia	rock dove
Corvus corax	common raven
Euphagus cyanocephalus	Brewer's blackbird
Fulica americana	American coot
Geothlypis trichas	common yellowthroat
Himantopus mexicanus	black-necked stilt
Larus occidentalis	western gull
Melospiza melodia	song sparrow
Mimus polyglottos	mockingbird
Oxyura jamaicensis	ruddy duck
Pelecanus occidentalis	**brown pelican**
Stelgidopteryx ruficollis	northern rough-winged swallow
Sturnus vulgaris	European starling
Mammalian	
Spermophilus beecheyi	California ground squirrel
Sylvilagus sp.	rabbit
Thomomys bottae	valley pocket gopher
Reptilian	
Sceloporus occidentalis	western fence lizard
Uta stansburiana	Side-blotched Lizard
Butterflies	
Pontia protodice	Common White

Bold *denotes sensitive species*

Total 26 species

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APPENDIX D

California Least Tern Snowy Plover Protocol Survey

Light-footed Clapper Rail, Western Snowy Plover, and California Least Tern Surveys
J Street Drain Project
Ventura County, California
2008

Prepared for

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INTRODUCTION

On 8 February 2008, Davenport Biological Services (DBS) was hired to evaluate the potential presence of several sensitive species within the action area of the proposed J Street Drain project site. The action area includes all areas that may be affected directly or indirectly by the proposed action. J Street Drain empties into Ormond Lagoon, which is located in Oxnard, California (Figures 1 & 2).

Initially, DBS was to evaluate the potential presence of the California least tern (*Sterna antillarum browni*), and western snowy plover (*Charadrius alexandrinus nivosus*), within the study area at Ormond Lagoon. Based on the results of the initial survey (10 April 2008), surveys for the light-footed clapper rail (*Rallus longirostris levipes*) were added due to the presence of suitable habitat for this species within and adjacent to the project area.

California Least Tern

The California least tern was listed as an endangered species under the Federal Endangered Species Act (ESA) on June 2, 1970 (Federal Register 35:8495). The California least tern is our smallest tern and measures approximately 9 inches long. Adult birds have a light gray back and a black cap and nape; their forehead is white. Adult birds have an orange-yellow bill with a dark tip. In contrast, first summer birds have dark feet and bill.

Between San Francisco Bay and San Diego Bay, the California least tern should be anticipated to occur throughout the coastal zone of California. California least terns commonly forage in coastal wetlands, bays, and near the surf zone. This species nests on sandy beaches, sand bars, salt flats, and other bare areas (areas that are essentially denuded or otherwise bares of vegetation). In addition, California least terns often forage within rivers, streams, and lakes located within 10 miles of the coast.

Western Snowy Plover

The western snowy plover was listed as a threatened species under the ESA on March 5, 1993 (Federal Register 58:12874). In southern California, the western snowy plover is our smallest plover and is approximately 6 inches long. The snowy plover is very pale in coloration and has a partial breast band and a dark ear patch. This species is active during the day.

Based on museum records, in the United States, the western snowy plover breeds along the west coast from Oregon to California; and includes some inland localities. The distribution of western snowy plovers continues along the west coast into Baja California, Mexico (Museum of Vertebrate Zoology, UC Berkeley). Western snowy plovers inhabit sandy beaches, mud flats, and salt-flats. They nest in the upper reaches of beaches, flats, and pans above the ordinary high water mark.

Light-footed Clapper Rail

The light-footed clapper rail was listed as an endangered species under the ESA on October 30, 1970 (Federal Register 35:16047). In addition, the light-footed clapper rail and California least tern are also listed as endangered species under CESA. The light-footed clapper rail is large compared to other rails in coastal, southern California (approx. 14 inches long). The plumage of this species is variable. However, the brown feathers on the back typically have grayish edges. The cheeks of the light-footed clapper rail are brownish gray. The light-footed clapper rail vocalizes mainly at dusk and dawn; but may be heard at any time during the day or night.

This rail should be anticipated to occur within all coastal fresh and saltwater marshes of central to southern California. Although most records of this species occur within chord grass (*Spartina sp.)* and, pickleweed (*Salicornia sp.)* dominated marshes, this species also uses cattail (*Typha latifolia)* and bulrush (*Scirpus* sp.) dominated freshwater and brackish marshes.

The migratory behavior of clapper rails is poorly known. Most populations of clapper rails are considered to be non-migratory (Eddleman and Conway, 1998). However, populations located in the northeast are largely migratory (Stewart 1954, Meanley 1985, and Sibley 1993 as in Eddleman and Conway, 1998). The light-footed clapper rail is apparently a non-migratory resident of coastal salt and freshwater marshes (U.S. Fish and Wildlife Service, 1985). However, dispersal movements of up to 21 kilometers have been documented (Zembal et al., 1985). Therefore, some flexibility in mobility should be anticipated for the light-footed clapper rail. Flexibility in movement between suitable sites is also supported by the presence of just one subspecies of clapper rail from Santa Barbara County, California to San Quintine Bay, Baja California, Mexico (U.S. Fish and Wildlife Service, 1985).

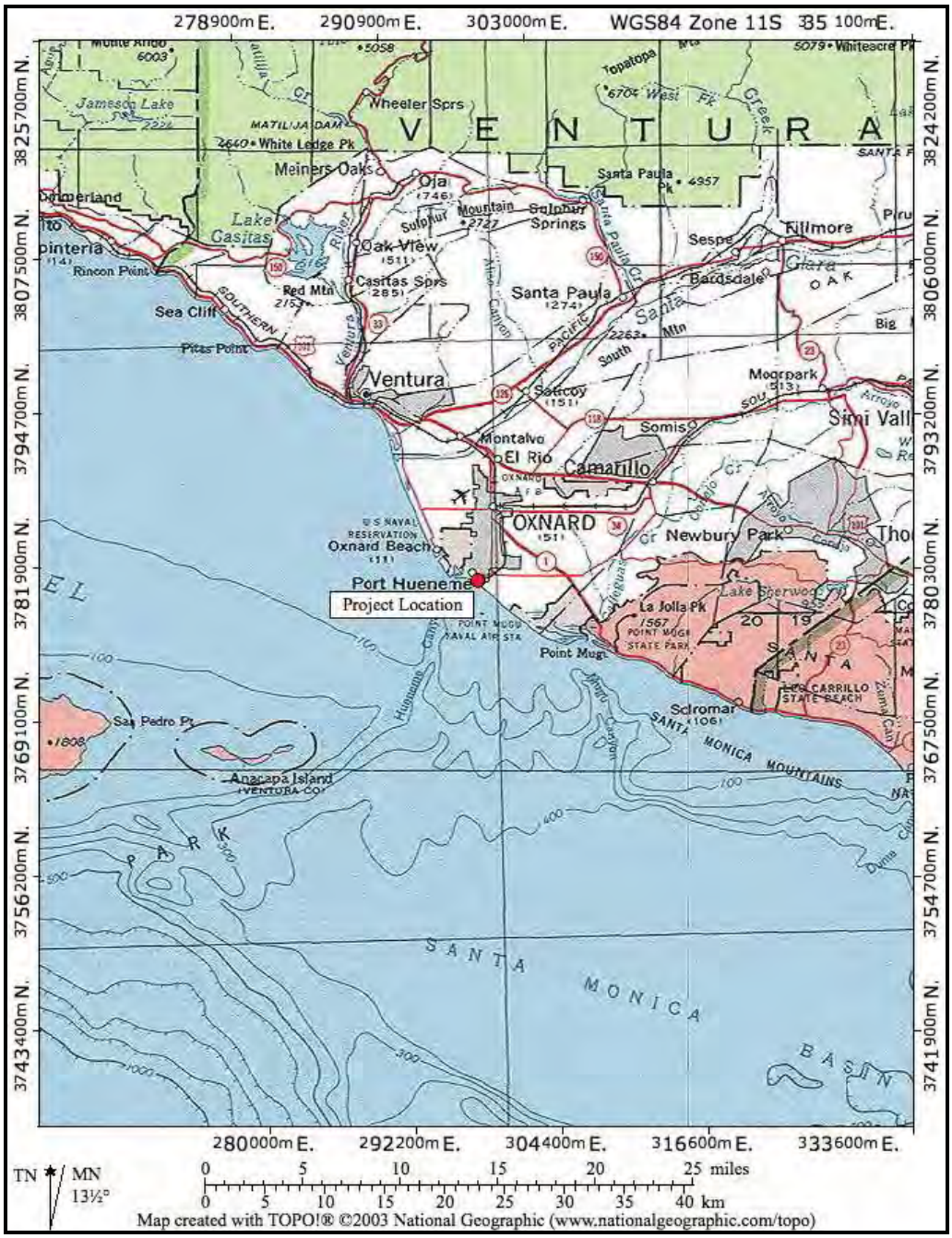

Figure 1. General location of the J Street Drain project/study area.

Figure 2. Location of the J Street Drain Project site.

METHODS

Background Search

Prior to conducting field surveys, a limited review of data concerning the historic locations of these animals was completed. Absent annual survey information or other recent information regarding the number and distribution of these species within or adjacent to the project area, information from the California Natural Diversity Data Base was reviewed. Absent relevant information within the CNDDB, specimens held at the Museum of Vertebrate Zoology, UC Berkeley (MVZ) was also reviewed.

Field Survey

To enhance and manage the collection of field data, the entire survey area was divided up into smaller survey areas (Figure 3).

California Least Tern

During the 2007 field season, no presence/absence survey guidelines were available from the U.S. Fish and Wildlife Service for the California least tern. Surveys for California least terns were strictly passive. Under no circumstances were California least terns pursued (i.e., chased, followed, trailed, tracked, shadowed, etc.) or their nests intentionally approached.

The survey was repeated 10 times, and the surveys were completed at least one week apart (Table 1). During each of the 10 survey events, two survey passes were completed of all potential habitat. Thus, a total of 20 survey passes were completed during the course of this survey. Surveys were completed by scanning all potential nesting and foraging areas for California least terns. The area surveyed extended up to 500 meters from the project site. The survey for California least terns was initiated on 10 April 2008, and was completed on 8 July 2008. Surveys were initiated and completed at various times and tidal regimes between sunrise and sunset.

During the survey, the locations of California least terns was determined in two ways. The location of incidentally discovered nests were determined using a Garmin GPSmap 60 CSx global positioning system (accuracy = +/-5 meters). In the case of nests, the distance to the nest was estimated while standing directly north or west of the nest site and the location adjusted accordingly. In addition, the locations of foraging attempts were initially located on geo-referenced aerial photographs of the lagoon. The positions of the foraging locations were then transferred to a geo-referenced map using ARC Map 9.2. The foraging locations are thus rough estimates of the exact location of the foraging attempt.

Figure 3. Shows survey areas.

Table 1. Shows dates, time, and weather conditions during each survey event for the California least tern.

Survey Date	Time (24 Hour)	Temperature (F^o)	Wind Speed (mph)	Cloud Cover (%)
	Start/Stop	Start/Stop	Start/Stop	Start/Stop
10 Apr 2008	1000/1920	59/58	1-5/3-5	0/0
18 Apr 2008	1157/1940	60/59	1-5/8-10	20/0 ML
27 Apr 2008	1400/1900	72/67	1-5/1-5	0/20
04 May 2008	1230/1600	61/62	1-7/3-10	90/50
16 May 2008	1430/1750	76/72	1-5/1-5	0/0
24 May 2008	1530/1955	63/58	1-3/1-3	20/30
31 May 2008	1630/2000	63/62	4-7/4-10	2/5
7 Jun 2008	1622/2000	67/61	1-5/1-5	0/0
14 Jun 2008	0520/1900	64/60	3-10/6-13	40/100 ML
8 Jul 2008	1400/1900	64/63	1-3/3-5	20/100 ML

ML: Marine Layer

Western Snowy Plover

During the 2008 field season, no presence/absence survey guidelines were available from the U.S. Fish and Wildlife Service for the western snowy plover. Surveys for western snowy plovers were strictly passive. Under no circumstances were western snowy plovers pursued (i.e., chased, followed, trailed, tracked, shadowed, etc.) or their nests intentionally approached.

The survey was repeated 10 times, and the surveys were completed at least one week apart (Table 2). During each of the 10 survey events, at each survey area, two survey passes were completed of all potential habitat. Thus, a total of 20 survey passes were completed during the course of this survey at Ormond Lagoon. Surveys were completed by scanning all potential nesting and foraging areas for western snowy plovers. The area surveyed extended up to 500 meters from the project site. The survey for western snowy plovers was initiated on 10 April 2008, and completed on 8 July 2008. Surveys were initiated between sunrise and completed by sunset.

Table 2. Shows survey dates, time, and weather conditions during each survey event for the western snowy plover.

Survey Date	Time (24 Hour)	Temperature (F^o)	Wind Speed (mph)	Cloud Cover (%)
	Start/Stop	Start/Stop	Start/Stop	Start/Stop
10 Apr 2008	1000/1920	59/58	1-5/3-5	0/0
18 Apr 2008	1157/1940	60/59	1-5/8-10	20/0 ML
27 Apr 2008	1400/1900	72/67	1-5/1-5	0/20
04 May 2008	1230/1600	61/62	1-7/3-10	90/50
16 May 2008	1430/1750	76/72	1-5/1-5	0/0
24 May 2008	1530/1955	63/58	1-3/1-3	20/30
31 May 2008	1630/2000	63/62	4-7/4-10	2/5
7 Jun 2008	1622/2000	67/61	1-5/1-5	0/0
14 Jun 2008	0520/1900	64/60	3-10/6-13	40/100 ML
8 Jul 2008	1400/1900	64/63	1-3/3-5	20/100 ML

Light-footed Clapper Rail

The survey was repeated 7 times, and the surveys were completed at least one week apart (Table 3). In an effort to decrease the probability of a false negative survey, two survey passes were completed per survey. Thus, within the project area, a total of 14 survey passes were completed during the course of this study. During each survey event, the playback of rail calls was used where clapper rails were not heard. During the use of call broadcasts, rail calls were played at approximately 10-meter intervals and only short broadcasts were used (approx. 5 seconds of "kek" calls). The short broadcast of calls was repeated twice at each 10-meter interval, following an approximately two minute delay. The survey for light-footed clapper rails was initiated on 18 April 2008, and was completed on 15 June 2008. Morning surveys were initiated between 0600 and completed by 1000 hours. Evening surveys were completed within one hour of sunset.

Table 3. Shows survey dates, time, and weather conditions during each survey event for the light-footed clapper rail.

Survey Date	Time (24 Hour)	Temperature (F^o)	Wind Speed (mph)	Cloud Cover (%)
	Start/Stop	Start/Stop	Start/Stop	Start/Stop
18 Apr 2008	1750/1940	59/54	1-8/3	0/0 ML
27 Apr 2008	0700/0800	67/60	1-5/1-5	20/30
04 May 2008	1800/1930	59/57	2-7/2-7	30/40 ML
16 May 2008	0612/0800	60/63	0-1/0-1	0/0
25 May 2008	0600/0730	52/53	1-3/1-3	40/40
1 Jun 2008	0600/0700	55/56	0-1/0-1	20/20
15 Jun 2008	0500/0600	57/57	0/0	100/100 ML

RESULTS

Background Search

California Least Tern

Based on the annual breeding season survey of California least terns, four general sites were monitored in Ventura County during the 2007 nesting season (Marschalek 2008). The monitored sites include McGrath State Beach, Ormond Beach, Hollywood Beach, and Point Mugu. At Ormond Beach, a maximum of 50 pairs of California least terns were documented in 2007. Based on the 1993 annual breeding season survey (Caffrey 1994), the Ormond Beach site was divided into three sites; Perkins, Middle, and Edison. During the 1993 nesting season, 14 pairs of California least terns were observed at the Edison site and three pairs observed at the Perkins site. The Ormond Beach site of 2007 appears to coincide with what was called the Edison site during the 1993 survey. Based on Marschalek (2008), the Perkins Site does not appear to have been monitored in 2007.

Western Snowy Plover

Unlike the California least tern, the annual survey for western snowy plovers is not comprehensive. Consequently, no comprehensive annual census data exists for western snowy plovers at Ormond Lagoon.

Based on information held in the California Natural Diversity Data Base, nesting western snowy plovers have been documented adjacent to Ormond Lagoon (CNDDB 2006). One of the records (Occurrence No. 39) indicated that a general nesting area of western snowy plovers is located approximately 1.5 miles southwest of Port Hueneme. At this general location, numerous nests have been documented. Other nesting western snowy plovers have been

documented just north of the inlet to the Channel Island Harbor, four miles southwest of Oxnard (Occurrence No. 123).

Light–footed Clapper Rail
Based on the annual breeding season survey of the light-footed clapper rail, Ormond Beach lagoon has not been monitored for this species (Zembal et al. 2007). Based on this report, the closet monitored population of light-footed clapper rails occurs at Point Mugu. From 2000 to 2007, the population of rails at Point Mugu has ranged between 7 and 17 individuals. Pair status remains unknown at Point Mugu.

Field Survey

California Least Tern
All, of the upper beach habitat bordering the project area, especially the dunes, is suitable nesting habitat for the California least tern. In addition, approximately 2.5 acres of suitable nesting habitat occurs within the project area (Figure 3).

California least terns did not arrive at Ormond Lagoon until mid May (Table 4). No nests of California least terns were detected within the project area during this survey. However, at least three pairs of California least terns were observed nesting near the project area (Figure 3). These three pairs routinely foraged within Ormond lagoon and within the J Street Drain. In addition, California least terns from the Southern California Edison nesting area, located south of the project site, also foraged within the lagoon. Foraging attempts by California least terns were mapped during each survey event (Figure 3). Based on observations made during these surveys, shallow, near shore areas were routinely used by the tern while foraging. California least terns were routinely observed flying over the project site while going to and returning from searches for food.

Table 4. Tabulated data from California least tern survey at the J Street Drain study area in 2008.

Survey Date	Survey Time (24 Hour)	Survey Area	Max Number Observed @ One Time	Activity
	Start/Stop			
10 Apr 2008	1000/1920			
18 Apr 2008	1157/1940			
27 Apr 2008	1400/1900			
04 May 2008	1230/1600			
16 May 2008	1430/1750			
24 May 2008	1530/1955	B,C,E	1,1,2	C,F,N
31 May 2008	1630/2000	A,C,B,E	3,3,5,3	F,F,F,N
7 Jun 2008	1622/2000	B,C,E	1,2,5	F,F,N
14 Jun 2008	0520/1900	A,C,E	1,2,6	F,F,N
8 Jul 2008	1400/1900	A,,B,C,E	1,13,3,3	F,F,F,N

C: Courting; F: Foraging; N: Nesting

Figure 3. Figure shows locations of commonly used foraging areas by the California least tern within the lagoon during the 2008 survey. Figure also shows location of small nesting colony of California least terns during 2008. Note, during the 2008 survey, water levels were higher within the lagoon than indicated in the aerial photograph.

Western Snowy Plover

All, of the upper beach habitat bordering the project area, including the dunes, is suitable habitat for the western snowy plover. In addition, approximately 2.5 acres of suitable nesting habitat occurs within the project area (Figure 4).

No snowy plovers were detected within the immediate project area during this survey. However, three pairs of snowy plovers, as well as several others, were observed adjacent to the project area (Table 5; Figure 4). At least one of these pairs established a nest adjacent to the project area. This nest was located across the lagoon within the dunes.

Table 5. Tabulated data from survey for western snowy plover at the J Street Drain study area. F: foraging; L: loafing; N: nest

Date	Survey Time	Maximum Number Observed	Survey Area	Activity	Easting	Northing
10 Apr 08	1000-1920	6	C	L	0298823	3779215
19 Apr 08	1200-1500	2 2 1	E F F	F F N? (very stealthy)	0298630 0298947 0298596	3779356 3779118 3779397
27 Apr 08	1400-1900	1 2 (+ nest)	F F	F N	0298561 0298630	3779420 3779370
04 May 08	1230-1600	2 3	F F	F, L F	0298893 0298837	3779172 3779161
16 May 08	1430-1900	2 (+ prev. nest)	F	F N	0298630 0298630	3779340 3779370
24 May 08	1530-2000	2 2	E F	F F	0298669 0298813	3779338 3779232
31 May 08	1630-2000	0	----	----	----	----
7 Jun 08	1622-2000	2	F	F	0299077	3778982
14 Jun 08	1520-1900	0	----	----	----	----
8 July 08	1610-1900	5	F	F, L	0298947	3779110

F: Foraging; L: Loafing/Perching; N: Nest

Figure 4. Figure shows location of observed western snowy plovers and nest location during 2008 survey.

Light-footed Clapper Rail

Approximately 5.52 acres of suitable light-footed clapper rails occurs within the project area. An additional 4 acres of suitable light-footed clapper rail habitat occurs adjacent to the project (Figure 4).

No light-footed clapper rails were detected during this survey. One Virginia rail (*Rallus limicola*) and one Sora (*Porzana carolina*) were detected during this survey.

Figure 4. Shows location and amount of light-footed clapper rail habitat within and adjacent to project area.

DISCUSSION

California Least Tern

There are three recognized nesting sites of California least tern near Ormond Lagoon. The locations are identified as the Perkins Street Site, Middle Site, and the Edison Site (Caffrey 1994). The project site appears to coincide with the Perkins Street Site. Although suitable nesting habitat for California least terns remains at the Perkins Street Site, and within the project area, no nesting was observed within the project site. The lack of nesting is likely due to the high disturbance of the site by people visiting the lagoon and/or trying to gain access to the beach. The sandy stretch of habitat that would be suitable for nesting (Survey Area H) is entirely trampled by people visiting the lagoon. People gain access to Survey Area H and I by two small foot-bridges. In addition, a large population of California ground squirrels (*Spermophilus beecheyi*) inhabits Survey Area H. California ground squirrels may prey on the eggs and chicks of ground nesting birds such as California least terns. The suitable nesting area is also degraded due to the presence of exotic invasive plants (e.g., sweet clover (*Melilotus alba*), crab grass (*Cynodon dactylon*), and ice-plant (*Carpobrotus* sp.) and is reduced in size due to their presence.

The three pairs of California least terns observed nesting across the lagoon from the project site foraged often within various areas of the lagoon (Figure 3). The foraging locations appeared to shift depending on the velocity of the wind. During windy conditions, the terns shifted their foraging to the calmer waters located just down wind of marsh vegetation and dunes. During calmer days, their foraging was more widespread across the lagoon but seemed concentrated near shallower waters.

Western Snowy Plover

Although suitable nesting habitat occurs within the immediate area of the project site, no nesting was observed within the project site. The lack of nesting is likely due to the high disturbance of the site by people visiting the lagoon. The sandy stretch of habitat that would be suitable for nesting (i.e., Survey Area H) is entirely trampled by people visiting the lagoon and/or trying to gain access to the beach. In addition, and as for the California least tern, California ground squirrels may pose a risk to nesting western snowy plovers. Nesting western snowy plovers were observed next to the project site but on the other side of the lagoon (Figure 4).

Light-footed Clapper Rail

Suitable habitat for nesting light-footed clapper rails occurs within the project site. The reason for the absence of rails is unknown. Interesting, only one Virginia rail and one Sora were detected during this survey, and they were only detected once. Other than the American coot (*Fulica americana*), no other rails were detected nesting within lagoon. The apparent absence of other rails remains unknown.

California Brown Pelican

California brown pelicans (*Pelecanus occidentalis californicus*) were commonly observed bathing in the lagoon and roosting on the sand spit that separates Ormond Lagoon from the Pacific Ocean. In May, three to five California brown pelicans were observed in this area. By mid June, the number of California brown pelicans had grown to more than 60 birds. Given the location of this site to Anacapa Island (a major nesting area for this species), the number of California brown pelicans using this area should be anticipated to increase.

CONCLUSION

Foraging California least terns were observed within and adjacent to the project site. Although suitable nesting habitat for California least terns, western snowy plovers, and light-footed clapper rails occurs within the project site, none of these species nested within the immediate area of the site. Nesting California least terns and snowy plovers were observed adjacent to the project site on the other side of the lagoon.

RECOMMENDATIONS (Avoidance, Minimization, and Mitigation Measures)

Avoid ground-disturbing and habitat impacting activities within the project area during the breeding season of migratory birds (February 15 through July 30). If project activities cannot avoid these dates, conduct nesting season surveys to ensure active nests are not destroyed by project activities.

To prevent a decrease in the foraging success of California least terns, prevent release of soils or other materials into waters of Ormond Lagoon.

To prevent a decrease in the foraging success of California least terns, install silt fences between the project area and waters of Ormond Lagoon to prevent clouding of the water due to runoff. For project activities within waters of Ormond Lagoon, install dual silt fences around each work area to prevent/decrease the clouding of water within the lagoon.

To offset project related impacts to Ormond Lagoon, enhance the site for future nesting California least terns and western snowy plovers by preventig general public access to Survey Area I. This can be accomplished by the installation of a sufficient gate at each of the two foot-brides. In addition, current signing discussing the sensitivity of the site can be enhanced by informing the public that there is no beach access.

To offset project related impacts to Ormond Lagoon, enhance the site for future nesting California least terns and snowy plovers, by instituting and funding a weed management program within Survey Areas H and I. The removal of exotic plants will increase the area of suitable nesting habitat for both California least terns and western snowy plovers.

To offset project related impacts to Ormond Lagoon, enhance the site post construction for future nesting California least terns and snowy plovers by instituting and funding a California ground squirrel eradication/management program within Survey Areas H and I. As California ground squirrels may prey upon nesting birds, their removal from the nesting area will enhance nest success of these species within this area.

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APPENDIX E

USACE and CDFG Jurisdictional Wetland Delineation

Jurisdictional Wetland Delineation Report

J Street Drain Project
Ventura County, California

July 2008

Revised September 2011

Prepared for

Ventura County Watershed Protection District
800 South Victoria
Ventura, California 93009-1610

Prepared by

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HDR

Jurisdictional Wetland Delineation Report
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TABLE OF CONTENTS

1.0 INTRODUCTION 1-1

2.0 PROJECT DESCRIPTION AND LOCATION 2-1

2.1 PROJECT LOCATION 2-1
2.2 PROJECT DESCRIPTION 2-1
2.3 PURPOSE, NEED AND PROJECT OBJECTIVES 2-2
2.4 PROJECT CHARACTERISTICS 2-7
2.5 CONSTRUCTION 2-8
2.6 OPERATIONAL – BEACH ELEVATION MANAGEMENT PLAN 2-17

3.0 METHODS 3-1

3.1 FEDERAL WETLAND DEFINITIONS 3-2
3.2 STATE JURISDICTIONAL AREA DEFINITIONS 3-7

4.0 RESULTS 4-1

4.1 FEDERAL JURISDICTIONAL AREAS 4-1
4.2 STATE JURISDICTIONAL AREAS 4-8

5.0 CONCLUSIONS AND RECOMMENDATIONS 5-1

6.0 REFERENCES 6-1

APPENDICES

Appendix A Site Photographs
Appendix B Routine Wetland Determination Data Forms

FIGURES

Figure 1. Regional Vicinity Map 2-3
Figure 2. Project Survey Area 2-5
Figure 3a. Coffer Dam Construction Phase 1 2-9
Figure 3b. Coffer Dam Construction Phase 2 2-11
Figure 3c. Coffer Dam Construction Phase 3 2-13
Figure 3d. Coffer Dam Construction Phase 4 2-15
Figure 4a. Northern Survey Area Vegetation 3-3
Figure 4b. Southern Survey Area Vegetation 3-5
Figure 5a. Northern Survey Area Jurisdictional Survey Results 4-3
Figure 5b. Southern Survey Area Jurisdictional Survey Results 4-5
Figure 6a. Project Impacts to Federal/State Jurisdictional Areas in the Northern Survey Area 5-3
Figure 6b. Project Impacts to Federal/State Jurisdictional Areas in the Northern Survey Area 5-5

TABLES

Table 1. Summary of Transect Data 4-2
Table 2. Summary of USACE Jurisdictional Areas 4-2
Table 3. Summary of CDFG and CCC Jurisdictional Areas 4-8
Table 4. Project Impact to Federal/State Jurisdictional Areas 5-1

1.0 INTRODUCTION

At the request of the Ventura County Watershed Protection District (District), HDR Engineering, Inc. (HDR) conducted a wetland delineation for the J Street Drain Project (Figure 1). This report presents the results of a U.S. Army Corps of Engineers (USACE), California Department of Fish and Game (CDFG), and California Coastal Commission (CCC) Jurisdictional Wetland Delineation conducted on site. The purpose of the delineation is to determine areas that may be subject to federal and state wetland regulation and permitting.

This study is intended to establish jurisdictional limits in compliance with the Unified Federal Method for Wetland Delineation (1987), Arid West Supplement pursuant to federal standards. Should project construction result in measurable impacts to resources determined to be within the jurisdiction of the USACE and/or CDFG, one or more of the following permitting documents may be required, depending on jurisdictional determinations (JD) made by the regulatory authorities identified by this study:

- A USACE Individual Permit pursuant to Section 404 of the federal Clean Water Act (CWA) (1990, as amended), and/or qualification under a Nationwide Permit pursuant to Section 404 of the CWA; and/or
- Clean Water Certification in compliance with the California Porter-Cologne Water Quality Control Act as defined by the state Regional Water Quality Control Board (RWQCB) or federal CWA Section 401 Certification requirements;
- A Section 1600-Series Streambed Alteration Agreement (SAA) with the CDFG in compliance with CDFG Code; and
- Coastal Zone Management Act, Coastal Development Permit.

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2.0 PROJECT DESCRIPTION AND LOCATION

2.1 PROJECT LOCATION

The project site is located along J Street, which is on the border of the City of Oxnard and City of Port Hueneme in Ventura County (Figure 1). The project site continues into the Ormond Beach Lagoon, which is located south of the J Street Drain (Drain). The predominant surrounding land uses consist of residential development on each side of J Street, some commercial uses near Hueneme Road, and the Oxnard Wastewater Treatment Plant (OWTP) near the lagoon. General site photos are located in Appendix A.

2.2 PROJECT DESCRIPTION

The existing Drain is a trapezoidal concrete-lined channel located along the centerline of J Street, and begins upstream at the Redwood Street crossing and terminates downstream at the west boundary of the Ormond Beach Lagoon (Figure 2). The facility also includes culverts under the street crossings at the following locations:

- Redwood Street
- Teakwood Street
- Yucca Street
- Bard Road
- Pleasant Valley Road
- Clara Street
- Hueneme Road
- Railroad crossing – Ventura County Railroad (VCRR)

The existing concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station and the remaining earthen portion continues downstream before turning east at the sand berm.

The Ventura County Watershed Protection District (then known as the Ventura County Flood Control District) was formed on September 12, 1944, when the California State Legislature approved the Ventura County Flood Control Act. The District was formed, in part, to provide for the control and conservation of flood and stormwaters and for the protection of watercourses, watersheds, public highways, life and property in the District from damage or destruction from these waters. On January 1, 2003, the name was changed to the Ventura County Watershed Protection District (District) to reflect changes in community values, regulatory requirements, and funding opportunities. The District's mission is to protect life, property, watercourses, watersheds, and public infrastructure from the dangers and damages associated with flood and stormwaters. Goals of the District include:

- Comprehensive, long range watershed planning
- Collaboration with watershed stakeholders
- Administration of adopted regulations, policies, and resolutions
- Responsible and accountable use of public resources
- Excellence in public service

The District possesses jurisdictional authority over any channel containing runoff with a peak flow rate of more than 500 cubic feet per second (cfs) during a 100-year storm. Laterals and side drains contributing runoff to the jurisdictional channels (referred to as "redline" channels) are under the jurisdiction of the state and or appropriate local agency (City of Oxnard for this project). However, lateral and side drain

connections to jurisdictional channels must obtain an encroachment permit from the District and provide sufficient information and engineering studies to show that the connection does not negatively impact the conveyance capacity of the jurisdictional channel.

In order to identify and focus long range priorities within the District an Integrated Watershed Protection Plan (IWPP) was prepared. The objectives of the IWPP include:

- To provide a systematic process for the inclusion of projects into the District's Capital Improvement Plan over its 5-year planning period; and
- To improve the long-range District planning process for the 20-year period subsequent to the Capital Improvement Plan by allocating projected revenues to identified projects. The IWPP also provides Level-of-Service evaluation that identifies the need for additional project funding to achieve desired flood mitigation goals.

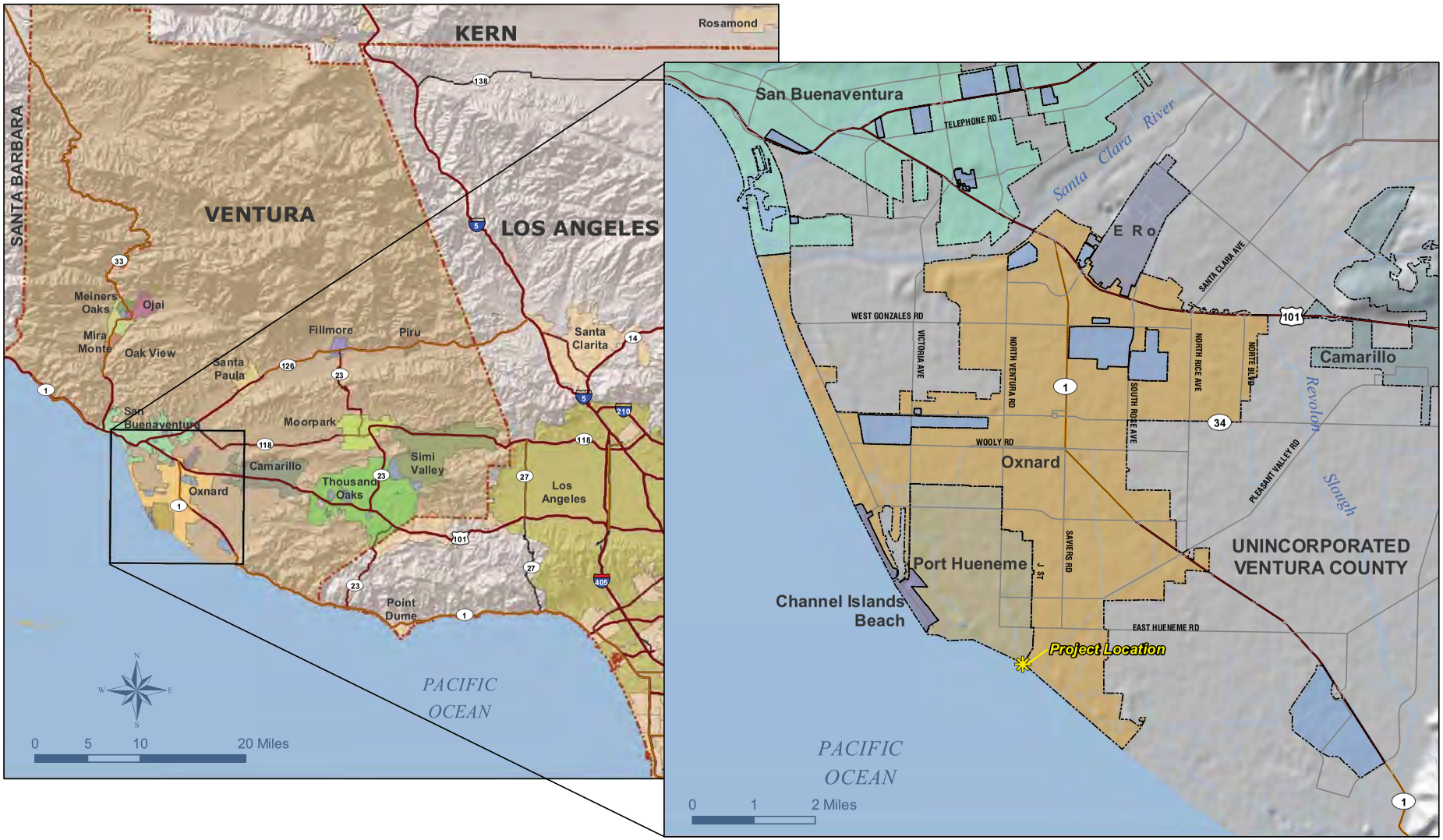
According to studies sponsored by the District, the area surrounding the J Street Drain is anticipated to flood during a severe rain event. The J Street Drain Channel Improvement Study and Preliminary Design (URS 2005) estimates that the capacity of the J Street Drain to be 500-600 cfs, which could be exceeded during a ten-year flood event. Flood damages were estimated using the depth of flooding in the residential and commercial areas along J Street, the structural value data obtained from the District, and the 1975 revised depth-damage curves for residential and small business structures calculated by the Federal Insurance Administration (FIA). The benefit cost analysis (BCA) was conducted using estimated pre-project flood damages and losses to calculate benefits. Based on calculations a total of $55.7 million was estimated as the damage that would result from a 100-year flood in the J Street Drain Channel.

In addition to the Drain capacity, the outlet of the Drain is sometimes constrained by a sand berm that can reach over 7 feet in height surrounding the Ormond Beach Lagoon. The sand berm hinders the direct flow path of the J Street Drain channel to the Pacific Ocean. The berm currently directs the water to the east. If there is no opening to the ocean then water ponds in the Lagoon and can reach up the Drain to Hueneme Road.

The sand berm at the Ormond Beach Lagoon was periodically manually breached prior to 1992 by the District to create a discharge path directly to the ocean and prevent water and silt buildup in the channel. However, this practice was stopped in 1992 due to environmental concerns and restrictions. Natural breaching also occurs under existing conditions when the water surface reaches an elevation of 5.1 to 5.6 feet National Geodetic Vertical Datum (NGVD) (7.5 to 8 feet NGVD) above mean sea level (msl). Therefore, the sand berm at the Ormond Beach Lagoon breaches naturally under existing conditions.

2.3 PURPOSE, NEED AND PROJECT OBJECTIVES

The purpose of the proposed project is to provide flood protection to the 100-year flood level for the area surrounding J Street Drain. The need is evidenced by the studies that show the Drain has a current capacity to handle a ten-year flood event without overtopping the channel. Without the increase in flood protection the local area would continue to be susceptible to flooding, as well as federal requirements to purchase flood insurance for properties within the 100-year flood zone after the Federal Emergency Management Agency (FEMA) remaps the project area in the future.



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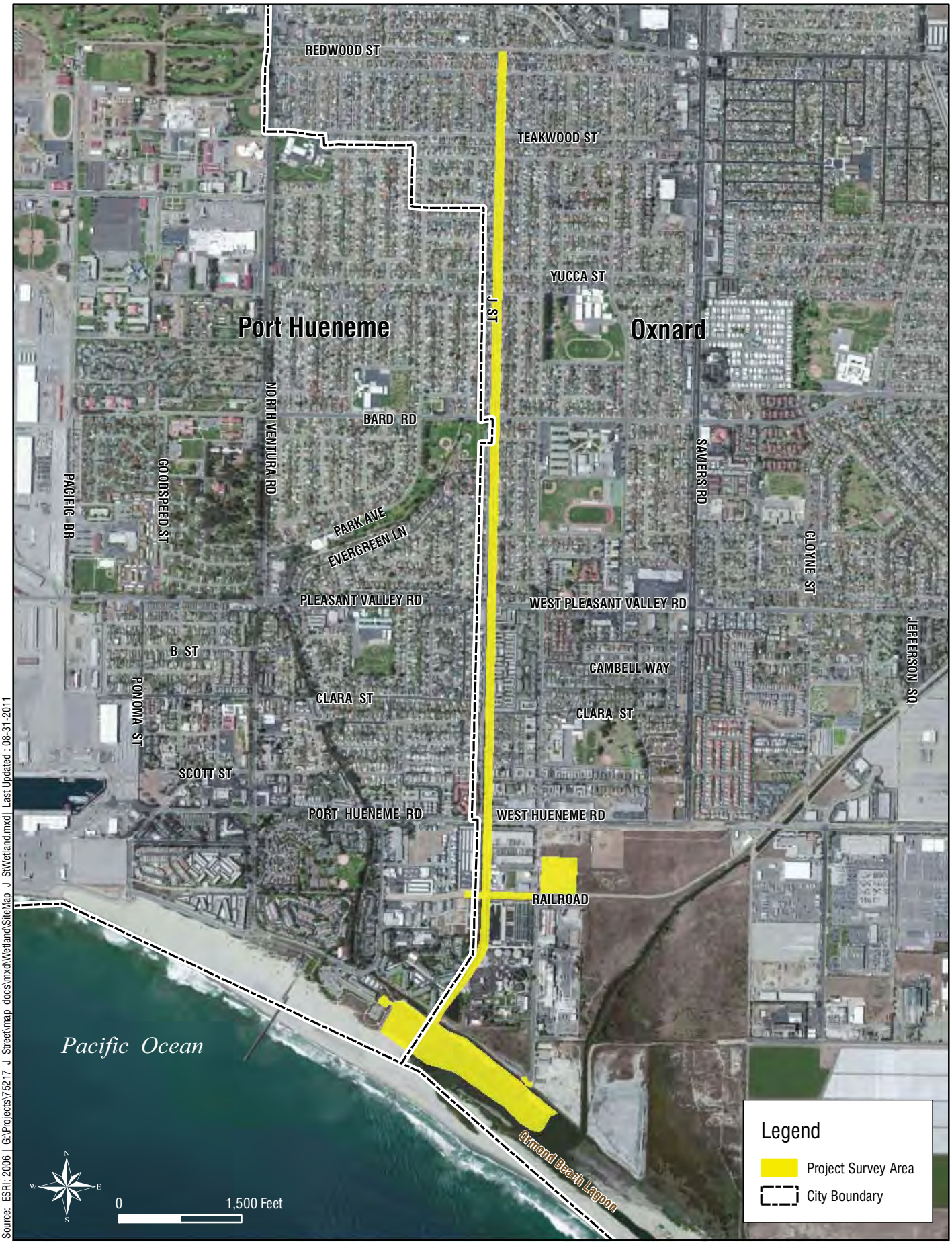
Project Regional & Vicinity Map

FIGURE 1

J Street Drain Ventura County Watershed Protection District Wetland Delineation Report



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Project Survey Area

FIGURE 2

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J Street Drain | Ventura County Watershed Protection District | Wetland Delineation Report

Along with the proposed increase in drain capacity, the proposed project also includes a Beach Elevation Maintenance Plan (BEMP). The BEMP identifies a set of environmental conditions that might cause flooding during a storm event. Once these conditions are observed, a predetermined list of actions would be implemented to ensure the opening of the lagoon outlet when the water surface reaches a target safe elevation. The Ormond Beach Lagoon inlet normally remains in a semi-closed condition due to sand accretion on Ormond Beach, but during most winters it breaches naturally to allow free outflow during storms and some high tides. The BEMP is a guideline to assist the District in responding to the potential flood threat caused by persistence of the sand berm during potentially damaging storm events of varying magnitudes. The BEMP defines a maximum safe beach height, and provides for a coordinated response to groom the sand berm at a pre-specified location immediately prior to a predicted storm event.

Project Objectives

The District's primary objectives of the project include:

- Flood control protection – increase drain capacity for 100-year flood flow;
- Maintain the existing functional characteristics of the Ormond Lagoon;
- Ensure project compatibility with future Ormond Beach Lagoon restoration plans;
- Minimize the disturbance to tidewater goby habitat downstream of the J Street lined channel, as well as snowy plover and California least tern nesting areas on Ormond Beach;
- Minimize operation and maintenance requirements, especially during storms; and
- Minimize effects on water quality of the lagoon.

2.4 PROJECT CHARACTERISTICS

The proposed project would involve increasing the capacity of the existing channel to reduce flooding in residential and commercial areas of Oxnard and Port Hueneme. The existing trapezoidal concrete-lined channel has a variable depth averaging 4 feet deep with a bottom width varying from 20 to 30 feet with 1:1 side slopes.

Channel Portion

Upstream

The proposed J Street Drain would involve converting the existing trapezoidal concrete channel into an open rectangular channel with an invert 2.5 to 4 feet below the existing channel bottom. The existing trapezoidal channel would be widened and deepened to increase the capacity; the channel walls would be vertical and top of the channel open. The existing culverts under the street crossings (listed above) would also be replaced by larger structures to improve flow conveyance. The existing concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station and the remaining earthen portion continues downstream before turning east at the beach.

Downstream

The existing J Street Drain Channel concrete lining terminates approximately 50 feet south of the Hueneme Drain Pump Station, near the Hueneme Drain confluence. Because the concrete lined portion of the channel invert would be lowered 2.5 to 4 feet to create the required capacity, excavation would continue downstream towards the sand berm. The finished invert would be daylighted via an earthen ramp to the lagoon at a 10:1 slope over a distance of up to 40 feet. A 10-foot thick layer of four-ton rock riprap would be placed horizontally at the end of the concrete drain and below the earthen ramp to dissipate energy flow. It is anticipated that the movement of water (tidal and drain flow) would ultimately result in an equilibrium elevation within the channel transition area.

Beach Outlet Portion

No alterations are proposed to the Ormond Beach Lagoon. The lagoon would continue to function as it does now with periodic natural breaching.

2.5 CONSTRUCTION

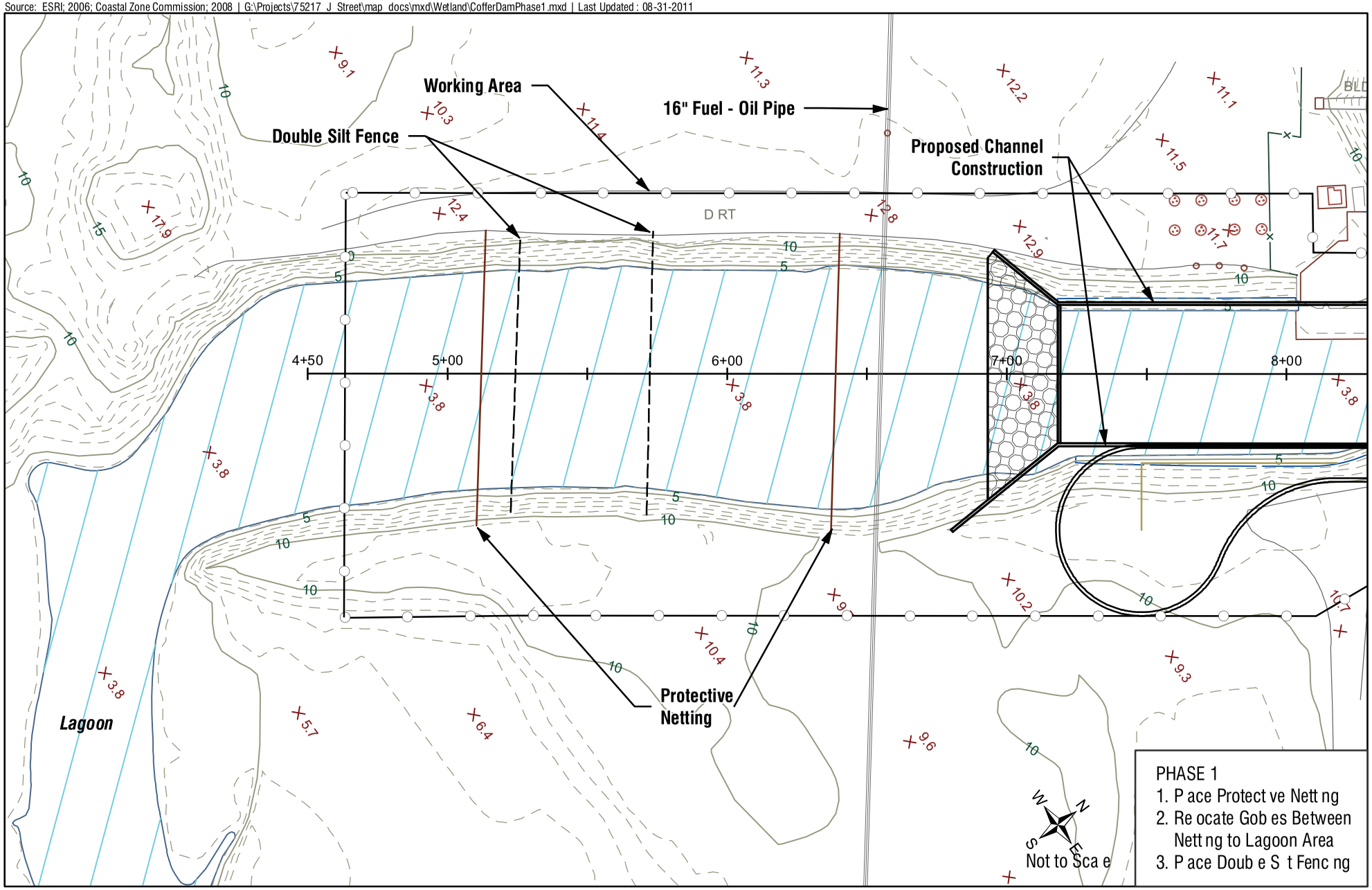
The demolition of the existing drain and construction of the new, higher capacity drain, will take place in phases. At this stage of the engineering design it is anticipated that the demolition and construction would start at the southern end of the Drain, south of Hueneme Road and move northward in phases. The initial construction activities include installation of groundwater dewatering wells, a coffer dam, and channel flow bypass. The groundwater dewatering wells will be approximately 15 to 20 feet deep, and placed along the work area of the J Street Drain. These wells will be installed and removed as construction moves upstream. Once installed, these wells will be attached to temporary pumps to extract groundwater for discharge into the Perkins Drain. The groundwater will be tested in accordance with the requirements of the Regional Water Quality Control Board (RWQCB) prior to placement into Perkins Drain. If the pumped groundwater is determined to be acceptable, it would then be allowed to be discharged. This will ensure that no surface water contamination would result from dewatering.

The electric power to run these pumps will be supplied from the existing Hueneme Drain Pump Station. The rate of groundwater pumping would be at the discretion of the project contractor, though it is recommended that the groundwater level should be 2 feet below the construction work area.

A coffer dam will be placed across the channel at the south end of the construction area. The coffer dam will block tidal flow into the work area. Figures 3a through 3d illustrate the proposed coffer dam. Block nets would be installed immediately upstream and downstream of the proposed coffer dam site to isolate it, and all native fish between the nets, including the endangered tidewater goby, will be relocated beyond the downstream net before coffer dam installation begins. The coffer dam and block net will be removed after project completion. This work will be conducted by approved, qualified biologists who will verify that all fish have been removed from the work area prior to the start of further construction.

The channel flow bypass will be a diversion installed to allow for any channel flow to bypass the construction area and enter the Perkins Drain. In addition, the Hueneme Drain Pump Station will pump water from the Hueneme Drain across the J Street Drain to the Perkins Drain during construction at the south end of Phase I. Once the initial construction activities of installation of groundwater wells, coffer dam, and channel bypass are completed, fish remaining within the channel section upstream of the coffer dam can be relocated and demolition can begin.

Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\Wetland\CofferDamPhase1.mxd | Last Updated : 08-31-2011



Coffer Dam Construction - Phase 1

FIGURE 3a

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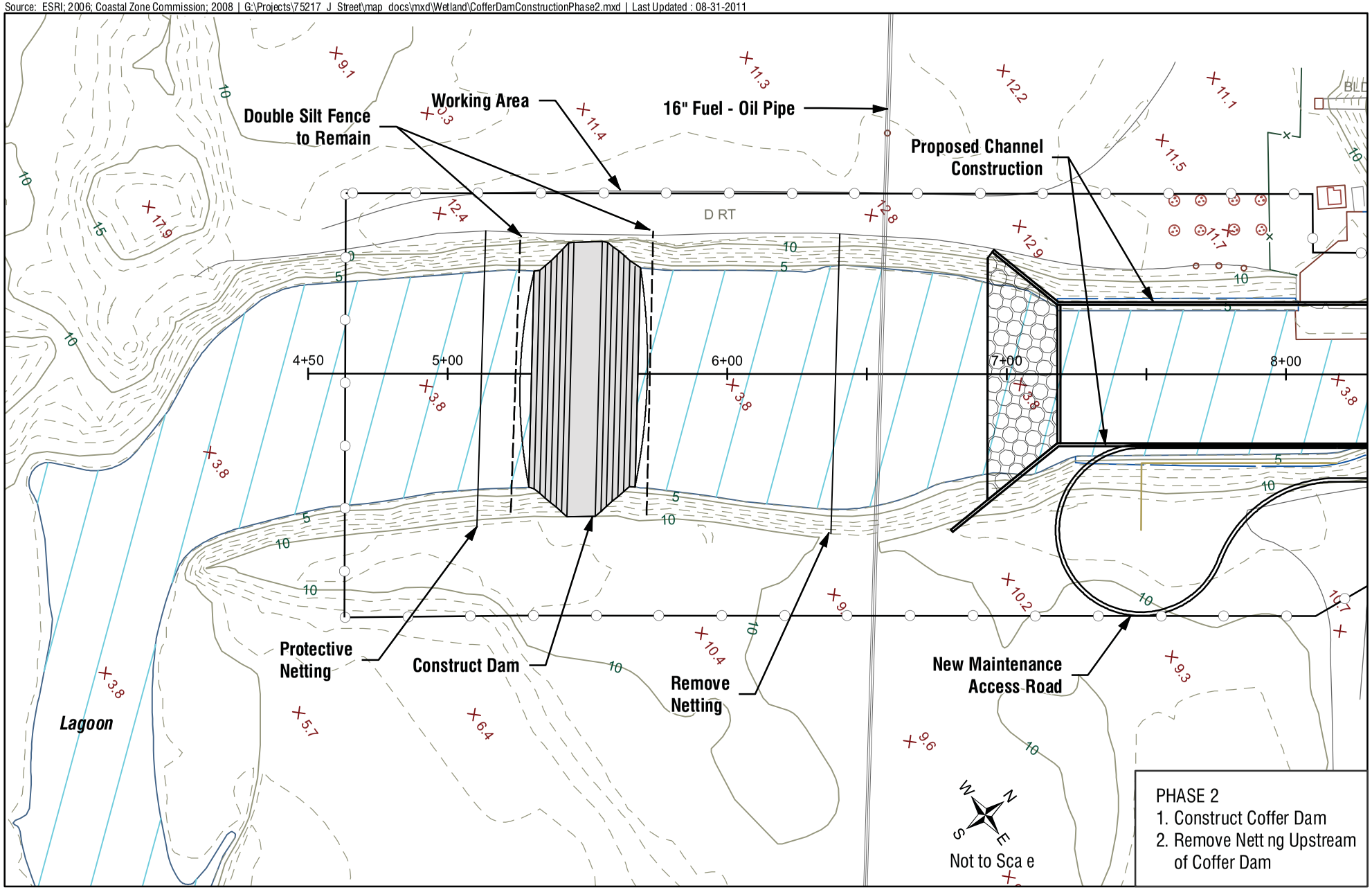
Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\Wetland\CofferDamConstructionPhase2.mxd | Last Updated : 08-31-2011



Coffer Dam Construction - Phase 2

FIGURE 3b

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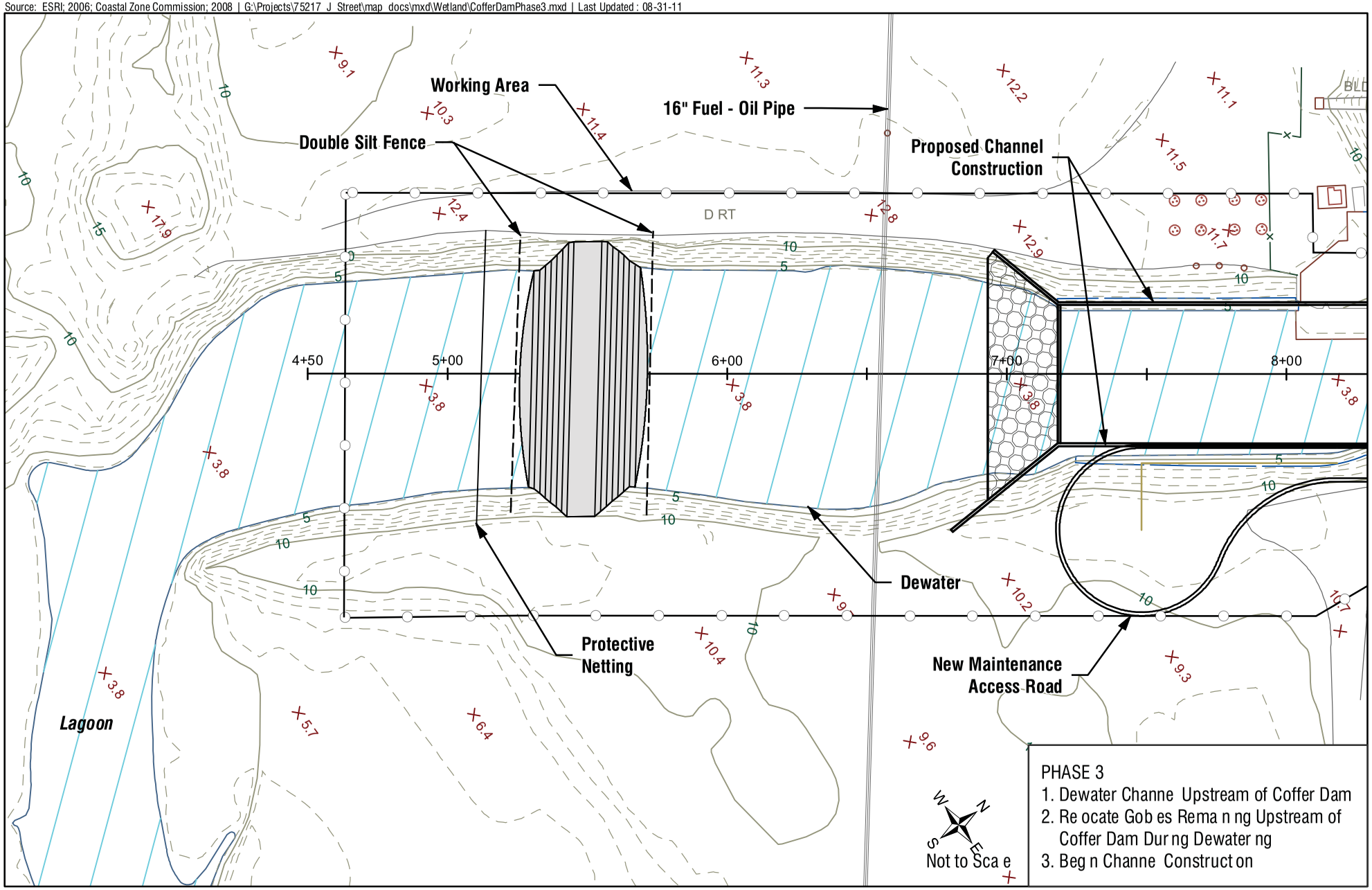
Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217_J_Street\map_docs\mxd\Wetland\CofferDamPhase3.mxd | Last Updated : 08-31-11



Coffer Dam Construction - Phase 3

FIGURE 3c

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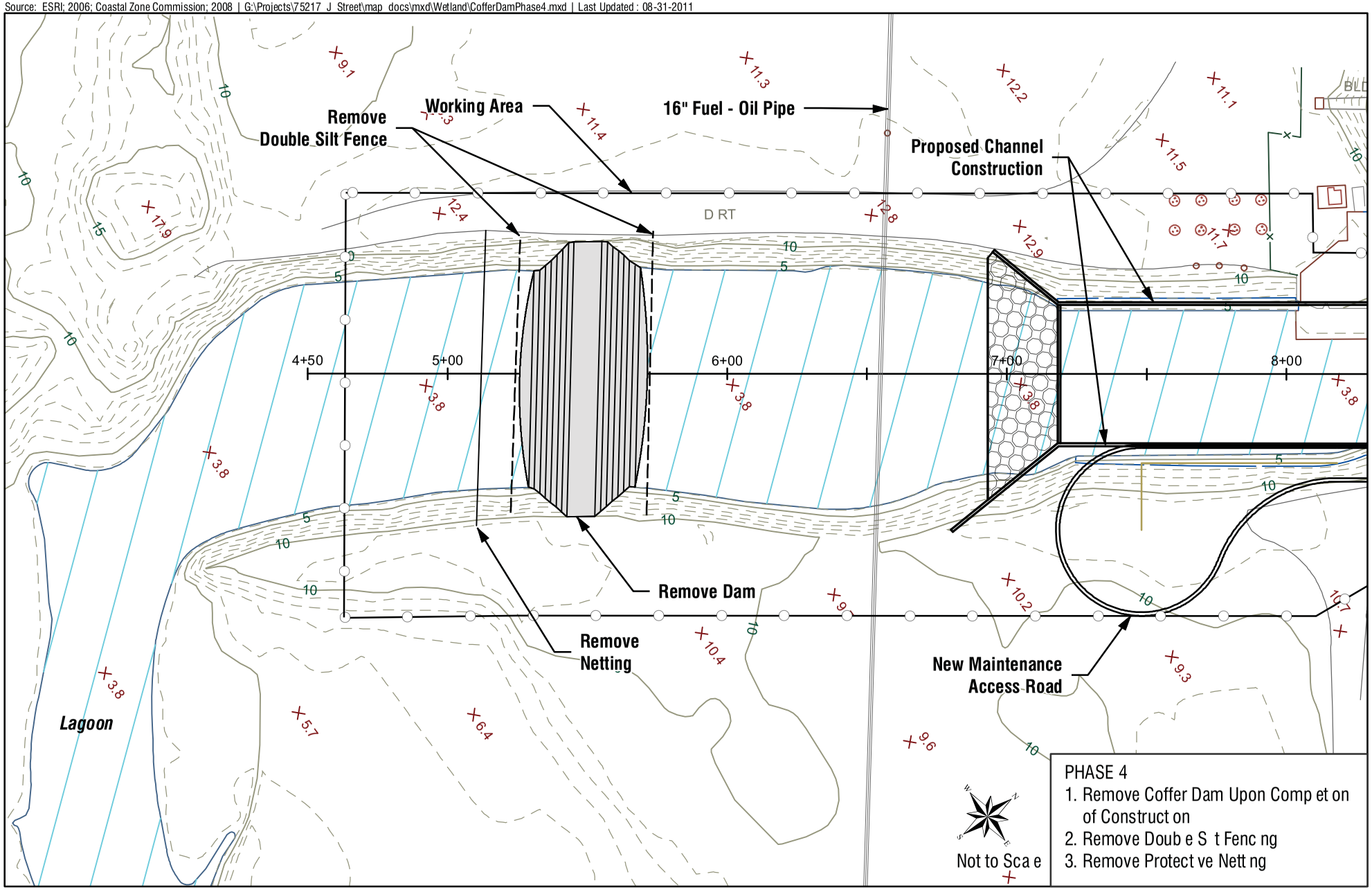
Source: ESRI; 2006; Coastal Zone Commission; 2008 | G:\Projects\75217 J Street\map docs\mxd\Wetland\CofferDamPhase4.mxd | Last Updated : 08-31-2011



Coffer Dam Construction - Phase 4

FIGURE 3d

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Demolition will initially start with adjacent fencing removal and landscape removal if necessary. After the permanent fencing is removed, temporary fencing will be installed along adjacent properties to limit access to the work area and ensure public safety. Demolition will consist of utilizing heavy equipment to break up and remove the concrete from the existing drain. Access to the area south of Hueneme Road will be from Hueneme Road via the District maintenance road on the east side of the drain. The contractor may decide to use the drain itself as an access way after entering the District right-of-way at Hueneme Road. The concrete will be broken on site for transport but the contractor will be required to find an appropriate location to grind the concrete further for appropriate recycling (as required by Ventura County ordinances).

After the concrete is removed, existing soil will be excavated to the appropriate dimensions for safe shoring (if necessary) and proper installation of subdrains and forms for the new drain. The excavated material will be removed by the contractor and hauled away from the site via a City-approved haul route (which is dependant on the ultimate location secured by the contractor). Some soils may remain on site for backfilling once the new drain is installed. Materials, including subdrain materials, reinforcing bar, and the concrete for the new drain will be delivered to the site via the approved access route from Hueneme Road. The work will only occur during hours approved by the City of Oxnard, which are anticipated to be from 7 am to 7 pm on weekdays.

Once each phase of the new drain is complete, the permanent perimeter fencing will be reinstalled. Any landscaping damaged outside of District easement on private property, will be replaced. Where the adjacent property is owned by the City, the landscaping will be replaced by the City under agreement with the District. Maintenance of the adjacent landscaping is the responsibility of the local jurisdiction once the materials are installed.

2.6 OPERATIONAL – BEACH ELEVATION MANAGEMENT PLAN

The Ormond Beach Lagoon inlet normally remains in a semi-closed condition due to sand accretion on Ormond Beach, but during most winters it breaches naturally to allow free outflow during storms and some high tides. These events do not drain the lagoon entirely, as urban runoff and high tides contribute fresh and salt water flows. To date, there has been one instance of the inlet remaining closed during a minor storm event and causing upstream flooding, this took place on January 18, 2010. This event flooded the OWWTP, which was at risk of releasing untreated sewage effluent into the surrounding waterways, roads, and residential properties due to electrical failure of inundated equipment. To prepare for the reoccurrence of the combination of the outlet being closed, the lagoon water surface being above a high threshold level, and a storm being forecast, a Beach Elevation Management Plan (BEMP) has been developed as part of the proposed J Street Drain project. The BEMP defines a maximum safe beach height, and provides for a coordinated response to groom the sand berm at a pre-specified location immediately prior to a predicted storm event. Implementation of the BEMP will generally occur outside of the breeding bird season between September 16 and March 14. On rare occasions, the BEMP may be implemented after March 14 with mitigation measures in place to protect breeding birds.

The purpose of the BEMP is to protect the lives and well-being of the communities and industrial facilities along J Street Drain and Ormond Beach Lagoon by maintaining downstream water levels below a predetermined safe elevation.

The BEMP is a guideline to assist the District in responding to the potential flood threat caused by persistence of the sand berm during potentially damaging storm events of varying magnitudes. It should be noted that the BEMP would be implemented when conditions warrant, which may be more than once

annually, to avoid an emergency. Therefore, implementation of the BEMP would constitute a new maintenance activity associated with operation of the proposed project.

Management Procedure

The grooming would be performed by a tracked dozer designated by the O&M Deputy Director in coordination with the District Director or his/her designee. Once the O&M Deputy Director determines that the BEMP threshold criteria have been met, the dozer shall be pre-positioned at the south side parking lot of Port Hueneme Beach Park. As soon as the BEMP is enacted, the dozer operator accompanied by District environmental staff would move the dozer to the designated beach grooming location, and shave the sand berm down to the maximum safe beach elevation. The dozer access path to the groom location would be the same as the one currently used by lifeguards from Port Hueneme Beach Park. Access to the beach from this point would avoid the nesting sites used by California least terns and western snowy plovers in 2008 (Davenport 2008, Hartley 2009 and 2010, Smith, 2009 and 2010). The grooming width would measure approximately100 feet parallel to the coastline. The removed sands would be placed on the beach adjacent to the groomed area. The grooming procedure would be completed within several hours, including removal of equipment from the beach. The designated grooming area would be permanently marked with rods driven deep into the sand. Elevation markings would be depicted on the rods. The grooming location would be coordinated with USFWS to limit potential impact to habitat areas.

During the grooming operation, the work site would be secured by the District to prevent interruption by or injury of the general public. Members of the Ventura County Sheriff Department or lifeguards, as well as their designees, may assume responsibility for the protective duty.

3.0 METHODS

In order to assess and delineate the onsite wetland resources, HDR biologists Shannon M. Allen and Allegra Simmons, surveyed the project area (and adjacent land) on April 28, 2008 between the hours of 0830 to 1700, and on April 29, 2008 between the hours of 0830 to 1750. Weather conditions were conducive for surveying on both days with clear skies, temperatures ranging from 65 degrees Fahrenheit to the low 70s, and winds between 7-9 mph. Habitats onsite were examined to determine drainage features and wetlands connectivity. All potential wetland areas were measured in terms of presence/absence of hydrology, hydrophytic vegetation, and indicators for hydric soil. Transects and test pits were established, as recommended and in accordance with the Unified Federal Method for Wetland Delineation (USACE 1987), to measure and assess these wetland indicators. The delineation followed protocol requiring the use of the recently instated Regional Supplement to the USACE Wetland Delineation Manual: Arid West.

During the baseline survey, the project site and adjacent land (project survey area) was surveyed for potential wetlands. Due to the size and shape of the project survey area, it was necessary to divide the area into two survey areas: northern and southern. The northern survey area consists primarily of the existing J Street Drain, which is a concrete-lined channel, beginning at Redwood Street and continuing south to Hueneme Rd (Figure 4a). The full length of the drain is fenced to prohibit people from entering. This area is primarily developed with residential and commercial development.

The southern survey area includes an approximately 2,600-foot portion of the drain, which continues south of Hueneme Road and flows into the Ormond Beach Lagoon. Given the developed nature of the drain, the focus of the delineation was on the Ormond Beach Lagoon portion of the southern survey area. The concrete lined channel of the drain ends approximately 50 feet south of the Hueneme Drain Pump Station, located adjacent to the northwestern boundary of the survey area (Appendix A, Photograph 1). The southern survey area consists of an island of vegetation surrounded on all sides by water. Two foot bridges on the northern survey boundary connect the area to the mainland. The majority of the survey area supports natural vegetation communities, however, the northern portion has experienced significant disturbance (dumping of fill dirt and grading) (Figure 4b). Several vegetation communities occur within the survey area and include southern foredunes (SFD), coastal brackish marsh (CBM), southern coastal salt marsh (SCSM), and disturbed habitat (DH). General site photographs of the southern survey area are located in Appendix A (Photographs 2 through 8).

Within the southern survey area, four transects were conducted to delineate jurisdictional boundaries. For each transect, several (3-4) test pits were dug and analyzed using the supplemental arid west form to establish jurisdiction of potential wetlands onsite. In addition, soil cores were used to identify changes in soil composition, which helped to establish wetland boundaries between soil pits.

BEMP Area

The access route to and on the beach for the proposed beach elevation maintenance activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. Portions of the BEMP area fall below the mean high tide line which was used to delineate the limits of Corps and CCC jurisdiction on the beach.

3.1 FEDERAL WETLAND DEFINITIONS

The federal regulations that implement Section 404 of the CWA, which was enacted in 1972, define "wetlands" as follows:

> *"Those areas that are inundated or saturated by surface or ground water (hydrology) at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation (hydrophytes) typically adapted for life in saturated soil conditions (hydric soils). Wetlands generally include swamps, marshes, bogs, and similar areas."* (40 CFR 232.2[r])

Federal jurisdictional wetlands that are regulated by the USACE under Section 404 of the CWA must exhibit all three of these characteristics: hydrology, hydrophytes, and hydric soils (USACE 1987). Areas that may function as wetlands ecologically, but exhibit only one or two of the three characteristics, do not currently qualify as federal jurisdictional wetlands; thus, activities to these resources are not regulated under Section 404.

The USACE also regulates the discharge of dredge and/or fill material into "waters of the United States." The term "waters of the United States" is defined by USACE regulations at 33 CFR Part 328.3 9(a) as:

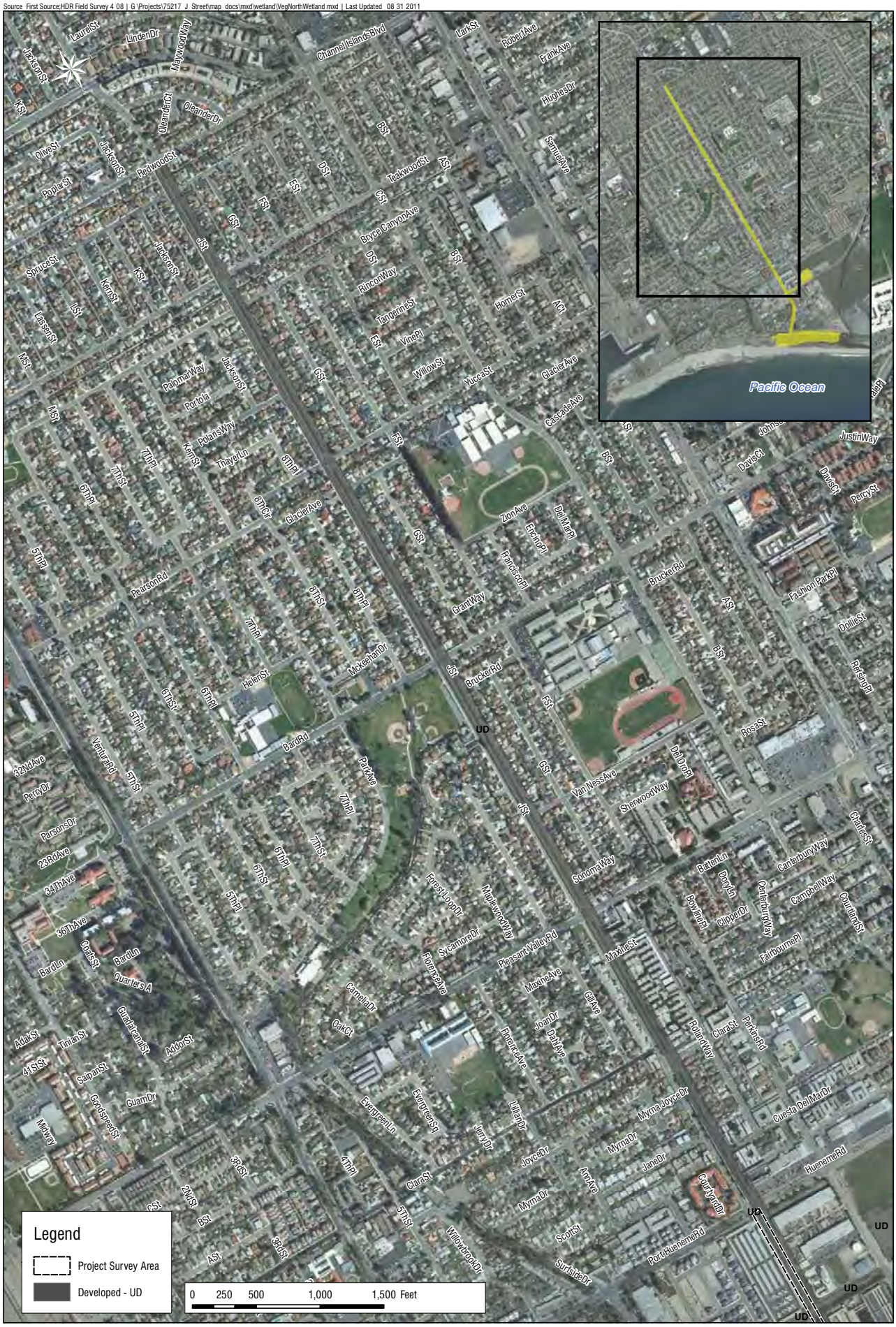
1) *All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
2) *All interstate waters including interstate wetlands;*
3) *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:*

    (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or

    (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

    (iii) which are used or could be used for industrial purpose by industries in interstate commerce;
4) *All impoundments of waters otherwise defined as waters of the United States under the definition;*
5) *Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;*
6) *The territorial seas;*
7) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section.*

Source First Source;HDR Field Survey 4 08 | G \Projects\75217 J Street\map docs\mxd\wetland\VegNorthWetland mxd | Last Updated 08 31 2011



Northern Survey Area - Vegetation

FIGURE 4a

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Source: First Source; HDR Field Survey 4 08 | G:\Projects\75217_J_Street\map_docs\mxd\wetland\VegSouthWetland.mxd | Last Updated: 08 31 2011

Southern Survey Area - Vegetation

FIGURE 4b

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The USACE also takes jurisdiction in non-tidal waters when wetlands are not present according to the ordinary high water mark (OHWM). This is defined as:

> *"…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."*

Federal Clean Water Act Jurisdiction per the Supreme Court's Decision in:
Rapanos v. United States* and *Carabell v. United States

In 2006, the Supreme Court addressed the jurisdictional scope of Section 404 of the CWA, specifically the term "the waters of the U.S.," in Rapanos v. U.S. and in Carabell v. U.S. (hereafter referred to as Rapanos). The Justices issued five opinions with no single opinion commanding a majority of the court.

A plurality of the court vacated the original Court of Appeals judgments and remanded both cases to the lower courts for re-evaluation. The decision provides two new analytical standards for determining whether water bodies that are not traditional navigable waters (TNWs), including wetlands adjacent to those non-TNWs, are subject to CWA jurisdiction:

- If the water body is relatively permanent, or if the water body is a wetland that directly abuts (e.g., the wetland is not separated from the tributary by uplands, a berm, dike, or similar feature) a relatively permanent water body (RPW), or
- If a water body, in combination with all wetlands adjacent to that water body, has a "significant nexus" with TNWs.

CWA jurisdiction over TNWs and their adjacent wetlands was not in question in this case and, therefore, was not affected by the *Rapanos* decision. In addition, at least five of the Justices in *Rapanos* agreed that CWA jurisdiction exists over all TNWs and over all wetlands adjacent to TNWs (USACE 2007).

The Environmental Protection Agency (EPA) issued a memorandum on June 5, 2007 to provide guidance to the EPA regions and the USACE in implementing the Supreme Court's decision in the *Rapanos* and *Carabell* cases. These cases specifically address the jurisdiction over waters of the U.S. under the CWA. The memorandum identifies some key points with relation to the case and asserting jurisdiction over waters. Therefore, this ruling was taken into consideration during the wetland delineation.

3.2 STATE JURISDICTIONAL AREA DEFINITIONS

California Department of Fish and Game

According to the definition used by the CDFG, state wetlands are "lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water," and they exist where <u>any one</u> of the following conditions are present:

> 1) *Predominantly undrained hydric soils (soils with low concentrations of oxygen in the upper layers during the growing season);*
> 2) *A predominance, at least periodically, of hydrophytic plants (plants that have adapted to the low availability of oxygen and others stresses in saturated soils);*

3) *A non-soil substrate (such as a rocky shore) that is saturated with water or covered by shallow water each year at some point during the growing season.*

CDFG Section 1602 states that an entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

California Coastal Commission

The California Coastal Commission relies on the definition for a "wetland" as set forth in Section 30121 of the Coastal Act which states:

> *"Wetland" pertains to lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.*

The CCC Administrative Regulations (Sections 13577 (b)) provides a more explicit definition:

> *Wetlands are lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats.*

4.0 RESULTS

Northern Survey Area

The northern survey area consists primarily of a concrete-lined drain. This portion of the drain from Hueneme Road to Redwood Street was historically constructed in upland areas (Figure 4a). A jurisdictional wetland delineation was not conducted in this portion of the drain due to the developed nature of the drain within the project survey area. However, federal and state wetland agencies may take jurisdiction over the concrete-lined portion of the drain as potential waters of the U.S.

Southern Survey Area

The southern survey area, from Hueneme Road to the ocean, is made up of the existing concrete lined channel and the Ormond Beach Lagoon. Within the Lagoon the dominant vegetation community consists of SCSM and in smaller amounts, CBM (Figure 4b). SCSM is dominated by saltgrass (*Distichlis spicata*), alkali heath (*Frankenia salina*), and western ragweed (*Ambrosia psilostachya*). A jurisdictional wetland delineation was conducted in the lagoon portion of the survey area. A jurisdictional wetland delineation was not conducted within the concrete-lined drain and associated outlet as the drain does not support the vegetation and soils required for USACE jurisdiction. However, this area potentially qualifies as waters of the U.S and is discussed in greater detail below in Section 3.1.

BEMP Access Area

The grooming would be performed by a tracked dozer designated by the O&M Deputy Director in coordination with the District Director or his/her designee. The dozer access path to the groom location would be the same as the one currently used by lifeguards from Port Hueneme Beach Park (Figure 5b). Beach elevation maintenance would occur below the mean high tide line (HTL) which was used to delineate the upper boundary of USACE and CCC jurisdiction (Figure 5b). The BEMP would not occur within CDFG jurisdictional areas.

Table 1 summarizes the findings of transects conducted within the survey area. Completed Arid West Region USACE Wetland Determination Data Forms are included in Appendix B.

4.1 FEDERAL JURISDICTIONAL AREAS

Northern Survey Area

As identified above, this portion of the survey area is concrete lined and historically occurred in upland areas. Therefore the focus of the wetland delineation occurred in the southern survey area. However, the existing channel potentially qualifies as federal waters of the U.S (Figure 5a).

Southern Survey Area (Ormond Beach Lagoon)

Within the southern survey area, four wetland transects were conducted (Figure 5b). Changes in vegetation communities and/or hydrophytic plants were the preliminary determinant for transect locations. For each transect, several test pits were dug to determine the presence of hydric soils (Table 1).

Table 1. Summary of Transect Data

Transect No.	Point No.	Hydrophytes	Hydric Soils	Hydrology	Jurisdictional Areas		
					CDFG	CCC	USACE
1	1	Yes	No	Yes	Yes	Yes	No
1	2	Yes	Yes	Yes	Yes	Yes	Jurisdictional Wetland
1	3	Yes	Yes	Yes	Yes	Yes	Jurisdictional Wetland
2	1	Yes	No	Yes	Yes	Yes	No
2	2	Yes	Yes	Yes	Yes	Yes	Jurisdictional Wetland
2	3	Yes	Yes	Yes	Yes	Yes	Jurisdictional Wetland
2	4	Yes	No	Yes	Yes	Yes	No
3	1	Yes	No	Yes	Yes	Yes	No
3	2	Yes	Yes	Yes	Yes	Yes	Jurisdictional Wetland
3	3	Yes	Yes	Yes	Yes	Yes	Jurisdictional Wetland
3	4	Yes	No	Yes	Yes	Yes	No
4	1	Yes	No	Yes	Yes	Yes	No
4	2	Yes	Yes	Yes	Yes	Yes	Jurisdictional Wetland
4	3	Yes	Yes	Yes	Yes	Yes	Jurisdictional Wetland
4	4	Yes	Yes	Yes	Yes	Yes	Jurisdictional Wetland

Overall the site consists of problematic sandy soils. These soils are considered to be problematic because they are excessively drained and thus, have difficulty developing anaerobic conditions which is an indicator of hydric soils. However, given the location of the test pit (lagoon), hydrologic indicators (e.g., high water table, saturation), and dominance of hydrophytic plants, it was concluded that the soils are hydric. This conclusion was also based on the determination that these problematic soils were inundated for at least two weeks during the growing season. The protocol wetland delineation identified the existence of federal jurisdictional wetlands and waters of the U.S. within the southern survey area (Table 2).

Table 2. Summary of USACE Jurisdictional Areas

USACE	Project Area
Waters of the U.S. (acres) - Concrete Channel	7.90
Waters of the U.S. (acres) - Natural Substrate	2.73
Wetlands (acres)	6.83
Total Jurisdictional Areas	**17.46**

Source: First Source; HDR Wetland Delineation | G:\Projects\75217_J_Street\map_docs\mxd\wetland\WeltandNorthResu ts.mxd | Last Updated: 09.02.2011

Northern Survey Area - Jurisdictional Areas

FIGURE 5a

HDR
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Source: First Source; HDR Wetland Delineation; Google Earth 2008 | G:\Projects\75217 J Street\map docs\mxd\wetland\WetandSoilResults new.mxd | Last Updated 08 31 2011

Southern Survey Area - Jurisdictional Areas

FIGURE 5b

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Transect 1

The Transect 1 survey was conducted on the southeast portion of the survey area (Figure 5b, and Appendix A, Photograph 9). Transect 1 traversed SFD, SCSM, and CBM vegetation communities. The indicators in this area include saltgrass, alkali heath, and American tule (*Scirpus acutus var. occidentalis)*, all of which are hydrophytic plant species. Three test pits were dug and of these, Transect 1 Point 2 (T1P2) was found to have problematic sandy soils (Photographs 10 and 11). However, given the presence of other wetland indicators and layer of dark organic material, the soil was determined to be hydric. From 3 to 20 inches, the primary soil matrix color was 7.5YR 4/1. A soil profile for T1P3 was not conducted due to the overwhelming hydrogen sulfide smell encountered when digging. Thus, soils at T1P3 were identified as hydric. A high water table and/or saturation were present at all of the test pits. Federal jurisdictional wetlands were identified within this transect.

Transect 2

The Transect 2 survey was conducted approximately 230 feet northwest of Transect 1 in the southern portion of the survey area (Appendix A, Photograph 12). Transect 2 traversed SCSM and CBM, with dominant hydrophytic plant species such as saltgrass, alkali heath, and cattails (*Typha angustifolia*).

Four test pits were dug and T2P3 contained problematic sandy soils. However, redox features were present in the soil matrix and it was determined to be hydric (Photographs 13 and 14). Soil matrix colors varied for each pit. The general range of color was 10YR 4/1 to 10YR 4/3 and 7.5YR 3/1 and 5YR 3/2. A high water table and saturation were present at all of the test pits (Photograph 15). Federal jurisdictional wetlands were identified within this transect.

Transect 3

The Transect 3 survey was conducted approximately in the middle of the survey area (Appendix A, Photograph 16). Transect 3 traverses SCSM and CBM with dominant hydrophytic plant species such as saltgrass, cattails, and western ragweed. Four test pits were dug and of these, T3P2 and T3P3 identified problematic sandy soils (Photographs 17 and 18). However, given the presence of hydrology and hydrophytic plants, the soil was determined to be hydric. General soil matrix colors ranged from 10YR 3/1 to 7.5YR 4/1, 3/1, and 3/2. A high water table, saturation, and/or watermarks were present at all of the test pits. Federal jurisdictional wetlands and waters were identified within this transect.

Transect 4

The Transect 4 survey was conducted in the northwestern portion of the survey area (Appendix A, Photograph 19). Transect 4 traverses SFD, SCSM, and CBM with dominant hydrophytic plant species including, saltgrass, cattails, and American tule. Four test pits were dug and of these, T4P2 identified problematic sandy soils (Photographs 20 and 21). These soils are considered hydric due to the presence of hydrology and hydrophytes. General soil matrix colors ranged from 10YR 4/2 to 7.5YR 4/1 and 3/2. Soils at T4P3 and T4P4 had redox features, indicating prolonged inundation and therefore, hydric soils. A high water table, saturation, and watermarks were present at all test pit locations. Federal jurisdictional wetlands were identified within this transect. A summary of USACE jurisdictional areas are provided in Table 2.

BEMP Access Area

As mentioned above, beach elevation maintenance would occur below the mean high tide line (HTL) which was used to delineate the upper boundary of USACE and CCC jurisdiction (Figure 5b).

4.2 STATE JURISDICTIONAL AREAS

As discussed previously in Section 2.2, the criteria used to define CDFG and CCC wetlands are less restrictive in terms of wetland indicators. An area can qualify as a state wetland if only one wetland indicator is present. While the boundaries of CDFG jurisdiction sometimes closely reflect those of the USACE, the CDFG jurisdiction generally covers a broader zone, including the USACE jurisdictional OHWM. However, CDFG jurisdiction also extends across the bank to the edge of the riparian habitat.

Due to the less restrictive nature of the CDFG and CCC requirements, the areas that qualify as state jurisdictional areas are usually larger but also include federal jurisdictional areas. The northern survey area does not support the appropriate indicators to qualify as CDFG wetlands. However, the concrete-lined drain located in the northern survey area may qualify as state waters. In addition, the northern survey area is not within the CCC Coastal Zone and, therefore, would not qualify as CCC jurisdictional areas.

Within the southern survey area, the lagoon portion of the survey area and the Drain portion of the project area south of Hueneme Road qualify as CDFG jurisdictional areas. Additionally, the southern survey area is within the Coastal Zone (all areas south of Hueneme Road), and therefore, all USACE and CDFG jurisdictional areas within the Coastal Zone qualify as CCC jurisdictional areas (Table 3, Figure 5b).

Table 3. Summary of CDFG and CCC Jurisdictional Areas

CDFG/CCC	Project Area
Waters of the State – Concrete Channel	7.90
Waters of the State – Natural Substrate	2.73
CDFG Wetlands	10.92
CCC Jurisdictional Areas[1] (acres)	15.73
Total State Jurisdictional Areas (acres)	**21.55**

[1] CDFG and CCC jurisdictional area totals include USACE wetland and waters of the U.S. acreages.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Any measurable modifications to the drainage or dredge to the watercourse could result in impacts, necessitating permitting for temporary or permanent impacts. The proposed improvements to the drain would temporarily impact state/federal jurisdictional areas (Table 4 and Figures 6a and 6b). It should be noted that impacts to federal and state jurisdictional areas would occur primarily within the existing concrete-lined channel. As the channel is concrete-lined, federal and state agencies may decline to take jurisdiction over this portion of the project. However, the southern portion of the project occurs within the natural soil substrate of the lagoon. It is anticipated that federal and state agencies will take jurisdiction over this area. Improvements to the drain would include removal of the existing concrete channel, replacement of existing rock riprap, lowering the elevation of the drain, and modifying the contour of the channel to a box configuration. Additional impacts would include the installation of a cofferdam within the Lagoon and the subsequent pumping/draining of ground and lagoon water within the construction/work area. Construction activities would impact the natural substrate of the lagoon (Figure 6b). As a result of these improvements, temporary impacts would occur to federal waters of the U.S and state.

BEMP Access Area

The access route to and on the beach for the beach elevation maintenance activities would follow the same pathway that the lifeguards and beach maintenance vehicles use on a daily basis to reach the groomed beach. No impacts to CDFG jurisdiction will occur from implementation of the BEMP. As previously discussed, portions of the BEMP would occur below the mean HTL which was used to delineate the upper boundary of USACE and CCC jurisdiction (Figure 6b). Implementation of the BEMP would temporarily impact 0.57 acre of USACE non-wetland waters and CCC jurisdictional waters. Temporarily impacted areas of beach are subject to tidal changes and wave action that will rapidly restore the beach to a natural state.

Table 4. Project Impact to Federal/State Jurisdictional Areas

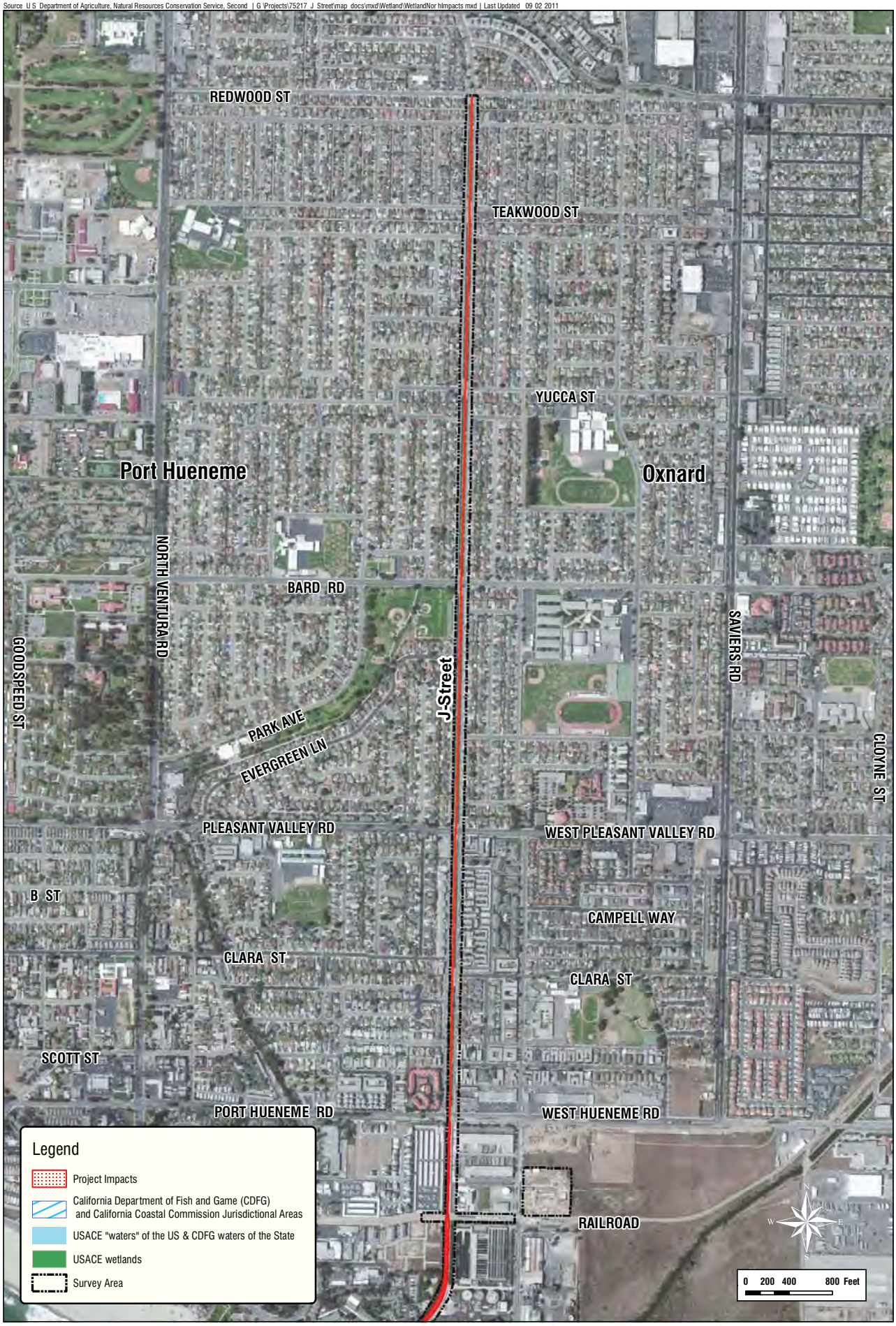
Federal/State Jurisdictional Areas	Existing Acres (Project Survey Area)	Project Impacts[2]
Federal waters of the U.S. and waters of the State - Concrete Channel	7.9	7.9
Federal waters of the U.S. and waters of the State - Natural Substrate	2.73	0.29
Federal Wetlands	6.83	0.00
CDFG Wetlands[1]	10.92	0.00
CCC Jurisdictional Areas	15.73	4.81[1]
Total	**n/a**	**8.19**

[1] CDFG and CCC jurisdictional area totals include USACE wetland and waters of the U.S. acreages.
[2] Project impacts to state and federal jurisdictional areas would be temporary.
[3] Mitigation for temporary project impacts to jurisdictional areas would be satisfied through on-site restoration.

Impacts to federal wetlands and/or waters of the U.S. would require consultation with USACE to obtain Section 404 Permit and associated Section 401 Water Quality Certification via the RWQCB. Impacts to state jurisdictional areas would also necessitate consultation with CDFG and RWQCB. The state resource agencies typically recommend that impacts to state jurisdictional areas be: (1) avoided to the extent feasible, (2) minimized if complete avoidance cannot be provided, or (3) mitigated if complete avoidance or minimization cannot be achieved. Wetland impacts trigger the need for a 1600 Series Streambed

Alteration Agreement with CDFG and Clean Water Certification pursuant to the Porter-Cologne Act or CWA as administered by the RWCQB in order to ensure adequate mitigation for project-related impacts to state jurisdictional areas. Similarly, any impacts to CCC jurisdictional areas would require a Coastal Zone Development Permit from the CCC under the Local Coastal Program.

Source: U.S. Department of Agriculture, Natural Resources Conservation Service, Second | G:\Projects\75217 J Street\map docs\mxd\Wetland\WetlandNorhImpacts.mxd | Last Updated: 09.02.2011



Project Impacts (Northern Survey Area) - Jurisdictional Areas

Figure 6a

HDR
ONE COMPANY | *Many Solutions*™

Source: First Source; HDR Wetland Delineation; Google Earth 2008 | G:\Projects\75217_J_Street\map_docs\mxd\wetland\WetlandSouthImpacts.mxd | Last Updated: 08.31.2011

Project Impacts (Southern Surey Area) - Jurisdictional Areas

FIGURE 6b

HDR
ONE COMPANY | *Many Solutions*™

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APPENDIX A

Site Photographs

Photograph 1. Northwest corner of the survey area, northeasterly view of the J Street Drain outlet into the Ormond Beach Lagoon. Hueneme Pump Station is located adjacent to the outlet (red arrow).

Photograph 2. Central portion of southern survey area, northwesterly view of coastal brackish marsh.

Photograph 3. Central portion of southern survey area, westerly view of southern coastal salt marsh.

Photograph 4. Northwestern portion of the southern survey area, southwesterly view of the lagoon. Southern foredunes in the foreground.

Photograph 5. Northwestern portion of the southern survey area, southeasterly view of disturbed habitat along the northeastern boundary.

Photograph 6. Southeastern portion of the southern survey area, southeasterly view of southern foredunes.

Photograph 7. Southeastern portion of the southern survey area, northeasterly view of eastern survey area boundary from foot bridge.

Photograph 8. Western portion of the southern survey area, southerly view of western survey area boundary (left bank).

Photograph 10. Transect 1, westerly view.

Photograph 11. Transect 1, soil pit.

Photograph 11. Transect 1, problematic sandy soils encountered within the survey area.

Photograph 12. Transect 2, southwesterly view.

Photograph 13. Transect 2, sandy soils with redox concentrations.

Photograph 14. Transect 2, soil pit.

Photograph 15. Transect 2, soil pit with high water table present.

Photograph 16. Transect 3, southerly view.

Photograph 17. Transect 3, soil pit.

Photograph 18. Transect 3, soil sample.

Photograph 19. Transect 4, westerly view.

Photograph 20. Transect 4, soil pit.

Photograph 21. Transect 4, soil sample.

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APPENDIX B

Routine Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/28/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T1P1

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR): C Lat: 34°,8',16.70"N Long: 119°,11', 1.78" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil Yes or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area Within a Wetland?** **Yes _____ No X**
Hydric Soil Present:	Yes _____ No X	
Wetland Hydrology Present:	Yes X No _____	

Remarks: The soils are sand no organic or redox features present. Photos 173 175.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	75	Yes	FACW
2 Ambrosia psilostachya	10	No	FAC
3. Melilotus alba	3	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
Total Cover:	88		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No _____**

Remarks:

SOIL

Sampling Point: T1P1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 24	10YR 4/3	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (**LRR C**)
- ____ 1 cm Muck (A9) (**LRR D**)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ____ Red Parent Material (TF2)
- ____ 1 cm Muck (A9) (**LRR C**)
- ____ 2 cm Muck (A10) (**LRR B**)
- ____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: Sandy soil with no organic or redox features present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- X Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2) (**Nonriverine**)
- ____ Drift Deposits (B3) (**Nonriverine**)
- ____ Surface Soil Cracks (B6)
- ____ Inundation on Aerial Imagery (B7)
- ____ Water stained Leaves (B8)
- ____ Biotic Crust (B10)
- ____ Aquatic Invertebrates (B11)
- ____ Crayfish Burrows (B12)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C2)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soil (C8)
- ____ Muck Surface (C7)
- ____ Saturation on Aerial Imagery (C8)
- ____ Shallow Aquitard (D4)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (B1) (**Riverine**)
- ____ Sediment Deposits (B2) (**Riverine**)
- ____ Drift Deposits (B3) (**Riverine**)
- ____ Drainage Patterns (B9)
- ____ Dry Season Water Table (C3)
- ____ Salt Deposits (C5)
- ____ Mud Casts (C9)
- ____ FAC Neutral Test (D7)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 24 inches
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 12 inches

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: There are hydrophytes and hydrology. However, the area is not inundated enough to have hydric soils.

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/28/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T1P2

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8',16.50" N Long: 119 ,11', 2.07" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil Yes, or Hydrology Ni naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____
Hydric Soil Present:	Yes X	No _____
Wetland Hydrology Present:	Yes X	No _____

Is the Sampled Area Within a Wetland? **Yes X No _____**

Remarks: Sandy soils are excessively drained. However, a layer of organic material (not mucky) 3 inches thick has accumulated. Photos 176 177.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	70	Yes	FACW
2. Frankenia salina	18	No	FACW
3. Melilotus indica	5	No	FAC
4. Scirpus acutus var. occidentalis	3	No	OBL
5.			
6.			
7.			
8.			
9.			
Total Cover:	96		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No _____**

Remarks:

SOIL

Sampling Point: T1P2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 3	7.5YR 3/2	100					Sand	
3 20	7.5YR 4/1	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ Red Parent Material (TF2)
- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- X Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Dark organic layer from 0 3 inches, but not a mucky layer. Soils are sandy and excessively drained.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation on Aerial Imagery (B7)
- ___ Water stained Leaves (B8)
- ___ Biotic Crust (B10)
- ___ Aquatic Invertebrates (B11)
- ___ Crayfish Burrows (B12)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C2)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soil (C8)
- ___ Muck Surface (C7)
- ___ Saturation on Aerial Imagery (C8)
- ___ Shallow Aquitard (D4)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B9)
- ___ Dry Season Water Table (C3)
- ___ Salt Deposits (C5)
- ___ Mud Casts (C9)
- ___ FAC Neutral Test (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 12 inches

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 3 inches

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/28/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T1P3

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8', 15.99" N Long: 119,11', 2.55" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____
Hydric Soil Present:	Yes X	No _____
Wetland Hydrology Present:	Yes X	No _____

Is the Sampled Area Within a Wetland? **Yes X No _____**

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	70	Yes	FACW
2. Scirpus acutus var. occidentalis	20	No	OBL
3. Frankenia salina	15	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:	105		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No _____**

Remarks:

SOIL

Sampling Point: T1P3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ Red Parent Material (TF2)
- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: As we began to dig the soil pit, the hydrogen sulfide smell was overwhelming.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation on Aerial Imagery (B7)
- ___ Water stained Leaves (B8)
- ___ Biotic Crust (B10)
- ___ Aquatic Invertebrates (B11)
- ___ Crayfish Burrows (B12)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C2)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soil (C8)
- ___ Muck Surface (C7)
- ___ Saturation on Aerial Imagery (C8)
- ___ Shallow Aquitard (D4)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B9)
- ___ Dry Season Water Table (C3)
- ___ Salt Deposits (C5)
- ___ Mud Casts (C9)
- ___ FAC Neutral Test (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): 0 1
Water Table Present?	Yes X	No ___	Depth (inches): 0 1
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0 1

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T2P1

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 2 3

Subregion (LRR): C Lat: 34, 8',18.322" N Long: 119,11',3.958" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____
Hydric Soil Present:	Yes _____	No X
Wetland Hydrology Present:	Yes X	No _____

Is the Sampled Area Within a Wetland? **Yes _____ No X**

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	40	Yes	FACW
2. Frankenia salina	30	Yes	FACW
3. Ambrosia psilostachya	20	No	FAC
4. Ambrosia bipinnatifida	15	No	NL
5.			
6.			
7.			
8.			
9.			
Total Cover:	105		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 20% Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No _____**

Remarks:

SOIL

Sampling Point: T2P1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 1	7.5YR 3/2	100					Sandy	Mineral
1 8	7.5YR 3/1	98	7.5YR 5/6	2	C	RC	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (**LRR C**)
- ____ 1 cm Muck (A9) (**LRR D**)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ____ Red Parent Material (TF2)
- ____ 1 cm Muck (A9) (**LRR C**)
- ____ 2 cm Muck (A10) (**LRR B**)
- ____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: Top layer (0 1) of soil is dry and sandy with live roots. The second layer (1 8) has more clay content and some redox features. However, redox features are not prevelant enough to warrant hydric soils. The soil is transitioning to hydric. From 8 24 inches the soil is sandy with little to no clay content.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ____ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2) (**Nonriverine**)
- ____ Drift Deposits (B3) (**Nonriverine**)
- ____ Surface Soil Cracks (B6)
- ____ Inundation on Aerial Imagery (B7)
- ____ Water stained Leaves (B8)
- ____ Biotic Crust (B10)
- ____ Aquatic Invertebrates (B11)
- ____ Crayfish Burrows (B12)
- ____ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C2)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soil (C8)
- ____ Muck Surface (C7)
- ____ Saturation on Aerial Imagery (C8)
- ____ Shallow Aquitard (D4)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (B1) (**Riverine**)
- ____ Sediment Deposits (B2) (**Riverine**)
- ____ Drift Deposits (B3) (**Riverine**)
- ____ Drainage Patterns (B9)
- ____ Dry Season Water Table (C3)
- ____ Salt Deposits (C5)
- ____ Mud Casts (C9)
- ____ FAC Neutral Test (D7)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 24
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 7

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T2P2

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8',18.08" N Long: 119,11',4.12" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present: Yes X No _____ Wetland Hydrology Present: Yes X No _____	**Is the Sampled Area Within a Wetland? Yes X No _____**
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	65	Yes	FACW
2. Frankenia salina	25	No	FACW
3. Ambrosia psilostachya	8	No	FAC
4. Melilotus indica	2	No	FAC
5.			
6.			
7.			
8.			
9.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0% Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: T2P2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 2	10YR 2/1	100						Detritus/primarily organic
2 5	10YR 4/1	98	7.5YR 4/6	2	C	PL/RC	Sandy	
5 15	10YR 4/2	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- X Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ Red Parent Material (TF2)
- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation on Aerial Imagery (B7)
- ___ Water stained Leaves (B8)
- ___ Biotic Crust (B10)
- ___ Aquatic Invertebrates (B11)
- ___ Crayfish Burrows (B12)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C2)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soil (C8)
- ___ Muck Surface (C7)
- ___ Saturation on Aerial Imagery (C8)
- ___ Shallow Aquitard (D4)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B9)
- ___ Dry Season Water Table (C3)
- ___ Salt Deposits (C5)
- ___ Mud Casts (C9)
- ___ FAC Neutral Test (D7)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 8

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 6

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T2P3

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8',16.72"N Long: 119,11',5.05"W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation no, Soil Yes, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present: Yes X No _____ Wetland Hydrology Present: Yes X No _____	**Is the Sampled Area Within a Wetland? Yes X No _____**
Remarks: sandy soils are problematic. Photos 188 193	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	65	Yes	FACW
2. Frankenia salina	20	No	FACW
3. Typha angustifolia	15	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: T2P3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 1	10YR 2/1	100						Organic material
1 4	7.5YR 3/2	100					Sand	
4 6	7.5YR 4/1	97	5YR 3/4	3	C	M	Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ Red Parent Material (TF2)
- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- X Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Problematic soils sandy.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation on Aerial Imagery (B7)
- ___ Water stained Leaves (B8)
- ___ Biotic Crust (B10)
- ___ Aquatic Invertebrates (B11)
- ___ Crayfish Burrows (B12)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C2)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soil (C8)
- ___ Muck Surface (C7)
- ___ Saturation on Aerial Imagery (C8)
- ___ Shallow Aquitard (D4)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B9)
- ___ Dry Season Water Table (C3)
- ___ Salt Deposits (C5)
- ___ Mud Casts (C9)
- ___ FAC Neutral Test (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: _____ City/County: _____ Sampling Date: _____

Applicant/Owner: _____ State: _____ Sampling Point: _____

Investigator(s): _____ Section, Township/Range: _____

Landform (hillside, terrace, fan, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No _____	**Is the Sampled Area Within a Wetland?** **Yes _____ No _____**
Hydric Soil Present:	Yes _____ No _____	
Wetland Hydrology Present:	Yes _____ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____% Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

_____ Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes _____ No _____**

Remarks:

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

_____ Histosol (A1)
_____ Histic Epipedon (A2)
_____ Black Histic (3)
_____ Hydrogen Sulfide (A4)
_____ Stratified Layers (A5) (**LRR C**)
_____ 1 cm Muck (A9) (**LRR D**)
_____ Depleted Below Dark Surface (A11)
_____ Thick Dark Surface (A12)
_____ Sandy Mucky Mineral (S1)
_____ Sandy Gleyed Matrix (S4)
_____ Sandy Redox (S5)
_____ Stripped Matrix (S6)
_____ Loamy Mucky Mineral (F1)
_____ Loamy Gleyed Matrix (F2)
_____ Depleted Matrix (F3)
_____ Redox Dark Surface (F6)
_____ Depleted Dark Surface (F7)
_____ Redox Depressions (F8)
_____ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

_____ Red Parent Material (TF2)
_____ 1 cm Muck (A9) (**LRR C**)
_____ 2 cm Muck (A10) (**LRR B**)
_____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

_____ Surface Water (A1)
_____ High Water Table (A2)
_____ Saturation (A3)
_____ Water Marks (B1)
_____ Sediment Deposits (B2) (**Nonriverine**)
_____ Drift Deposits (B3) (**Nonriverine**)
_____ Surface Soil Cracks (B6)
_____ Inundation on Aerial Imagery (B7)
_____ Water stained Leaves (B8)
_____ Biotic Crust (B10)
_____ Aquatic Invertebrates (B11)
_____ Crayfish Burrows (B12)
_____ Hydrogen Sulfide Odor (C1)
_____ Oxidized Rhizospheres on Living Roots (C2)
_____ Presence of Reduced Iron (C4)
_____ Recent Iron Reduction in Plowed Soil (C8)
_____ Muck Surface (C7)
_____ Saturation on Aerial Imagery (C8)
_____ Shallow Aquitard (D4)
_____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

_____ Water Marks (B1) (**Riverine**)
_____ Sediment Deposits (B2) (**Riverine**)
_____ Drift Deposits (B3) (**Riverine**)
_____ Drainage Patterns (B9)
_____ Dry Season Water Table (C3)
_____ Salt Deposits (C5)
_____ Mud Casts (C9)
_____ FAC Neutral Test (D7)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches):_____

Water Table Present? Yes _____ No _____ Depth (inches):_____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches):_____

Wetland Hydrology Present? Yes _____ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T3P1

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8',20.44" N Long: 119,11',7.62" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____
Hydric Soil Present:	Yes _____	No X
Wetland Hydrology Present:	Yes X	No _____

Is the Sampled Area Within a Wetland? **Yes _____ No X**

Remarks: Photos 195

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	50	Yes	FACW
2. Ambrosia psilostachya	30	Yes	FAC
3. Melilotus indica	15	No	FAC
4. Typha angustifolia	5	No	OBL
5.			
6.			
7.			
8.			
9.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X No _____**

Remarks:

SOIL

Sampling Point: T3P1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 24	7.5YR 3/2	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (**LRR C**)
- ____ 1 cm Muck (A9) (**LRR D**)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ____ Red Parent Material (TF2)
- ____ 1 cm Muck (A9) (**LRR C**)
- ____ 2 cm Muck (A10) (**LRR B**)
- ____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: Sandy soils with organic material and redox features starting to form not significant enough to meet hydric soils criteria.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ____ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2) (**Nonriverine**)
- ____ Drift Deposits (B3) (**Nonriverine**)
- ____ Surface Soil Cracks (B6)
- ____ Inundation on Aerial Imagery (B7)
- ____ Water stained Leaves (B8)
- ____ Biotic Crust (B10)
- ____ Aquatic Invertebrates (B11)
- ____ Crayfish Burrows (B12)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C2)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soil (C8)
- ____ Muck Surface (C7)
- ____ Saturation on Aerial Imagery (C8)
- ____ Shallow Aquitard (D4)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (B1) (**Riverine**)
- ____ Sediment Deposits (B2) (**Riverine**)
- ____ Drift Deposits (B3) (**Riverine**)
- ____ Drainage Patterns (B9)
- ____ Dry Season Water Table (C3)
- ____ Salt Deposits (C5)
- ____ Mud Casts (C9)
- ____ FAC Neutral Test (D7)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 20
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 10

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T3P2

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8',20.19" N Long: 119,11',7.74" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil Yes, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present: Yes X No _____ Wetland Hydrology Present: Yes X No _____	**Is the Sampled Area Within a Wetland? Yes X No _____**
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	75	Yes	FACW
2. Ambrosia psilostachya	10	No	FAC
3. Melilotus indica	10	No	FAC
4. Typha angustifolia	5	No	OBL
5.			
6.			
7.			
8.			
9.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: T3P2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 0.5	10YR 2/1	100						Organic material
0.5 6	7.5YR 4/1	100					Sand	
6 12	5YR 5/1	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ Red Parent Material (TF2)
- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- X Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Sandy soils preventing anaerobic conditions to occur. However, the area is a wetland with obvious hydrophytes and hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation on Aerial Imagery (B7)
- ___ Water stained Leaves (B8)
- ___ Biotic Crust (B10)
- ___ Aquatic Invertebrates (B11)
- ___ Crayfish Burrows (B12)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C2)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soil (C8)
- ___ Muck Surface (C7)
- ___ Saturation on Aerial Imagery (C8)
- ___ Shallow Aquitard (D4)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B9)
- ___ Dry Season Water Table (C3)
- ___ Salt Deposits (C5)
- ___ Mud Casts (C9)
- ___ FAC Neutral Test (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 11

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T3P3

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8',18.91" N Long: 119,11', 8.28" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil Yes, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present: Yes X No _____ Wetland Hydrology Present: Yes X No _____	**Is the Sampled Area Within a Wetland? Yes X No _____**

Remarks: Sandy soils are problematic, however still considered a hydric soil.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Acacia longifolia	15	Yes	UPL
2.			
3.			
4.			
5.			
Total Cover:	15		
Herb Stratum			
1. Distichlis spicata	50	Yes	FACW
2. Typha angustifolia	40	Yes	OBL
3. Ambrosia psilostachya	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: T3P3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 3	10YR 2/1	100					Sand	
3 14	7.5YR 3/1	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ Red Parent Material (TF2)
- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- X Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Sandy soils preventing anaerobic conditions. However, given the hydrology and vegetation, the area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation on Aerial Imagery (B7)
- ___ Water stained Leaves (B8)
- ___ Biotic Crust (B10)
- ___ Aquatic Invertebrates (B11)
- ___ Crayfish Burrows (B12)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C2)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soil (C8)
- ___ Muck Surface (C7)
- ___ Saturation on Aerial Imagery (C8)
- ___ Shallow Aquitard (D4)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B9)
- ___ Dry Season Water Table (C3)
- ___ Salt Deposits (C5)
- ___ Mud Casts (C9)
- ___ FAC Neutral Test (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 1

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T3P4

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8',18.68"N Long: 119,11',8.38"W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present: Yes _ No X Wetland Hydrology Present: Yes X No _____	**Is the Sampled Area Within a Wetland? Yes _____ No X**
Remarks: Photo 217	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Acacia longifolia	10	Yes	UPL
2.			
3.			
4.			
5.			
Total Cover:	10		
Herb Stratum			
1. Distichlis spicata	50	Yes	FACW
2. Polypogon monspeliensis	20	Yes	FACW
3. Ambrosia psilostachya	15	No	FAC
4. Typha angustifolia	15	No	OBL
5.			
6.			
7.			
8.			
9.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: T3Ps4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 6	7.5YR 4/1	100					Sand	
6 19	10YR 3/1	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (**LRR C**)
- ____ 1 cm Muck (A9) (**LRR D**)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ____ Red Parent Material (TF2)
- ____ 1 cm Muck (A9) (**LRR C**)
- ____ 2 cm Muck (A10) (**LRR B**)
- ____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ____ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ____ Sediment Deposits (B2) (**Nonriverine**)
- ____ Drift Deposits (B3) (**Nonriverine**)
- ____ Surface Soil Cracks (B6)
- ____ Inundation on Aerial Imagery (B7)
- ____ Water stained Leaves (B8)
- ____ Biotic Crust (B10)
- ____ Aquatic Invertebrates (B11)
- ____ Crayfish Burrows (B12)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C2)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soil (C8)
- ____ Muck Surface (C7)
- ____ Saturation on Aerial Imagery (C8)
- ____ Shallow Aquitard (D4)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (B1) (**Riverine**)
- ____ Sediment Deposits (B2) (**Riverine**)
- ____ Drift Deposits (B3) (**Riverine**)
- ____ Drainage Patterns (B9)
- ____ Dry Season Water Table (C3)
- ____ Salt Deposits (C5)
- ____ Mud Casts (C9)
- ____ FAC Neutral Test (D7)

Field Observations:

Surface Water Present? Yes ____ No X____ Depth (inches):_____

Water Table Present? Yes X____ No ____ Depth (inches): 7.5

Saturation Present? (includes capillary fringe) Yes X____ No ____ Depth (inches): 7

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T4P1

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8",22.45" N Long: 119,11',11.17" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present: Yes _ No X Wetland Hydrology Present: Yes X No _____	**Is the Sampled Area Within a Wetland? Yes _____ No X**

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	60	Yes	FACW
2. Ambrosia psilostachya	20	No	FAC
3. Typha angustifolia	15	No	OBL
4. Melilotus indica	5	No	FAC
5.			
6.			
7.			
8.			
9.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: T4P1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 9	7.5YR 4/1	100					Sandy	
9 12	10YR 4/2	100					Sandy	Fine medium grain sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (**LRR C**)
- ____ 1 cm Muck (A9) (**LRR D**)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ____ Red Parent Material (TF2)
- ____ 1 cm Muck (A9) (**LRR C**)
- ____ 2 cm Muck (A10) (**LRR B**)
- ____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: Sandy soils not saturated long enough to produce anaerobic conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ____ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ____ Sediment Deposits (B2) (**Nonriverine**)
- ____ Drift Deposits (B3) (**Nonriverine**)
- ____ Surface Soil Cracks (B6)
- ____ Inundation on Aerial Imagery (B7)
- ____ Water stained Leaves (B8)
- ____ Biotic Crust (B10)
- ____ Aquatic Invertebrates (B11)
- ____ Crayfish Burrows (B12)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C2)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soil (C8)
- ____ Muck Surface (C7)
- ____ Saturation on Aerial Imagery (C8)
- ____ Shallow Aquitard (D4)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (B1) (**Riverine**)
- ____ Sediment Deposits (B2) (**Riverine**)
- ____ Drift Deposits (B3) (**Riverine**)
- ____ Drainage Patterns (B9)
- ____ Dry Season Water Table (C3)
- ____ Salt Deposits (C5)
- ____ Mud Casts (C9)
- ____ FAC Neutral Test (D7)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 5 6

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T4P2

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8',22.32" N Long: 119,11',11.28" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil Yes, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present: Yes X No _____ Wetland Hydrology Present: Yes X No _____	**Is the Sampled Area Within a Wetland? Yes X No _____**

Remarks: Sandy soils however hydrology and hydrophytes support a wetland determination. Photo 206

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	50	Yes	FACW
2. Typha angustifolia	40	Yes	OBL
3. Melilotus indica	5	No	FAC
4. Ambrosia psilostachya	5	No	FAC
5.			
6.			
7.			
8.			
9.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: T4P2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 11	7.5YR 3/2	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (**LRR C**)
- ____ 1 cm Muck (A9) (**LRR D**)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ____ Red Parent Material (TF2)
- ____ 1 cm Muck (A9) (**LRR C**)
- ____ 2 cm Muck (A10) (**LRR B**)
- X Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks: Sandy soil too excessively drained to develop anaerobic conditions. However, hydrophytes and hydrology support a wetland determination.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ____ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ____ Sediment Deposits (B2) (**Nonriverine**)
- ____ Drift Deposits (B3) (**Nonriverine**)
- ____ Surface Soil Cracks (B6)
- ____ Inundation on Aerial Imagery (B7)
- ____ Water stained Leaves (B8)
- ____ Biotic Crust (B10)
- ____ Aquatic Invertebrates (B11)
- ____ Crayfish Burrows (B12)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C2)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soil (C8)
- ____ Muck Surface (C7)
- ____ Saturation on Aerial Imagery (C8)
- ____ Shallow Aquitard (D4)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (B1) (**Riverine**)
- ____ Sediment Deposits (B2) (**Riverine**)
- ____ Drift Deposits (B3) (**Riverine**)
- ____ Drainage Patterns (B9)
- ____ Dry Season Water Table (C3)
- ____ Salt Deposits (C5)
- ____ Mud Casts (C9)
- ____ FAC Neutral Test (D7)

Field Observations:

Surface Water Present? Yes ____ No X____ Depth (inches):_____

Water Table Present? Yes X____ No ____ Depth (inches): 7

Saturation Present? (includes capillary fringe) Yes X____ No ____ Depth (inches): 2

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T4P3

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8',20.32" N Long: 119,11',13.11" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present: Yes X No _____ Wetland Hydrology Present: Yes X No _____	**Is the Sampled Area Within a Wetland? Yes X No _____**
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Acacia longifolia	15	Yes	UPL
2. Tamarisk ramosissima	5	No	FAC
3.			
4.			
5.			
Total Cover:	20		
Herb Stratum			
1. Scirpus acutus var. occidentalis	30	Yes	OBL
2. Distichlis spicata	20	Yes	FACW
3. Typha angustifolia	20	Yes	OBL
4. Melilotus indica	15	No	FAC
5. Polypogon monspeliensis	5	No	FACW
6.			
7.			
8.			
9.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: T4P3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 1	7.5YR 2.5/1	100						Organic material
1 18	10YR 4/2	92	5YR 4/6	8	C	PL/RC	Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ Red Parent Material (TF2)
- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation on Aerial Imagery (B7)
- ___ Water stained Leaves (B8)
- ___ Biotic Crust (B10)
- ___ Aquatic Invertebrates (B11)
- ___ Crayfish Burrows (B12)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C2)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soil (C8)
- ___ Muck Surface (C7)
- ___ Saturation on Aerial Imagery (C8)
- ___ Shallow Aquitard (D4)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B9)
- ___ Dry Season Water Table (C3)
- ___ Salt Deposits (C5)
- ___ Mud Casts (C9)
- ___ FAC Neutral Test (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 6

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region (DRAFT)

Project/Site: J Street Drain City/County: Oxnard/Ventura Sampling Date: 4/29/2008

Applicant/Owner: Ventura County Watershed Protection District State: CA Sampling Point: T4P4

Investigator(s): Shannon Allen, Allegra Simmons Section, Township/Range: N/A

Landform (hillside, terrace, fan, etc.): Coastal marsh Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): C Lat: 34,8',20.25" N Long: 119,11',13.32" W Datum: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present: Yes X No _____ Wetland Hydrology Present: Yes X No _____	**Is the Sampled Area Within a Wetland? Yes X No _____**
Remarks: Photo 214	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Tamarisk ramosissima	15	Yes	FAC
2.			
3.			
4.			
5.			
Total Cover:	15		
Herb Stratum			
1. Distichlis spicata	30	Yes	FACW
2. Scirpus acutus var. occidentalis	30	Yes	OBL
3. Typha angustifolia	20	No	OBL
4. Ambrosia psilostachya	10	No	FAC
5. Melilotus indica	10	No	FAC
6.			
7.			
8.			
9.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

_____ Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting date in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: T4P

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 3	10YR 2/1	100						
3 12	5YR 4/1	73	5YR 5/8	12	C	PL/RC	Sand	
			Gley1 3/N	15	C	M	Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ Red Parent Material (TF2)
- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation on Aerial Imagery (B7)
- ___ Water stained Leaves (B8)
- ___ Biotic Crust (B10)
- ___ Aquatic Invertebrates (B11)
- ___ Crayfish Burrows (B12)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C2)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soil (C8)
- ___ Muck Surface (C7)
- ___ Saturation on Aerial Imagery (C8)
- ___ Shallow Aquitard (D4)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B9)
- ___ Dry Season Water Table (C3)
- ___ Salt Deposits (C5)
- ___ Mud Casts (C9)
- ___ FAC Neutral Test (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 15

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 8

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX F

Potential Sensitive Species Table

J Street Drain Potential Sensitive Species Table

SPECIES	STATUS	PREFERRED HABITAT	OBSERVED ON SITE	POTENTIAL FOR OCCURRENCE
Botanical				
Astragalus pycnostachyus var. lanosissimus Ventura Marsh milk-vetch	Federal Endangered State Endangered CNPS List 1B.1	Coastal dunes, marshes and swamps; elevations 1-35 meters. Requires well-drained soils and areas with a relatively high water table. Blooms June to October	No	The potential for the species to occur on site is high. This species of milk vetch is a perennial and was not observed during the general biology survey.
Cordylanthus maritimus ssp. Maritimus Salt marsh bird's-beak	Federal Endangered State Endangered CNPS List 1B.2	Coastal dunes, marshes and swamps; elevations 0-30 meters. This species requires influence by freshwater input. Blooms May to October.	No	The potential for the species to occur on site is high. However, this species was not observed during the survey. Nor any species of bird's –beak.
Malacothrix similis Mexican Malacothrix	CNPS List 1A	Coastal sage scrub and chaparral	No	This species is generally associated with Santa Cruz and San Miguel Islands. This species was last reported in Ventura County in 1925. No coastal sage scrub habitat occurs on site. The potential for this species to occur on site is low
Zoological				
Actinemys marmorata pallida Southwestern pond turtle	State Species of Special Concern	Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms	No	The majority of the site is a concrete lined channel which is not appropriate for this species. However, the Ormond Lagoon has appropriate habitat. However this is isolated due to surrounding development. The potential for this species to occur on site is low.

SPECIES	STATUS	PREFERRED HABITAT	OBSERVED ON SITE	POTENTIAL FOR OCCURRENCE
Charadrius alexandrinus nivosus Western snowy plover	Federal Threatened State Species of Special Concern	Coastal beaches, dune-backed beaches, sparsely-vegetated dunes, and salt pans at estuaries and lagoons.	No	During the focused survey for this species, individuals were observed offsite to the southwest of the site. The individuals were not observed on site most likely due to the foot traffic associated with hikers, dogs and homeless.
Cicindela hirticollis gravida Sandy beach tiger beetle	State Rank S1	Found in close association with a body of water, common on the sandy beaches of oceans, lakes, rivers and streams	No	This species is believed to be extirpated from this area. The last known occurrence was at Port Hueneme in 1956. There is no potential for this species to exist onsite.
Eucyclogobius newberryi Tidewater goby	Federal Endangered State Species of Special Concern	Brackish water in lagoons created by coastal streams	No	The potential for the species to occur onsite is high. Records indicate occupation as recent as 1995.
Passerculus sandwichensis beldingi Belding's savannah sparrow	State Endangered	Salt marsh vegetated by pickleweed (*Salicornia virginica*)	No	The potential for this species to occur within the lagoon portion project area is low as their preferred vegetative cover, pickleweed, does not occur within the project area. However, populations of the species occur within pickleweed vegetation located approximately 480 feet southwest of the lagoon.
Sternula antillarum browni California least tern	Federal Endangered State Endangered	Coastal sandy bare areas e.g., beaches, sand bars, and salt flats.	Yes	The potential for this species to occur within the lagoon portion of the project area is moderate. Breeding populations of the species have been observed to the west of the lagoon. However, human and domestic animal traffic within the lagoon reduces the potential for the species to nest within the project area.

APPENDIX G

2009 and 2010 California Least Tern Breeding Survey Reports

State of California
The Resources Agency
Department of Fish and Game
Wildlife Branch

California Least Tern Breeding Survey
Ormond Beach, Ventura County
2009 Season

by
Reed V. Smith

Nongame Wildlife Program

Final Report

To

State of California
Department of Fish and Game
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123

California Least Tern Breeding Survey
Ormond Beach, Ventura County
2009 Season

Reed V. Smith
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Ventura, CA 93003
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Prepared 9/30/09

State of California
The Resources Agency
Department of Fish and Game

California Least Tern Breeding Survey
Ormond Beach, Ventura County
2009 Season

by

Reed V. Smith
104 N. Evergreen Drive
Ventura, CA 93003

ABSTRACT

This year's breeding season work was conducted by me under contract to the California Department of Fish and Game in accordance with US Fish and Wildlife protocols for monitoring Least Tern nesting under a Endangered Species Act Recovery Permit. I conducted 14 weekly surveys of Ormond Beach from Port Hueneme beach to the boundary fence for Naval Base Ventura County (Pt. Mugu) from April 29 to August 9, 2009. During that period I located and monitored 44 California Least Tern nests from nest initiation to fledging of young.

INTRODUCTION

Ormond Beach is located between Naval Base Ventura County Pt. Mugu (Arnold Road) and the city of Port Hueneme (J. Street Drain.) The beach is approximately 2.2 miles long. From West to East: The sandy beach is backed by the J. Street Estuary, a Pickleweed wetland, the Reliant Energy Power plant and then another Pickleweed wetland. The West end is owned by the City of Oxnard, and the East end is owned by the California Coastal Conservancy.

The portion of the beach used for nesting by California Least Terns is typified by 3-6 foot high small dunes on the ocean side. Inland of the small dunes is a wide, level sandy area. This is the area where the nests are placed. This area is vegetated by Beach Bur, Beach Morning Glory, Sea Rocket and Beach Evening Primrose. The vegetation provides shelter from sun and predators for the least tern chicks. Behind the nesting area are higher dunes marking the inland extent of

nesting. The beach is not cleaned or groomed so driftwood and wrack collect on the seaward edge.

Efforts to protect least tern nesting have been ongoing for approximately 20 years by various NGOs, including the Ventura Audubon Society, the Conejo Valley Audubon Society, the Nature Conservancy and the Sierra Club. These private efforts have had the support of the California Department of Fish and Game and the U. S. Fish and Wildlife Service. The area immediately west of the Reliant Energy power plant has been the primary nesting area for most of that time. Over the years various types of fences have been put up in the spring and taken down in the fall. For the last 3 years least terns have used both the west area and the area immediately west of Arnold Road on the other end of the beach. This year the terns used only the western portion for nesting

Over the years the City of Oxnard has been trying to develop the area. Various proposals have been put forth including a city park, a marina, a housing development, etc. Currently the city is considering an industrial park along Arnold Road and an over 1,200 home residential development at Arnold Road and Port Hueneme Road. This is going on in spite of the city council saying that Ormond Beach is recognized as a valuable habitat for wildlife. The city has recently circulated a draft 2030 General Plan that shows industrial land use adjacent to and south of Port Hueneme Road. The land is currently used for agriculture and is a good buffer between industrial areas and the wetland/dune complex at Ormond Beach. The draft plan also designates the sandy beach as "Park and Recreation" use. This could lead to "Park" type management with beach grooming, sand moving and park infrastructure.

METHODS

Once a week I walked Ormond Beach along meandering transects to locate least tern nests. Once located, the nest was marked with a tongue depressor 1 meter inland of the nest, the longitude and latitude were recorded using Global Positioning System (GPS) and the number of eggs was recorded along with the date. On subsequent surveys the nest was checked to determine if incubation was continuing. This was done remotely when possible to reduce disturbance to the least tern colony. The number of least terns present was recorded on each site visit.

All hatched nests were recorded and the number of chicks noted. Nest hatching was determined by the presence of chicks nearby, tern fecal matter on the nest scrape and the absence of eggs or chicks and/or by examining the nest site for small portions of egg shell left from hatching. Failed nests were also recorded. If possible the cause of the nest failure was recorded. The outcome was determined by examination of the nest site for signs of the cause; i.e. predator tracks, partially eaten eggs, human footprints, etc.

After observing that a nest had hatched the chicks were observed to determine their growth and fate. Nest abandonment was determined by the absence of adult terns tending it, the eggs being present beyond the expected hatching date, the presence of dew on the eggs in the early morning, and a reduced temperature of the eggs.

RESULTS and DISCUSSION

The first California Least Tern appeared in the area on May 6, 2009. The 2009 nesting season for least terns on Ormond Beach produced ~24 fledglings. Out of a total of 44 nests initiated, 35 nests hatched. By August 14, 2009 all terns had left the area.

The birds place nests in level areas behind the seaward line of small dunes. Most nests were initiated between June 3 and June 10, 2009. When the nests hatched the parents fed the chicks initially within 100 feet of the nest site. After that the chicks moved to a more protected area within the more vegetated portions of the nesting area.

When the birds fledged they moved to the outer beaches, closer to the foraging areas. Most of them waited at the east end of the J. Street Estuary for fish delivered by the parents.

Nest Locations

This year the nests were all located west of the Reliant power plant. Forty one (93%) were within the fenced nesting area there. Three (7%) were located on the narrow strip of sand between the J Street Estuary and the outer beach. No nests were initiated on the east (Arnold Road) end of the beach.

One possible explanation for the lack of nests on the east end of the beach is the lack of suitable forage fish in the nearshore waters. No CLT were observed foraging outside the surf line until early August. The east end of the beach has no close ponds containing forage fish. The west end of the beach is adjacent to the J. Street Estuary and freshwater ponds immediately behind the dunes on TNC property. Many CLT were observed foraging in these waters.

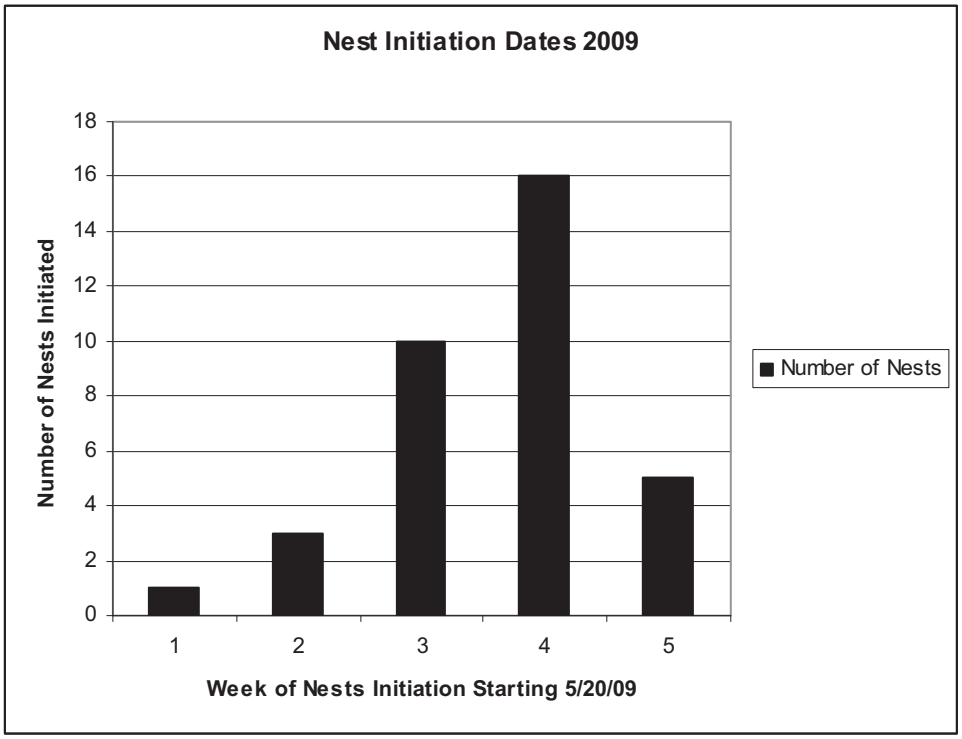
An initial look at anchovies landing receipts by Briana Brady, DFG Marine Resources, indicates a significant decline from nearshore Ventura County waters for the first six months of 2009. She indicated that there is usually a lag in receipt by DFG of this data and a more reliable report on this will be available in December of this year.

During my monitoring over the last couple years I have observed that least terns do not use the ½ mile long area in front of the Reliant Energy power plant for nesting. (Western Snowy Plovers do not nest there either.) The nest distribution map shows this. There is no apparent physical difference between this area and the portions of the beach on either side that the terns do use for nesting. The power plant operation is quite noisy. Least terns use calls to locate and identify their chicks. The power plant noise could interfere with this. There might be a vibration of the land caused by the power plant that the birds don't like, but this has not been detected. No study has determined the cause of this lack of nesting in the area.

A map of all 2009 Least Tern nests is in Attachment 1.

Nest Initiation

The first terns arrived May 6, 2009. The first nest was located May 22, 2009 and the last nest located July 8, 2009. Approximate nest initiation dates were determined by going back 21 days from the approximate hatch dates. A total of 44 nests were initiated.



Nest Fates

A total of 33 nests hatched as evidenced by chicks in the nest scrape or near by, egg shell nearby or adults vociferously defending area, scrape without eggs or chicks and tern fecal matter present and no evidence of other fate.

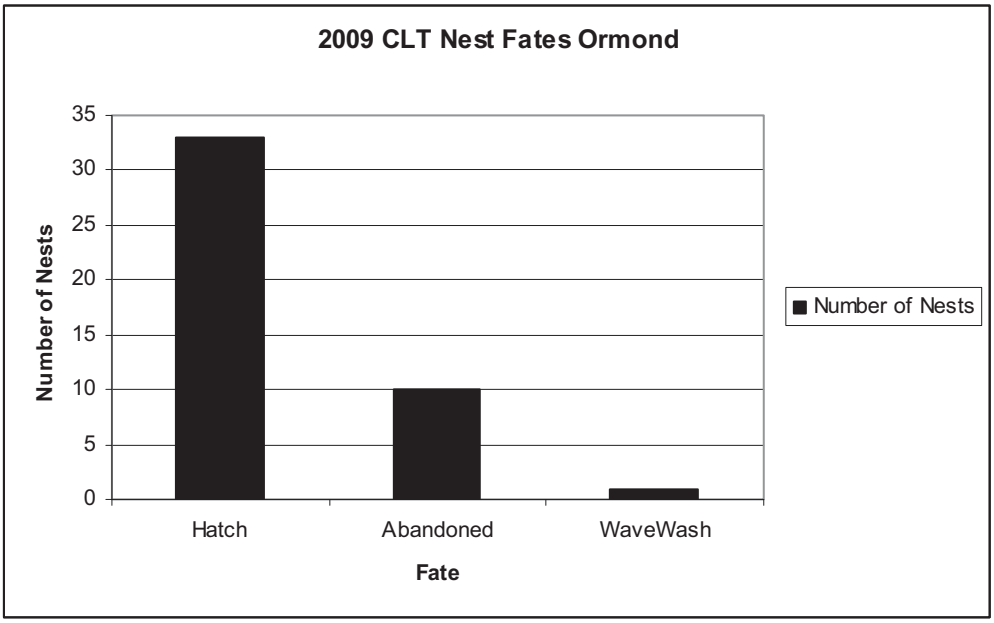
The number of abandoned nests was 10. Abandonment was determined by 2 or more weeks past expected hatching date, no adult tracks nearby, sun bleaching of the eggs, eggs with morning dew on them or cold temperature of the eggs. All abandoned eggs were opened to check on whether or not the egg was fertilized. Six (50%) of the abandoned eggs were not fertilized, Six (50%) were fertile as evidenced by an embryo in the egg.

No nests were predated. One nest was wave washed.

The following is a breakdown of the fate of the nests:

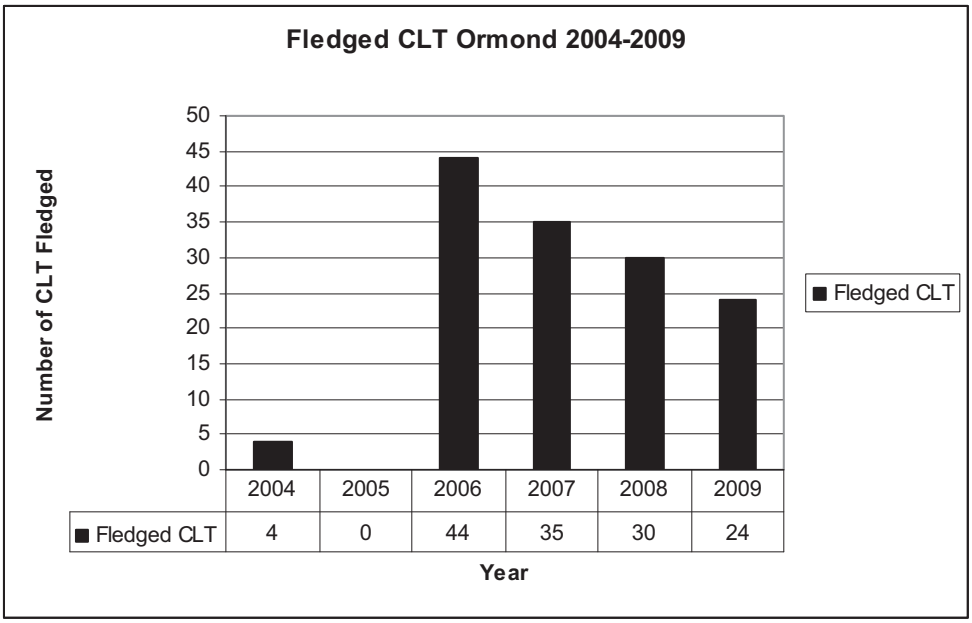
Hatched	33	(75%)
Abandoned	10	(23%)

Wave Washed 1 (2%)



The nest abandonment rate was the highest in several years. (2009 23%; 2008 6.2%) This may have been caused by people walking through the nesting area and riding bikes and motorcycles through the nesting area. Another factor may have been the lack of suitable forage fish in nearshore waters. (See discussion about nest locations above.)

The 2009 breeding season was a success on Ormond Beach. Thirty three nests hatched producing 24 fledgling least terns. The fledgling to pair ratio was .54. This is an increase from the last year and above the range wide "normal" ratio which has an average range of .28 to .38 over the prior 4 years.



Comparison of 2009 CLT Breeding on Ormond Beach to Prior Years

Year	2004	2005	2006	2007	2008	2009
Number of Nests	29	27	53	52	81	44
Number of unsuccessful nests	26	25	17	11	14	11
Number of hatched nests	3	2	36	41	67	33
Percent of nests hatching	10.3%	7.4%	67.9%	78.8%	82.7%	75.00%
Number of Fledges	4	0	44	35	30	24
Fledge to Nesting Adult Pair Ratio	0.14	0.00	0.83	0.67	0.37	0.54

The failure in least tern fledglings during 2004 and 2005 was probably caused by the use of the beach by powered paragliders and ultralight aircraft. These aircraft would often fly low over the nesting areas disturbing the terns. A city ordinance was passed prohibiting landing and take off by these aircraft in late 2005. This eliminated the disturbance with a rebound in fledgling numbers in 2006.

There had been a decline in the total number of CLT fledglings in the last 4 years, though the fledgling per pair ratio has gone up and down.

See Attachment 2 for the Master Nest List

Discussion

The primary factor in reducing dogs off leash on the beach was an active enforcement effort by the City of Oxnard's Animal Regulation Department. In 2008 there was an average of 102 dog visits per month on the Arnold Road end of the beach. This year the number of visits per month was down to 65. Enforcement of the leash laws may discourage dog owners who want their dogs to run without a leash from visiting the beach.

The US Fish and Wildlife Service, Et. Al., also constructed a plastic mesh fence around the designated Least Tern nesting area west of the Reliant Energy Power plant.

The U.S. Navy's Environmental Division at Naval Base Ventura County Point Mugu had a program to remove Corvids and Coyotes that prey on Least Tern nests. This appears to have reduced the number of Corvids and Coyotes foraging on Ormond Beach.

The California Department of Fish and Games hires a monitor for the breeding season but has no management plan for the beach and no authority for management beyond its general responsibility for protecting endangered species. This agency does address problems as they arrive on a case by case basis, when there is a wildlife biologist available.

The U.S. Fish and Wildlife Service has no management plan for the beach beyond its general responsibility for protecting endangered species. They do take part in discussions with a wide range of agencies and NGOs on ways to protect Least Terns on Ormond Beach.

The City of Oxnard owns the western portion of the beach, but has no specific protection plan in place and has not taken an active role in management of the beach. The Oxnard Police Department will respond to off road vehicles on the beach.

The California Coastal Conservancy (CCC) owns the eastern portion of the beach and takes a leadership role in holding regular meetings with interested agencies, NGOs and individuals concerning the use of the area. They have no specific plan for the protection of least terns. On August 12, 2009 a meeting was held to discuss problems on Ormond Beach. Attending were representatives of DFG, USFWS, TNC and the CCC in addition to myself and Cynthia Hartley, the Western Snowy Plover monitor, who organized the meeting. The enforcement representative, DFG Warden Coombs made it clear that enforcement of the prohibition against entry would be simple if the area was completely fenced and adequately signed. There was reluctance on the part of the CCC representative Peter Brand to close any portion of the beach. (See Attachment 3 for the minutes of the meeting.) I asked Peter Brand why the CCC has not turned the property over to another agency or NGO for proper preserve management. He refused to answer the question.

Currently there is no law or ordinance specifically prohibiting entry into the nesting area. The only laws protecting the nesting areas are the Endangered Species Act with it's prohibition of take defined as disturbing the birds and California Fish and Game Code sections dealing with destruction of birds' nests and take of fully protected birds. These laws require a high degree of proof in order to be enforced. If the land owners closed access to the nesting areas, while allowing general public access to the outer beach, protective enforcement as simple trespasses would be easier. The City of Oxnard could pass an ordinance prohibiting the entry into nesting areas that would be easily enforceable. The USFWS is actively pursuing this option.

Recommendations

The following recommendations could result in an increase in success in Least Tern nesting on Ormond Beach.

1. Enforcement of existing dog leash laws. This has started and has been successful.

2. A docent program to educate the public that uses the beach on the ways to not disturb nesting Least Terns. A Docent/Volunteer coordinator has been hired to create a docent program last year, but he has not succeeded in getting an effective program up and running.

3. Oppose any development of lands South of Hueneme Road as this would increase human use of the beach and result in degradation of the wetland and beach habitats on Ormond Beach.

4. Public events should not be scheduled on Ormond Beach during the nesting season.

5. Collect the two portions of the beach that are used by Least Terns under a single owner with an adequate management and protection plan or develop a plan in concert with the 2 property owners (the California Coastal Conservancy and the City of Oxnard.)

6. Encourage landowners to prohibit entry into the fenced nesting area from April 1 to September 15 annually. Then the local police department and DFG wardens could enforce the protection.

   A simple enhancement of protection would be for the City of Oxnard to enact an ordinance prohibiting entry into fenced nesting areas by anyone except authorized monitors.

7. The entire area used by least terns for nesting needs to be fenced.

ACKNOWLEDGEMENTS

I would like to thank Cynthia Hartley and Chris Kahler for their assistance in monitoring this beach this year.

Funding for this project was provided by the U. S. Fish and Wildlife Service Grant-in-Aid for threatened and endangered species program (Section 6).

ATTACHMENT 1

2009 Least Tern Nest Locations

ATTACHMENT 2

2009 CLT Master Nest List

Least Tern Master Nest List	Location: Ormond Beach 2009						
Nest No.	Egg No.	Date Found	Hatch Date	Other Outcome	Date	GPS Coordinates 34N; 119W	Comments

1	2	5/22/2009	6/17/2009			7.902; 10.597	Same as #12
2	2	5/27/2009	7/1/2009			7.868, 10.506	
3	1	5/27/2009		Abandoned	7/1/2009	7.872, 10.497	
4	2	5/27/2009	6/17/2009			7.883, 10.571	
5	2	5/27/2009	6/24/2009			7.992; 10.652	
6	1	6/3/2009	6/10/2009			8.271, 11.234	
7	2	6/3/2009	6/24/2009			7.971, 10.656	
8	1	6/3/2009		Abandoned	6/10/2009	7.974, 10.650	
9	1	6/3/2009		Abandoned	7/22/2009	7.985, 10.653	
10	2	6/3/2009	6/24/2009			8.002, 10.666	
11	2	6/3/2009	6/24/2009			7.932, 10.639	
12	2	6/3/2009	6/17/2009			7.903, 10.614	Same as #1
13	2	6/3/2009	6/24/2009			7.889, 10.571	
14	1	6/3/2009	7/1/2009			7.876, 10.545	
15	2	6/3/2009	6/24/2009			7.945, 10.576	
16	2	6/3/2009	6/24/2009			7.985, 10.649	
17	2	6/3/2009	6/24/2009			8.000, 10.651	
18	2	6/4/2009	7/1/2009			7.835, 10.491	
19	1	6/4/2009		Abandoned	7/8/2009	7.896, 10.601	
20	1	6/10/2009		Wave Wsh	7/1/2009	8.235, 11.184	
21	2	6/10/2009		Abandoned	7/8/2009	7.844. 10.540	
22	2	6/10/2009	7/1/2009			7.850, 10.540	
23	1	6/10/2009	7/1/2009			7.912, 10.573	
24	3	6/10/2009	7/1/2009			7.928, 10.555	
25	2	6/10/2009	7/1/2009			7.927, 10.551	
26	1	6/10/2009	7/1/2009			7.918, 10.615	
27	2	6/10/2009	7/1/2009			7.937, 10.655	
28	2	6/10/2009	6/24/2009			7.980, 10.659	
29	3	6/10/2009	7/1/2009			8.283, 11.254	
30	1	6/12/2009		Abandoned	7/8/2009	7.901, 10.489	
31	1	6/17/2009		Abandoned	7/22/2009	7.943, 10.642	
32	1	6/17/2009	7/8/2009			7.936, 10.634	
33	1	6/17/2009	7/8/2009			7.934, 10.635	
34	2	6/17/2009	7/1/2009			7.936, 10.609	
35	2	6/17/2009	7/1/2009			7.929, 10.596	
36	1	6/17/2009		Abandoned	7/22/2009	7.923, 10.594	
37	2	6/17/2009	7/1/2009			7.866, 10.536	
38	2	6/17/2009	7/8/2009			7.864, 10.545	Same as #45

39	2	6/17/2009	7/8/2009			7.880, 10.575	
40	2	6/17/2009	7/1/2009			7.948, 10.585	
41	2	6/17/2009	6/24/2009			8.006, 10.662	
42	1	6/24/2009		Abandoned	7/22/2009	7.887, 10.565	
43	2	6/24/2009	7/1/2009			7.897, 10.586	
44	2	6/24/2009	7/1/2009			7.950, 10.632	
45	2	6/17/2009	7/8/2009				Same as #38
46	2	7/8/2009		Abandoned	7/8/2009	7.895, 10.592	

Attachment 3

Ormond Beach Enforcement Meeting Minutes

Ormond Beach Enforcement Meeting Minutes

August 12, 2009
U.S. Fish and Game Ventura office
2493 Portola Road, Suite B
Ventura, CA 93003
1:30p.m. 4:00 p.m.

In attendance

Dan Blankenship, California Department of Fish and Game
Peter Brand, California Coastal Conservancy
Jake Coombs, California Department of Fish and Game
Chris Dellith, U.S. Fish and Wildlife Service
Cynthia Hartley, Snowy Plover Nest Monitor
Rich Handley, The Nature Conservancy
Chris Kahler, Ventura County Shorebirds
Reed Smith, Least Tern Nest Monitor

Objective

Bring together land owners, law enforcement and wildlife protection agencies to discuss and resolve problems with homeless and trespassers that threaten sensitive habitat and endangered species survival on Ormond Beach.

Presentation

Cynthia Hartley presented an overview of threats to the nesting success of Snowy Plovers on Ormond Beach focusing on problems that have impacted nesting success this year in 2009. Last year in 2008 just 2 out of 43 nests failed whereas so far this year 14 out of 31 nests have either been predated or vandalized. Threats include trespassers in the fenced off breeding area (walkers, walkers with dogs and off road vehicles) and homeless living between the fence line and the surf.

Discussion Highlights

A better presence needs to be established on the beach to convince the public that the property is being monitored. This includes improved fencing, signage, law enforcement presence and more docent volunteers. Rich Handley reports that a part time Nature Conservancy employee will be starting in a few weeks and will spend a large portion of that time on the beach.

FENCING and SIGNAGE: In order to aid law enforcement several improvements need to be made to the protective fencing around the breeding area. Law enforcement cannot enforce no trespassing laws if it isn't obviously clear that the area is restricted. Without better signage and complete enclosure of the restricted area it is unenforceable. The Coastal Conservancy condones adding signs to the fencing. The city manager for Oxnard needs to be contacted to request permission for signs on the fencing on Oxnard City property. This is critical as it may derail a prosecution if "no trespassing" signs are posted without permission of the land owner. There was discussion about year round fencing in the future that would be symbolic during the non-breeding season. Just before breeding season additional fencing would be mounted on the permanent posts to restrict entrance into the breeding area. This may also make the process of putting up the breeding season fencing easier. More discussion on this will be required in the future.

HOMELESS: There appears to be no city codes that specifically address homeless sleeping on the beach, or anywhere else. Without a city code for this issue we will not be able to legally remove the homeless that are sleeping on the beach outside of the fence exclosures by the breeding areas. A possible solution to this problem would be to approach Oxnard City Attorney Alan Holmberg to create a new city code that would make homeless sleeping on the beach illegal. An appeal to the Oxnard City Council would also be needed. Once existing city codes have been more thoroughly researched we will discuss this alternative.

AGENT AUTHORIZATION FORM: The problem the California Coastal Conservancy (CCC) has with the Agent Authorization form provided by the city is that the language in the document appears to be all inclusive in regard to restricting access to CCC property. The intent of CCC is to restrict access to only the fenced off breeding area on the property from March 15-September 15. A dialogue needs to be established between both agencies to address this concern so that the form is acceptable to the CCC lawyer. Until the document is signed and submitted by CCC it is unlikely we will have significant local law enforcement support.

VIDEO CAMERAS: In order to improve our awareness of trespassing and vandalism activities in the breeding areas we may be able to make use of the Reliant Energy Plant to mount video cameras. Camera resolution is a potential issue as we may not be able to identify individuals in order to support prosecution in the case of a take. However even a low resolution camera may give us a profile of peak activity times of trespassing in the restricted breeding areas. This may provide enough information to allow law enforcement to intercept trespassers on the ground. More information is needed about camera resolution and costs. A dialogue with Reliant is also needed to determine if they would be willing to help out.

LAW ENFORCEMENT PRESENCE: An increase in law enforcement presence on the beach may help reduce the problems we are having. Ideally law enforcement would actively engage people on the beach. This may also discourage the homeless. The Oxnard City Police Department has indicated recently that they would like the California Fish and Game Department to become more involved. Both agencies are resource limited and overworked, but a solution is likely. Fish and Game could potentially use extra funds to enable occasional sweeps of the beach in order to increase presence. If severe violation occurs, Fish and Game can be called (1 888 DFG-CALTIP or 888 334-2258) and will respond, although there may be a delay. It would be best to establish a dialogue between the two agencies to work out the best way forward.

BEACH FORTS: Beach forts are a focal point of partiers, trash, predators, illegal sexual activity and encourage homeless encampments. Larger forts need to be removed.

CCC proposes an observation tower at the end of Arnold Road to help connect the community with the wildlife on the beach.

Recommendations

- Completely fence in the breeding area in the future on the east side (by Mugu fence).
- Create new signs
    1. Fence line signs: Make them more consistent (i.e. have only 1 or 2 kinds of signs on display) and list all code violations a trespasser could be prosecuted for, including the wording "No Trespassing" and affix them every 2-3 posts around the whole fence.
    2. Instructive signs: For display at trail entrances and in the Arnold Rd Parking lot. Remove the graphic showing the dog on leash.
    3. Consider creating a sign indicating that the California Coastal Conservancy is the property owner
- Enhance the docent program to have more eyes on the beach
- Investigate mounting a video camera on the Reliant Energy Plant to monitor the breeding areas
- More frequent visits to the beach by law enforcement to engage the public and establish a stronger presence
    1. Fish and Game could occasionally do a beach sweep to check fishing licenses and other potential violations, meanwhile their presence on the beach would increase visibility of law enforcement
    2. Same as above for city police, only they would engage homeless on the beach (until a new legal code can be created)
- Improve the gate at the end of the Arnold Rd parking lot to prevent the passage of off road vehicles, and also allow law enforcement vehicle access to the beach using a lock and key
- Reach a compromise between Oxnard City and California Coastal Conservancy lawyer so that the Agent Authorization form is acceptable to both.
- Use Oxnard City Corps to remove beach forts
- Send out a press release in the beginning of the breeding season to announce the closure of the breeding grounds
- Consider utilizing homeless outreach groups to redirect homeless to shelters

Action Items

	Item	Responsibility	Due Date
1	Create new signs to be circulated for comment	Chris Kahler	Update next meeting
2	Research city ordinances that address homeless sleeping on the beach	Chris Kahler	Update next meeting
3	Contact the Oxnard City Manager to find out who can give permission to post "no trespassing" signs on the protective fencing on Oxnard City Property	Chris Kahler	Update next meeting
4	Inquire with Fish and Game supervisors to see if it would be possible to add Ormond Beach patrols to the Fish and Game schedule	Jake Coombs	Update next meeting
5	Continue to push through the Arnold Rd Gate improvement	Peter Brand	Update next meeting
6	Give Peter Brand the contact info for Officer Marostica	Cynthia Hartley	August 14
7	Check with California Coastal Conservancy lawyer about Agent Authorization document, begin a dialogue with the City of Oxnard to complete the form	Peter Brand	Update next meeting
8	Investigate mounting a camera on the Reliant Energy Plant	Chris Dellith	Update next meeting
9	Press release announcing breeding ground closure	TBD	March 1, 2010
10	Create a management plan	Chris Kahler to take the lead, with help from the group	Update next meeting

Next Meeting – October 2009, time and day to be announced

State of California
The Resources Agency
Department of Fish and Game
Wildlife Branch

California Least Tern Breeding Survey
Ormond Beach, Ventura County
2010 Season

by
Reed V. Smith

Nongame Wildlife Program

Final Report

To

State of California
Department of Fish and Game
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123

California Least Tern Breeding Survey
Ormond Beach, Ventura County
2010 Season

Reed V. Smith
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Prepared 9/10/10

State of California
The Resources Agency
Department of Fish and Game

California Least Tern Breeding Survey
Ormond Beach, Ventura County
2010 Season

by

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ABSTRACT

This year's breeding season work was conducted by me under contract to the California Department of Fish and Game in accordance with US Fish and Wildlife protocols for monitoring Least Tern nesting under an Endangered Species Act Recovery Permit. I conducted 14 weekly surveys of Ormond Beach from Port Hueneme beach to the boundary fence for Naval Base Ventura County (Pt. Mugu) from April 23 to August 4, 2010. During that period I located and monitored 48 California Least Tern nests from nest initiation to fledging of young.

INTRODUCTION

Ormond Beach is located between Naval Base Ventura County Pt. Mugu (Arnold Road) and the city of Port Hueneme (J. Street Drain.) The beach is approximately 2.2 miles long. From West to East: The sandy beach is backed by the J. Street Estuary, a Pickleweed wetland, the Reliant Energy Power plant and then another Pickleweed wetland. The West end is owned by the City of Oxnard, and the East end is owned by the California Coastal Conservancy.

The portion of the beach used for nesting by California Least Terns is typified by 3-6 foot high small dunes on the ocean side. Inland of the small dunes is a wide, level sandy area. This is the area where the nests are placed. This area is vegetated by Beach Bur, Beach Morning Glory, Sea Rocket and Beach Evening Primrose. The vegetation provides shelter from sun and predators for the least tern chicks. Behind the nesting area are higher dunes marking the inland extent of

nesting. The beach is not cleaned or groomed so driftwood and wrack collect on the seaward edge.

Efforts to protect least tern nesting have been ongoing for approximately 20 years by various NGOs, including the Ventura Audubon Society, the Conejo Valley Audubon Society, the Nature Conservancy and the Sierra Club. These private efforts have had the support of the California Department of Fish and Game and the U. S. Fish and Wildlife Service. The area immediately west of the Reliant Energy power plant has been the primary nesting area for most of that time. Over the years various types of fences have been put up in the spring and taken down in the fall. Least terns have used both the west area and the area immediately west of Arnold Road on the other end of the beach.

Over the years the City of Oxnard has been trying to develop the area. Various proposals have been put forth including a city park, a marina, a housing development, etc. Currently the city is considering an industrial park along Arnold Road and an over 1,200 home residential development at Arnold Road and Port Hueneme Road. This is going on in spite of the city council saying that Ormond Beach is recognized as a valuable habitat for wildlife. The city has recently circulated a draft 2030 General Plan that shows industrial land use adjacent to and south of Port Hueneme Road. The land is currently used for agriculture and is a good buffer between industrial areas and the wetland/dune complex at Ormond Beach. The draft plan now designates the sandy beach as "Resource Protection".

METHODS

Once a week I walked Ormond Beach along meandering transects to locate least tern nests. Most nests were located by observing an adult tern sitting on the sand. Once located, the nest was marked with a tongue depressor 1 meter inland of the nest, the longitude and latitude were recorded using Global Positioning System (GPS) and the number of eggs was recorded along with the date. On subsequent surveys the nest was checked to determine if incubation was continuing. This was done remotely when possible to reduce disturbance to the least tern colony. The estimated number of least terns present was recorded on each site visit.

All hatched nests were recorded and the number of chicks noted. Nest hatching was determined by the presence of chicks nearby, tern fecal matter on the nest scrape and the absence of eggs or chicks and/or by examining the nest site for small portions of egg shell left from hatching. Failed nests were also recorded. If possible the cause of the nest failure was recorded. The outcome was determined by examination of the nest site for signs of the cause; i.e. predator tracks, partially eaten eggs, human footprints, etc.

After observing that a nest had hatched the chicks were observed to determine their growth and fate. Nest abandonment was determined by the absence of adult terns tending it, the eggs being present beyond the expected hatching date, the presence of dew on the eggs in the early morning, and a reduced temperature of the eggs.

RESULTS and DISCUSSION

The first California Least Tern appeared in the area on May 12, 2010. The 2010 nesting season for least terns on Ormond Beach produced ~14 fledglings. Out of a total of 48 nests initiated, 35 nests hatched. By August 11, 2010 all terns had left the area.

The birds place nests in level areas behind the seaward line of small dunes. Most nests were initiated between May 26 and June 9, 2010. When the nests hatched the parents fed the chicks initially within 100 feet of the nest site. After that the chicks moved to a more protected area within the more vegetated portions of the nesting area.

When the birds fledged they moved to the outer beaches, closer to the foraging areas. Most of them waited at the east end of the J. Street Estuary for fish delivered by the parents.

Nest Locations

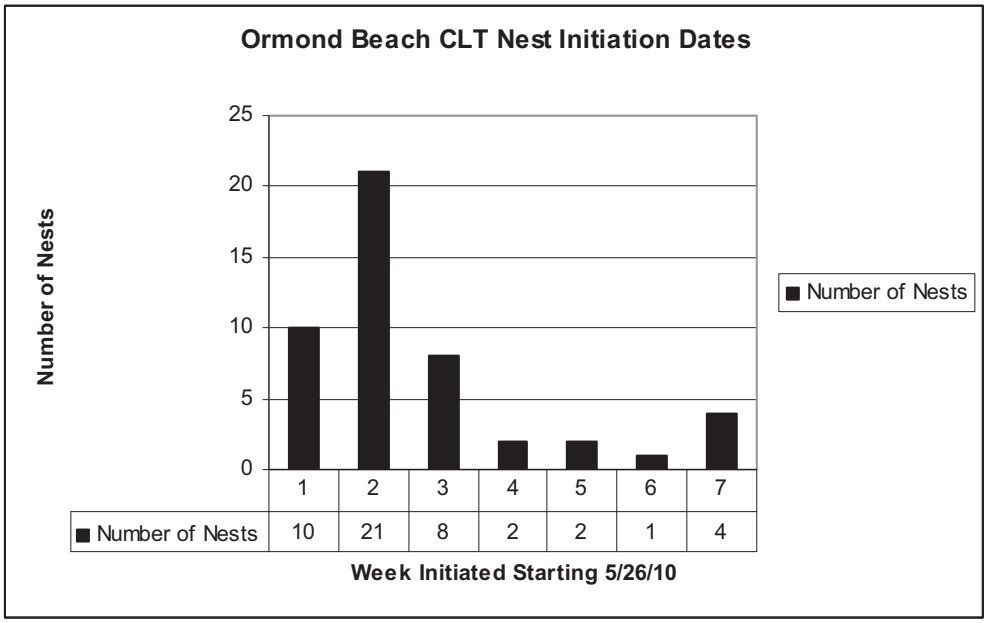
This year most of the nests were all located west of the Reliant power plant. Thirty eight nests (79.2%) were within the fenced nesting area there. One nest (2.1%) was located on the narrow strip of sand between the J Street Estuary and the outer beach. Nine nests (18.7%) were initiated on the east (Arnold Road) end of the beach.

During my monitoring over the last couple years I have observed that least terns do not use the ½ mile long area in front of the Reliant Energy power plant for nesting. (Western Snowy Plovers do not nest there either.) The nest distribution map shows this. There is no apparent physical difference between this area and the portions of the beach on either side that the terns do use for nesting. The power plant operation is quite noisy. Least terns use calls to locate and identify their chicks. The power plant noise could interfere with this. There might be a vibration of the land caused by the power plant that discourages nesting, this had been detected by scientists using microscopes on the power plant property. No study has definitively determined the cause of this lack of nesting in the area.

A map of all 2010 Least Tern nests is in Attachment 1.

Nest Initiation

The first terns arrived May 12, 2010. The first nest was located May 26, 2010 and the last nest located July 7, 2010. Approximate nest initiation dates were determined by going back 21 days from the approximate hatch dates. A total of 48 nests were initiated.



Nest Fates

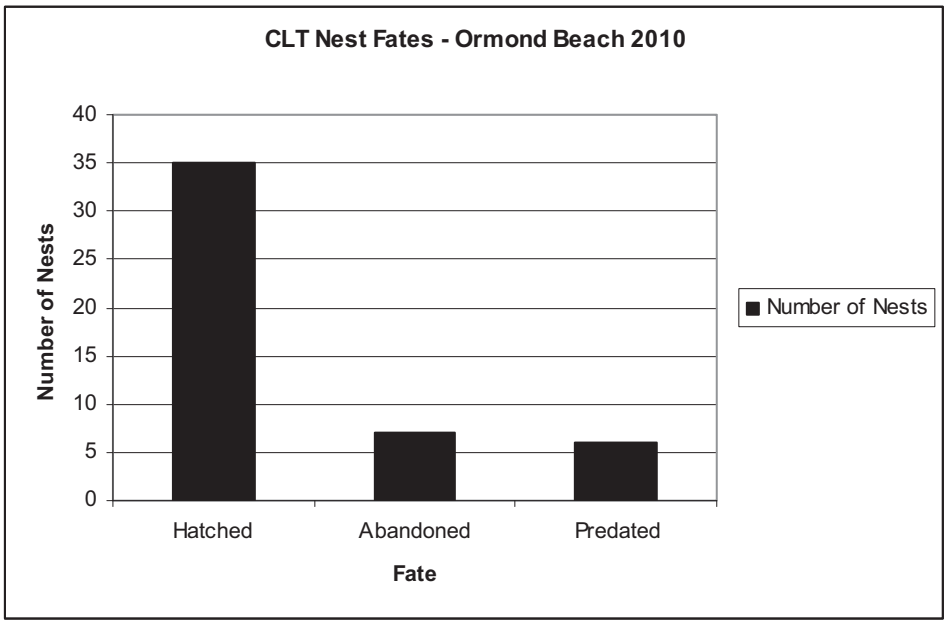
A total of 35 nests hatched as evidenced by chicks in the nest scrape or near by, egg shell nearby or adults vociferously defending area, scrape without eggs or chicks and tern fecal matter present and no evidence of other fate.

The number of abandoned nests was 7. Abandonment was determined by 2 or more weeks past expected hatching date, no adult tracks nearby, sun bleaching of the eggs, eggs with morning dew on them or cold temperature of the eggs. All abandoned eggs were collected and delivered to the Western Foundation of Vertebrate Zoology.

Six nests were predated with Ground Squirrels being the suspected predator. Ground squirrels were observed by Cynthia Hartley (Ormond Beach WSP monitor) predating nests. All of the squirrel predated nests were located on the east end of the beach adjacent to Arnold Road. One nest inside the western fenced area was predated by a crow.

The following is a breakdown of the fate of the nests:

Hatched	35	(73%)
Abandoned	7	(14.5%)
Predated	6	(12.5%)

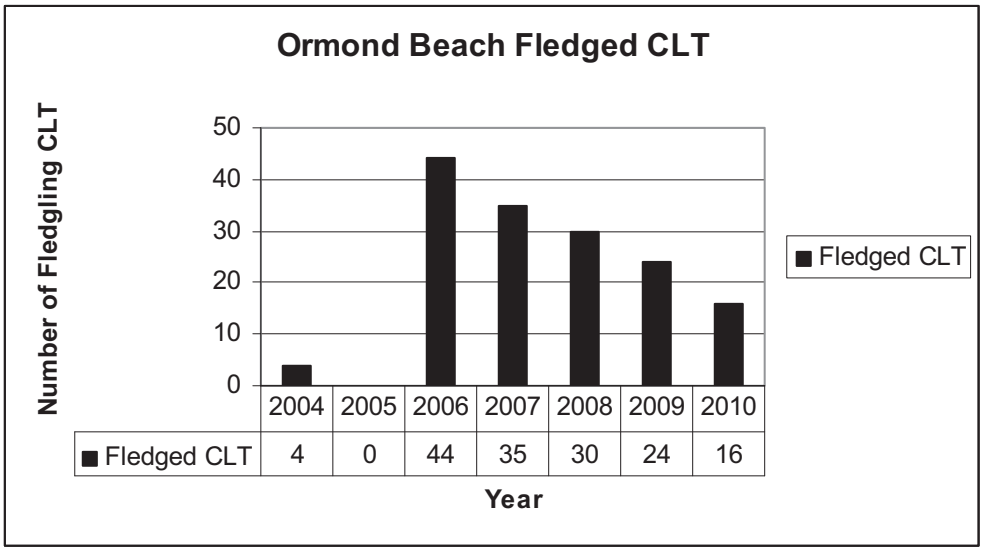


The nest abandonment rate was lower than last year. (2010 14.5%; 2009 23.0%) A chain link fence was constructed between The Nature Conservancy property and the beach behind the west nesting area and an improved gate was placed at the end of Arnold Road. These were paid for by The Nature Conservancy.

The quality of the fencing material around the nesting areas was improved. This was financed in part by a grant from Amgen, Inc. in recognition of Cynthia Hartley's volunteer hours on Ormond Beach and was administered by myself through the Ventura Audubon Society. The sandy beach portion of the Arnold Road nesting area was completely enclosed by mesh fencing.

These access controls all but eliminated human entry to the fenced nesting areas.

The 2010 breeding season was a success on Ormond Beach. Forty eight pairs hatched thirty five nests producing 16 fledgling least terns. The fledgling to pair ratio was .33. This is a decrease from the last year and within the range wide "normal" ratio which has an average range of .28 to .38 over the prior 4 years.



Comparison of 2010 CLT Breeding on Ormond Beach to Prior Years

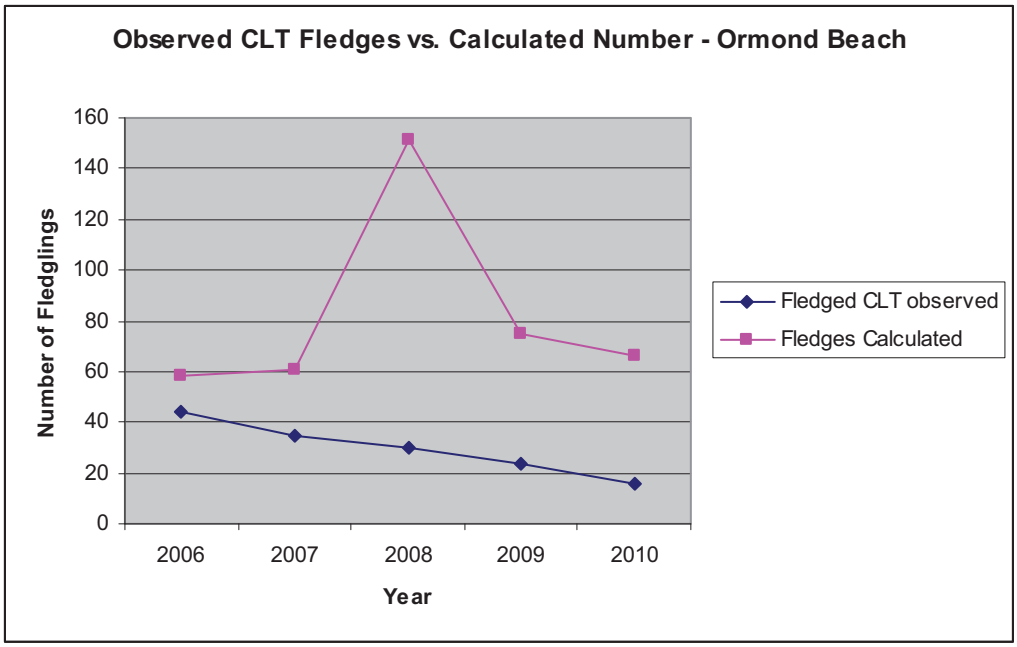
Year	2004	2005	2006	2007	2008	2009	2010
Number of Nests	29	27	53	52	81	44	48
Number of unsuccessful nests	26	25	17	11	14	11	13
Number of hatched nests	3	2	36	41	67	33	35
Percent of nests hatching	10.3%	7.4%	67.9%	78.8%	82.7%	75.00%	72.90%
Number of Fledges	4	0	44	35	30	24	16
Fledge to Nesting Adult Pair Ratio	0.14	0.00	0.83	0.67	0.37	0.54	0.33

The failure in least tern fledglings during 2004 and 2005 was caused by the use of the beach by powered paragliders and ultralight aircraft. These aircraft would often fly low over the nesting areas disturbing the terns. A city ordinance was passed prohibiting landing and take off by these aircraft in late 2005. This eliminated the disturbance with a rebound in fledgling numbers in 2006.

Hatching success for 2006 through 2010 has averaged 74.8% with the average number of nests hatched at 42. The range of hatchings success has varied from 67.9% to 82.7% so this years 72.9% rate is only slightly depressed. There had been a decline in the total number of CLT fledglings in the last 5 years, though the fledgling per pair ratio has gone up and down. The reason for this decline has not been determined.

Kathy Keane has proposed a new way of estimating fledgling numbers. She suggests we should take the number of hatched eggs and subtract the chick and fledgling mortality and use the number derived as the number of fledglings.

This method gives a different picture of success:

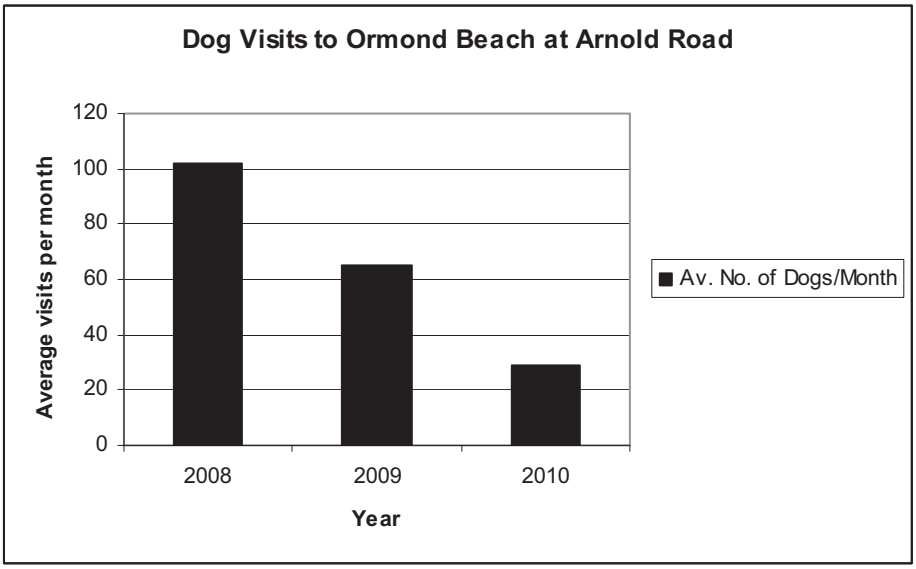


See Attachment 2 for the Master Nest List

Discussion

Two adult least tern mortalities and two chick mortalities were noted. One of the adults had no apparent damage and it was collected and taken to the Western Foundation of Vertebrate Zoology. The other adult had been apparently taken by a Peregrine Falcon. The two chicks were 1st week birds and were too decomposed to warrant collection.

In 2008 there was an average of 102 dog visits per month on the Arnold Road end of the beach. In 2009 the number of visits per month was down to 65. This year the number of dog visits per month was 29. The primary factor in reducing dogs off leash on the beach was an active enforcement effort by the City of Oxnard's Animal Regulation Department. This was greatly aided by Mr. Walter Fuller, a volunteer docent who called the enforcement officers when he saw a dog on the beach off leash. Mr. Fuller collected the data on dog visits Monday through Saturday from 5:30AM to 1:30PM from May through August. Enforcement of the leash laws may discourage dog owners who want their dogs to run without a leash from visiting the beach.



Dog owners that enter the beach from the west do so onto a portion of the beach owned by the city of Port Hueneme. Dogs are prohibited on Port Hueneme beaches but that prohibition is not enforced. Numerous off leash dogs were observed near the western nesting area.

The California Department of Fish and Games hires a monitor for the breeding season but has no management plan for the beach and no authority for management beyond its general responsibility for protecting endangered species. This agency does address problems as they arrive on a case by case basis, when there is a wildlife biologist available.

The U.S. Fish and Wildlife Service has no management plan for the beach beyond its general responsibility for protecting endangered species. They do take part in discussions with a wide range of agencies and NGOs on ways to protect Least Terns on Ormond Beach.

The City of Oxnard owns the western portion of the beach, but has no specific protection plan in place and has not taken an active role in management of the beach. The Oxnard Police Department will respond to off road vehicles on the beach.

The California Coastal Conservancy (CCC) owns the eastern portion of the beach and takes a leadership role in holding regular meetings with interested agencies, NGOs and individuals concerning the use of the area. They have no specific plan for the protection of least terns

Recommendations

The following recommendations could result in an increase in success in Least Tern nesting on Ormond Beach.

1. Enforcement of existing dog leash laws. This has started and has been successful.

2. Expand the Docent program to include the western nesting area. This year there was a docent program, led by Chris Kahler, active on the Arnold Road end of the beach. Nine CLT nests were initiated there and 3 hatched the week of June 16, 2010. The other 6 nests were predated by ground squirrels. This meant that the bulk of the active nesting was on the western nesting area and the docent program did not cover that area.

3. Oppose any development of lands South of Hueneme Road as this would increase human use of the beach and result in degradation of the wetland and beach habitats on Ormond Beach.

4. Public events should not be scheduled on Ormond Beach during the nesting season.

5. Collect the two portions of the beach that are used by Least Terns under a single owner with an adequate management and protection plan or develop a plan in concert with the 2 property owners (the California Coastal Conservancy and the City of Oxnard.)

ACKNOWLEDGEMENTS

I would like to thank Cynthia Hartley and Chris Kahler for their assistance in monitoring this beach this year.

Funding for this project was provided by the U. S. Fish and Wildlife Service Grant-in-Aid for threatened and endangered species program (Section 6).

ATTACHMENT 1

2010 Least Tern Nest Locations

ATTACHMENT 2

2010 Master Nest List

Nest No.	Egg No.	Date Found	Hatch Date	Other Outcome	Date	Coordinates 34N	119W
1	1	5/26/2010	6/16/2010			7.276	9.676
2	2	5/26/2010	6/16/2010			7.275	9.701
3	2	5/26/2010	6/16/2010			7.297	9.727
4	2	5/26/2010	6/23/2010			7.875	10.544
5	2	5/26/2010	6/23/2010			7.909	10.601
6	1	5/26/2010	6/9/2010			7.895	10.581
7	2	5/26/2010	6/16/2010			7.914	10.581
8	1	5/26/2010		Abandoned	7/7/2010	7.919	10.611
9	1	5/26/2010	6/23/2010			7.993	10.692
10	1	5/26/2010	6/23/2010			7.978	10.673
11	2	6/2/2010		Pred. GS	6/23/2010	7.283	9.68
12	2	6/2/2010		Pred. GS	6/23/2010	7.255	9.669
13	3	6/2/2010		Pred. GS	6/23/2010	7.304	9.742
14	2	6/2/2010		Pred. GS	6/23/2010	7.308	9.744
15	1	6/2/2010	6/23/2010			7.880	10.546
16	1	6/2/2010	6/30/2010			7.915	10.55
17	2	6/2/2010	6/30/2010			7.927	10.551
18	2	6/2/2010	6/30/2010			7.933	10.553
19	2	6/2/2010	6/23/2010			7.932	10.575
20	2	6/2/2010	6/23/2010			7.948	10.584
21	1	6/2/2010	6/16/2010			7.932	10.601
22	2	6/2/2010	6/23/2010	Abandoned	7/7/2010	7.928	10.604
23	2	6/2/2010	6/23/2010			7.938	10.61
24	2	6/2/2010	6/23/2010			7.934	10.615
25	2	6/2/2010	6/23/2010			7.918	10.626
26	2	6/2/2010	6/16/2010			7.947	10.63
27	1	6/2/2010	6/30/2010			7.964	10.666
28	2	6/2/2010	6/23/2010		6/23/2010	7.973	10.656
29	2	6/2/2010		Abandoned	7/7/2010	7.985	10.653
30	2	6/2/2010		Abandoned	7/7/2010	7.986	10.644
31	2	6/2/2010	6/23/2010			7.993	10.691
32	2	6/9/2010		Pred. GS		7.266	9.675

33	2	6/9/2010	6/23/2010			7.869	10.562
34	2	6/9/2010	6/30/2010			7.895	10.607
35	2	6/9/2010	6/23/2010			7.909	10.602
36	2	6/9/2010	6/23/2010			7.914	10.559
37	2	6/9/2010	6/30/2010			7.943	10.634
38	1	6/9/2010	6/23/2010			7.970	10.679
39	1	6/9/2010		Abandoned	7/21/2010	7.986	10.678
40	2	6/16/2010		Pred. GS	6/23/2010	7.249	9.647
41	2	6/16/2010	6/23/2010			7.913	10.596
42	2	6/23/2010	7/7/2010			7.955	10.671
43	2	6/27/2010	6/30/2010			7.942	10.658
44	2	6/30/2010	7/7/2010			7.962	10.674
45	2	7/7/2010		Abandoned	7/21/2010	7.950	10.681
46	2	7/7/2010	7/14/2010			7.925	10.550
47	1	7/7/2010	7/14/2010			7.904	10.515
48	2	7/7/2010		Abandoned	7/21/2010	8.128	11.000

APPENDIX H

2009 and 2010 Western Snowy Plover Breeding Survey Reports

State of California
The Resources Agency
Department of Fish and Game
Wildlife Branch

Western Snowy Plover Breeding Survey
Ormond Beach, California

2009 Season

by
Cynthia Hartley

South Coast Region, 2008-02

Final Report
To

State of California
Department of Fish and Game
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123

Western Snowy Plover Survey
Ormond Beach, California

2009 Season

Cynthia Hartley
Ventura, CA

Prepared 28 September 2009

State of California
The Resources Agency
Department of Fish and Game

Western Snowy Plover Breeding Survey
Ormond Beach, California

by

Cynthia Hartley
Ventura, CA

Executive Summary

The abundance and productivity of the threatened western snowy plover (WSP) (*Charadrius alexandrinus nivosus*) was monitored at Ormond Beach located in Oxnard, Ventura County, California from March 19, 2009 to September 5, 2009.

An average of 30 adult WSP were recorded weekly during the survey period. There were a total of 23 breeding individuals, which includes 13 males and 10 females. Thirty three WSP nests were located of which 54.5% successfully hatched (18 nests) and 45.5% failed (15 nests). Of the failed nests, one was vandalized by an off-road vehicle, seven were confirmed to have been predated and seven failed due to undetermined causes. Nest predators identified were squirrels and ravens. The number of dog visits to the beach decreased in 2008 (333 sightings in 2009 compared to 553 in 2008); however, the number of predators have increased with a corresponding increase in nest failure. There has been an increase in the number of homeless people living on the beach, which has attracted more predators and may be the reason for increased nest predation.

INTRODUCTION

The western snowy plover (WSP) (*Charadrius alexandrinus nivosus*) breeds along the coast of the Pacific Ocean in California, Oregon, and Washington and at alkaline lakes in the interior of the western United States (Page et al. 1991). Loss of habitat, predation pressures, and disturbance have caused the decline of the coastal population of WSP and led to the listing of the Pacific Coast Population of WSP as Threatened on March 5, 1993 (Federal Register 1993).

Ormond Beach is located between Naval Base Ventura County, Pt. Mugu (i.e., Arnold Road) and the City of Port Hueneme (i.e., J Street drain). The beach is approximately 2.2 miles long. From west to east, the sandy beach is backed by Perkins Street, a pickleweed wetland, the Reliant Energy power plant, and another pickleweed wetland. The west end is owned by the City of Oxnard, the center and eastern portion are owned by the California Coastal Conservancy. The survey area is bounded by the Point Mugu boundary fence on the southeast, to Port Hueneme beach on the northwest, and includes the Ormond Beach Salt Pannes directly inland from the northeast end of Ormond Beach. Figure 1 shows an aerial view of the nesting areas.

Figure 1. Ormond Beach survey area

Plovers utilize dune backed beaches for nesting and digging scrapes, which they line with shells and other bits of material. They lay three camouflaged eggs and incubate for approximately 28 days. Chicks are precocial and typically are attended to by the male, which guards the surviving chicks and leads them to forage. Chicks fledge approximately four weeks after hatching. On Ormond Beach, plovers utilize two distinct areas for nesting, which are located on the southeastern and northwestern ends of the beach. There is an approximately 0.5 mile stretch of beach in front of the Reliant Energy power plant where no nests are found. Over the past years, various types of protective fencing have been put up in the spring and taken down in the fall. This year the protective fencing completely enclosed the breeding area on the northwest end of the beach. The breeding area on the southeast end of the beach was enclosed on three sides with the inland side left open (Figure 1). The beach is not cleaned or groomed, so driftwood and wrack collect on the seaward edge and provide forage for nesting birds.

Efforts to protect plover nesting have been ongoing for approximately 20 years by various non-governmental organizations including the Ventura Audubon Society, the Conejo Valley Audubon Society, the Nature Conservancy, and the Sierra Club. These private efforts have had the support of the California Department of Fish and Game and the U. S. Fish and Wildlife Service.

The objective of this work was to monitor all nests, eggs and young of the plover and estimate reproductive success. The number of adults and chicks observed each week was recorded, nests were located and tracked until completion, and nest outcome was determined where possible. Threats to nesting success were determined and documented.

METHODS

Population Abundance and Nest Fate

Monitoring of Ormond Beach was conducted by walking wandering transects a minimum of once per week over the entire length of the beach in each direction from the boundary fence of Navy Base Ventura County, Pt. Mugu to Port Hueneme Beach. The Ormond Beach Salt Pannes were also included in the survey area. All plovers observed were recorded by age and gender. All nests located were recorded by date found, GPS coordinates, and number of eggs. Nests were marked with a colored tongue depressor placed approximately three to five feet inland. Each nest was followed until hatching or date lost prior to hatching. Once a nest no longer contained eggs, a 2 meter area around the nest was examined for eggshell fragments, egg yolk, tracks of birds or possible predators or any other disturbance. Next, the nest scrape was carefully examined for shell fragments. Nest hatching was determined by locating a pip shell (1-4 mm) within the hatched nest, by observing displaying behaviors of adults and locating chicks when possible. Larger shell fragment, fragments with egg

membrane still attached and/or egg contents were indicative of nest predation (Mabee 1997). If no eggshell pip, fragment or egg content could be located and no adult defending behavior or chick presence was observed, the nest was determined to be a probable failure. Cause of failure was determined as best as possible based on tracks, eggshell evidence or lack of evidence, observations of predators in the nest vicinity and eyewitness reports.

Nest Initiation
Nest initiation was calculated for nests confirmed to have hatched by subtracting 28 days from the first observed survey date in which no eggs remained in the nest. For nests determined to have failed, nest initiation was taken to be the first date the nest was observed with eggs.

Breeding Adults
The number of breeding adults was estimated using the survey with the highest combined number of active nests and broods. This number was calculated by adding the number of active nests, based on the calculated nest initiation dates, and the number of active broods sighted on the same survey date. The survey with the highest number of nests and broods was used to calculate the number of breeding adults representative of the season. One breeding male and female were attributed to each active nest and one breeding male was attributed to each active brood.

Dogs
The number of dogs entering the beach via the Arnold Road parking lot access was recorded by a volunteer docent, Walter Fuller. Observations were made between the hours of 6:30 am and 1:30 pm Monday through Saturday from April 1 through September 5.

RESULTS and DISCUSSION

Population Abundance
An average of 30 adult WSP were observed on weekly surveys throughout the survey period. The monthly averages are shown in Figure 2. From the months of April through July, the monthly average population count fluctuated between 24 and 34 adults. During these months, most adults were located in the fore or back dune area. Starting in mid-August, the pattern of WSP spatial dispersal changed and the population counts increased to an average of 41 during the month. WSPs no longer spread out on the beach in territories and instead began gathering in one of two flocks located on either end of the survey area. Detailed population data gathered during each survey is included in Attachment 1.

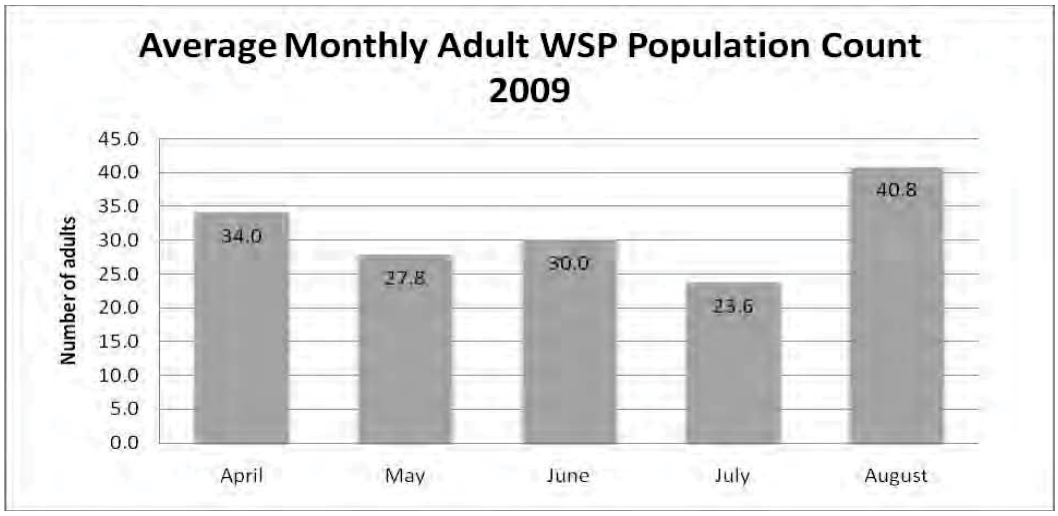


Figure 2. Average monthly number of adult plovers observed during the 2009 survey period.

Breeding Adults
The maximum estimated number of breeding adults is calculated to be a total of 23 individuals, with 13 males and 10 females. This is based on a maximum of 10 active nests and three broods observed on May 3. Nest numbers and chick observations are detailed in Attachment 2.

Banded Birds
Banded WSP observed during the survey period were recorded and the data sent to Frances Bidstrup, with Point Reyes Bird Observatory. The banded bird NO:YW, which was banded as a chick in 2004 at Vandenberg Air Force Base, was first observed in the 2009 season on the north west end of Ormond Beach on April 1. It was sighted repeatedly in the same location through the end of June. It was not observed engaging in breeding behavior during this time. This same bird had been sighted in 2008 in the months of April and May in the same location. Seven new banded birds were observed beginning late in August coinciding with the changed dispersal patterns. Included in these sightings were four 2009 hatch year birds - one each from Moss Landing State Beach, Moss Landing Salt Ponds, and two from Salinas National Wildlife Refuge. The three remaining birds had been banded at Vandenberg Air Force Base in 2008 or 2007. A detailed record of banded bird sightings is included in Attachment 3.

Nest Activity

Spatial Dispersal of Plover Nests
Consistent with each year surveyed since 2003, WSP utilize two distinct areas for nesting on either the southwestern or northeastern ends of the beach. There is an approximately 0.5 mile length of beach in front of the Reliant Energy power plant where no nests are found. This area is bounded by the east and west nesting areas. Nineteen nests were established on the northwest end of Ormond Beach, 13 nests were on the southeast side, and a single nest was west of Perkins Estuary. Nests have been

found in the salt pannes during past breeding seasons; however, no nests were found there this year or in the last 2 years.

Nest Initiation

The first nest was located on March 19, 2009 and the final nest on July 24, 2009. A total of 33 WSP nests were located during the 2009 breeding season. Approximate date of nest initiation was calculated for 32 of the 33 nests. One nest was found after hatch, therefore, it was not possible to calculate nest initiation. One clutch (a 10-day old chick) was found west of the Perkin's Street Estuary after hatch.

Only one nest was initiated in March. Following that time, strong offshore winds occurred for approximately three weeks, so subsequent nest initiation did not begin until after the beginning of April when a total of 11 nests where established in that month. All WSP nests failed within a two week period in mid-May and no new nests were established for two weeks. Thus, there is a pause in nest initiation in May so only six new nests were established. In June, 10 nests were initiated decreasing to four new nests in July. No new nests were found in August. Figure 3 summarizes nest initiation by month. For a detailed account of recorded nest observations see Attachment 4.

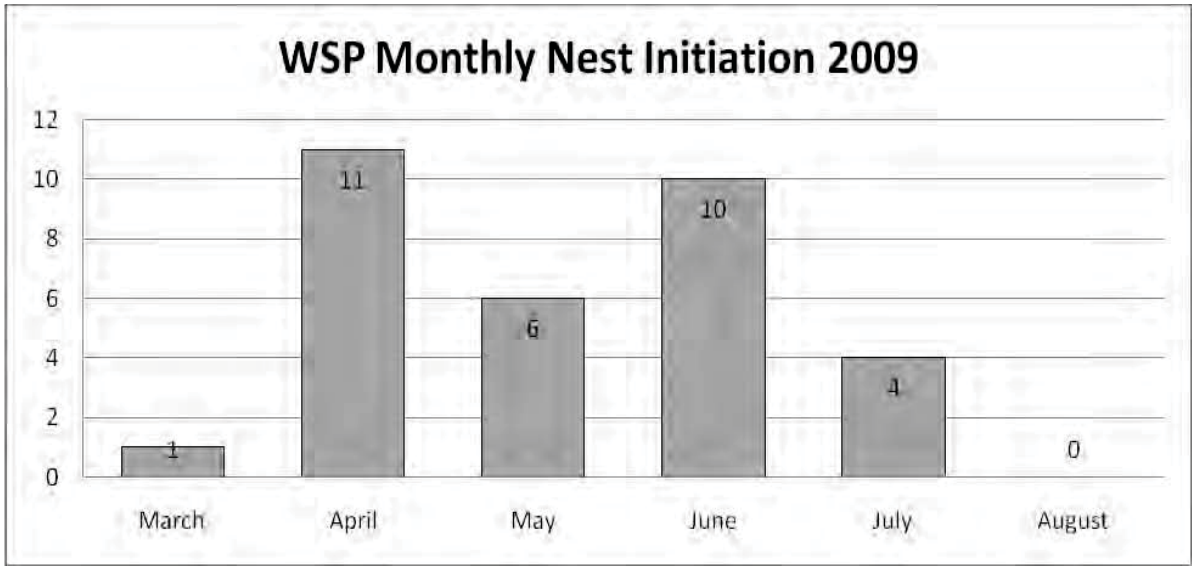


Figure 3. Total number of plover nests initiated each month in 2008.

Nesting Outcome

Eighteen out of the 33 nests were determined to have hatched. Hatched nests were confirmed by the presence of pip shells, chicks less than one week old nearby, and/or displaying adults close to the nest. One nest was located as an undisturbed scrape lined with shells, did not map to a location of a previous nest in any year, no eggs were present, but pip shells were found in the scrape. Fifteen nests were determined to have failed because they contained no pip shells and the eggs disappeared less than four weeks after discovery (Figure 4).

Nest Failures

Predation was confirmed in seven of the 15 failed nests by the presence of large shell fragments, egg yolk or shell halves within one meter of the nest. Due to animal footprints around nests, predation was confirmed in two nests by a squirrel and in 1 nest by a corvid. Three nests had broken eggs but no discernable prints; however, all of these nests were in areas of heavy squirrel infestation. It is likely that the eggs were stolen by squirrels and destroyed away from the nest. One nest did not have shell fragments, but one egg was stolen while the adults were still incubating. One week later the adults abandoned the remaining two eggs (26 days after nest discovery). Subsequently, the remaining eggs disappeared from the nest at 34 days and 43 days after nest discovery.

Hatch	18	**54.5%**
Fail	15	**45.5%**
Predated	*7*	*21.2%*
Undertermined	*7*	*21.2%*
Vandalized	*1*	*3.0%*
Abandoned	*0*	*0.0%*

There were seven nests that met the criteria of failure because the eggs disappeared from the nests with no evidence of hatching (pips, chicks or displaying adults); however, there were no obvious signs of predation, so these nests are labeled undetermined failure. Due to the problems with nest predation, a mini-exclosure was used on one nest. However, 24 days after the nest was marked and protected, a small four-wheel off-road vehicle trespassed into the breeding ground, removed the nest exclosure and repeatedly ran over the nest. Because of the extensive damage to the area, it was not possible to identify the nest scrape or any egg fragments. However, two small pieces of animal tissue were found in the sand roughly at the nest location. No nests were abandoned (Figure 4).

Figure 4. Spatial arrangement and nest outcome of WSP nests during the 2009 breeding season at Ormond Beach.

Threats to Nesting Success

During the 2009 WSP breeding season, the greatest threat to nesting success were predators and trespassers in the breeding areas.

Humans

Homeless living adjacent to the southeast fenced area left food, trash and human excrement in the fore dunes, which attracted predators such as rodents, squirrels and gulls as evidenced by tracks. There was a large population increase of ground squirrels this year and at least two nests were predated as a result. All the nests in that area were destroyed in the month of May and only two nests were subsequently established, both of which failed (one was vandalized and one was predated by a corvid). Homeless

also walked into the fenced areas to hide sleeping equipment and to access the beach. One nest located near a heavily used area, with two unhatched eggs, was trampled by a human.

On the northwest end of the beach there was frequent trespassing through the center of the fenced breeding grounds. Individuals cut the fence from the back of the property and walked through to reach the beach. In one case, I witnessed a person walking a dog through the active breeding ground. One nest in that area was trampled twice. Fortunately, the first time just the nest marker was stepped on and the second time the eggs had already hatched.

Natural Predators

Several raptors were observed in or near the breeding areas during the season. These include a Peregrine Falcon, an American Kestrel, and a Cooper's Hawk. On August 17, a Cooper's Hawk was observed taking a WSP (pers. communication, Rich Handley) and a dead female WSP with a broken neck was found in April (pers. communication, Chris Kahler). The dead WSP was deposited with the Western Foundation of Vertebrate Zoology. In addition, a Long-Tailed Weasel has been observed and photographed in the Salt Panne (pers. communication, Walter Fuller).

Domestic Dogs

Between April 1 and September 1, a total of 333 dogs were documented entering the beach from the Arnold Road parking lot. Observations were made between the hours of 6:30 am and 1:30 pm Monday through Saturday each week, so it is reasonable to extrapolate that the actual number of dog visits to the beach was over 600 during the WSP breeding season in 2009. This data does not account for any dogs that entered Ormond Beach via Hueneme Beach. Compared to data collected in 2008, there has been a decrease in dog visits to the beach (Figure 5).

In early 2009, Oxnard City Animal Control started ticketing dog owners with off-leash dogs and it appears to have been effective in decreasing the number of dogs on the beach; however, off-leash dogs continue to be a problem. Despite the decrease of dogs on the beach, most dog owners still unleash their dogs once they reach the sand, ignoring the leash law signs in the parking lot and verbal warnings.

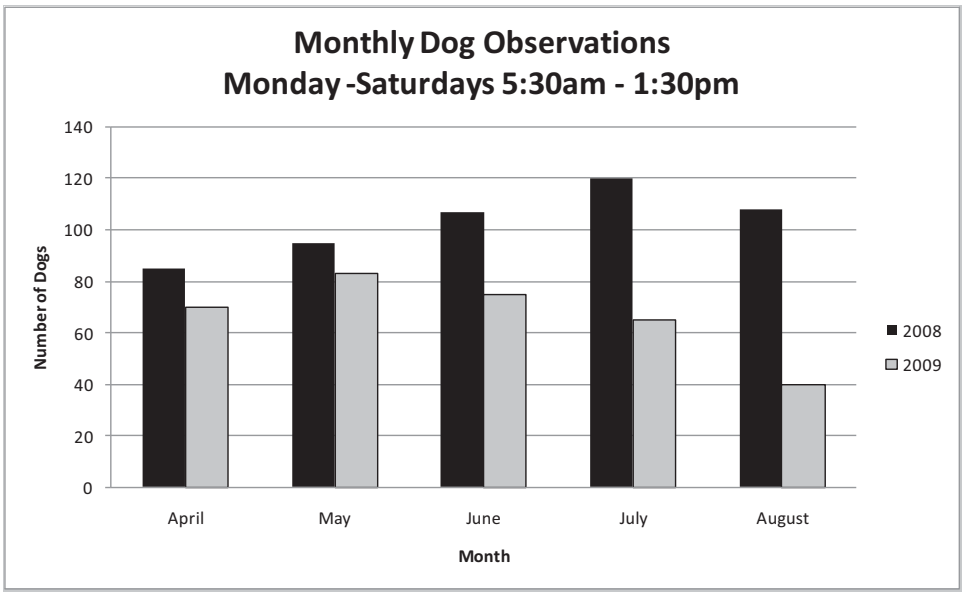


Figure 5. Monthly average of dog visits recorded between 06:30 and 13:30 hours Monday through Saturday.

Law Enforcement Meeting

In 2009 there was an increase in nest vandalism and homeless activities on Ormond Beach and a corresponding decrease in WSP breeding success. Signs are posted in the Arnold Road parking lot regarding the leash law code which has been enforced by Oxnard Animal Control beginning in 2009. There are also signs in the Arnold Road parking lot and on the protective fencing notifying the public about the seasonal beach closure, however there has been no enforcement of this restriction and compliance has only been voluntary. The presence of homeless living on the beach and next to the restricted areas has also been allowed to occur largely unchecked (in March 2009 one homeless man was asked to leave by Oxnard Police). Because the laws and city codes regarding these issues are less clear and jurisdiction is also uncertain a meeting was called to bring together local enforcement agencies, landowners and biologists to discuss these problems. The meeting was held on August 12, 2009 at the US Fish and Wildlife Service office in Ventura and was attended by representatives from US Fish and Wildlife Service, California Department of Fish and Game, the nest monitors for California Least Terns and Western Snowy Plovers, the Ventura County docent coordinator and the land managers for the California Coastal Commission and The Nature Conservancy Ormond Beach properties. The Oxnard Police Department was unable to attend at the last minute due to a conflict. A list of recommendations and action items were compiled for improving communication and determining the best way forward to restrict homeless and enforce closure of the breeding areas. A follow up meeting is planned for October 2009 and this matter will require further work. Detailed meeting minutes are included in Attachment 5.

ACKNOWLEDGEMENTS

I would like to thank Walter Fuller, Rich Handley, Chris Kahler and Vincent Kinsch for their assistance in monitoring this year. Special thanks to Reed Smith for his guidance and mentoring and his assistance in monitoring throughout the breeding season. Thanks also to Nancy Frost and the Oxnard Animal Control Department.

Funding for this project was provided by the U. S. Fish and Wildlife Service Grant-in-Aid for the threatened and endangered species program (Section 6).

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Attachment 1. WSP population abundance per survey.

Date	Total adults	Total all ages	Females	Males	Unknown	Chicks	Juveniles
3/14/2009	20	20	6	8	6	0	0
3/20/2009	17	17	5	9	3	0	0
3/28/2009	22	22	7	14	1	0	0
4/1/2009	35	35	6	29	0	0	0
4/9/2009	25	25	3	20	2	0	0
4/18/2009	42	42	10	31	1	0	0
4/23/2009	34	34	7	22	5	0	0
5/3/2009	38	44	9	27	2	6	0
5/11/2009	29	34	8	16	5	4	1
5/14/2009	26	34	5	21	0	8	0
5/19/2009	28	29	5	23	0	0	1
5/22/2009	20	25	4	15	1	5	0
5/29/2009	26	28	4	22	0	0	2
6/4/2009	23	26	2	21	0	0	3
6/12/2009	29	35	10	19	0	0	6
6/19/2009	24	24	6	18	0	0	0
6/26/2009	44	44	12	31	1	0	0
7/2/2009	32	33	12	20	0	0	1
7/9/2009	22	26	4	16	2	4	0
7/15/2009	24	29	8	15	1	1	4
7/24/2009	25	29	8	15	2	4	0
7/31/2009	15	17	4	8	3	2	0
8/7/2009	16	28	9	7	0	4	8
8/14/2009	26	31	5	2	19	0	5
8/21/2009	57	63			57	0	6
8/29/2009	64	64			64	0	0
9/5/2009	51	51			51	0	0
average	**30**						

Attachment 2. Total number of active nests and brood observations for the WSP breeding season of 2009. The maximum number of clutches occurred on May 3 when there were 10 active nests and three observed broods

Date	Chicks	Juveniles	Calculated Active Nests	# broods	nests + broods	Notes - chick detail/breeding behavior
3/14/2009	0	0	0	0	0	
3/20/2009	0	0	1	0	1	
3/28/2009	0	0	1	0	1	Pair making scrapes, west end by white pole. East end: Another scrape near nest location reported by Walter, pair nearby.
4/1/2009	0	0	2	0	2	
4/9/2009	0	0	6	0	6	
4/18/2009	0	0	7	0	7	
4/23/2009	0	0	10	0	10	
5/3/2009	6	0	10	3	13	3 broods: (one@2wks old) (three@1wk old) and (two@1wk old)
5/11/2009	4	1	2	2	4	2 broods: (2@2wks old) (2 newly hatched chicks)
5/14/2009	8	0	2	5	7	5 broods: (two@3wks) (one chick 3wks) (one@2wks) (two@2wks) and (2@1wk old)
5/19/2009	0	1	3	2	5	
5/22/2009	5	0	3	2	5	2 broods: (three@2wks old) (two@3wks)
5/29/2009	0	2	1	0	1	
6/4/2009	0	3	2	0	2	
6/12/2009	0	6	6	0	6	
6/19/2009	0	0	9	0	9	
6/26/2009	0	0	11	0	11	
7/2/2009	0	1	9	0	9	
7/9/2009	4	0	6	3	9	all chicks 1 week old (2 broods with one chick each and 1 brood with 2 chicks)
7/15/2009	1	4	3	1	4	
7/24/2009	4	0	3	2	5	2 broods: (one@2wks old) (three@3wks)
7/31/2009	2	0	1	1	2	Chicks were 3 weeks old, one brood
8/7/2009	4	8	1	4	5	4 broods: two clutches of 3 week old chicks, (one 4 week old) and (3 HYs still with male)
8/14/2009	0	5	1	1	2	1 HY with male, 4 HY alone
8/21/2009	0	6	0	2	2	2 different HY with adult male
8/29/2009	0	0	0	0	0	
9/5/2009	0	0	0	0	0	

Attachment 3. Banded WSP detail during the 2009 breeding survey.

Date	Band Combo	Sex	Band Details	Behavior	Additional Info
4/1/2009	NO:YW	male	2004 -VAFB	Foraging in wrack with a flock of 8 other males, west end	
4/9/2009	NO:YW	male	2004 -VAFB	Foraging in wrack with a flock of 13 other males, west end	
4/18/2009	NO:YW	male	2004 -VAFB	Foraging in hind dunes on west end	
5/19/2009	NO:YW	male	2004 -VAFB	Foraging in wrack, west end by estuary	
6/4/2009	NO:YW	male	2004 -VAFB	Foraging in wrack, west end by estuary	
6/26/2009	NO:YW	male	2004 -VAFB	Foraging in wrack, west end by estuary	
8/21/2009	AW:NY	unknown	2007 fledge VAFB	Foraging in wrack, east end near Arnold Rd.	
8/21/2009	PY:YY	HY	2009 fledge Moss Landing State Beach	Foraging in wrack, by Reliant plant	
8/21/2009	AY:YB	HY	2009 fledge Moss Landing Salt Ponds	Roosting, west end by Hueneme Beach	
8/29/2009	NY:GW	unknown	2008 fledge VAFB	Foraging in wrack, by Reliant plant	Sighted on Santa Rosa Island Feb 2009
8/29/2009	NW:OY	unknown	2008 fledge VAFB	Foraging in wrack, west end by Hueneme Beach	
8/29/2009	WP:AW	HY	2009 fledge Salinas National Wildlife Refuge	Foraging in dunes, west end by Hueneme Beach	
9/5/2009	OO:WW	HY	2009 fledge Salinas National Wildlife Refuge	Roosting, west end by Hueneme Beach	Sighted at Surfer's Knoll Ventura 9/3/09

Attachment 4. WSP Nest Details

Nest #	Location	Date Found	Date eggs gone	Eggs Laid	Eggs Hatched	# days	Outcome	Fate	Comments
09OB01	east	3/19/2009	4/16/2009	3	1	27	succeed	hatch	3 eggs went to 2 eggs 4 weeks after discovery (4/16). One week later the nest was found to have been trampled (4/23). A single, age appropriate chick was sighted on the west side on 4/29/09 (2 week old chick)
09OB02	west	4/1/2009	4/29/2009	3	3	28	succeed	hatch	pips found
09OB03	east	4/9/2009	5/2/2009	3	3	23	succeed	hatch	pips found
09OB04	east	4/9/2009	5/11/2009	3	3	32	succeed	hatch	pips found
09OB05	east	4/18/2009	5/22/2009	3	0	34	fail	predation	One egg was stolen from the nest while the adults were still incubating. No pips, no new clutches around or distracting adults
09OB06	east	4/18/2009	5/2/2009	3	3	14	succeed	hatch	pips found
09OB07	east	4/23/2009	5/11/2009	3	3	18	succeed	hatch	no pips, but a male distracting nearby
09OB08	east	4/23/2009	5/14/2009	2	0	21	fail	predated	predated squirrel
09OB09	west	4/23/2009	5/11/2009	3	0	18	fail	undetermined	eggs gone, no pips, no prints
09OB10	west	4/23/2009	5/11/2009	3	0	18	fail	predated	eggs gone, no pips, no prints
09OB11	west	4/25/2009	5/11/2009	3	0	16	fail	undetermined	eggs gone, no pips, no prints
09OB12	east	4/29/2009	5/11/2009	3	3	12	succeed	hatch	pips found
09OB13	east	5/3/2009	5/11/2009	3	0	8	fail	predated	predated squirrel
09OB14	west	5/3/2009	5/11/2009	3	0	8	fail	undetermined	eggs gone, no pips, no prints
09OB15	west	5/6/2009	5/11/2009	3	0	5	fail	undetermined	eggs gone, no pips, no prints
09OB16	east	5/14/2009	5/29/2009	3	0	15	fail	predated	broken egg & yolk near nest, could not read footprints but suspect squirrel predation

Nest #	Location	Date Found	Date eggs gone	Eggs Laid	Eggs Hatched	# days	Outcome	Fate	Comments
09OB17	west	5/19/2009	5/29/2009	3	0	10	fail	predated	broken egg & yolk near nest, could not read footprints probable squirrel or raccoon (Rich Handley has seen raccoons in the vicinity)
09OB18	east	5/22/2009	6/4/2009	3	0	12	fail	undetermined	no pips, no new clutches around or distracting adults
09OB19	west	6/10/2009	7/2/2009	3	3	22	succeed	hatch	pips found
09OB20	west	6/12/2009	7/9/2009	3	3	27	succeed	hatch	pips found
09OB21	west	6/12/2009	7/2/2009	3	3	20	succeed	hatch	pips found
09OB22	west	6/12/2009	7/6/2009	3	0	24	fail	undetermined	no pips, no new clutches around or distracting adults
09OB23	west	6/19/2009	7/15/2009	3	3	26	succeed	hatch	pips found
09OB24	west	6/19/2009	7/9/2009	3	3	20	succeed	hatch	pips found
09OB25	west	6/24/2009	7/15/2009	3	3	21	succeed	hatch	pips found
09OB26	east	6/26/2009	7/21/2009	3	0		fail	vandalism	nest was run over by an ATV
09OB27	west	6/26/2009	7/9/2009	3	2	13	succeed	hatch	pips found
09OB28	west	6/26/2009	7/15/2009	3	3	19	succeed	hatch	pips found
09OB29	west	7/9/2009	7/24/2009	3	2	22	succeed	hatch	pips found
09OB30	east	7/24/2009	8/21/2009	3	0		fail	predated	no pips, distracting adults or chicks sited. Raven tracks seen around nest.
09OB31	west	7/24/2009	7/31/2009	2	0	7	fail	undetermined	eggs gone, no pips, no prints
09OB32	estuary	7/29/2009	7/29/2009	unknown	unknown	?	succeed	hatch	chick spotted west of J Street Estuary
09OB33	west	unknown	8/14/2009	unknown	unknown	?	succeed	hatch	unmarked nest scrape found in a location that does not correspond to any nest in any other season. Pips in nest scrape
			Total	**91**	**44**				

Attachment 5. Meeting Minutes from Ormond Beach Enforcement Meeting

Ormond Beach Enforcement Meeting Minutes

August 12, 2009
U.S. Fish and Game Ventura office
2493 Portola Road, Suite B
Ventura, CA 93003
1:30p.m. 4:00 p.m.

In attendance

Dan Blankenship, California Department of Fish and Game
Peter Brand, California Coastal Conservancy
Jake Coombs, California Department of Fish and Game
Chris Dellith, U.S. Fish and Wildlife Service
Cynthia Hartley, Snowy Plover Nest Monitor
Rich Handley, The Nature Conservancy
Chris Kahler, Ventura County Shorebirds
Reed Smith, Least Tern Nest Monitor

Objective

Bring together land owners, law enforcement and wildlife protection agencies to discuss and resolve problems with homeless and trespassers that threaten sensitive habitat and endangered species survival on Ormond Beach.

Presentation

Cynthia Hartley presented an overview of threats to the nesting success of Snowy Plovers on Ormond Beach focusing on problems that have impacted nesting success this year in 2009. Last year in 2008 just 2 out of 43 nests failed whereas this year 14 out of 31 nests have either been predated or vandalized. Threats include trespassers in the fenced off breeding area (walkers, walkers with dogs and off road vehicles) and homeless living between the fence line and the surf.

Discussion Highlights

A better presence needs to be established on the beach to convince the public that the property is being monitored. This includes improved fencing, signage, law enforcement presence and more docent volunteers. Rich Handley reports that a part time Nature Conservancy employee will be starting in a few weeks and will spend a large portion of that time on the beach.

FENCING and SIGNAGE: In order to aid law enforcement several improvements need to be made to the protective fencing around the breeding area. Law enforcement cannot enforce no trespassing laws if it isn't obviously clear that the area is restricted. Without better signage and complete enclosure of the restricted area it is unenforceable. The Coastal Conservancy condones adding signs to the fencing. The city manager for Oxnard needs to be contacted to request permission for signs on the fencing on Oxnard City property. This is critical as it may derail a prosecution if "no trespassing" signs are posted without permission of the land owner. There was discussion about year round fencing in the future that would be symbolic during the non-breeding season. Just before breeding season additional fencing would be mounted on the permanent posts to restrict entrance into the breeding area. This may also make the process of putting up the breeding season fencing easier. More discussion on this will be required in the future.

HOMELESS: There appears to be no city codes that specifically address homeless sleeping on the beach, or anywhere else. Without a city code for this issue we will not be able to legally remove the homeless that are sleeping on the beach outside of the fence exclosures by the breeding areas. A possible solution to this problem would be to

approach Oxnard City Attorney Alan Holmberg to create a new city code that would make homeless sleeping on the beach illegal. An appeal to the Oxnard City Council would also be needed. Once existing city codes have been more thoroughly researched we will discuss this alternative.

AGENT AUTHORIZATION FORM: The problem the California Coastal Conservancy (CCC) has with the Agent Authorization form provided by the city is that the language in the document appears to be all inclusive in regard to restricting access to CCC property. The intent of CCC is to restrict access to only the fenced off breeding area on the property from March 15-September 15. A dialogue needs to be established between both agencies to address this concern so that the form is acceptable to the CCC lawyer. Until the document is signed and submitted by CCC it is unlikely we will have significant local law enforcement support.

VIDEO CAMERAS: In order to improve our awareness of trespassing and vandalism activities in the breeding areas we may be able to make use of the Reliant Energy Plant to mount video cameras. Camera resolution is a potential issue as we may not be able to identify individuals in order to support prosecution in the case of a take. However even a low resolution camera may give us a profile of peak activity times of trespassing in the restricted breeding areas. This may provide enough information to allow law enforcement to intercept trespassers on the ground. More information is needed about camera resolution and costs. A dialogue with Reliant is also needed to determine if they would be willing to help out.

LAW ENFORCEMENT PRESENCE: An increase in law enforcement presence on the beach may help reduce the problems we are having. Ideally law enforcement would actively engage people on the beach. This may also discourage the homeless. The Oxnard City Police Department has indicated recently that they would like the California Fish and Game Department to become more involved. Both agencies are resource limited and overworked, but a solution is likely. Fish and Game could potentially use extra funds to enable occasional sweeps of the beach in order to increase presence. If severe violation occurs, Fish and Game can be called (1 888 DFG-CALTIP or 888 334-2258) and will respond, although there may be a delay. It would be best to establish a dialogue between the two agencies to work out the best way forward.

BEACH FORTS: Beach forts are a focal point of partiers, trash, predators, illegal sexual activity and encourage homeless encampments. Larger forts need to be removed.

CCC proposes an observation tower at the end of Arnold Road to help connect the community with the wildlife on the beach.

Recommendations

- Completely fence in the breeding area in the future on the east side (by Mugu fence).
- Create new signs
    1. Fence line signs: Make them more consistent (i.e. have only 1 or 2 kinds of signs on display) and list all code violations a trespasser could be prosecuted for, including the wording "No Trespassing" and affix them every 2-3 posts around the whole fence.
    2. Instructive signs: For display at trail entrances and in the Arnold Rd Parking lot. Remove the graphic showing the dog on leash.
    3. Consider creating a sign indicating that the California Coastal Conservancy is the property owner
- Enhance the docent program to have more eyes on the beach
- Investigate mounting a video camera on the Reliant Energy Plant to monitor the breeding areas
- More frequent visits to the beach by law enforcement to engage the public and establish a stronger presence
    1. Fish and Game could occasionally do a beach sweep to check fishing licenses and other potential violations, meanwhile their presence on the beach would increase visibility of law enforcement
    2. Same as above for city police, only they would engage homeless on the beach (until a new legal code can be created)
- Improve the gate at the end of the Arnold Rd parking lot to prevent the passage of off road vehicles, and also allow law enforcement vehicle access to the beach using a lock and key

- Reach a compromise between Oxnard City and California Coastal Conservancy lawyer so that the Agent Authorization form is acceptable to both.
- Use Oxnard City Corps to remove beach forts
- Send out a press release in the beginning of the breeding season to announce the closure of the breeding grounds
- Consider utilizing homeless outreach groups to redirect homeless to shelters

Action Items

	Item	Responsibility	Due Date
1	Create new signs to be circulated for comment	Chris Kahler	Update next meeting
2	Research city ordinances that address homeless sleeping on the beach	Chris Kahler	Update next meeting
3	Contact the Oxnard City Manager to find out who can give permission to post "no trespassing" signs on the protective fencing on Oxnard City Property	Chris Kahler	Update next meeting
4	Inquire with Fish and Game supervisors to see if it would be possible to add Ormond Beach patrols to the Fish and Game schedule	Jake Coombs	Update next meeting
5	Continue to push through the Arnold Rd Gate improvement	Peter Brand	Update next meeting
6	Give Peter Brand the contact info for Officer Marostica	Cynthia Hartley	August 14
7	Check with California Coastal Conservancy lawyer about Agent Authorization document, begin a dialogue with the City of Oxnard to complete the form	Peter Brand	Update next meeting
8	Investigate mounting a camera on the Reliant Energy Plant	Chris Dellith	Update next meeting
9	Press release announcing breeding ground closure	TBD	March 1, 2010
10	Create a management plan	Chris Kahler to take the lead, with help from the group	Update next meeting

Next Meeting – October 2009, time and day to be announced

State of California
The Resources Agency
Department of Fish and Game
Wildlife Branch

Western Snowy Plover Breeding Survey
Ormond Beach, California

2010 Season

by
Cynthia Hartley
Permit# TE-181713-0

South Coast Region, 2008-02

Report

To

State of California
Department of Fish and Game
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123

Western Snowy Plover Survey
Ormond Beach, California

2010 Season

Cynthia Hartley
Ventura, CA

Prepared 28 September 2010

State of California
The Resources Agency
Department of Fish and Game

Western Snowy Plover Breeding Survey
Ormond Beach, California

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Ventura, CA

Executive Summary

The abundance and productivity of the threatened western snowy plover (WSP) (*Charadrius alexandrinus nivosus*) was monitored at Ormond Beach located in Oxnard, Ventura County, California from March 15, 2010 to September 15, 2010.

An average of 34 adult WSP were recorded weekly during the survey period. There were a total of 24 breeding individuals, which includes 12 males and 12 females. Twenty seven WSP nests were located, of which 70% successfully hatched (19 nests), 22% failed (6 nests) and 2 had an undetermined outcome. For the first time in 3 years WSPs established five nests in a third area, the salt panne inland from the east end or Ormond Beach.

The biggest threat to nesting success in 2010 was nest predators. Nests were predated by ground squirrels and ravens. The use of mini-exclosures was initiated on the east end of Ormond Beach due to the high predation rate early in the season and the increase in ground squirrels and their dens in that area. The success rate with the exclosures was 100%. Unlike last year in 2009, no humans vandalized nests inside exclosures. Human trespassing was much less than in the previous year. However, trash left by humans continues to be a problem and a source of attraction to nest predators. The number of dog visits to the beach decreased again in 2010 (116 documented dog visits compared to 263 in 2009 and 468 in 2008 during the same period).

INTRODUCTION

The western snowy plover (WSP) (*Charadrius alexandrinus nivosus*) breeds along the coast of the Pacific Ocean in California, Oregon, and Washington and at alkaline lakes in the interior of the western United States (Page et al. 1991). Loss of habitat, predation pressures, and disturbance have caused the decline of the coastal population of WSP and led to the listing of the Pacific Coast Population of WSP as federally-threatened on March 5, 1993 (Federal Register 1993).

Ormond Beach is located between Naval Base Ventura County, Pt. Mugu (Arnold Road) and the City of Port Hueneme (J Street drain). The beach is approximately 2 miles long. From west to east, the sandy beach is backed by Perkins Street, a pickleweed wetland, the Reliant Energy power plant, and another pickleweed wetland. The west end is owned by the City of Oxnard, the center and eastern portion are owned by the California Coastal Conservancy. The survey area is bounded by the Point Mugu boundary fence on the southeast, to Port Hueneme Beach on the northwest, and includes the Ormond Beach Salt Pannes directly inland from the northeast end of Ormond Beach. Figure 1 shows an aerial view of the nesting areas.

Figure 1. Ormond Beach survey area

Plovers utilize dune backed beaches for nesting and digging scrapes, which they line with shells and other bits of material. They lay three camouflaged eggs and incubate for approximately 28 days. Chicks are precocial and typically are attended to by the male, which guards the surviving chicks and leads them to forage. Chicks fledge approximately four weeks after hatching. On Ormond Beach, plovers utilize two distinct areas for nesting, which are located on the southeastern and northwestern ends of the beach. There is an approximately 0.5 mile stretch of beach in front of the Reliant Energy power plant where no nests are found. Over the past years, various types and configurations of protective fencing have been put up in the spring and taken down in the fall. As in past years the protective fencing completely enclosed the breeding area on the northwest end of the beach. The breeding area on the southeast end of the beach was enclosed for the first time on all four sides (Figure 1). The beach is not cleaned or groomed, so driftwood and wrack collect on the seaward edge and provide forage for nesting birds.

Efforts to protect plover nesting have been ongoing for approximately 20 years by various non-governmental organizations including the Ventura Audubon Society, the Conejo Valley Audubon Society, the Nature Conservancy, and the Sierra Club. These private efforts have had the support of the California Department of Fish and Game and the U. S. Fish and Wildlife Service.

The objective of this work was to monitor all nests, eggs and young of the plover and estimate reproductive success. The number of adults and chicks observed each week was recorded, nests were located and tracked until completion, and nest outcome was determined where possible. Threats to nesting success were determined and documented.

METHODS

Population Abundance and Nest Fate

Monitoring of Ormond Beach was conducted by walking wandering transects a minimum of once per week over the entire length of the beach in each direction from the boundary fence of Navy Base Ventura County, Pt. Mugu to Port Hueneme Beach. The Ormond Beach Salt Pannes were also included in the survey area. All plovers observed were recorded by age and gender. All nests located were recorded by date found, GPS coordinates, and number of eggs. Nests were marked with a colored tongue depressor placed approximately three to five feet inland. Each nest was followed until hatching or date lost prior to hatching. Once a nest no longer contained eggs, a 2 meter area around the nest was examined for eggshell fragments, egg yolk, tracks of birds or possible predators or any other disturbance. Next, the nest scrape was carefully examined for shell fragments. Nest hatching was determined by locating a pip shell (1-4 mm) within the hatched nest, by observing displaying behaviors of adults and locating chicks when possible. Failed nests were determined based on eggshell evidence such as large shell fragments, fragments with egg membrane still attached and/or egg contents within 2 meters of the nest scrape (Mabee 1997). In addition signs of predator tracks, nest disturbance, observations of predators in the nest vicinity and eyewitness reports were used as evidence of failed nests. If no eggshell pip, fragment or egg content could be located, and no signs of nest disturbance as well as no adult defending behavior or chick presence observed, the nest outcome was recorded as unknown.

Nest Initiation

Nest initiation was calculated for nests confirmed to have hatched by subtracting 28 days from the first observed survey date in which no eggs remained in the nest. For nests determined to have failed or with unknown outcome, nest initiation was taken to be the first date the nest was observed with eggs.

Breeding Adults
The number of breeding adults was estimated. This number was calculated by adding the number of active nests and the number of active broods sighted on the same survey date. The survey with the highest combined number of nests and broods was used to calculate the number of breeding adults representative of the season. One breeding male and female were attributed to each active nest and one breeding male was attributed to each active brood.

Dogs
The number of dogs entering the beach via the Arnold Road parking lot access was recorded by a volunteer docent, Walter Fuller. Observations were made between the hours of 6:30 am and 1:30 pm Monday through Saturday throughout the breeding season.

RESULTS and DISCUSSION

Population Abundance
Throughout the survey period the average number of adult WSP observed was 34. The monthly averages are shown in Figure 2. The greatest number of birds were observed in the months of March and April with average counts of 48 and 58. During these months there continued to be gatherings of WSP on the outer beach. During May, June and July the population counts dropped to monthly averages of 33, 41 and 25, respectively. Fewer birds were observed on the beach and the majority of birds were seen in the fore or back dune area of the breeding areas or in the salt panne. In August, the numbers of WSP dropped to an average of 9 birds per survey. This corresponded to the end of the breeding season and birds were only observed foraging in the high tide area. In September, WSP were again observed in flocks corresponding to winter gatherings on the outer beach and the average number increased to 38. Detailed population data gathered during each survey is included in Attachment 1.

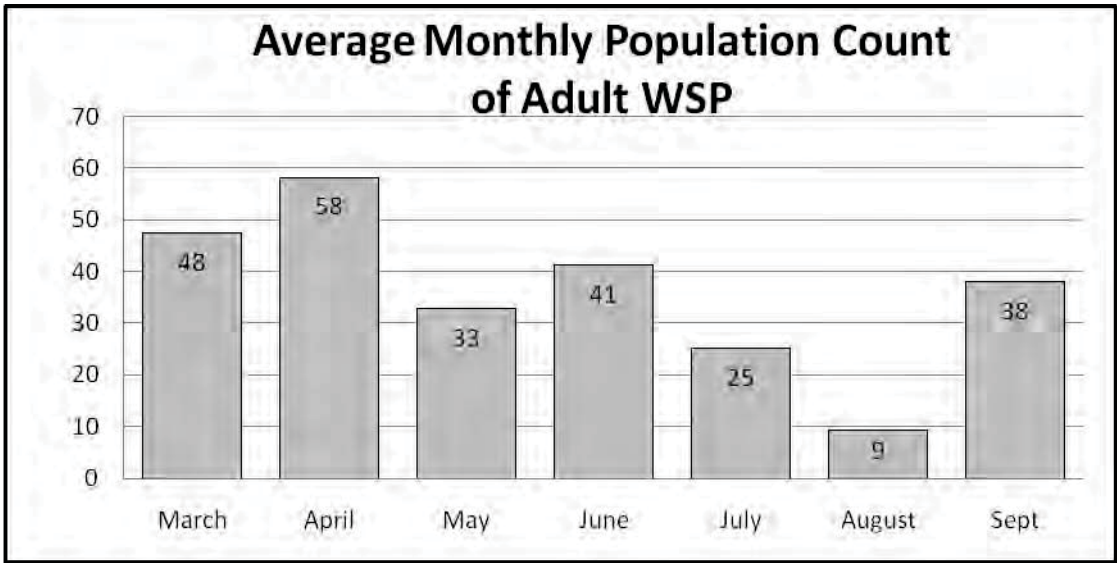

Figure 2. Average monthly number of adult plovers observed during the 2010 survey period.

Breeding Adults
The estimated number of breeding adults is calculated to be a total of 24 individuals, with 12 males and 12 females. This is based on the survey with the greatest number of active nests (n = 12). Nest numbers and chick observations are detailed in Attachment 2.

Banded Birds
Banded WSP observed during the survey period were recorded and the data was sent to Frances Bidstrup, with Point Reyes Bird Observatory. Banded birds observed included two that had fledged from Camp Pendelton, two from Oceano and one bird from Salinas National Wildlife Refuge (NWR). A male WSP banded S:K/P was observed on March 30th and April 3 foraging on the northwest end of Ormond Beach. It had been banded at Camp Pendleton sometime since 2004. A female banded S:K/V was observed on June 5th roosting on the outer beach near the northwest breeding area. It also had been banded at Camp Pendleton during the same time period. On May 31 another female banded bird GG:VG was observed displaying defending behavior in the salt panne. It fledged from and had been banded at Oceano in 2008. This bird was not re-sighted. A male WSP with the bands GP:RP was observed foraging in the high tide line in front of the Reliant Energy power plant on June 27. It fledged from the southern end of Salinas NWR in 2009. Finally, a bird with the band pattern RR:OY was observed foraging with a flock on the outer beach near Arnold Rd. on September 7. It was a hatch year bird and had just been banded at Oceano on July 22 of this year. A detailed record of banded bird sightings is included in Attachment 3.

Nest Activity

Spatial Dispersal of Plover Nests
WSP utilized three distinct areas for nesting in 2010. Consistent with previous years since at least 2003, nests were established on the northwest and southwestern or northeastern ends of the Ormond Beach. There is an approximately 0.5 mile length of beach in front of the Reliant Energy power plant bounded by the east and west nesting areas where no nests are found. This year nests were also found in the salt panne near Arnold Rd. (Figure 1). Nests have been observed in this location only in 2006 and 2007. Ten nests were established on the northwest end of Ormond Beach, 12 nests were on the southeast side, and 5 nests were found in the salt panne.

Nest Initiation
The first nest was located on April 3, 2010 and the final nest on August 4, 2010. A total of 27 WSP nests were located during the 2010 breeding season. No nests were initiated in March, although pairs were observed performing courtship behaviors (scrape construction and copulation). Nesting began in April when 6 nests were established. In May, nest initiation peaked with 13 new nests and in June, only 7 were found. In July there was only one new nest. No nests were found in August or September. Figure 3 summarizes nest initiation by month. For a detailed account of recorded nest observations see Attachments 4 and 5.

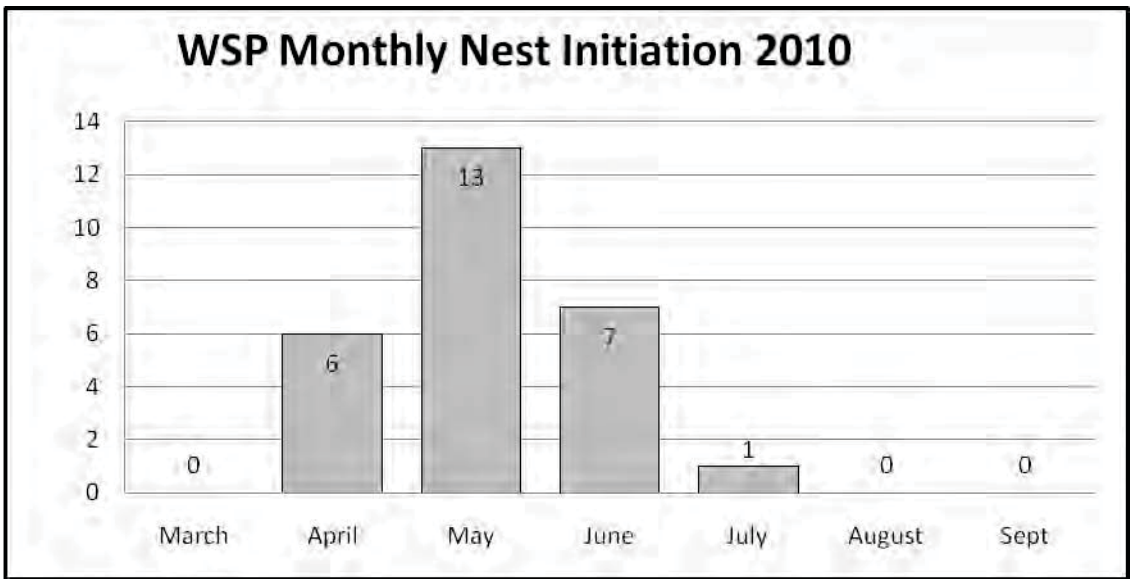

Figure 3. Total number of plover nests initiated each month

Nesting Outcome
Nineteen out of the 27 nests located during the season were determined to have hatched (70%). Six nests were determined to have failed due to predation (22%) and two nests had an unknown outcome (7%). No nests were determined to have been abandoned. All nests had three eggs and of the nests that hatched, all but two hatched each of the three eggs. One nest hatched two and one nest hatched 1 egg. See Attachments 4 and 5 for complete hatch details.

Outcome	Number	Percent
Hatch	19	70%
Predated	6	22%
Undetermined	2	7%
Abandoned	0	0%
Total	27	

Nest Failures
The 6 failed nests were the first nests of the season. All of these nests were located on the eastern end of Ormond Beach (Figure 4). Predation was confirmed in five of the failed nests. Two nests were predated by squirrels and 3 nests were predated by corvids. The sixth nest was either predated or destroyed by high winds two weeks after it was discovered. All nest evidence was blown away before it could be examined. Two undetermined nests had no signs of hatching and no signs of predation so the outcome is unknown.

The east end of Ormond Beach was heavily infested with ground squirrels all season, a trend that began in 2009 and became worse in 2010. Because of the loss of the first nests to predation, mini-exclosures were used on all subsequent nests on the east end. The success rate with exclosures was 100%.

Figure 4. Spatial arrangement and nest outcome of WSP nests during the 2010 breeding season at Ormond Beach.

Dogs

Between May 1 and September 1 a total of 116 dogs were recorded entering the beach from the Arnold Road parking lot. Observations were made between the hours of 6:30 am and 1:30 pm Monday through Saturday each week. This data does not account for any dogs that entered Ormond Beach via Hueneme Beach. Compared to data collected in 2008 and 2009, there has been a downward trend each year in dog visits to the beach (Figure 5). For the same time period in 2008 there were 468 dogs entering the beach and in 2009 there was 263. In early 2009, Oxnard City Animal Control started ticketing dog owners with off-leash dogs and has continued the practice in 2010.

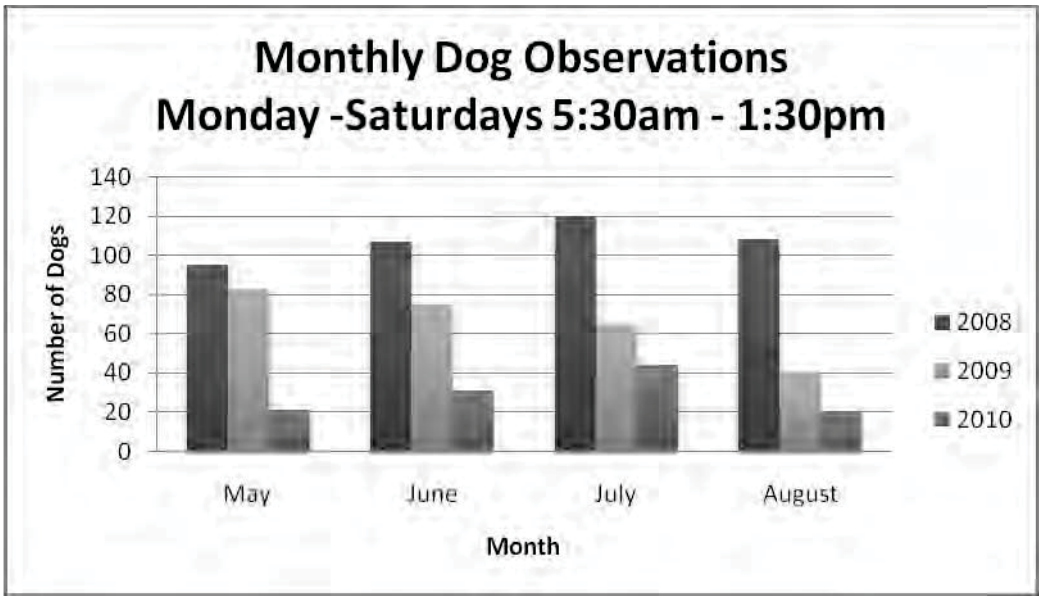

Figure 5. Average number of dogs visits recorded between 06:30 and 13:30 hours Monday through Saturday.

Threats to Nesting Success

During the 2010 WSP breeding season, the greatest threat to nesting success were predators. Ground squirrels were the biggest problem. Corvids also predated 3 nests early in the season. Another issue was strong winds which occurred from March until late May. Winds typically had sustained speeds of 15-25 mph and gusted up to 40 mph. In some cases winds persisted for a week at a time and on two occasions high winds caused the cancellation of the nest survey. Although WSP succeeded in establishing nests during this time, it is possible one nest was lost to the wind.

Natural Predators

Ground squirrels were seen on almost every survey in the southeastern breeding area. Squirrel dens are located inside and inland of all breeding areas and are especially numerous on the southeast end of the beach. On July 15, a squirrel was observed predating a California least tern (CLT) nest in the southeastern breeding area (personal observation). An adult tern and two adult WSP were attempting to distract the squirrel. All existing CLT nests were lost that day. A WSP nest was also in the area, but had a mini-exclosure on it. Without mini-exclosures it is likely that most WSP nests would have been lost to squirrel predation as what occurred in the 2009 breeding season. Crows and ravens were also observed on most surveys throughout the season at Ormond Beach and were responsible for 3 nest failures. Other predators observed in the area were a peregrine falcon that was seen on the Reliant Energy power plant and on the Pt. Mugu tower east of Arnold Rd. A long-tailed weasel and a coyote were observed in the salt panne area (pers. communication, Walter Fuller).

Humans
The biggest issue with human activity on Ormond Beach in 2010 was trash left on the beach. This attracts predators and contributes to the predation problem. Problems with transients were much less of a problem than in past years. No homeless people lived in the dunes by the nesting area as they did in 2009. Homeless encampments were confined to cypress trees behind the southeast nesting area and did not pose a problem to nesting birds. Human trespassers in the breeding grounds were also much less of a problem in 2010 compared to 2009. A large fort that attracted human trespassers into the breeding ground on the northwest end of the beach was removing in a pre-season beach cleanup on March 5, 2010. No new forts were established during the year. A large sturdy chain link fence with a gate was also installed at a common crossing point. Additional factors that helped were the use of a more durable fencing that was able to withstand high winds, the enclosure of the southeast breeding area was fenced on all four sides, and better signage.

Recommendations
There are several areas of improvement that could be implemented to increase breeding success of the WSP at Ormond Beach. Development of a management plan is critical to improving the fledgling success of the WSP at Ormond Beach. The management plan should address the following issues:

1) Continue to strictly enforce the dog leash law at all times. Ideally, dogs should be banned from the breeding areas during the breeding season with leash law enforcement during non-breeding times.
2) Add signage at the entrance to the beach showing which areas are opened and closed to the public. Include educational information on endangered breeding birds.
3) Initiate a predator control program to remove ground squirrels from breeding areas.
4) Repair the gate before the Arnold Road parking lot and close the parking lot from dawn to dusk.
5) Move the protective fencing further towards the high tide line on the southeast end since WSP establish nests on the fence line.
6) Do not allow scientific monitoring or educational field trips inside the breeding areas without the presence of a nest monitor.
7) Oppose any development of lands south of Hueneme Road as this would increase human use of the beach and result in degradation of the wetland and beach habitats on Ormond Beach.
8) Public events should not be scheduled on Ormond Beach during the nesting season (i.e. grunion runs, beach cleanups). Educational trips should stay 50 feet away from the protective fencing or the fencing boundaries should be extended.
9) Collect the three portions of the beach that are used by WSP under a single owner. Alternatively, ensure endorsement and active support of the management plan by all three property owners (the California Coastal Conservancy, Reliant Energy, and the City of Oxnard).

Acknowledgements

I would like to thank Walter Fuller, Rich Handley, Chris Kahler, Elliot Perez, and Vincent Kinsch for their assistance in monitoring this year. Special thanks to Reed Smith for his guidance and mentoring and his assistance in monitoring throughout the breeding season. Thanks also to Nancy Frost and the Oxnard Animal Control Department.

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Attachment 1. WSP population abundance per survey.

Date	Total: adults	Total: all ages	Females	Males	Unknown	Chicks	Hatch Year
3/20/2010	65	65	22	43	0	0	0
3/27/2010	30	30	7	19	4	0	0
4/3/2010	84	84	24	60	0	0	0
4/10/2010	54	54	10	44	0	0	0
4/17/2010	66	66	13	50	3	0	0
4/24/2010	29	29	5	24	0	0	0
5/1/2010	42	42	8	34	0	0	0
5/8/2010	aborted survey due to high winds						
5/15/2010	18	18	4	14	0	0	0
5/18/2010	27	0	0	0	0	0	0
5/22/2010	aborted survey due to high winds						
5/31/2010	44	44	10	34	0	0	0
6/5/2010	35	37	10	25	0	2	0
6/12/2010	36	36	6	25	5	0	0
6/19/2010	43	50	16	24	3	7	0
6/27/2010	51	66	17	34	0	12	3
7/7/2010	32	42	11	19	2	6	4
7/15/2010	28	32	12	14	2	2	2
7/24/2010	27	32	11	14	2	3	2
7/29/2010	14	17	7	5	2	3	0
8/4/2010	13	13	1	12	0	0	0
8/9/2010	8	11	4	3	1	3	0
8/16/2010	6	6	0	4	2	0	0
8/22/2010	13	15	5	4	4	0	2
8/29/2010	6	6	1	3	2	0	0
9/7/2010	23	23	0	0	23	0	0
9/11/2010	53	53	0	0	53	0	0
Average	**34**						

Attachment 2. Total number of active nests and brood observations. The maximum number of clutches occurred on May 31 with the occurrence of 12 active nests.

Date	# Chicks	Hatch Year	Calculated Active Nests	# broods with chicks	# breeding adults	Notes - chick detail/breeding behavior
3/20/2010	0	0	0	0	0	
3/27/2010	0	0	0	0	0	
4/3/2010	0	0	1	0	2	
4/10/2010	0	0	3	0	6	
4/17/2010	0	0	2	0	4	
4/24/2010	0	0	1	0	2	
5/1/2010	0	0	2	0	4	
5/8/2010				0		winds prevented survey
5/15/2010	0	0	6	0	12	
5/18/2010	0	0	7	0	14	
5/22/2010				0		winds prevented survey
5/31/2010	0	0	12	0	**24**	
6/5/2010	2	0	11	1	23	
6/12/2010	0	0	10	0	20	
6/19/2010	7	0	8	3	19	3 clutches of chicks(3@1wk old, 2@1wk, 2@2wks)
6/27/2010	12	3	6	5	17	5 clutches; banded bird GP:RP male
7/7/2010	6	4	5	2	12	2 clutches(3@<1wk old, 3@2wks)
7/15/2010	2	2	5	1	11	1 clutch of 2 chicks(1wk old)
7/24/2010	3	2	3	1	7	1 clutch of 3 chicks (days old)
7/29/2010	3	0	0	1	1	1 clutch of 3 chicks(1 week old)
8/4/2010	0	0	0	0	0	
8/9/2010	3	0	0	1	1	1 clutch of three 2-week old chicks crossing to the Mugu side *Last chick sigthing of the year*

Attachment 3. Banded WSP detail

Date	Band Combo	Sex	Band Details	Behavior	Additional Info
3/20/2010	S:K/P	male	Banded Camp Pendelton, any year since 2004	foraging	by J-St. Estuary
4/3/2010	S:K/P	male	Banded Camp Pendelton, any year since 2004	foraging	Arnold Rd.
5/31/2010	GG:VG	female	Banded 2008 Oceano	defending	Wetlands/salt panne
6/5/2010	S:K/V	female	Banded Camp Pendelton, any year since 2004	roosting	J St. Estuary
6/27/2010	GP:RP	male	Banded 2009 southern end of Salinas NWR "between the signs"	foraging	High tide line in front of Reliant Energy power plant
9/7/2010	RR:OY	HY	Banded on 7/22/2010 at Oceano	roosting	Arnold Rd. flock

Attachment 4. WSP nest details for nest numbers 1-14

Nest #	Location	Date Found	Survey date eggs gone	Eggs Laid	Eggs Hatched	Exclosure	Outcome	Fate	Comments
10OB01	east	4/1/2010	4/17/2010	3	0	no	Fail	predated/corvid	corvid tracks, broken eggs
10OB02	east	4/10/2010	4/17/2010	3	0	no	Fail	predated/squirrel	eggs gone, squirrel tracks
10OB03	east	4/8/2010	4/17/2010	3	0	no	Fail	predated/squirrel	eggs gone, squirrel tracks
10OB04	east	4/17/2010	4/23/2010	1	0	no	Fail	predated/corvid	corvid tracks, broken eggs
10OB05	east	4/17/2010	5/1/2010	3	0	no	Fail	unknown/wind	no eggs or sign of nest scrape
10OB06	east	5/1/2010	5/8/2010	3	0	no	Fail	predated/corvid	corvid tracks, broken eggs
10OB07	salt panne	5/3/2010	5/27/2010	3	3	yes	Hatch	succeed	chick observed near nest on 5/27/10, pips
10OB08	east	5/15/2010	6/5/2010	2	2	yes	Hatch	succeed	2 chicks observed near nest, pips
10OB09	east	5/31/2010	6/23/2010	3	3	yes	Hatch	succeed	2 chicks just hatched, 1 egg
10OB10	east	5/31/2010	7/2/2010	3	3	yes	Hatch	succeed	pips, exclosure
10OB11	west	5/31/2010	6/12/2010	3	3	yes	Hatch	succeed	pips found
10OB12	west	5/31/2010	6/27/2010	3	3	yes	Hatch	succeed	2 just hatch chicks in nest on 6/27/10; no eggs left on 7/2/10
10OB13	west	5/31/2010	6/19/2010	3	?	no	unknown	unknown	1 egg left, no pips
10OB14	west	6/2/2010	6/19/2010	3	3	no	Hatch	n/a	pips, chicks spotted in area on 6/16/10

Attachment 5. WSP nest details for nest numbers 15-27

Nest #	Location	Date Found	Date eggs gone	Eggs Laid	Eggs Hatched	Exclosure	Outcome	Fate	Comments
10OB15	east	6/5/2010	6/10/2010	3	3	yes	hatch	succeed	exclosure, no signs of disruption, female nearby distracting, chick sighted on 6/11/10
10OB16	west	6/9/2010	6/27/2010	3	3	no	hatch	succeed	pips found
10OB17	salt panne	6/10/2010	only chicks obs.	2	2	no	hatch	n/a	2 chicks, day old observed 6/10/10
10OB18	salt panne	6/10/2010	6/19/2010	3	3	no	hatch	n/a	3 chicks nearby ~ 1 wk old. No pips in nest, but no signs of disturbance.
10OB19	salt panne	6/19/2010	6/27/2010	3	?	no	no pips	unknown	no signs of predation, but no pips or chicks
10OB20	west	6/23/2010	7/24/2010	3	2	no	hatch	n/a	pips found
10OB21	west	6/23/2010	7/7/2010	3	3	no	hatch	n/a	1 egg left on 7/7/10
10OB22	west	6/23/2010	6/23/2010	3	3	no	hatch	n/a	3 chick newly hatched chicks in nest scrape
10OB23	east	7/2/2010	7/29/2010	3	3	yes	hatch	n/a	adult female sighted with v. young chick nearby 7/28/10; no eggs 7/29/10
10OB24	west	7/2/2010	7/24/2010	3	3	no	hatch	n/a	pips found
10OB25	salt panne	7/7/2010	only chicks obs.	3	3	no	hatch	n/a	3 chicks, <1 week old with adult male nearby, No documented nest in area with matching hatch date.
10OB26	west	7/7/2010	7/24/2010	3	3	no	hatch	n/a	pips found
10OB27	east	8/4/2010	8/5/2010	3	1	no	hatch	n/a	male next to nest, brooding new chick

CULTURAL RESOURCE CONSTRAINT ANALYSIS FOR THE J STREET DRAIN INITIAL STUDY VENTURA COUNTY, CALIFORNIA

Report Prepared for:
HDR

June 2008

Kyle Consulting

CULTURAL RESOURCE CONSTRAINT ANALYSIS FOR THE J STREET DRAIN INITIAL STUDY VENTURA COUNTY, CALIFORNIA

Prepared for:
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Prepared by:
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National Archaeological Data Base Information
Type of Study: Literature Review, Record Search, Native American Consultation, and Constraint Analysis
Project Area: Linear Alignment Approximately 3,352.8 meters (11,000 feet) in length
Site Previously Recorded: None
Isolates Previously Recorded: None
Site Newly Recorded: None
Isolates Newly Recorded: None
USGS Quadrangle: Oxnard 7.5'
Key Words: No cultural resources recorded in project area, construction monitoring recommended

Carolyn E. Kyle
Project Archaeologist

June 2008

TABLE OF CONTENTS

SECTION	NAME	PAGE
	EXECUTIVE SUMMARY	ii
1	INTRODUCTION	
1.1	Project Description	1-1
1.2	Project Setting	1-1
1.3	Project Background	1-1
1.4	Prehistoric Cultural Background	1-4
1.5	Record Search Results	1-5
2	PROJECT METHODS, RESULTS, AND RECOMMENDATIONS	
2.1	Project Methods and Results	2-1
2.2	Native American Consultation Results	2-1
2.3	Recommendations	2-2
3	REFERENCES CITED	3-1

LIST OF FIGURES

FIGURE	NAME	PAGE
1-1	Regional Location of Study Area	1-2
1-2	Project Location Map	1-3

LIST OF APPENDICES

LETTER	NAME	PAGE
A	Record Search Results*	A-1
B	Resume of Ms. Kyle	B-1
C	Native American Consultation	C-1

*Bound separately in Confidential Appendix

EXECUTIVE SUMMARY

TITLE: Cultural Resource Constraint Analysis for the J Street Drain Initial Study Ventura County, California

AUTHORS: Carolyn E. Kyle
Kyle Consulting
P.O. Box 2509
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DATE: June 2008

SOURCE OF COPIES: South Central Coastal Information Center
California State University
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ABSTRACT:

This study included a literature review and record search from the South Central Coastal Information Center, Native American consultation, and a constraint level analysis of an approximately 3,352.8 m alignment located in Ventura County, California. The study was conducted in compliance with Ventura County and California Environmental Quality Act (CEQA) guidelines. The proposed project is to increase the capacity of the existing J Street Drain to the 100-year flood level. No cultural resources have been recorded within the project area which is generally developed with an area at the Ormond Beach Lagoon undeveloped. Recommendations include archaeological monitoring during any ground disturbance and mitigation of any buried cultural deposits that are identified as significant resources.

SECTION 1
INTRODUCTION

1.1 PROJECT DESCRIPTION

The current study was completed in compliance with Ventura County and California Environmental Quality Act (CEQA) guidelines. The study area is a linear alignment approximately 3,352.8 meters (11,000 feet) in length that is located in Ventura County, California (Figure 1-1). The project area is shown on the Oxnard 7.5' USGS topographic map (Figure 1-2).

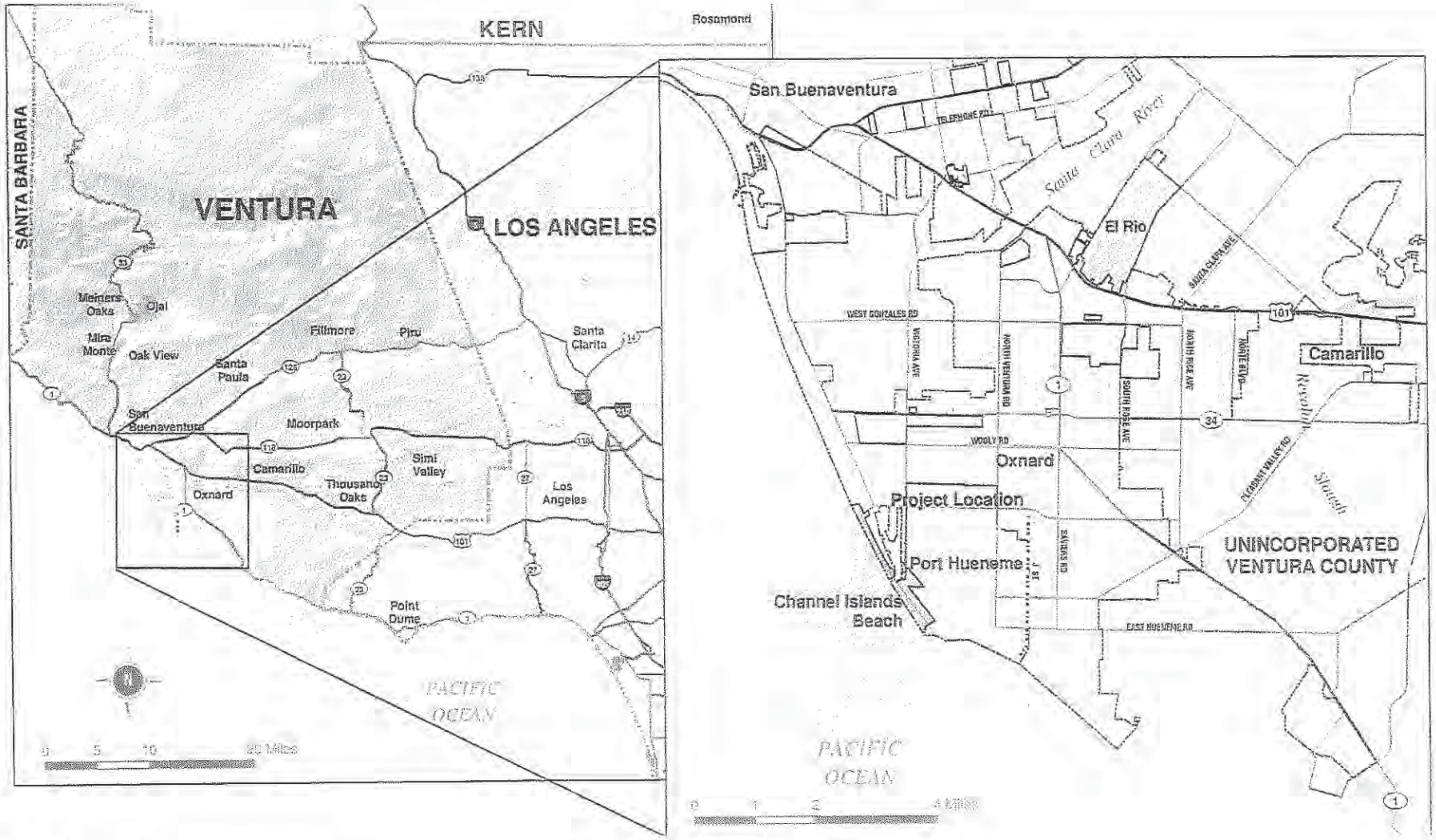
Literature information and site records on recorded cultural resources within a one-half mile radius of the study area were obtained from data provided by the South Central Coastal Information Center at California State University, Fullerton, California (Appendix A). In addition, early maps were checked for historic resources. The resume of Ms. Kyle is included as Appendix B. Consultation regarding this project was completed with the Native American Heritage Commission and local Native Americans. This correspondence is included in Appendix C and the results discussed in Section 2.2.

1.2 PROJECT SETTING

The project site is located along J Street, which is on the border of the cities of Oxnard and City of Port Hueneme in Ventura County and within the Ormond Beach Lagoon. The surrounding land uses consist mainly of residential development on both sides of J Street, some commercial uses near Hueneme Road, and the Oxnard Wastewater Treatment Plant (OWTP) near the lagoon.

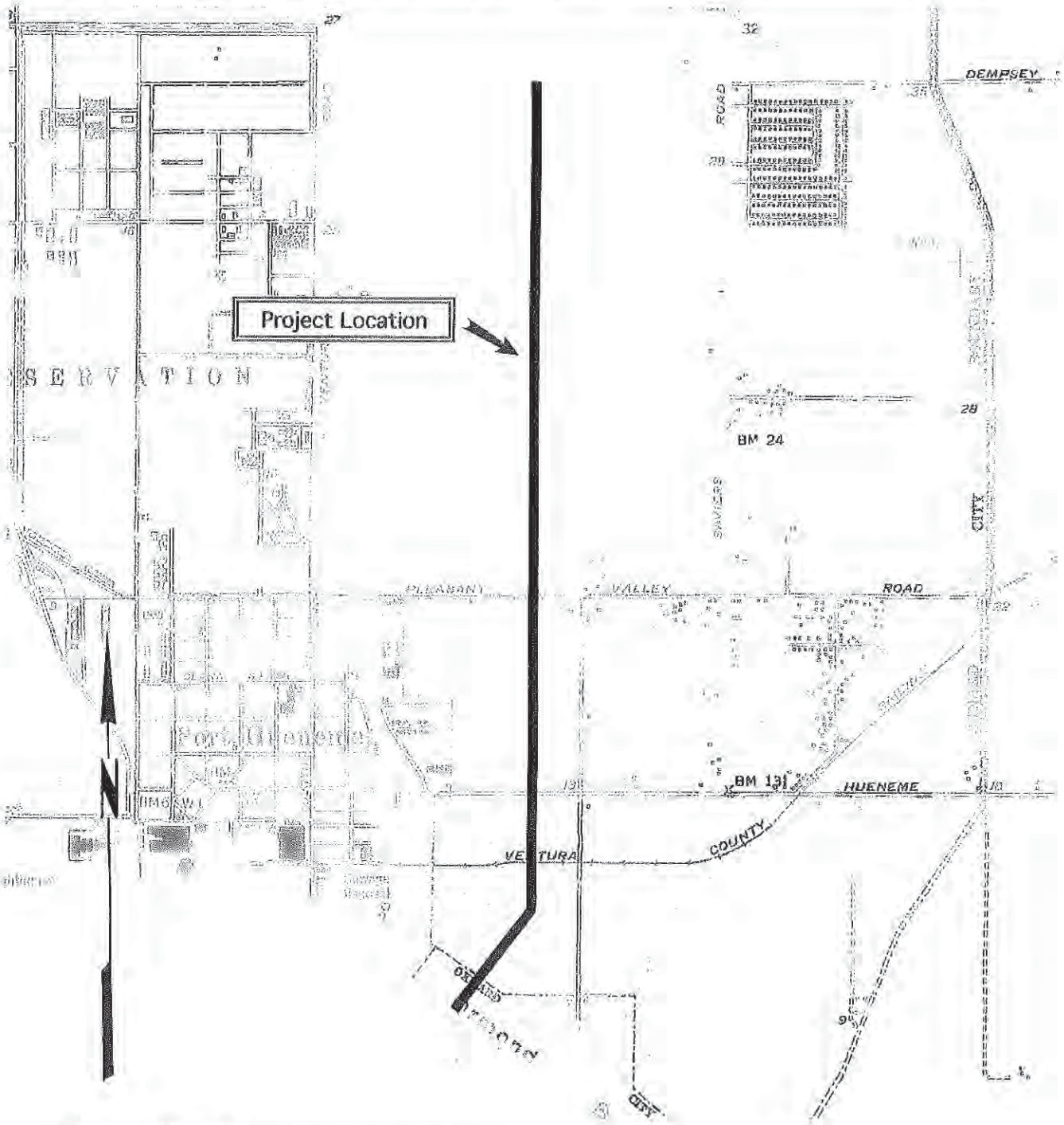
1.3 PROJECT BACKGROUND

The sand berm at the Ormond Beach Lagoon was manually beached prior to 1992 by VCWPD to create a discharge path directly to the ocean and prevent water and silt buildup in the channel. However, this practice was stopped in 1992 due to environmental concerns and restrictions. It is estimated that runoff from a 2-year storm flowing into the J Street Drain would generate enough water to fill up the lagoon and cause a natural breaching of the sand berm. Therefore, the sand berm at the Ormond Beach Lagoon



Source: HDR One Company/Many Solutions

Figure 1-1 Project Regional & Vicinity Map



Scale: 1:24,000

Source: USGS 7.5' Oxnard, California Quadrangle

Figure 1-2 Project Location Map

breaches under existing conditions. The proposed project would allow J Street Drain to accommodate runoff from a 100-year storm event and would not include changes at the outlet of the Ormond Beach Lagoon which is currently locaed approximately ¾ mile downstream from the J Street Drain.

The proposed project involves increasing the capacity of the existing J Street Drain to the 100-year flood level. Currently, the Drain's capacity is estimated at 500 to 600 cubic feet per second (cfs), which is approximately a 5-year flood level. According to studies conducted by the Ventura County Watershed Protection District (VCWPD), the area surrounding the Drain is anticipated to flood during a severe rain event. In addition, the outlet of the channel is sometimes constrained by a sand berm (7.5 to 8 feet high) surrounding the Ormond Beach Lagoon. The sand berm hinders the direct flow path of the J Street Drain channel, which results in a reservoir of water in the lagoon.

1.4 PREHISTORIC CULTURAL BACKGROUND

The Native American occupants of the study area, identified as Chumash, were one of the first native California groups encountered by European explorers, specifically Cabrillo who sailed between the Channel Islands in 1542-1543 (Kroeber 1925). This large group of Hokan speaking California natives were basically a coastal people who occupied territory in Central California that extended from Estero Bay on the north to Malibu Canyon in the south, from the Carizzo Plain in the east to the Santa Barbara Channel Islands to the west. Kroeber (1925) expressed doubt that there were any permanent Chumash villages in the Carizzo Plains area to the east away from the coastal arera. Chumash generally exploited the exceptionally rich maritime resources that were available to them in the coastal areas of their territory.

Kroeber (1925) states that the Chumash lived in large houses up to 50 feet or more in diameter that housed a community of up to 50 individuals. These structures were constructed of willow or other poles that wee bend and tied together at the stop and then covered with tule mats or thatch. The Chumash seemed to be have been one of the few California Native groups who constructed raised platforms that were used for beds within rooms inside the houses. Canoes constructed from wooden planks were used to travel to the islands within the Santa Barbara Channel. The Chumash used spear throwers, as

well, as bows and arrows for hunting. The Chumash were skilled artisans who made fine baskets and stone cookware. Chumash rock art has been identified in caves and on overhangs, many located in the Los Padres Nation Forest.

A Spanish land expedition led by Gaspar de Portola left Baja California in 1769 eventually reaching Chumash territory. Five Spanish missions were established in Chumash territory, introducing European diseases that decimated the local inhabitants. Chumash territory was divided into Mexican Land Grants and settled by European settlers with the result that the native Chumash inhabitants were further displaced. The Chumash are today a national-recognized tribe. They live just outside Santa Ynez near Mission Santa Inés and throughout original Chumash territory (Chumash Tribe History Page http://www.santaynez.org/).

1.5 RECORD SEARCH RESULTS

A literature review and record search of the project site and a one-half mile radius was completed by the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, California. This search identified seventeen studies (Cottrell 1977, Peak & Associates, Inc. 1989, Horne 1980, Gray and Cagle 1992, Bonner 2002, McFarlane 2002, Whitley and Simon 2002, Toren 2003, Wlodarske 2004, EarthTouch, Inc. 2007, and one reference missing from SCCIC files) that have been conducted within a one-half mile radius of the project site. Of these, six (Whitney-Desautels 1978; Howard 1991; Wlodarski 2004; Maki 2001, 2006, 2007) are located within the project location. There are twelve additional investigations (Chartkoff et al. 1965, Craig 1967, Husbands 1974, Genge Consultants 1978, Rosen 1978, MacFarlane Archaeological Consultants 1988, King 1993, Barrier 2001, Knight 2001, McFarlane 2001, Bonner 2002) located on the Oxnard 7.5' USGGS Quadrangle that are unmapped due to insufficient locational information but that may be within a one-half mile radius of the project area.

Two prehistoric archaeological sites and one historic site have been identified outside of the project area but within the one-half mile radius. One of the archaeological sites, 4-VEN-663, was originally recorded by Van Valkenburgh in 1933 and rerecorded in 1979 by Horne and Craig who noted cores, flakes, hammerstones, ground stone, burned rock, shellfish, and faunal remains. Van Valkenburgh, Horne and Craig stated that the site might represent the ethnographic village of Wenemu, a Chumash word that means

"sleeping place." Horne and Craig described the site as very important. A site update was completed in 2004 by Wlodarski and Bonner who noted that approximately 60% of the site has been destroyed by construction. They also state that the site may represent the village of Huememe and that if that is true it may be one of the most important resources in the region. The second archaeological site, 56-150016, was recorded by Taylor in 1978 although no site description was provided.

Horne and Craig (1979) recorded a historic resource, 4-VEN-664(H), that they described as the remains of twentieth century farm buildings. Artifacts noted included shell, cut cow bone, 1903 glass, crockery, stoneware, bricks, irrigation tile, ceramics, glass, and one handmade shell button.

No cultural resources were identified within the proposed project area. No properties have been listed within a one-half mile of the project area by the California Point of Historical Interest of the Office of Historic Preservation, Department of Parks and Recreation, the California Historical Landmarks of the Office of Historic Preservation, Department of Parks and Recreation, the California Register of Historic Places, the National Register of Historic Places, or the California Historic Resources Inventory.

SECTION 2
PROJECT METHODS, RESULTS, AND RECOMMENDATIONS

2.1 PROJECT METHODS AND RESULTS

This constraint analysis for the J Street Drain project included a literature review and record search from the South Central Coastal Information Center at California State University, Fullerton and Native American Consultation. Results of the literature review and record search are provided in Section 1.4. No cultural resources, prehistoric or historic, were identified within the project area. Two prehistoric sites and one historic site were identified within a one-half mile radius of the project area. Prehistoric site, 4-VEN-662, is a habitation locale that may have been the ethnographic village of Wenemu/Huememe. The northern portion of this site has been destroyed by development. A small area of the site located south of Huememe Road and just east of Surfside Drive may still be intact under what appears to be commercial or business development. This portion of 4-VEN-662 is located well outside any area that might me impacted by the proposed project. The other prehistoric site, 56-150016, and the historic site, 4-VEN-664(H), are also outside of any areas that might be impacted by the proposed project.

2.2 NATIVE AMERICAN CONSULTATION RESULTS

Native American consultation included a sacred lands check with the Native Ameican Heritage Commission (NAHC) for the presence of Native American cultural resources in the immediate project area. No specific site information was on file with the NAHC who provided a list of Native American individual and organization who might have knowledge of cultural resources within the project area. A letter explaining the project and asking for any comments was mailed to all names on the list. The contact list and a sample of the letter along with correspondence from the NAHC are included in Appendix C.

Due to the project schedule a response was requested by June 10, 2008. Two responses were received, from Patrick Turnamait and Randy Guzman-Folkes. The comments were requested to be presented in writing but had not been received any upon completion of the report. Patrick Turnamait noted in a telephone conversation with the author that two Chumash burial sites are located in the area near the beach area. These sites were not identified by the record search unless Mr. Turnamait was referring to 4-VEN-662, the village of Wenemu/Huememe. The recorded location of this village site is outside of any area that might be impacted by the proposed project.

2.3 RECOMMENDATIONS

The final project design has not been decided so the following recommendations provide general procedures designed to protect any previously unidentified prehistoric or historic resources. Because of the potential for buried archaeological resources in this area all ground disturbing activity within the project area should be monitored by a professional archaeologist who meets the requirements for archaeological monitoring set by the California Office of Historic Preservation (OHP) and the local agency. In the event that cultural resources are identified during the course of archaeological monitoring subsurface construction activities should be halted immediately and the resource evaluated by a qualified archaeologist or historian as appropriate.

If the resource is determined to be potentially significant, a cultural resources treatment plan should be developed that to provide appropriate mitigation measures that may include archaeological testing and data recovery excavation designed to reduce impacts from the development to a less than significant level. The treatment plan should also include a detailed description of associated reporting requirements, curation requirements for any cultural materials collected during treatment, and the qualifications for archaeologists involved in treatment activities.

If Native American or other human remains are inadvertently discovered during the course of project actions, there will be no further excavation or disturbance of the site of the remains or the vicinity needs to be discontinued until the remains and the vicinity have been evaluated in accordance with CEQA Section 10564.5, California Health and

Safety Code (CHSC) Section 7050.5, Public Resources Code (PRC) Section 5097.98, and the Native American Graves Protection and Repatriation Act (NAGPRA), as appropriate. Project protocols designed in consultation with the NAHC and local Native Americans to reduce potential project impacts to unknown cultural resources, including cemeteries, isolated Native American, or other human remains that may be within the project area to a less than significant level should then be implemented.

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APPENDIX A

RECORD SEARCH RESULTS

BOUND SEPARATELY IN CONFIDENTIAL APPENDIX

APPENDIX B

RESUME OF MS. KYLE

CAROLYN E. KYLE

Kyle Consulting

Cultural Resource Management

P.O. Box 2509, Borrego Springs, California 92004 (760) 767-3371

EDUCATION

M.A. Anthropology, San Diego State University, 1988
B.A. Anthropology, San Diego State University, 1983

PROFESSIONAL AFFILIATIONS

Register of Professional Archaeologists (formerly Society of Professional Archeologists)
Society for American Archaeology
Society for California Archaeology
San Diego County Archaeological Society

PROFESSIONAL EXPERIENCE

Kyle Consulting ***June 1998 to Present***

Ms. Kyle has completed cultural resource constraint studies for the Crossroads, Valley Center, North Bay, Escondido, Valley Center, and San Ysidro redevelopment areas, as well as constraint studies for the Otay River Valley and the San Diego River. Other projects include a cultural resource survey and archaeological monitoring for the Otay Water Treatment Plant; data recovery programs for a portion of CA-SDI-48, located within the Ballast Point Submarine Base, and for site CA-SDI-11424, located on Otay Mesa. These studies were completed in compliance with state, federal, County of San Diego, and City of San Diego guidelines.

Ms. Kyle has completed work numerous cellular antenna sites in San Diego, Orange, Los Angeles, Riverside, San Bernardino, and Ventura counties in southern California, as well as in Nevada and Arizona. These studies included completion of literature reviews and record searches, field surveys, Native American consultation, and submittal to the State Office of Historic Preservation. Ms. Kyle completed work on portions of the Level 3 fiberoptics alignment located in the states of California, Arizona, and Nevada. The Level 3 fiberoptics study included record searches, field surveys, and preparation of required documents and reports for each alignment in compliance with Section 106 and local guidelines. Review agencies for the fiberoptics project included State Office of Historic Preservation, Caltrans, the Bureau of Land Management, and various Cities and Counties.

Gallegos & Associates ***October 1991 to June 1998***

Ms. Kyle, as senior archaeologist at Gallegos & Associates, completed a full range of cultural resource studies. Duties included preparation of research designs and supervision of projects with the authority to direct fieldwork and subcontract to appropriate research consultants, as well as preparation of a report of finding for each project.

Projects completed in compliance with federal Section 106 guidelines include: a test of one prehistoric and two historic cultural resources for the Rancho del Oro Road/Highway 78 interchange project, surveys and testing programs for Camp Pendleton Housing, Naval Weapons Station Seal Beach, North Torrey Pines Bridge, and State Route 905. The State Route 905 project included preparation of a testing program research design for a large habitation site and a management plan that set criteria for determination of Otay Mesa site types and provided recommendations for future work on Otay Mesa.

Ms. Kyle served as Project Archaeologist for the following projects that were completed for Caltrans: the State Route 905 survey and test; survey and test programs for the Rancho del Oro/Highway 78 interchange project and the Twin Oaks Valley Road/Highway 78 interchange project; and surveys for the North Torrey Pines Bridge widening project; and the Leucadia Boulevard/Interstate 5 interchange project. The cultural resources located within the proposed impact area of the Rancho del Oro Road/Highway 78 interchange project include a standing adobe and the location of a melted adobe.

Projects completed in compliance with City of San Diego and CEQA guidelines include surveys for the San Diego Bikeways project, the Tijuana Trolley Transport Pedestrian Path and Border Gate project in San Ysidro; a data recovery program for the East Mission Gorge Pump Station, a monitoring program for construction of the East Mission Gorge Force Main, surveys for Pipelines 2A and 4, test of three sites for the Kumeyaay Lake Campground, and a data recovery program of a prehistoric habitation site for the Remington Hills project in Otay Mesa.

Ms. Kyle has served as Project Archaeologist for a number of projects completed in compliance with the County of San Diego and CEQA guidelines . These projects include surveys for the proposed Valley Center Sewerage and Water Reclamation Facilities, the Pomerado Reclamation Plant, and the Julian Water Control Facilities; a testing program of two prehistoric and two historic resources for the proposed widening of Valley Center Road; and a data recovery program for the proposed Skyline Church project.

Ms. Kyle served as Project Archaeologist for a significance testing program of a prehistoric site located on property owned by the University of California at San Diego (UCSD). Ms. Kyle also assisted historian Roxana Phillips with a significance assessment of buildings associated with historic Camp Matthews, located within the campus.

Additional projects completed include: a study with Ms. Phillips of the Spanish Landing area for the Port of San Diego, a survey for the Vista Irrigation District Potable Water and Water Reclamation project, overview studies for the cities of Escondido and Lemon Grove, and a field survey for the widening of Carlsbad Boulevard.

County of San Diego ***February 1989 to October 1991***

Environmental Analyst for the Department of Planning and Land Use/Archaeological Specialist. Duties included initial review of submitted projects, determination of required environmental studies, review of submitted studies, and presentation of determination and subsequent findings to the County Board. Reviewed archaeology reports submitted by consultants in response to County determinations. Responsible for report review and recommendations for cultural resource work necessary for the proposed 22,000-acre Otay Ranch project.

ERC Environmental and Energy Services Company ***1985 to February 1989***

Project Archaeologist responsible for direction of cultural resource surveys, test excavations, and data recovery programs. Major projects include the data recovery program for Ballast Point, Batiquitos Ridge, Kuebler Ranch - Otay Mesa, San Diego Mission, and Westwood Valley. Responsible for direction of field and laboratory crews, coordination of artifact analysis, and principle author of reports of findings.

Archaeological Consultant ***1983 to 1985***

Archaeological consultant with various firms including WESTEC, RECON, RBR & Associates, and Brian F. Mooney & Associates. Positions for these firms included both laboratory and field crew member for: Johnson-Taylor Adobe, under the supervision of Dr. Susan Hector, RECON; Fieldstone Northview, Unit 4, Encinitas, under the supervision of Dennis Gallegos, WESTEC; data recovery program for a large prehistoric village at Sabre Springs, Poway, under the direction of Sean Cardenas, RBR & Associates.

MAJOR REPORTS

2003 Cultural Resource Survey and Test for the Washington Hills Project. Prepared for the City of Escondido.

2003 Cultural Resource Monitoring and Analysis of Recovered Historic Material for the Market Manor Project. Prepared for the City of San Diego.

2003 Cultural Resource Survey and Test for the Viejas Bridge Replacement Project. Prepared with Dayle Cheever, RECON for the County of San Diego and Caltrans.

2002 Cultural Resource Survey and Significance Test for the 76-Acre Jiles Ranch Project. Prepared for the County of San Diego.

2001 Cultural Resource Constraint Analysis for the Wetlands and Sedimentation Basin Sites, New and Alamo Rivers. Prepared for Imperial County, California.

2001 Constraint Analysis for Sixteen Proposed Airport Sites. Prepared for the Airport Sites Review Board, San Diego, California.

2000 Constraint Analysis for the Crossroads Redevelopment Project. Prepared for the City of San Diego.

2001 A Cultural Resource Inventory Update and Recommendations for the University of California at San Diego and Scripps Institution of Oceanography. Prepared for the University of California at San Diego.

2001 Cultural Resource Survey and Testing Program for the Future State Route 11 and East Otay Mesa Port of Entry Project. Prepared for the San Diego, California.

2001 Cultural Resource Survey for the Chaffin Subdivisions Project. Prepared for the County of San Diego, California.

2000 Cultural Resource Constraint Study for the Escondido General Plan Update Project, Prepared for the City of Escondido, California.

2000 Cultural Resource Survey for the International Gateway of the Americas Project. Prepared for the City of San Diego, California.

1999 Cultural Resource Survey for the Sycamore Estates Project, Cities of San Diego and Poway, California. Prepared for the City of San Diego.

1998 Cultural Resource Constraint Study for the Valley Center Sewer Moratorium EIR Project County of San Diego, California. Prepared for the County of San Diego.

1998 Cultural Resource Constraint Study for the Valley Center Sewer Moratorium EIR Project.Prepared for the County of San Diego, California

1998 Cultural Resource Constraint Study for the North Bay Redevelopment Project. Prepared for the County of San Diego.

1998 SR 905 Cultural Resource Inventory and Evaluation. Overview and testing program to identify and evaluate properties to determine National Register status of cultural resources within the proposed APE. Prepared for the City of San Diego and Caltrans.

1996 Cultural Resource constraint Study for the Lemon Grove General Plan. Prepared for the City of Lemon Grove, California.

1996 Cultural Resource Constraint Level Analysis for the San Ysidro Redevelopment Project. Prepared for the City of San Ysidro.

1995 Archaeological Testing of Seven Sites for the Stardust Golf Course Realignment Project. A significance test of cultural resources located adjacent the San Diego River. Prepared for the City of San Diego.

1995 Otay Mesa Road Widening Project Cultural Resources Technical Report: Archaeological testing of nine cultural resources. Prepared for the City of San Diego.

1994 Remington Hills Project: Archaeological Testing of Seven Sites Otay Mesa, San Diego, California. Archaeological significance testing of seven prehistoric sites. Prepared for the City of San Diego.

1994 Historical/Archaeological Test for the Casa de Aguirre Adobe Site, City of San Diego, California. A test using mechanical and hand excavation to identify presence/absence of remains of the Casa de Aguirre adobe. Prepared for the City of San Diego.

1994 Cultural Resource Survey and Test for the California Department of Corrections, R. J. Donovan-II Correctional Facility Project, Otay Mesa, San Diego County, California. A literature review, record search, and 174-acre field survey that identified the presence of previously recorded site CA-SDI-8654. A subsequent significance test was completed for the portion of the site located within the project area. Prepared for the California Department of Corrections.

1993 Data Recovery Program for a Portion of Prehistoric Site CA-SDI-10148 East Mission Gorge Pump Station and Force Main, San Diego, California. A data recovery program to mitigate impacts to portions of CA-SDI-10148, identified as significant after construction was begun. Analysis of recovered artifacts identified a 2,000 year old milling tool kit. Prepared for the City of San Diego.

1993 Archaeological Evaluation of Prehistoric Sites CA-SDI-11606, CA-SDI-11057A, and CA-SDI-11057B Kumeyaay Lake Campground, San Diego, California. A significance test prepared for the City of San Diego.

1993 Cultural Resource Survey and Test of Five Sites for the Otay Water District Central Area and Otay Mesa Interconnection Pipeline Alignments. A significance test that identified one significant and four not significant cultural resources. Prepared for the Otay Water District.

1993 A Constraint Study for the Otay Valley Regional Park FPA. This study included a literature review, record search, identification of constraints and opportunities, and recommendations for the proposed Otay Valley Regional Park.

1993 Historical/Archaeological Test Report for Sites CA-SDI-9775, CA-SDI-9775, CA-SDI-13187, and CA-SDI-13188 East County Square Development San Diego County, California A significance test prepared for the County of San Diego.

1992 Historical/Archaeological Survey and Testing for CA-SDI-5352 and CA-SDI-12730, Otay Mesa, San Diego, California. A testing program for a 250-acre parcel on Otay Mesa.

1991 Six Thousand Years of Occupation at Batiquitos Ridge. Report involved excavation of a five percent phased sample inventory to provide mitigation of development impacts.

1990 Early Period Occupation at the Kuebler Ranch Site SDi-8654, Otay Mesa, San Diego County, California. A data recovery program for a 7,000 year old site on Otay Mesa prepared for the County of San Diego.

1989 Archaeological/Historical Survey and Test Report for One City Block, Downtown Oceanside Redevelopment Core Block Area, Oceanside, California. Prepared for the City of Oceanside, California.

1988 Cultural Resource Inventory and CEQA Test for Site Importance, Rancho Bernardo Lake Course. Inventory of 315 acres, identification and testing of ten prehistoric sites for the J. W. Colachis Company.

1988 Cultural Resource Survey and Testing Program for the East Mesa Detention Facility, San Diego California. Project involved the survey of 523 acres, the identification and testing of eight prehistoric and one historic site. Three of these sites were quarry localities on Otay Mesa. Report prepared for the County of San Diego.

1988 Five Thousand Years of Maritime Subsistence at Ballast Point Prehistoric Site SDi-48 (W-164), San Diego, California. Report involved the excavation of a 2.5 percent sample within a coastal shell midden site, dated from 6000 to 1500 years before present. Report prepared for the U.S. Navy.

1987 Cultural Resource Inventory for Rancho La Quinta. Inventory of 1272 acres identifying six prehistoric sites within Coachella Valley, Riverside County, California. Report prepared for the Landmark Land Company.

1986 Archaeological Investigation at Westwood Valley, San Diego, California. Ten sites located within the Westwood Valley, Rancho Bernardo in San Diego, County.

PUBLICATIONS

Five Thousand Years of Maritime Subsistence at Ballast Point Prehistoric Site SDi-48 (W-164), San Diego, California. In press.

A 2,000 Year Old Milling Tool Kit from CA-SDI-10148, San Diego, California. In: *Proceedings for California Archaeology*, Vol. 8, 1995

An Overview of the Late Prehistoric Village in the Westwood Valley, Rancho Bernardo, California in *Proceedings of the Society for California Archaeology*.

PROFESSIONAL PAPERS PRESENTED

"An Overview of the Ballast Point Data Recovery Program at Site SDi-48, San Diego, California." Paper presented at the Society for California Archaeology Meetings, City of Commerce, California.

"An Overview of the San Diego Mission Excavations." Paper presented at the San Diego County Archaeology Society.

"An Overview of the Late Prehistoric Village in Westwood Valley, Rancho Bernardo, California." Paper presented at the Society for California Archaeology Meetings, Fresno, California.

"An Overview of the Prehistoric Village in Westwood Valley, Rancho Bernardo, California." Paper presented at the San Diego County Archaeological Society.

"A 2,000 Year Old Tool Kit from CA-SDI-10148, San Diego California." Paper presented at the Society for California Archaeology Meetings, Ventura, California.

"A Prehistoric Milling Tool Kit from CA-SDI-10148, San Diego, California." Paper presented at the Society for California Archaeology Meetings, Ventura, California.

REFERENCES

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Marty Rosen
Caltrans District 11
2829 Juan Street
San Diego, CA 92103
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APPENDIX C

NATIVE AMERICAN CONSULTATION

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

FILE COPY

April 16, 2008

Theresa Stevens
Ventura County Watershed Protection District
800 S. Victoria Avenue
Ventura, CA 93009-1610

RE: SCH# 2008041057 J Street Drain Project: Ventura County.

Dear Ms. Stevens:

The Native American Heritage Commission (NAHC) has reviewed the Notice of Preparation (NOP) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. **USGS 7.5 minute quadrangle name, township, range and section required.**
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached.**
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

RECEIVED
APR 21 2008
WATERSHED PROTECTION DIST.

Sincerely,
Katy Sanchez
Katy Sanchez
Program Analyst

CC: State Clearinghouse

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Ventura County
April 16, 2008

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Chumash

Coastal Band of the Chumash Nation
Janet Garcia,Chairperson
P.O. Box 4464
Santa Barbara , CA 93140
805-964-3447

Chumash

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2008041067 J Street Drain Project; Ventura County.

Native American Contacts
Ventura County
April 16, 2009

Charles S. Parra
P.O. Box 6612
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(805) 488-0481 (Home)

Chumash

Carol A. Pulido
165 Mountainview Street
Oak View , CA 93022
805-649-2743 (Home)

Chumash

Melissa M. Para-Hernandez
119 North Balsam Street
Oxnard , CA 93030
805-988-9171

Chumash

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Kyle Consulting

June 1, 2008

Ms. Debbie Plias-Treadway
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, California 95814

Subject: Request for Sacred Lands File Check

Dear Ms. Plias-Treadway:

Please complete a Sacred Lands File check for the J Street Drain Initial Study for the Ventura County Watershed Protection District. I have included the Oxnard USGS quadrangle map showing the location of the project area at Township 10S, Range 2.98W, Unsectioned. These were very difficult for me to interpret from the USGS quadrangle so I may not have the correct.

Thank you for your assistance.

Sincerely,

Carolyn E. Kyle
Project Archaeologist

Attached

P.O. Box 2509• Borrego Springs, CA 92004
Tel 760.767.3371 Fax 760.767.5687
Email crkyle@aol.com

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390

June 3, 2008

Carolyn Kyle
Kyle Consulting
P.O. Box 2509
Borrego Springs, CA 92004

Sent by Fax: 760-767-5687
Number of Pages: 2

RE: Proposed J Street Drain Initial Study, Ventura County Watershed Protection District, Ventura County

Dear Ms. Kyle:

A record search of the sacred lands file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4040.

Sincerely,

Katy Sanchez

Katy Sanchez
Program Analyst

Native American Contacts
Ventura County
June 3, 2008

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Tataviam
Kitanemuk

Coastal Band of the Chumash Nation
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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed J Street Drain Initial Study, Ventura County Watershed Protection District; Ventura County.

Kyle Consulting

Sample Letter

P.O. Box 2509
Borrego Springs, California 92004

Telephone (760) 767-3371
Fax: (760) 767-5687
email: crkyle@aol.com

June 2, 2008

Coastal Band of the Chumash Nation
Janet Garcia, Chairperson
P.O. Box 4464
Santa Barbara, California 93140

Subject: J Street Drain Initial Study for the Ventura County Watershed Protection District Project

Dear Ms. Garcia:

Kyle Consulting is conducting an initial constraint level study for the above project that includes a literature review and record search at the South Central Coastal Information Center, California State University, Fullerton and Native American Consultation. The project area is located along J Street, which is on the border of the City of Oxnard and City of Port Hueneme in Ventura County as well as within the Ormond Beach Lagoon (see attached map). The study is being conducted in accordance with the California Environmental Quality Act criteria.

The proposed project would involve increasing the capacity of the existing channel to reduce flooding in residential and commercial areas of Oxnard and Port Hueneme, and improve storm water flow through the J Street Drain. The existing concrete-lined channel has a dept of about 4 feet with a bottom width varying from 20 to 30 feet with 1:1 side slopes. There are various options that are being considered for the increase capacity channel and outlet. The project alternatives are identified a channel options and outlet options and these options can bee combined as desired for the preferred alternative. Currently these are still being evaluated and there is no specific preferred alternative. Operation and maintenance of the proposed channel would be conducted in accordance with the Ventura County Watershed Protection District's routine operation and maintenance protocols.

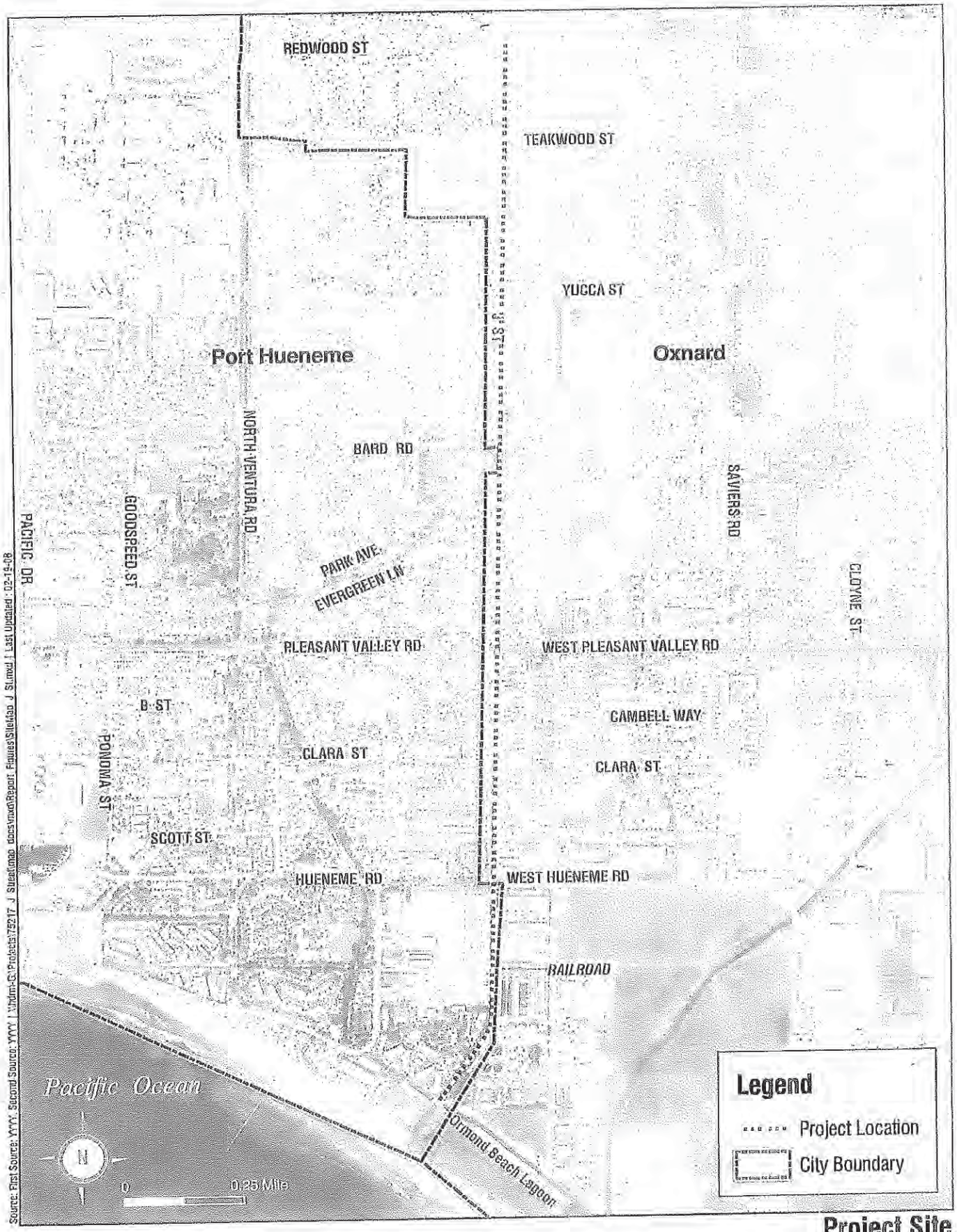
We are requesting any information or concerns that you may have the proposed project we request any comments be received at Kyle Consulting, by letter, telephone, fax, or email, by June 10, 2008. Thank you for your assistance.

Sincerely,

Carolyn E. Kyle

Carolyn E. Kyle
Project Archaeologist

Attached



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Project Site

FIGURE 2

HDR
ONE COMPANY | *Many Solutions*

FUGRO WEST, INC.

DRAFT GEOTECHNICAL STUDY
J STREET DRAINAGE IMPROVEMENTS
VENTURA COUNTY WATERSHED PROTECTION DISTRICT
PROJECT NO. 82322
OXNARD, CALIFORNIA

DRAFT

Prepared for:
HDR Engineering, Inc.

January 2009
Fugro Job No. 3161.014

January 20, 2009
Project No. 3161.014

HDR Engineering, Inc.
3230 El Camino Real, Suite 200
Irvine, California 92602

Attention: Mr. William Young, P.E., Water Resources Section Manager

Subject: Draft Geotechnical Study, J Street Drain Improvements, Ventura County Watershed Protection District Project No. 82322, Oxnard, California.

Dear Mr. Young:

Fugro West, Inc., herewith presents this draft geotechnical study for the proposed J Street Drain Improvements in Oxnard, California. Geotechnical engineering services for this project were provided in accordance with our revised proposal dated May 7, 2007.

The draft report presents field exploration and laboratory test data compiled for this study, and summarizes our opinions and recommendations for site preparation and channel design based on preliminary assumptions. Once design concepts are finalized, updated recommendations can be developed, as appropriate.

If you have any questions or require additional information regarding this study, please contact the undersigned.

Sincerely,

FUGRO WEST, INC.

Loree A. Berry, P.E.
Project Engineer

Jon M. Everett, P.E., G.E.
Principal Geotechnical Engineer

Lori E. Prentice, R.G., C.E.G.
Principal Engineering Geologist

Copies Submitted: (6) Addressee and 1-CD

DRAFT

CONTENTS

Page

1.0 INTRODUCTION 3
1.1 General 3
1.2 Project Description and Site Conditions 3
1.2.1 Project Description 3
1.2.2 Site Conditions 3
1.3 Purpose and Scope 4
1.3.1 Subsurface Exploration 4
1.3.2 Laboratory Testing 4
1.3.3 Geotechnical Analysis and Report Preparation 4
2.0 GEOLOGIC AND SUBSURFACE CONDITIONS 5
2.1 Regional Setting 5
2.2 Local Setting 5
2.2.1 Artificial Fill (af) 5
2.2.2 Alluvium (Qal) 5
2.3 Groundwater 6
2.4 Potential Variation of Subsurface Materials 6
2.5 Seismic Considerations and Geohazards 6
2.5.1 Potential for Strong Ground Shaking 6
2.5.2 Ground Rupture Potential 6
2.5.3 Liquefaction Potential 6
3.0 RECOMMENDATIONS 7
3.1 Site Preparation 7
3.2 Excavations 8
3.2.1 Excavation Conditions 8
3.2.2 Special Subgrade Stabilization Measures 8
3.2.3 Dewatering 8
3.2.4 Temporary Excavations and Shoring 9
3.2.5 Operations 10
3.3 Fill Materials 10
3.3.1 General Fill 10
3.3.2 Imported Fill 10
3.3.3 Drainage Materials 10
3.4 General Fill Placement 11
3.5 Overexcavation and backfill 11
4.0 CHANNEL FOUNDATION DESIGN 11
4.1 Allowable Bearing Pressure 11
4.2 Modulus of Subgrade Reaction 12
4.3 Settlement 12
4.4 Resistance to Lateral Loads 12

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4.5 Uplift Pressures 12
4.6 Lateral Earth Pressures 13
4.6.1 General 13
4.6.2 Equivalent Fluid Weights 13
4.6.3 Channel Wall Construction 13
4.6.4 Corrosion Potential 14

5.0 LIMITATIONS 14

6.0 REFERENCES 16

TABLES

Page

1 Estimated Liquefaction-Induced Settlement Along Channel Alignment 7
2 Recommended Equivalent Fluid Weights (pcf) for Retaining Wall Design 13
3 Summary of Chemical Test Results 14

PLATES

Plate

Vicinity Map 1
Site Exploration Plan and Profiles 2

APPENDICES

APPENDIX A FIELD EXPLORATION

Logs of CPT-1 through CPT-11 ..... Plates A-1 through A-11
Key to CPT Logs ..... Plate A-12
Log of Boring No. DH-1 through DH-5 ..... Plates A-13 through A-17
Log of Boring No. MW-1 through MW-3 ..... Plates A-18 through A-20
Key to Terms & Symbols Used on Logs ..... Plates A-21 and A-22

APPENDIX B LABORATORY TESTING

Summary of Laboratory Test Results ..... Plates B-1a and B-1b
Grain Size Curves ..... Plates B-2a and B-2b
Plasticity Chart ..... Plate 3
Direct Shear Test Results ..... Plates B-4a and B-4b
Consolidation Test Results ..... Plate B-5
Corrosivity Test Summary from Cooper Testing Laboratory ..... Plate B-6

APPENDIX C HYDRAULIC CONDUCTIVITY TESTING

Pumping Test Results ..... Plates C-1 to C-4
Recovery Test Results ..... Plates C-5 and C-6

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1.0 INTRODUCTION

1.1 GENERAL

This report presents the results of a geotechnical study for the planned improvements to the J Street Drain in Oxnard, California. This study was performed in general accordance with our revised proposal to HDR Engineering, Inc. (HDR) dated May 7, 2007. Our services for this project were authorized by a Subconsulting Agreement executed by Ms. Betty Dehoney of HDR, dated March 14, 2008.

The site is located as shown on Plate 1 – Site Location Map. The site layout is shown on Plate 2 – Site Exploration Plan and Profiles.

1.2 PROJECT DESCRIPTION AND SITE CONDITIONS

1.2.1 Project Description

Our understanding of the proposed project, and the general scope of geotechnical services provided for this study, is based on discussions with Mr. William Young of HDR and representatives of the Ventura County Watershed Protection District (VCWPD). The goal of the project is to reduce local flooding in the City of Oxnard by increasing the capacity of the existing J Street Drain channel. Based on preliminary design information furnished by HDR, the proposed project will consist of the construction of a rectangular reinforced concrete channel that is about 30 feet wide and 8 feet deep. New culverts designed to handle the projected 100-year flow will replace the existing culverts.

1.2.2 Site Conditions

The existing J Street Drain Channel is a 2.2-mile long concrete-lined flood control channel located along the center line of J Street in Oxnard, California. J Street consists of two northbound lanes and two southbound lanes located immediately east and west of the channel, respectively. The channel begins at Redwood Street and flows south to where it discharges into the Ormond Beach Lagoon. J Street terminates at the south end where it meets Hueneme Road. The existing drain was constructed in the 1960's and consists of a 20- to 30-foot-wide trapezoidal channel with 1(h):1(v) side slopes that are about 4 to 6 feet deep. There are seven existing culverts along the alignment that allow traffic to pass over the channel. The six culverts that handle street traffic are at Teakwood Street, Yucca Street, Bard Road, Pleasant Valley Road, Clara Street, and Hueneme Road, all of which consist of multi-barrel reinforced concrete box (RCB) structures. The seventh culvert, which allows the Ventura County Railroad to cross the channel south of Hueneme Road, consists of a parallel arrangement of five corrugated metal pipes (CMPs) ranging in diameter from approximately 4 to 5 feet. Residential development is present along both sides of the channel along most of the alignment. Commercial and industrial development is present south of the intersection of Hueneme Road.

DRAFT

1.3 PURPOSE AND SCOPE

The purpose of the geotechnical engineering study was to explore and evaluate the geotechnical conditions at the site, and to develop geotechnical opinions and recommendations for use in planning and design of the proposed channel improvements.

Our scope of services for the study included the following tasks.

1.3.1 Subsurface Exploration

The subsurface exploration program was performed to obtain geotechnical data for use in developing the recommendations in this report. The program consisted of electric Cone Penetrometer Tests (CPTs) and hollow-stem auger borings. The locations of the CPTs and borings are shown on Plates 1 and 2. Further details regarding the subsurface exploration program are presented in Appendix A.

Eleven (11) Cone Penetrometer Test (CPT) soundings were advanced to depths ranging from approximately 33 feet to 50 feet below the ground surface (bgs). Data from the CPT soundings are presented on the CPT logs in Appendix A (Plates A-1 through A-11).

Eight (8) hollow-stem auger borings were drilled to depths of approximately 30 to 40 feet bgs. Soil samples were obtained from the borings for laboratory testing. Three of the hollow-stem auger borings were completed as groundwater monitoring wells to depths of approximately 30 feet bgs. Descriptions of the geotechnical conditions observed in the borings are presented on the boring logs in Appendix A (Plates A-13 through A-20).

1.3.2 Laboratory Testing

Laboratory testing was performed on selected soil samples obtained from the exploratory borings. Samples were analyzed for unit dry weight and moisture content, grain size, Atterberg Limits (Plasticity Index), shear strength, and corrosion potential. The results of the laboratory tests are presented in Appendix B of this report.

1.3.3 Geotechnical Analysis and Report Preparation

The data obtained from the subsurface exploration and laboratory testing program were reviewed and evaluated to characterize the geotechnical conditions along the alignment and to develop parameters for use in design of the project. The results were compiled into this report, which includes geotechnical opinions and preliminary recommendations regarding:

- Description of the subsurface soil and groundwater conditions observed in the subsurface borings;
- Assessment of the soil engineering properties, based on field observations and laboratory testing;
- General geohazard and seismic design criteria;
- Suitability of excavated material for use as compacted fill;

DRAFT

- Description of applicable dewatering, temporary excavation, and shoring methods and construction considerations (does not include design of groundwater dewatering or shoring system);
- Bearing pressure, lateral earth pressure, and settlement estimates for proposed box culverts; and
- Evaluation of corrosion potential for buried ferrous metal and concrete.

2.0 GEOLOGIC AND SUBSURFACE CONDITIONS

2.1 REGIONAL SETTING

The Oxnard Plain is located within the Transverse Ranges geologic/geomorphic province of California. That province is characterized by generally east-west trending mountain ranges composed of sedimentary and volcanic rocks ranging in age from Cretaceous to Recent. Major east-trending folds, reverse faults, and left-lateral strike-slip faults reflect regional north-south compression and are characteristic of the Transverse Ranges. The project site is located in the seismically active southern California area, and the project will most likely be subjected to strong earthquake ground motion during its lifetime.

2.2 LOCAL SETTING

The Oxnard Plain is predominately underlain by alluvial soils. The earth materials exposed along the project alignment consist of fine- to coarse-grained alluvial fan deposits. Additionally, artificial fill materials associated with roadways, buildings, and other development are also present in the project area.

2.2.1 Artificial Fill (af)

Up to 4 feet of artificial fill was observed in the borings. Generally, the fill consists of asphaltic concrete and base material (where applicable) overlying medium dense clayey to silty sand. The majority of the non-pavement artificial fill materials were likely derived from the underlying alluvial materials. Because of the similarity in material types, it was often difficult to differentiate the fill from the underlying alluvium. Therefore, the differentiation shown on the boring logs may vary from actual conditions encountered during construction.

2.2.2 Alluvium (Qal)

Native soils observed in the borings and encountered in the CPTs at the ground surface or below the artificial fill consisted of predominately coarse-grained alluvial deposits with interbedded fine-grained deposits of variable thickness and consistency. The coarse-grained deposits consisted of loose to medium dense sands, silty sands and clayey sands. The fine-grained material consisted of soft to stiff silts and clays.

DRAFT

2.3 GROUNDWATER

Groundwater was observed in all of the borings at depths ranging from about 4½ feet to 11 feet bgs. Groundwater levels published by the California Geologic Society (CGS, 2002) indicate historic groundwater levels are within 5 feet below the ground surface. Based on the subsurface soil and groundwater conditions observed in the borings, it is possible that groundwater may reach the existing ground surface during storm events. It must be noted that groundwater conditions can vary seasonally and/or in response to changes in rainfall and other factors not evident at the time of our subsurface exploration, such as irrigation, land use, and groundwater withdrawal.

2.4 POTENTIAL VARIATION OF SUBSURFACE MATERIALS

The borings and CPT soundings performed for this study were spaced about 400 to 1,000 feet apart along the proposed channel alignment (Plates 1 and 2). Therefore, there is a potential for variation in the consistency, density, and strength/hardness of the materials. There is also potential for oversized materials (greater than 8 inches in diameter), perched water, zones of poorly consolidated soils, or other conditions not indicated in the boring logs and CPT logs. If significant variation in the geologic conditions is observed during grading, we recommend that the geotechnical engineer, in conjunction with the project designer, evaluate the impact of those variations on the project design.

2.5 SEISMIC CONSIDERATIONS AND GEOHAZARDS

2.5.1 Potential for Strong Ground Shaking

The site is located in the seismically active southern California region and ground shaking generated from future earthquakes on local or regional faults should be anticipated.

Based on a regional probabilistic seismic hazard evaluation using averaged results from the ground motion attenuation relations, the California Division of Mines and Geology (CDMG, 2002) estimates peak horizontal ground acceleration (PGA) ranging from 0.59g to 0.62g for a 10 percent probability of exceedance in a 50-year exposure period. CDMG (2002) also indicates that the predominant earthquake moment magnitude is about M7.3 and the modal distance is about 2 kilometers (km) for the project area.

2.5.2 Ground Rupture Potential

No known active or potentially active faults have been mapped by other investigators beneath or trending toward the site. In addition, the site is not located within an Alquist-Priolo Special Studies Zone. Therefore, in our opinion, the ground rupture potential due to faulting is considered to be low.

2.5.3 Liquefaction Potential

Soil liquefaction occurs as a result of a loss of shear strength or shearing resistance in loose, saturated soils subjected to earthquake-induced ground shaking. Typically, soil

DRAFT

liquefaction occurs within the upper 50 feet of the soil profile and can be manifested at the ground surface by the formation of sand boils, ground surface settlement, lateral spreading, and/or ground oscillation.

Like most of Oxnard and Port Hueneme, the J Street Drain is located within a liquefaction hazard zone as mapped by CDMG (2002). Granular subsurface soils and high groundwater suggest liquefaction settlement could occur along the alignment.

The magnitude of liquefaction-induced settlement along the channel alignment was estimated using the CPT-Analyst software program at each of the 11 CPT soundings performed for this project. A design groundwater level of 5 feet below existing ground surface along J Street was used at all locations. The design earthquake input parameter was the site PGA, which is described in Section 2.5.1. The range of estimated li uefaction settlements at each CPT location is presented in the following table.

Table 1 - Estimated Liquefaction-Induced Settlement long Channel Alignment

CPT Number	Station	Estimated Settlement (in.)
CPT – 1	126+20	2 – 3
CPT – 2	10 0	3 – 4
CPT – 3	102 5	3 – 4
CPT – 4	83+3	2 – 3
CPT – 5	74+35	5 – 6
CPT – 6	0	4 – 5
CPT – 7	52+60	4 – 5
CP – 8	41+20	4 – 5
CP – 9	35+30	3 – 4
CPT – 1	29+20	5 – 6
CPT - 11	16+40	7 – 8

The results of the liquefaction analyses indicate that some segments of the alignment could experience more seismic settlement than others during the design-level earthquake.

3.0 RECOMMENDATIONS

Geotechnical recommendations for concrete channel design are presented below.

3.1 SITE PREPARATION

Prior to channel construction, the existing concrete channel, unsuitable fill materials, or any other deleterious materials should be demolished or stripped and removed from construction areas. Underground structures (e.g., pipelines, old foundations, etc.) and soils disturbed during the demolition process also should be removed.

DRAFT

3.2 EXCAVATIONS

3.2.1 Excavation Conditions

The earth materials encountered in the borings excavated for this study consisted primarily of granular soils deposited in an alluvial environment. The fines content of the sampled granular materials ranged from about 1 to 37 percent. It should be noted that granular material with low fines content like those encountered in our explorations are particularly susceptible to caving. Appropriate shoring or laying back of trench walls should be utilized to reduce the potential for caving.

Based on our observations during drilling, we anticipate that conventional heavy grading equipment in good working order should be capable of excavating the earth materials encountered along the alignment of the channel improvements. However, smaller equipment may be necessary where working space is limited.

Groundwater was observed at the exploration locations at depths ranging from about 4½ feet to 11 feet below the existing ground surface. Therefore, dewatering will likely be required at most locations along the alignment since the observed groundwater levels were at or above the bottom of proposed construction excavations. Where shallower excavations do not extend below the groundwater level, the excavation bottom will likely be locally wet, soft, and yielding. For this condition, the bottom of the excavation should be stabilized prior to construction of channel improvements so that the subgrade is firm and unyielding.

3.2.2 Special Subgrade Stabilization Measures

As indicated above, stabilization of channel excavation bottom conditions may be needed if the subgrad is s ft or yielding. The contractor, after considering input from the design engineer, geotechnical ngineer, and owner, should be responsible for design and implementation of an subgrade abilization techniques. Some methods that have been used successfully to stabilize ubgrad include:

- <u>Rock stabilization blanket</u> - Geotextile fabric (such as Mirafi HP570) can be placed along the excavation bottom and covered with a 1- to 2-foot thick layer of 4-inch minus crushed rock. A layer of ¾-inch crushed rock sufficient to fill the voids is then spread on top of the coarser material and can be covered with a non-woven filter fabric (such as Mirafi 180N) if fill soil will be placed on the stabilization blanket; or
- <u>Soil-cement</u> - The soft subgrade can be overexcavated, mixed with portland cement, and replaced to form a layer of cement-stabilized soil.

3.2.3 Dewatering

For excavations extending below anticipated groundwater elevations, pumping of free water from open excavations using portable sump pumps may not be adequate to maintain excavations in a dry and stable condition. Instead, an integrated system of fixed dewatering wells may be required. Dewatering systems should be designed, installed, and operated by an experienced contractor specializing in groundwater dewatering systems and should be capable

DRAFT

of lowering the groundwater surface to a level below the required depth of excavation. Groundwater levels should be maintained at least 3 feet below any point on the excavated surface (defined by the elevation of any overexcavated surface) and should provide excavation sidewalls free of groundwater seepage. The dewatering system should be designed, installed and operated so as to minimize the potential for settlement and damage to adjacent improvements and property.

Before selecting or implementing a dewatering system, we recommend that a dewatering test program be conducted to evaluate the feasibility and efficiency of the proposed dewatering system. Dewatering operations will require permitting in accordance with National Pollutant Discharge Elimination System (NPDES) regulations and possibly other local permits. It is recommended that groundwater along the channel alignment be tested for the presence of environmental contaminants in order to evaluate the need for treatment prior to discharge or disposal.

To aid in the dewatering design, pump testing was performed in two of the monitoring wells, MW-1 and MW-2. The results of the pump testing were used to evaluate the hydraulic conductivity of the aquifer at two locations along the channel alignment. Details regarding the pump test procedures and results of the evaluation are described in Appendix C - Hydraulic Conductivity Testing.

3.2.4 Temporary Excavations and Shoring

Excavations more than 4 feet deep should be sloped, shored, or shielded in accordance with federal and state standards, project specifications, and safe construction practices. The contractor is responsible for providing and maintaining safe excavations according to Occupational Safety and Health Administration (OSHA) regulations.

In areas where the right-of-way is of sufficient width, temporary excavations could potentially be laid back no steeper than 1:1. However, loose to medium dense sands with varying amounts of silt, clay, and gravel were encountered in the borings. Per OSHA (1926), unsupported excavations for Type C soils (sands and gravels) should be sloped no steeper than 1.5(h):1(v), and even flatter slopes may be warranted depending on exposed soil conditions. Temporary excavations should be monitored for stability during construction and be modified if necessary. Excavations lacking adequate sidewall support could move or be unstable and result in damage to existing improvements and utilities adjacent to the channel alignment. The use of unshored excavations will likely limit traffic access near the top of temporary slopes.

Where there is insufficient width or where other factors would prohibit the use of temporary construction slopes, a shoring system will likely be required. The selection, design, and installation of any shoring system needed for the project should be made by the contractor in accordance with OSHA regulations.

We anticipate that potential shoring methods could consist of cantilevered sheet piling or cantilevered soldier beam and lagging systems. Lateral pressures applicable for the design will depend on the type of shoring system selected by the contractor, surcharge loads due to construction equipment and traffic, and any dewatering methods that are used.

DRAFT

3.2.5 Operations

To help reduce the potential for caving/sloughing of the excavation sidewalls from construction equipment and/or traffic vibration, we suggest that the contractor maintain a setback equal to the depth of the excavation. However, if local soil conditions create a sidewall-stability hazard, the project geotechnical engineer should be consulted to evaluate alternative minimum distances needed between the edge of the excavation and construction equipment, vehicle traffic, and stockpiled materials, so that the potential for sidewall instabilities can be minimized.

As a general guideline, heavy equipment should be excluded from a zone located between the top of the excavation and a 1h:1v projection from the bottom of the adjacent sidewall. This is a general guideline and may need to be modified in the field for specific geotechnical conditions. The contractor should consult the project geotechnical engineer regarding excavation procedures.

3.3 FILL MATERIALS

Based on limited laboratory testing performed as part of this study, much of the onsite soil appears to satisfy requirements for general fill as described below. General fill may be used for fill beneath the channel bottom, beneath the channel wall footings, and behind the channel walls (outside of the drainage envelope as described in Section 4.6.4).

3.3.1 General Fill

Soil generated during removal of the existing channel may be suitable for use as general fill provided that oversize materials are removed and debris and other deleterious materials are excluded.

General fill materials should meet the following requirements:

- No rocks larger than 3 inches in maximum dimension.
- No more than 15 percent material larger than 2 inches.
- Non-expansive (EI $\leq$ 20).
- Plasticity Index $<$ 10.
- Less than 30 percent passing the No. 200 sieve.

3.3.2 Imported Fill

Imported fill materials may be used for general fill, provided that the imported fill satisfies the requirements in Section 3.3.1. Imported fill material should be evaluated by the geotechnical engineer to verify suitability for its intended use.

3.3.3 Drainage Materials

Drainage material should be placed behind the channel walls in accordance with Section 4.6.4, and consist of clean, coarse-grained material with no more than 5 percent passing the No. 200 sieve. Acceptable drainage materials include "Pervious Backfill" conforming to Item

DRAFT

300-3.5.2, Standard Specifications for Public Works Construction (Greenbook, 2006), "Permeable Material" conforming to Item 68-1.025, Caltrans Standard Specifications (Caltrans, 2006), or three-quarter-inch uniformly graded rock or gravel. All drainage materials should be enclosed in a filter fabric, such as Mirafi 140N or equivalent.

3.4 GENERAL FILL PLACEMENT

Fill should be placed and compacted at a moisture content within 2 percent of the optimum moisture and compacted to at least 90 percent relative compaction as determined by ASTM D1557. Fill should be spread in lifts no thicker than about 8 inches prior to being compacted. Each layer should be spread evenly and thoroughly blade-mixed during the spreading to provide relative uniformity of material within each layer. Soft or yielding materials should be removed and replaced with properly compacted fill material prior to placing the next layer.

3.5 OVEREXCAVATION AND BACKFILL

All soils disturbed as part of channel demolition and any existing artificial fill soils exposed during demolition should be overexcavated to expose undisturbed native material. The overexcavation should extend at least 2 feet beyond the outside edge of channel wall footings. Any soft, loose, or unstable soil or other deleterious material should be removed entirely and replaced with engineered compacted fill. Backfilling of excavations should be performed in accordance with Section 3.4. Backfill materials below the channel bottom or wall footings should consist of stabilization materials as described in Section 3.2.2 and/or general fill materials that meet the minimum requirements in Section 3.3.1 of this report. All overexcavation, removal, and backfill activities should be performed under the observation and testing of Fugro.

DRAFT

4.0 CHANNEL FOUNDATION DESIGN

Channel retaining walls and culverts should be designed and constructed in accordance with recommendations below.

4.1 ALLOWABLE BEARING PRESSURE

Retaining wall footings may be sized for dead load plus probable maximum live load using a maximum net allowable bearing pressure of 1,500 pounds per square foot (psf) for footings founded on compacted fill as described above. The recommended allowable bearing pressure includes a factor of safety for general shear failure in excess of 2.5. A one-third increase in the allowable bearing pressure may be used for transient loads such as seismic or wind forces.

Fugro estimates that most of the RCB structures will exert a contact pressure of 500 psf or less on underlying soils. As they become available, the dead weights, live loads, and structure dimensions for all culverts should be provided to Fugro in order to verify the design bearing pressures.

4.2 MODULUS OF SUBGRADE REACTION

The design of slabs may be based on an analogy with a beam on an elastic half-space. A modulus of subgrade reaction (k) of 175 pounds per cubic inch can be used for the design of the channel bottom founded on granular compacted fill.

4.3 SETTLEMENT

Provided the channel wall footings are designed and constructed in accordance with recommendations herein, we anticipate that total settlement from static loads generally should be on the order of about 1 inch or less if bearing on a minimum of 2 feet of compacted fill.

For the assumed maximum static bearing pressure of 500 psf, static settlements of reinforced concrete box (RCB) culverts are estimated to be on the order of 2 – 3 inches, most of which will occur during or soon after construction. These structures will also be subjected to the estimated liquefaction settlements presented in the table above.

The future loading requirements for the new culvert at the railroad crossing are unknown. Fugro assumes that the new structure will consist of a multi-barrel RCB similar to the other proposed structures. Settlements for the proposed railroad crossing structure are expected to be on the order of the estimated settlements discussed above for RCBs at the other locations. Fugro should confirm the estimated settlement for the railroad crossing structure once the structure type and loading conditions are known.

4.4 RESISTANCE TO LATERAL LOADS

Ultimate sliding resistance generated through a concrete-on-soil interface may be computed by multiplying dead weight structural loads, less buoyant forces where applicable, by a of coefficient 0.4.

Ultimate passive earth resistance may be estimated using an equivalent fluid weight of 350 pcf for drained conditions and 175 pcf for undrained conditions, based on a friction angle of 35 degrees and an average total unit weight of about 120 pcf. The undrained passive resistance is provided to allow consideration of drainage facilities constructed behind the channel walls that become clogged.

Sliding resistance and passive pressure may be used together without reduction in conjunction with minimum factors of safety of 1.5 and 2.0, respectively.

4.5 UPLIFT PRESSURES

Groundwater levels may rise above the channel bottom due to a rise in the groundwater table or flood conditions in the channel. Therefore hydrostatic uplift pressures should be considered in design.

For uplift design, dead weight loads should exceed uplift pressures along the foundation bottom. Dead weight loads may be estimated using the total unit weight of the concrete channel

DRAFT

and the total unit weight of soil above any footing extensions beyond the channel walls. The weight of water in the channel should be considered a live load and therefore omitted from the cumulative dead weight loads. Uplift pressures should be estimated assuming the groundwater level is at the ground surface.

4.6 LATERAL EARTH PRESSURES

4.6.1 General

Walls that are free to rotate or translate laterally (e.g., cantilevered) through a horizontal-distance-to-wall-height ratio of no less than 0.004 are referred to as unrestrained or yielding. Such walls can generally move enough to develop active conditions. Walls that are unable to rotate or deflect laterally (e.g. fixed at the top) are referred to as restrained or non-yielding.

If backfill materials behind the channel walls consist of cohesionless soils, then unrestrained walls can usually be designed for active earth pressure conditions, which are lower than at-rest conditions. For cohesionless backfills, restrained walls should be designed for at-rest earth pressure conditions. For cohesive backfills, both unrestrained and restrained walls should be designed for at-rest conditions because cohesive soils creep, undergo stress relaxation, and cannot sustain active conditions. If backfill materials are expansive, then lateral earth pressures will be increased as a result of swelling pressures.

Based on our understanding of the project, the channel walls will be unrestrained. If wall backfill consists of material conforming to general fill requirements presented in Section 3.3.1, unrestrained channel walls should be designed for active conditions.

4.6.2 Equivalent Fluid Weights

Table 2 presents recommended equivalent fluid weights for level backfills for static conditions for the at-rest and active cases under either drained or undrained conditions. Drained conditions imply that drainage measures are incorporated into the wall to preclude the buildup of hydrostatic pressure as described in Section 4.6.3.

Table 2. Recommended Equivalent Fluid Weights (pcf) for Retaining Wall Design

Wall Backfill	Drained		Undrained	
	Active	At-Rest	Active	At-Rest
Compacted Cohesionless Soil	30	60	80	90

4.6.3 Channel Wall Construction

Fill Placement. Backfill materials behind channel walls and beneath channel bottoms can consist of onsite soils satisfying recommendations in Section 3.3.1, and should be compacted to at least 90 percent relative compaction. Channel wall backfill should be placed outside of the drainage material described herein, to at least a 1(h):1(v) line projected upward

DRAFT

from the heel of the channel wall footing. Wall backfill geometry may need to be modified to satisfy OSHA regulations for temporary excavations summarized in Section 3.2.2.

Compaction Adjacent to Walls. Backfill within 5 feet, measured horizontally, behind the retaining structures should be compacted with lightweight hand-operated compaction equipment to reduce the potential for induction of large compaction-induced stresses. If large or heavy compaction equipment is used, compaction-induced stresses can result in increased lateral earth pressures on the retaining walls. If lightweight, hand-operated compaction equipment will not be used, further evaluation of the potential for compaction-induced stresses may be warranted.

Drainage Measures. Drainage measures, as described in Section 3.3.3, should be provided behind channel walls to preclude the buildup of hydrostatic pressures. As previously specified, clean, coarse-grained material with no more than 5 percent passing the No. 200 sieve should be enclosed in or protected with a filter fabric, such as Mirafi 140N or equivalent.

4.6.4 Corrosion Potential

Three corrosion tests were performed on representative samples of subsurface materials. The soils tested were predominantly coarse-grained materials with varying amounts of fines. The results are summarized in Table 3. The resistivity values indicate that the tested samples are mildly to moderately corrosive to ferrous metals. Measured sulfate and chloride values were generally low for all of the samples tested and suggest those soils are generally not corrosive to concrete and steel reinforcing. The test results should be evaluated by a corrosion specialist to confirm the opinions regarding the potential corrosion impacts from the onsite soils to the channel and other construction materials proposed for the project. We also recommend that any imported fill used as backfill against concrete structures be tested to evaluate corrosion potential.

DRAFT

Table 3. Summary of Chemical Test Results

Boring No.	Material Description	Resistivity (ohms/cm)	pH	Chloride (ppm)	Sulfate (percent)
DH-1	Sand (SP)	7,893	9.0	<2	<0.0005
DH-3	Clayey sand (SC)	1,100	8.1	10	0.0480
DH-5	Silty sand (SM)	1,188	8.2	56	0.0991

5.0 LIMITATIONS

This geotechnical study report has been prepared for HDR solely for the planning, design, and construction of the proposed J Street Drain Improvements.

The scope of services did not include any environmental assessments for the presence or absence of hazardous/toxic materials in the soil, surface water, groundwater, or atmosphere. Any statements, or absence of statements, in this report or data presented herein regarding

odors, unusual or suspicious items, or conditions observed are strictly for descriptive purposes and are not intended to convey engineering judgment regarding potential hazardous/toxic assessments.

In performing our professional services, we have used generally accepted geologic and geotechnical engineering principles and have applied that degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical engineers currently practicing in this or similar localities. No other warranty, express or implied, is made as to the professional advice included in this report.

Results, evaluations, conclusions, and recommendations contained in this report are directed at, and intended to be utilized within, the scope of work contained in the proposal executed by Fugro and the client. This report is not intended to be used for any other purposes. Fugro makes no claim or representation concerning any activity or condition falling outside its specified purposes to which this report is directed, said purposes being specifically limited to the scope of work as defined in said agreement. Inquiries as to said scope of work or concerning any activity not specifically contained therein should be directed to Fugro for determination and, if necessary, further investigation.

We recommend that Fugro West, Inc., be retained to review and comment on geotechnical aspects of the project plans and specifications before they are finalized. This can allow Fugro West, Inc., to evaluate if the recommendations in this report have been properly interpreted and implemented in the design, specifications, and drawings.

Users of this report should recognize that the construction process is an integral design component with respect to the geotechnical aspects of the project. Because geotechnical engineering is inexact due to the variability of the natural processes, unanticipated or changed conditions can occur. Proper geotechnical observation and testing during construction is thus imperative in allowing the geotechnical engineer the opportunity to verify assumptions made during the design process. Therefore, we recommend that Fugro West, Inc., be retained during site grading, excavation, and construction of foundations to observe compliance with the design concepts and geotechnical recommendations, and to allow design changes in the event that subsurface conditions or methods of construction differ from those anticipated.

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PLATES

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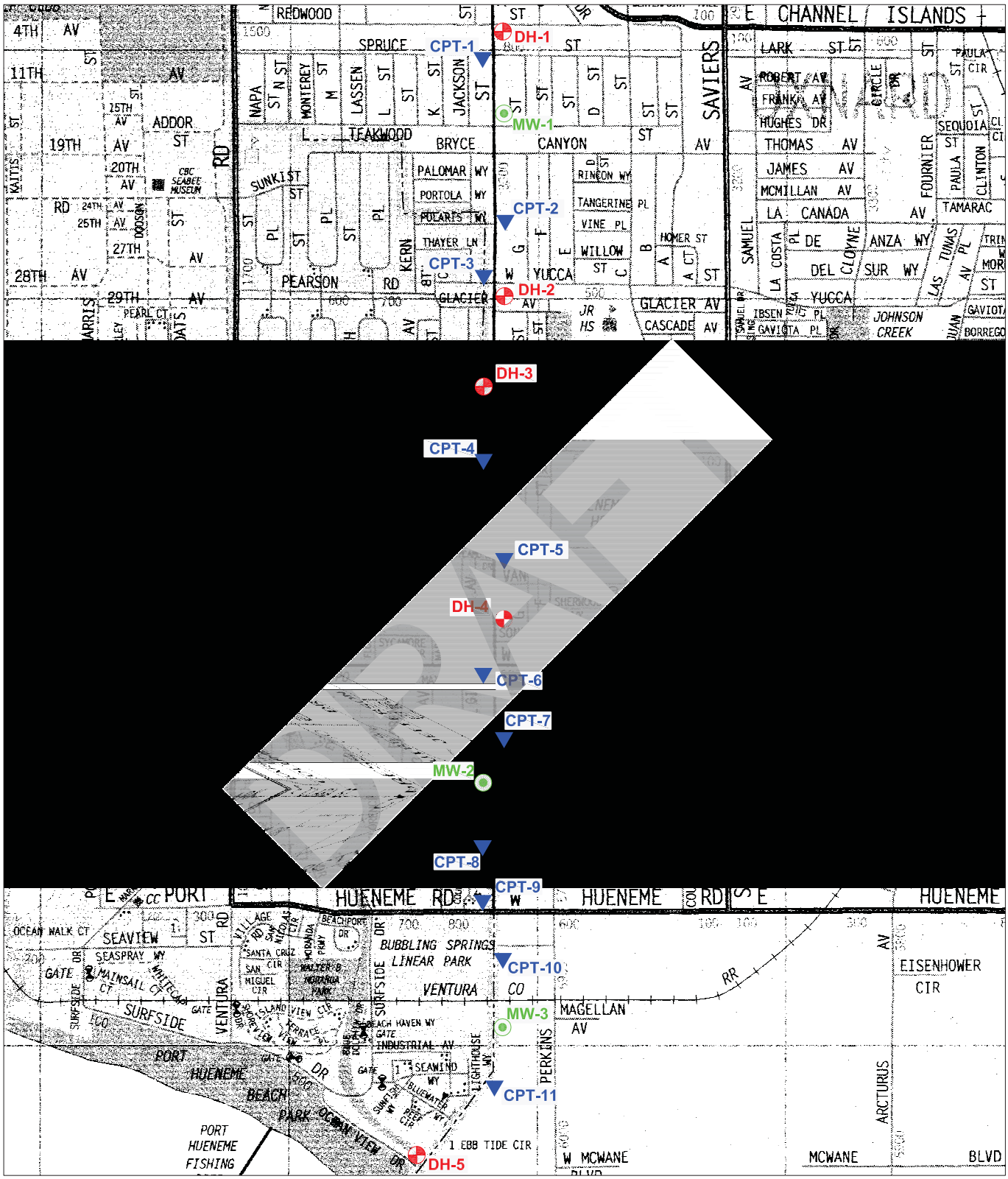

BASE MAP SOURCE: Thomas Guide 2002, Ventura County, p. 552

LEGEND

- DH-5 Approximate drill hole location
- CPT-11 Approximate CPT location
- MW-3 Approxiamte piezometer location

SITE LOCATION MAP

J Street Drain Improvements
Oxnard, California

NORTH

0 1500
FEET

PLATE 1

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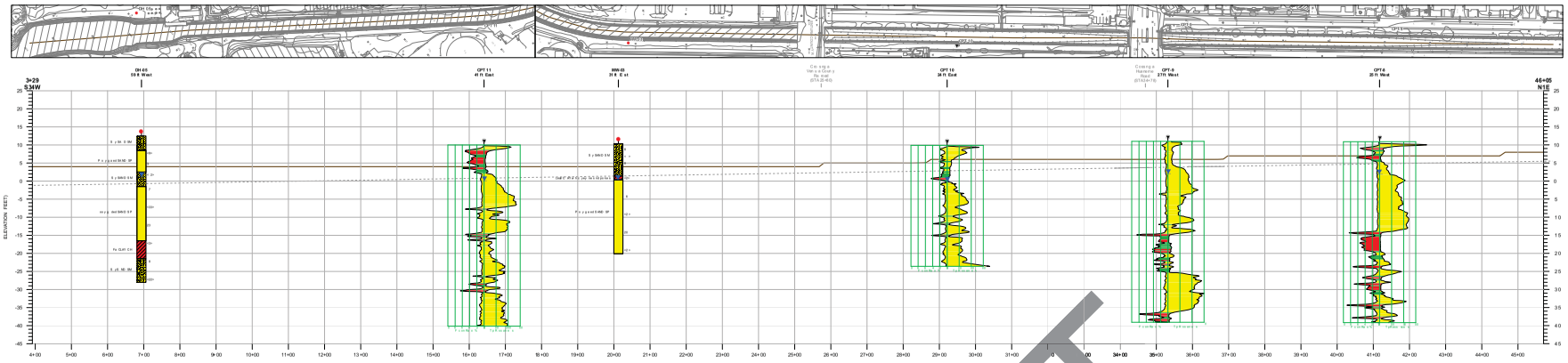

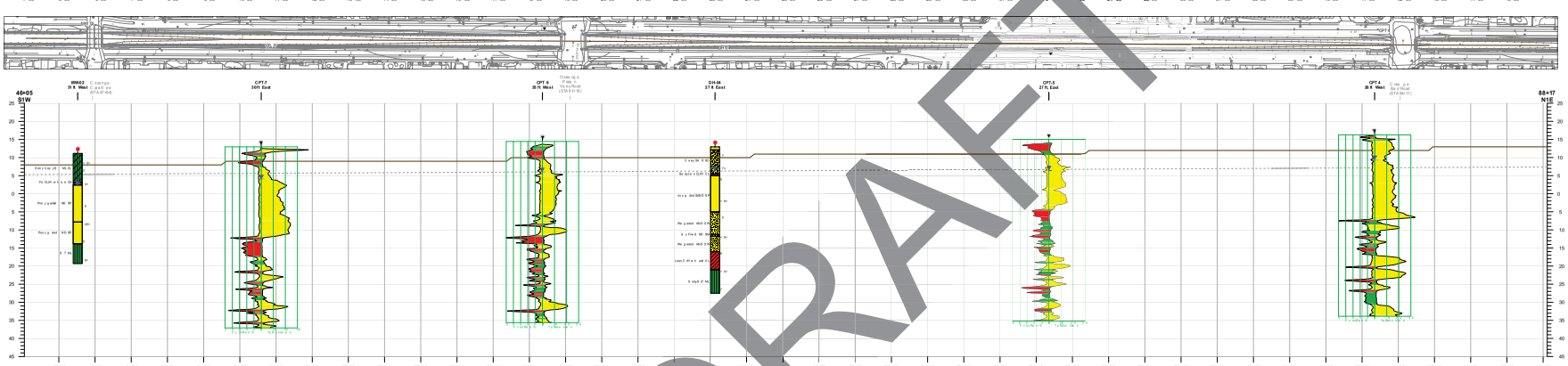

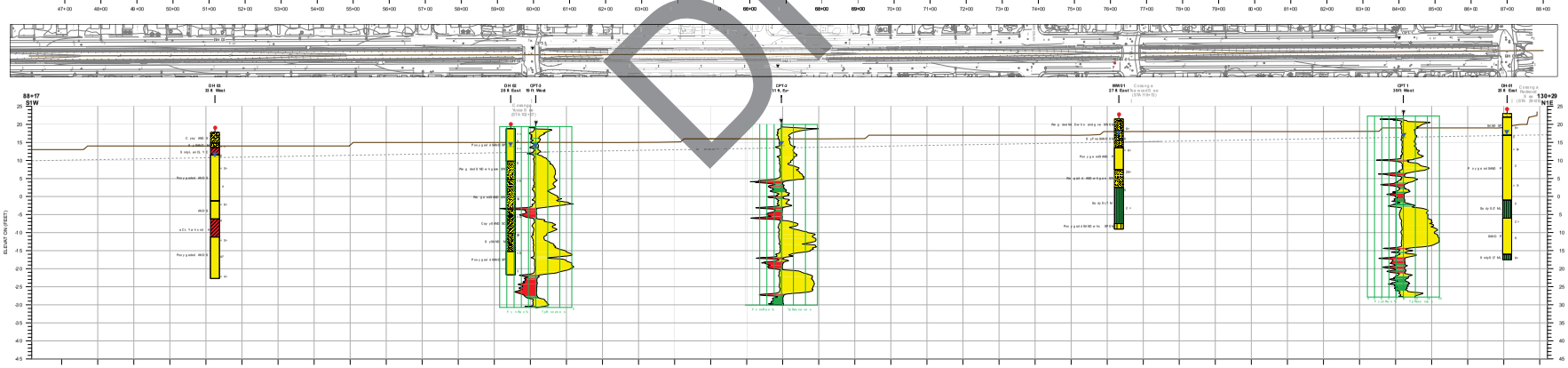

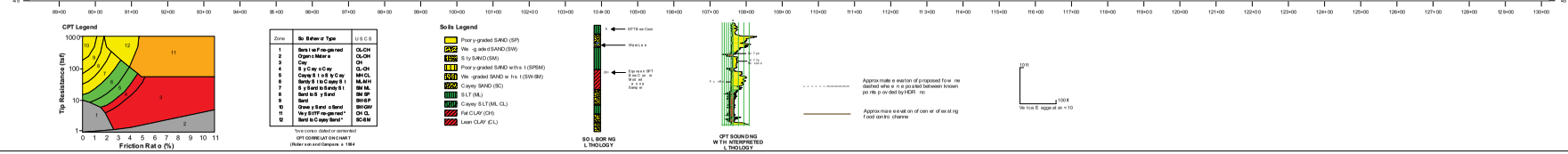

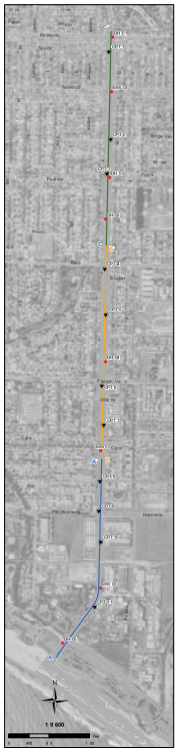

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GEODETIC INFORMATION

SPHEROID	GRS 1980
SEMI MAJOR AXIS	6378.137 (M)
SEMI MINOR AXIS	6356.752 (M)
INVERSE FLATTENING	298.257222101
ECCENTRICITY SQUARED	0.006694380
PROJECTION	LAMBERT CONFORMAL CONIC
PROJECTION ZONE	5
LONGITUDE OF ORIGIN	118°
FALSE EAST NORTHING	2000000.000 (FT)
FALSE NORTHING	500000.000 (FT)

FUGRO WEST, INC.
4820 McGrath St., Suite 100
Ventura, California 93003
Tel (805) 650-7000
Fax (805) 650-7015
www.fugrowest.com

SITE EXPLORATION PLAN AND PROFILES

J Street Drain Improvements
Oxnard, California

NO	DATE	DESCRIPTION	DRAWN	CHKD	APPR
1	Aug 2008	Preliminary Comments	CBD	LB	LB

JOB NUMBER 3161014

PLATE 2

APPENDIX A
FIELD EXPLORATION

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APPENDIX A
FIELD EXPLORATION

INTRODUCTION

The contents of this appendix shall be integrated with the geotechnical engineering study of which it is a part. They shall not be used in whole or in part as a sole source for information or recommendations regarding the subject site.

GENERAL

The field exploration for this geotechnical study consisted of eleven cone penetrometer test soundings (CPTs) and eight hollow-stem-auger drill holes performed over three continuous days beginning April 28, 2008. Three of the hollow-stem-auger drill holes were converted to groundwater monitoring wells and are referred to and labeled as such throughout this report. The approximate locations of the explorations are shown on Plate 1 - Site Location Map and on Plate 2 - Site Exploration Plan and Profiles. The field exploration program was conducted in general accordance with our revised proposal dated May 7, 2007.

CONE PENETRATION TEST SOUNDINGS

CPT soundings were performed by Fugro Consultants, Inc., of Santa Fe Springs, California, in accordance with ASTM D5778, using a 25-ton rig. The CPT soundings were advanced to depths of about 33 feet to 50 feet below the existing ground surface. Data from the CPT soundings consist of plots of sleeve friction, tip resistance, friction ratio, pore pressure, and equivalent blow count (N60) relative to depth, which are presented on Plates A-1 through A-11 - Log of CPT. A soil classification chart is presented on Plate A-12 - Key to CPT logs.

BORINGS AND MONITORING WELLS

Hollow-stem-auger drilling services were performed by Martini Drilling Corporation of Los Alamitos, California. The hollow-stem-auger borings were advanced using a truck-mounted CME 85 drilling rig equipped with an 8-inch-diameter hollow-stem-auger. Drilling was performed under the observation of a Fugro West, Inc., staff engineer, who prepared a field log of the soil conditions and obtained soil samples for laboratory observation and testing. Soils were classified in the field in general accordance with the Unified Soil Classification System. Hollow-stem-auger borings holes were excavated to a depth of about 30 to 40 feet below the ground surface.

Drive samples were obtained from the hollow-stem-auger drill hole using either modified California or Standard Penetration Test (SPT) samplers. The modified California sampler has a 3-inch-outside-diameter and a 2-3/8-inch-inside-diameter. Samplers were driven into the material at the bottom of the drill hole using a 140-pound CME automatic trip hammer with a 30-inch drop. The number of blows required to drive the California or SPT sampler was recorded on the boring logs in general accordance with ASTM D1586. Recovered samples

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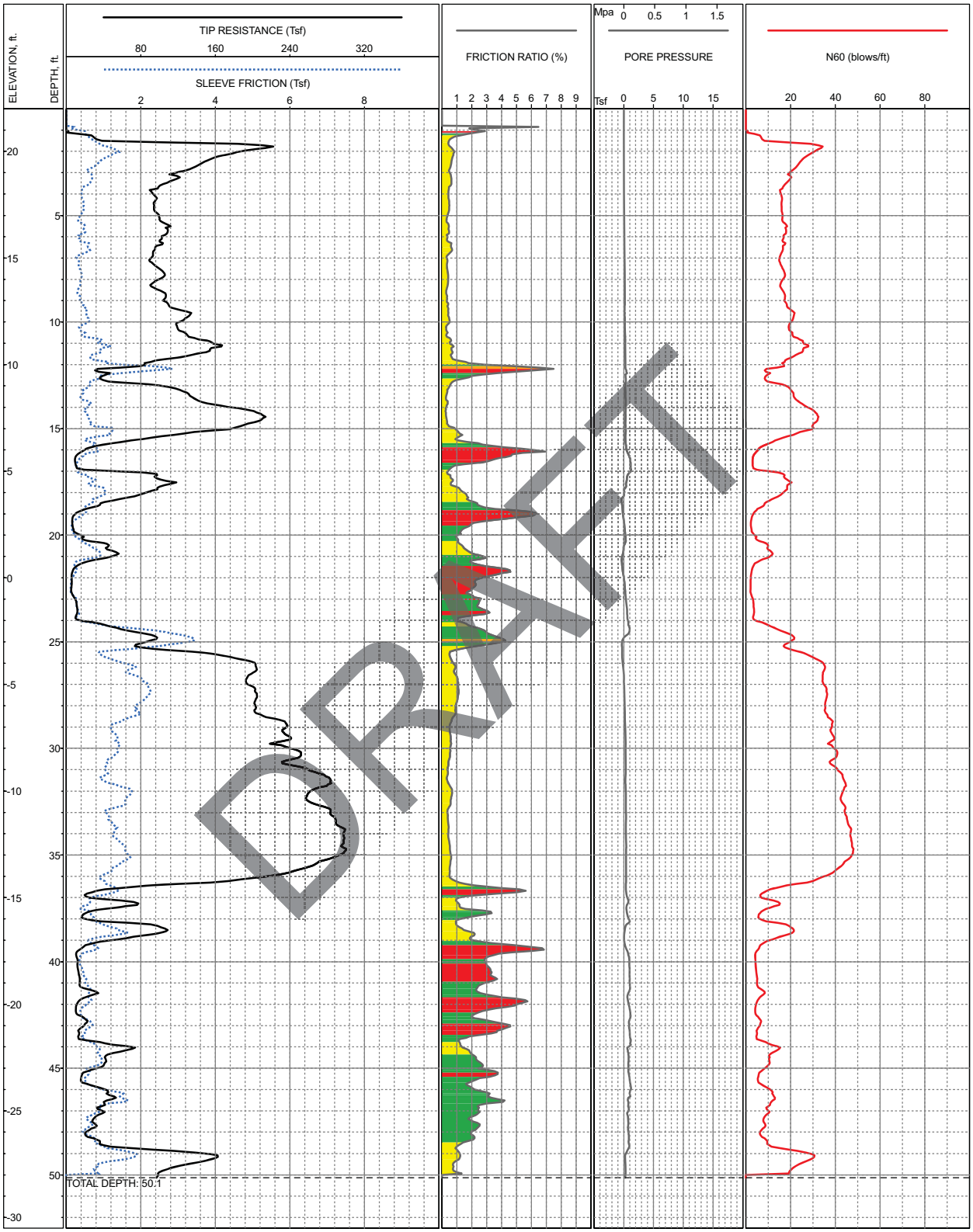
were placed in transport containers and returned to the laboratory for further classification and testing.

Five of the borings holes were backfilled with a hydrated mixture of bentonite chips and excavated soil cuttings and patched with quick set concrete upon completion. Three of the borings were set with 30-foot deep groundwater monitoring wells upon completion of logging and sampling. The well materials consisted of 15 feet of slotted PVC pipe and 15 feet of solid PVC pipe. The well pipe was backfilled with graded sand to within 5 feet of the ground surface. The upper 5 feet was backfilled with hydrated bentonite chips. A traffic well box was installed at the surface to protect each well.

BORING AND MONITORING WELL LOGS

Boring and monitoring well logs showing the depths and descriptions of soils encountered, geologic structure where applicable, vertical locations of samples, sampler blow counts, and results of density and moisture content tests, are presented as Plates A-13 through A-20 - Log of Boring. A legend of symbols typically used on boring logs hole logs is provided on Plates A-21 and A-22 - Key to Terms and Symbols Used on Logs. The logs represent the interpretation of the visual observation and field tests, interpolation between samples, and laboratory test results. Stratification lines between materials are approximate boundaries between soil types; transitions between soil types can be gradual.

DRAFT



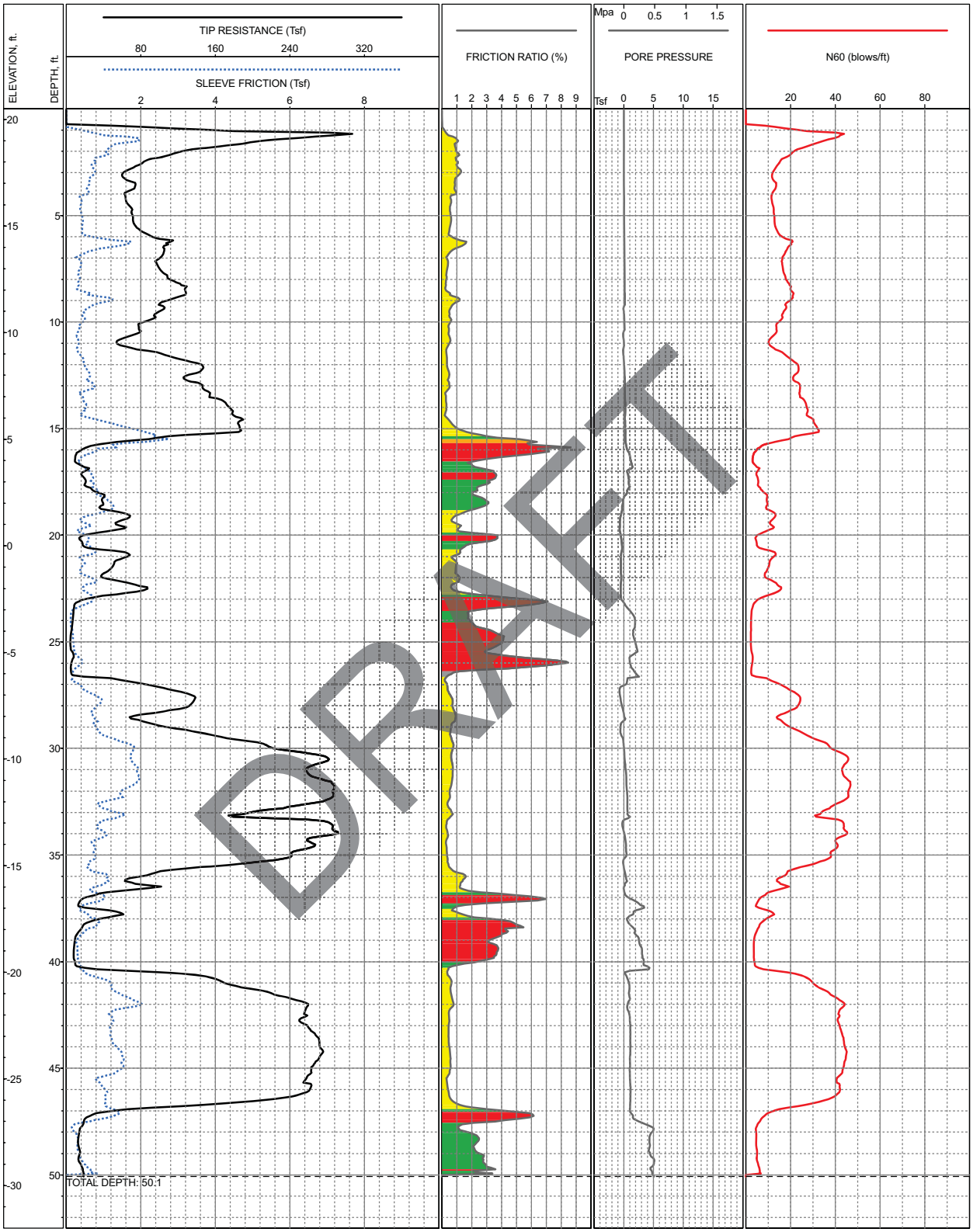
LOCATION: See Plate 2
SURFACE EL: 22.0ft +/ (MSL)
COMPLETION DEPTH: 50.1ft
TESTDATE: 4/29/2008

EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-1

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean



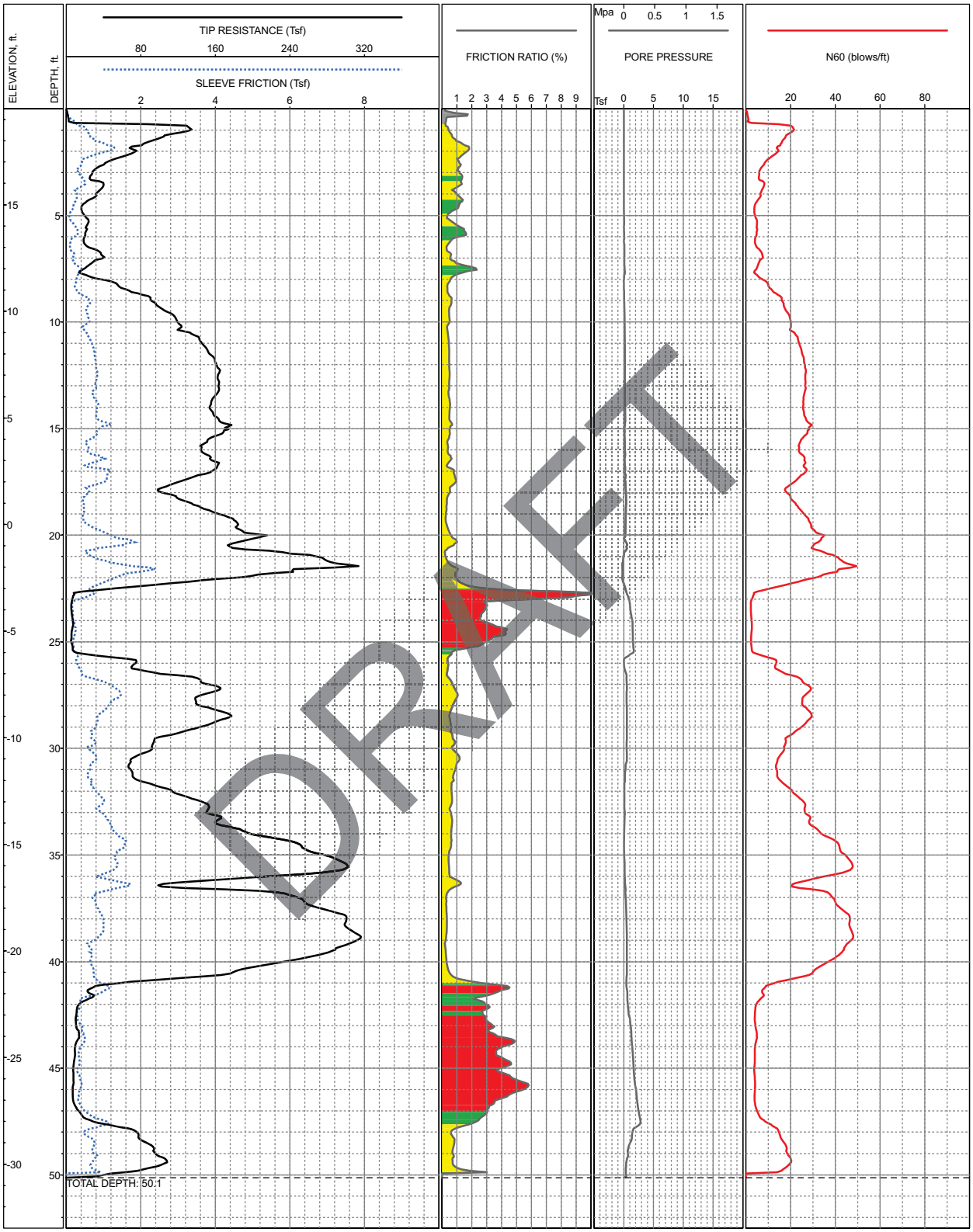
LOCATION: See Plate 2
SURFACE EL: 20.5ft +/ (MSL)
COMPLETION DEPTH: 50.1ft
TESTDATE: 4/30/2008

EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-2

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean



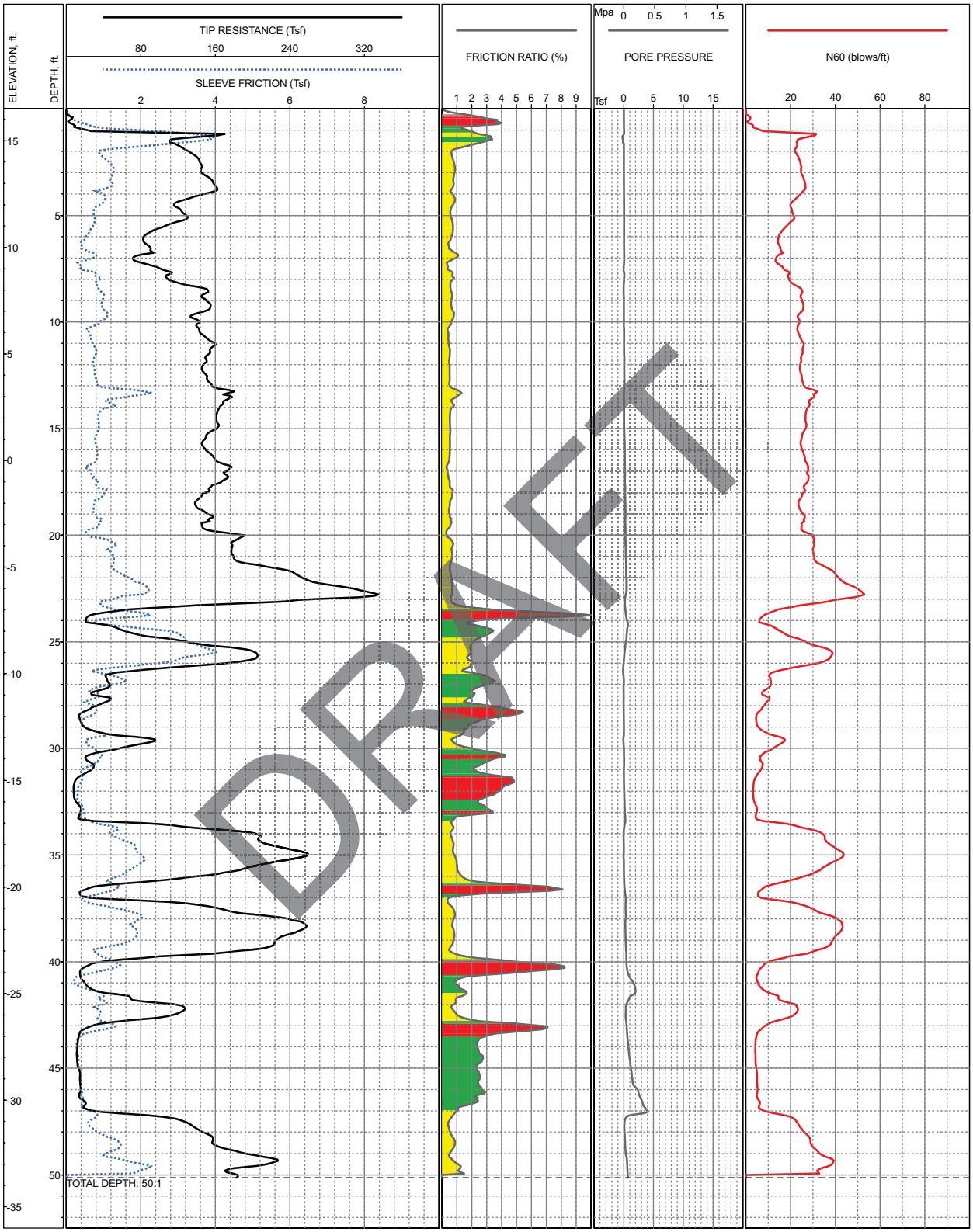
LOCATION: See Plate 2
SURFACE EL: 19.5ft +/ (MSL)
COMPLETION DEPTH: 50.1ft
TESTDATE: 4/29/2008

EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-3

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean



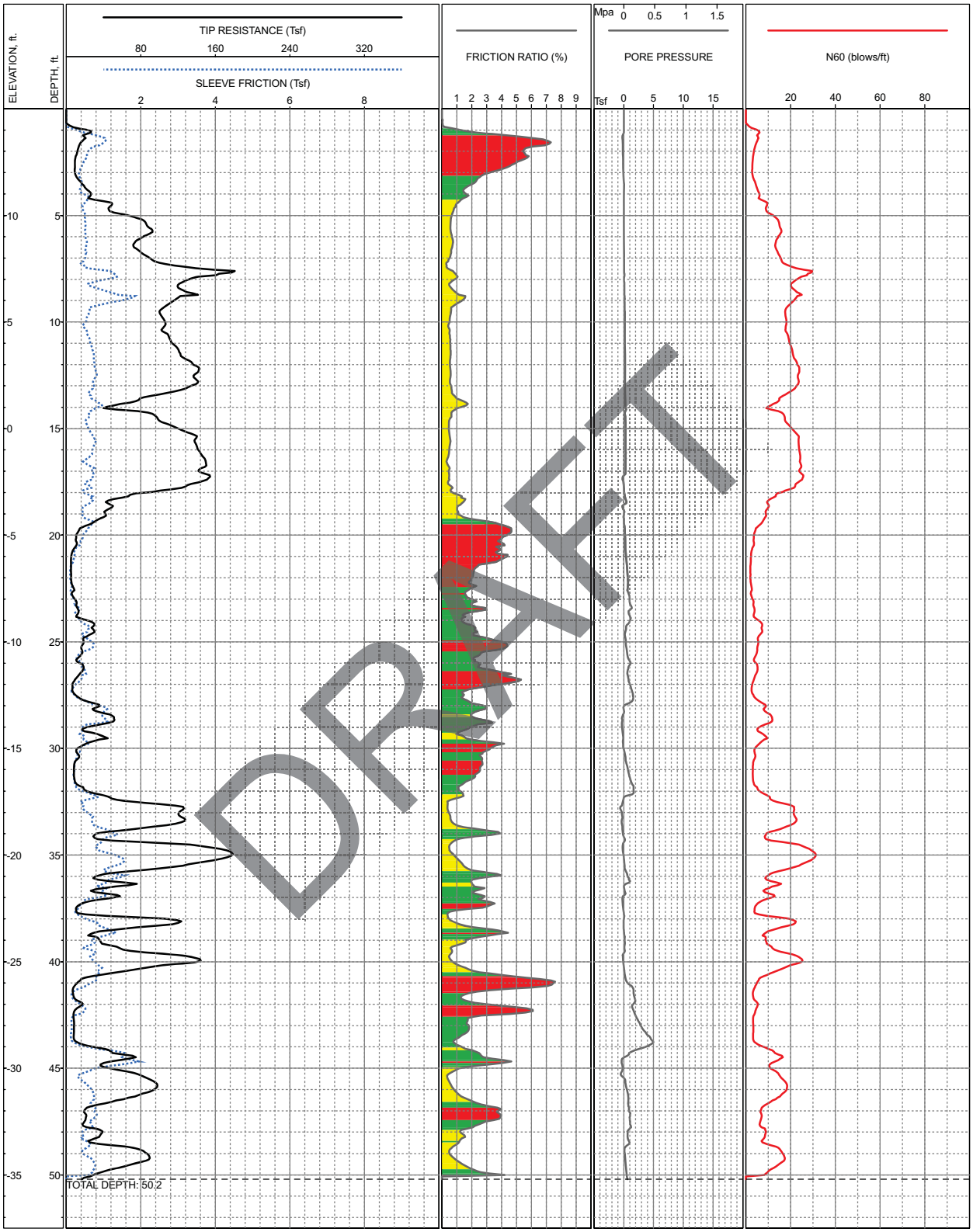
LOCATION: See Plate 2
SURFACE EL: 16.5ft +/ (MSL)
COMPLETION DEPTH: 50.1ft
TESTDATE: 4/29/2008

EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-4

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean



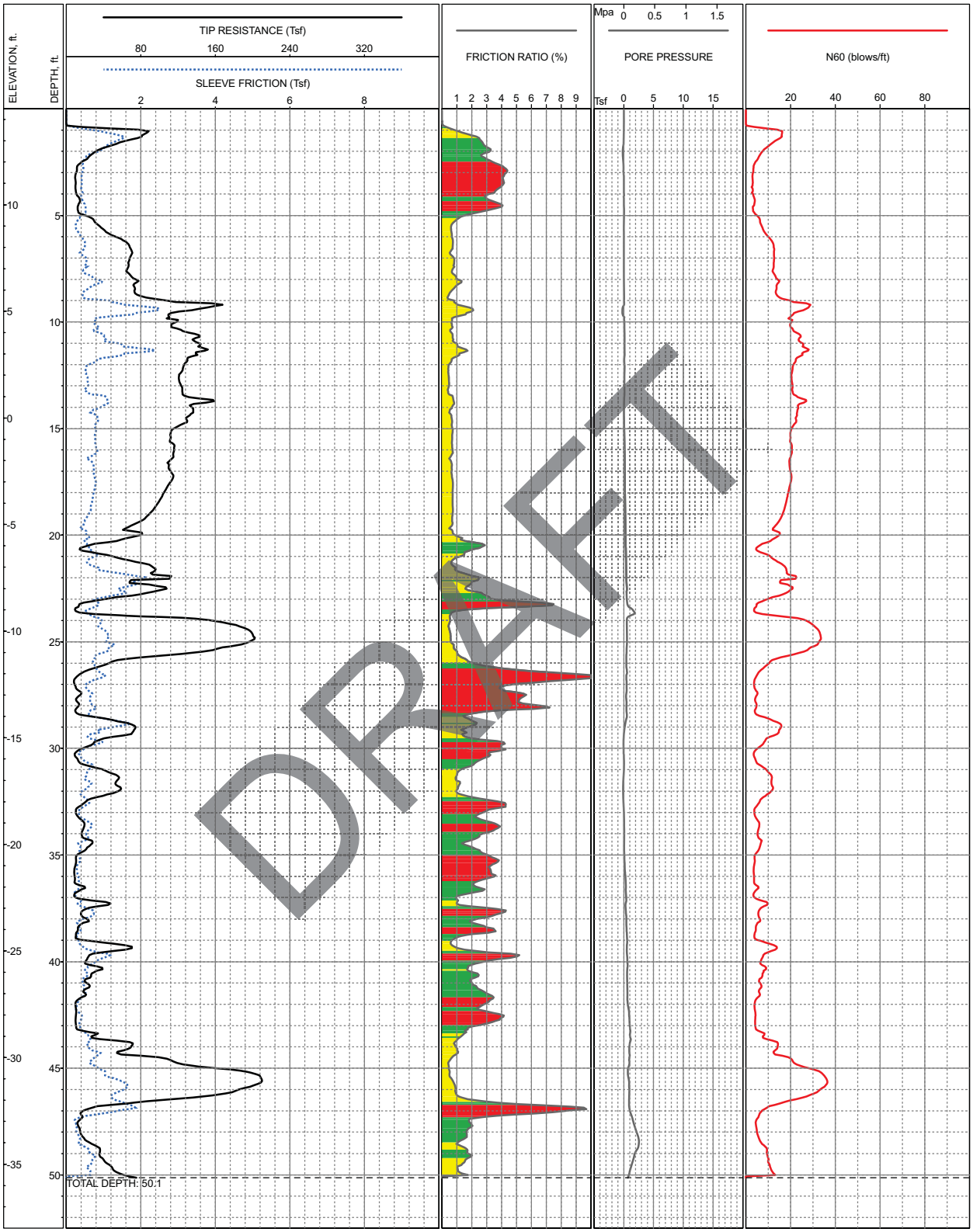
LOCATION: See Plate 2
SURFACE EL: 15.0ft +/ (MSL)
COMPLETION DEPTH: 50.2ft
TESTDATE: 4/30/2008

EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-5

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean



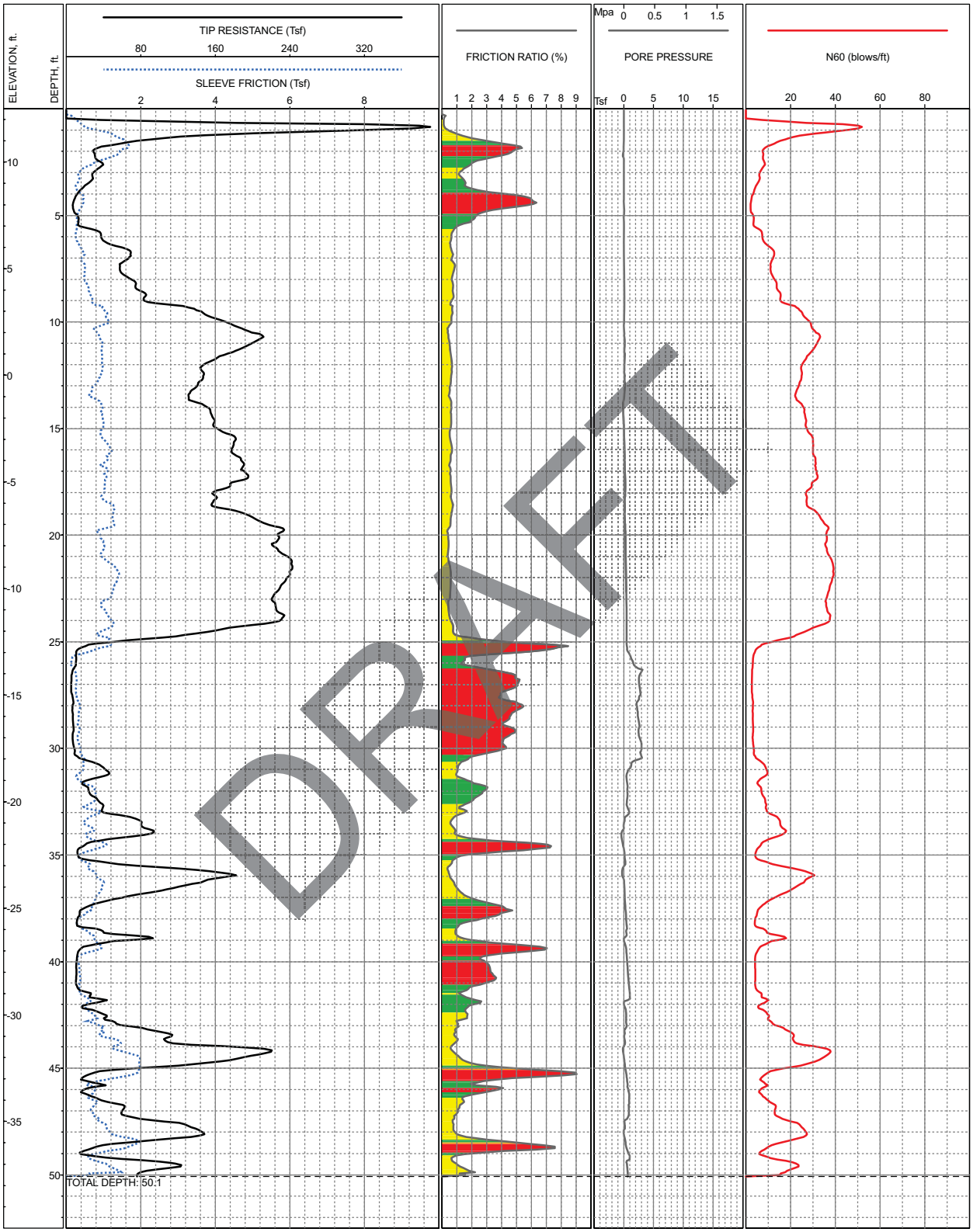
LOCATION: See Plate 2
SURFACE EL: 14.5ft +/ (MSL)
COMPLETION DEPTH: 50.1ft
TESTDATE: 4/29/2008

EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-6

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean



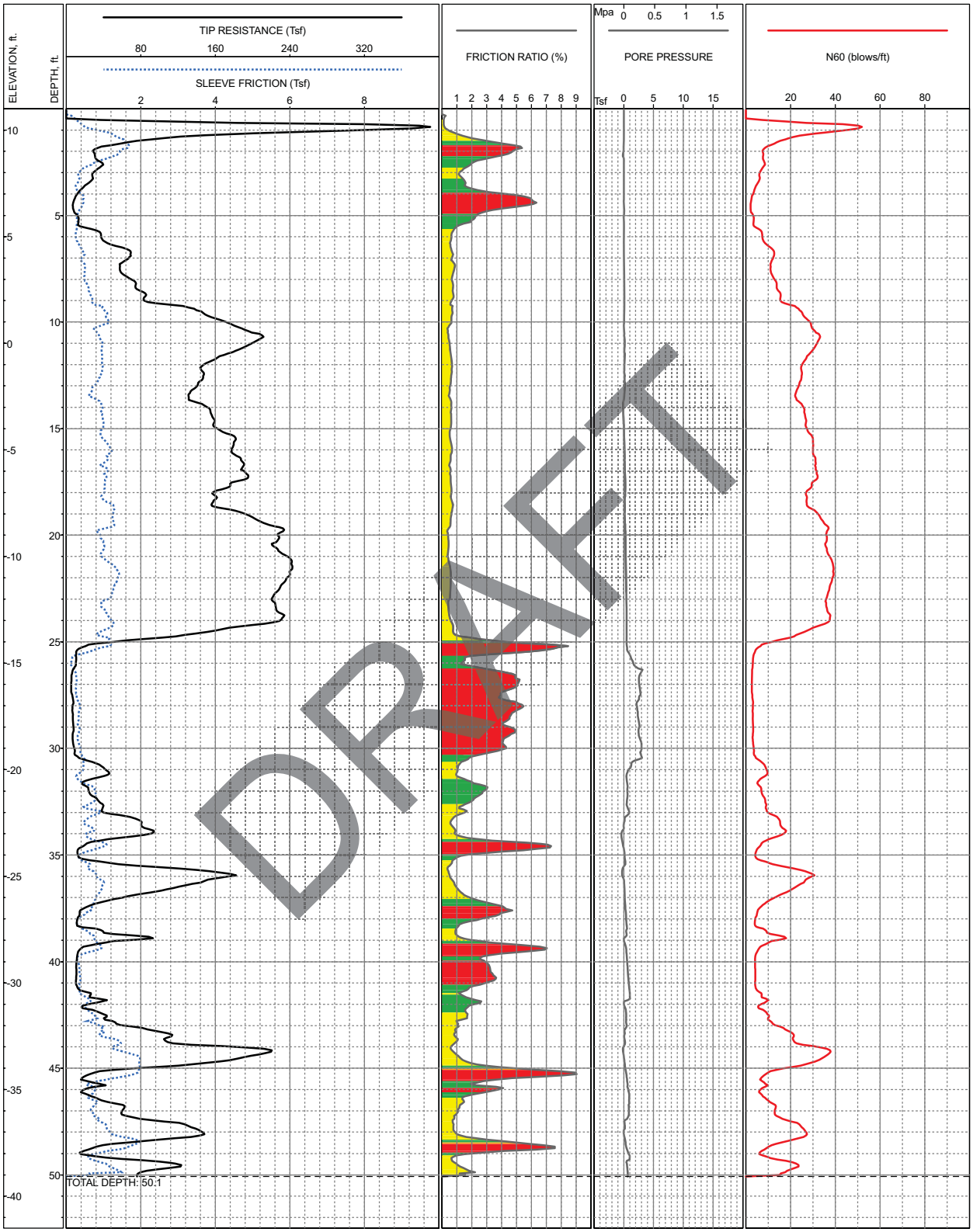
LOCATION: See Plate 2
SURFACE EL: 12.5ft +/ (MSL)
COMPLETION DEPTH: 50.1ft
TESTDATE: 4/30/2008

EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-7

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean



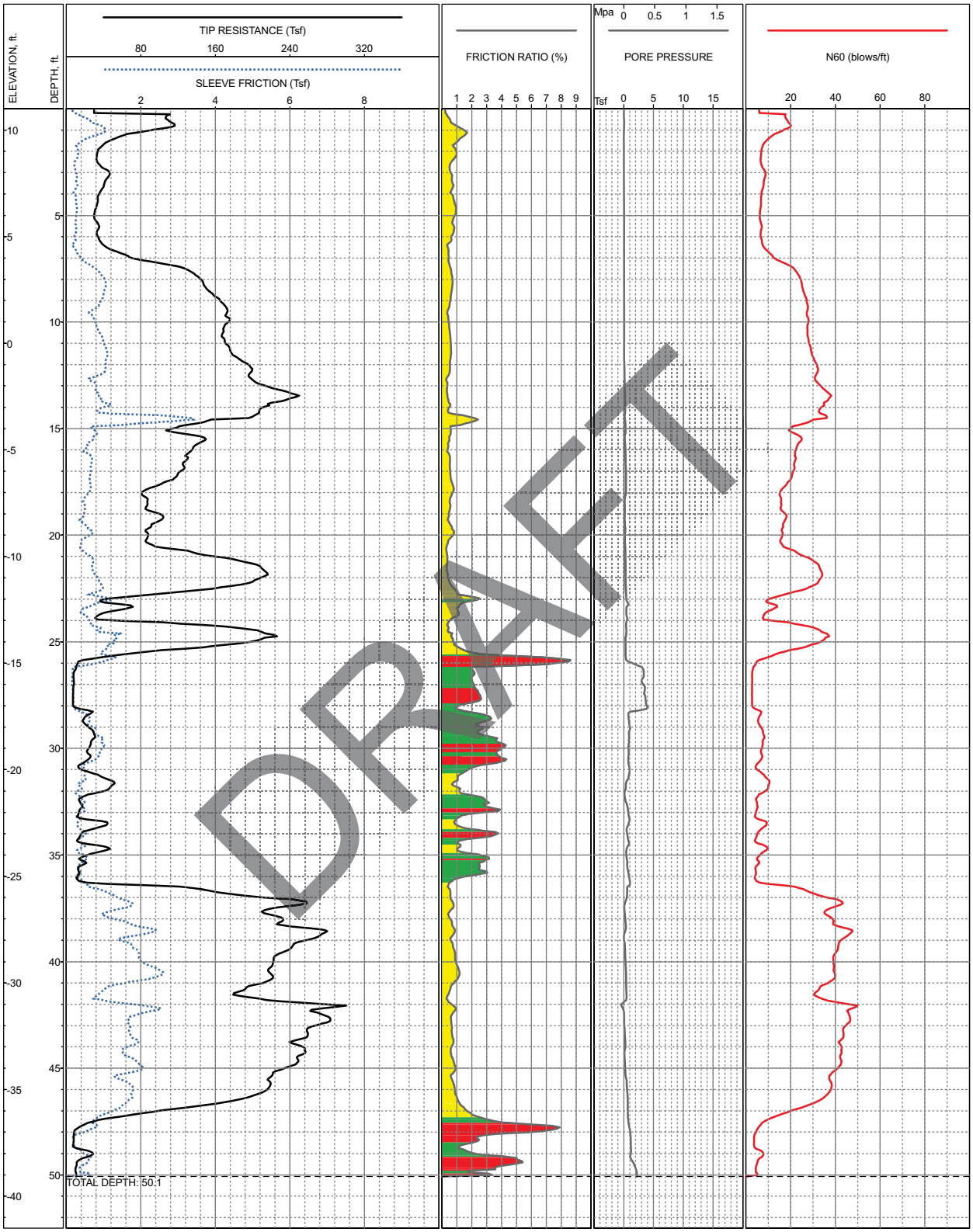
LOCATION: See Plate 2
SURFACE EL: 11.0ft +/ (MSL)
COMPLETION DEPTH: 50.1ft
TESTDATE: 4/30/2008

EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-8

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean



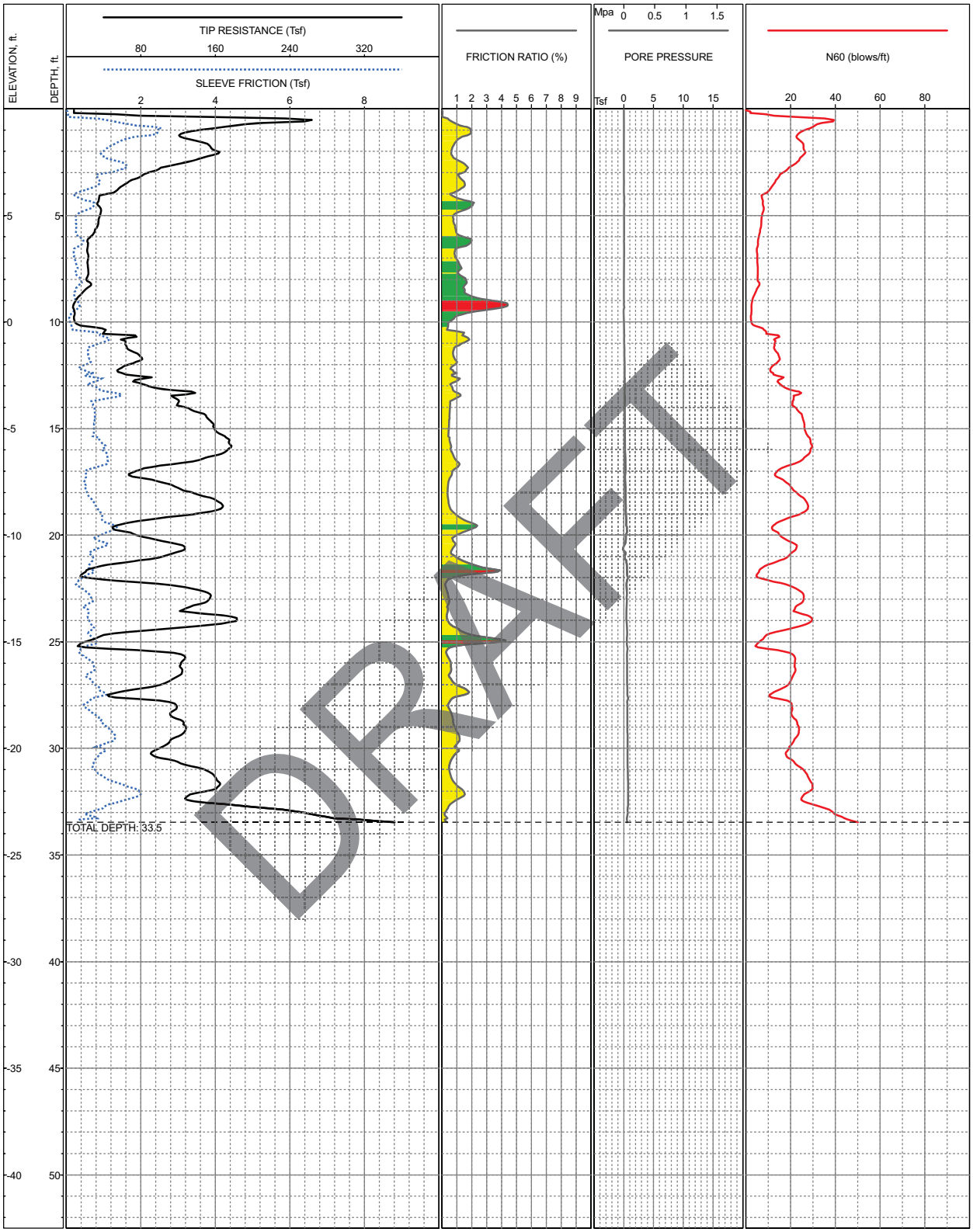
LOCATION: See Plate 2
SURFACE EL: 11.0ft +/ (MSL)
COMPLETION DEPTH: 50.1ft
TESTDATE: 4/30/2008

EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-9

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean



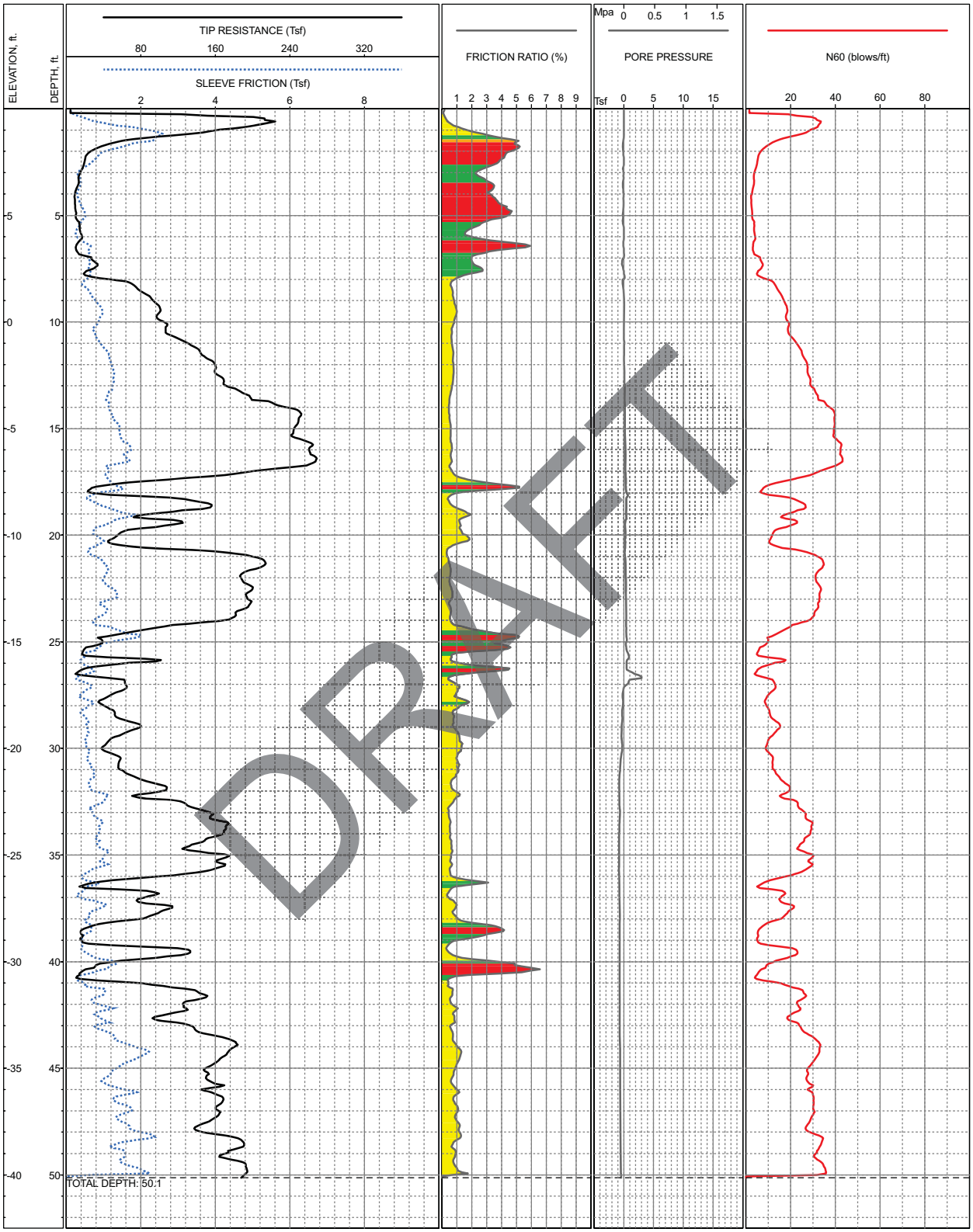
LOCATION: See Plate 2
SURFACE EL: 10.0ft +/ (MSL)
COMPLETION DEPTH: 33.5ft
TESTDATE: 4/30/2008

EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-10

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean



LOCATION: See Plate 2
SURFACE EL: 10.0ft +/ (MSL)
COMPLETION DEPTH: 50.1ft
TESTDATE: 4/30/2008

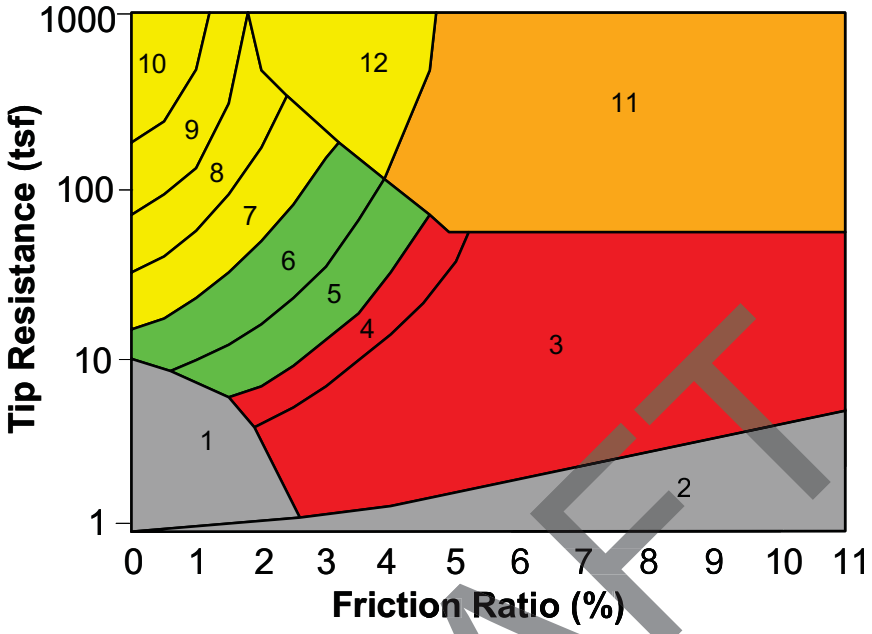
EXPLORATION METHOD: Cone Penetrometer
PERFORMED BY: Fugro Consultants, Inc.
REVIEWED BY: L Berry

LOG OF CPT-11

J Street Drain Improvements
Oxnard, California

N:\Projects\3161_HDREngineering\3161-014_JStreetDrain\Explorations\CPT\2008\Logs\Logs_2008_05_27\MXD\CPTLogs.mxd,05/27/2008,CDean

COLOR LEGEND FOR FRICTION RATIO TRACES



Zone	Soil Behavior Type	U.S.C.S.
1	Sensitive Fine-grained	OL-CH
2	Organic Material	OL-OH
3	Clay	CH
4	Silty Clay to Clay	CL-CH
5	Clayey Silt to Silty Clay	MH-CL
6	Sandy Silt to Clayey Silt	ML-MH
7	Silty Sand to Sandy Silt	SM-ML
8	Sand to Silty Sand	SM-SP
9	Sand	SW-SP
10	Gravelly Sand to Sand	SW-GW
11	Very Stiff Fine-grained *	CH-CL
12	Sand to Clayey Sand *	SC-SM

*overconsolidated or cemented

CPT CORRELATION CHART
(Robertson and Campanella, 1984)

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KEY TO CPT LOGS

J Street Drain Improvements
Oxnard, California

HDR Engineering, Inc.
Project No. 3161.014

LOCATION: Southeast corner of the intersection of J Street and Redwood Street.N 247,175 E 1,641,655

SURFACE EL: 23 ft +/ (rel. MSL datum)

ELEVATION ft	DEPTH ft	MATERIAL SYMBOL	SAMPLE NO	SAMPLERS	SAMPLER BLOW COUNT	MATERIAL DESCRIPTION	UNIT WET WEIGHT pcf	UNIT DRY WEIGHT pcf	WATER CONTENT %	% PASSING #200 SIEVE	LIQUID LIMIT %	PLASTICITY INDEX %	UNDRAINED SHEAR STRENGTH S_u ksf
						Asphalt concrete over base materials.							
			Bulk			**ALLUVIUM (Qal)** SAND (SP): loose, brown, moist, fine sand, trace silt and fine gravel							
	4		1		(14)		106	101	5				
	6		2		5	Poorly graded SAND (SP): loose, dark brown to olive gray, wet, medium to coarse sand, trace rounded gravel up to about 3/4" in diameter							
	10		3		(30)	medium dense, olive gray, at 9'							
	14		4		12	loose, trace clay pockets, at 14'							
	20		5		(27)	increased fines, at 19'	130	111	17				
	24		6A 6B		15	Sandy SILT (ML): stiff, olive gray with dark gray mottles, wet, with very fine sand, trace roots, trace white calcium carbonate veins							
	30		7		(3	SAND (SP): medium dense, olive gray, wet, fine to medium sand, trace silt, trace gravel up to 1" in diameter							
	34		8		29				20	8			
	40		9		(13)	Sandy SILT (ML): stiff, olive gray with dark gray mottles, wet, fine sand	123	94	32				

DRAFT

The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location Subsurface conditions may differ at other locations and with the passage of time

COMPLETION DEPTH: 40.5 ft
DEPTH TO WATER: 5.9 ft
BACKFILLED WITH: Cuttings and bentonite, topped with concrete.
DRILLING DATE: April 28, 2008

DRILLING METHOD: 8 inch dia. Hollow Stem Auger
HAMMER TYPE: Automatic Trip
DRILLED BY: Martini Drilling Corporation
LOGGED BY: K. Nelson
CHECKED BY: LE Prentice R.G.

LOG OF BORING NO. DH-01

J Street Drain Improvements
Oxnard, California

PLATE A-13

HDR Engineering, Inc.
Project No. 3161.014

LOCATION: Southeast corner of the intesection of J Street and Yucca Street.N 244,411 E 1,641,596

SURFACE EL: 18.8 ft +/ (rel. MSL datum)

ELEVAT ON ft	DEPTH ft	MATER AL SYMBOL	SAMPLE NO	SAMPLERS	SAMPLER BLOW COUNT	MATERIAL DESCRIPTION	UN T WET WE GHT pcf	UN T DRY WE GHT pcf	WATER CONTENT %	% PASS NG #200 S EVE	L QU D L MIT %	PLAST C TY NDEX %	UNDRA NED SHEAR STRENGTH S_u ksf
18						**ALLUVIUM (Qal)**							
	2		1		(11)	Poorly graded SAND (SP): loose, brown, slightly moist, medium to coarse sand, with fine to coarse subangular gravel	107	103	4				
16						trace subangular gravel, at 3'							
	4		2		3								
14													
	6		3		(5)	wet, increased subangular fine gravel, at 5'	122	107	14				
12													
	8												
10													
	10		4		8	Well graded SAND with gravel (SW): loose, brown, wet, fine to coarse sand, fine to coarse subrounded gravel							
8													
	12												
6													
	14												
4			5		(42)	Well graded SAND (SW): medium dense ay, wet, fine to medium sand, trace clay and fine gra el	135	7	15				
	16												
2													
	18												
0													
	20		6		34	dense, at 19'							
-2													
	22												
-4													
	24												
-6			7		(22)	Clayey SAN (SC): me um dense gray, moist, fine sand	135	117	16	23			
	26												
-8													
	28												
-10													
	30		8		2	Silty SAND (M): mei m dense, gray, wet, fine sand							
-12													
	32												
-14													
	34												
-16			9		(79)	Poorly g aded SAND (SP): dense, gray, moist, medium sand	133	114	17				
	36												
-18													
	38												
-20													
	40		10		31	wet, at 39'							
-22													
	42												
-24													
	44												

The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location Subsurface conditions may differ at other locations and with the passage of time

COMPLETION DEPTH: 40.5 ft
DEPTH TO WATER: 5.0 ft
BACKFILLED WITH: Cuttings and bentonite, topped with concrete.
DRILLING DATE: April 29, 2008

DRILLING METHOD: 8 inch dia. Hollow Stem Auger
HAMMER TYPE: Automatic Trip
DRILLED BY: Martini Drilling Corporation
LOGGED BY: J. Hutchins
CHECKED BY: LE Prentice R.G.

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LOG OF BORING NO. DH-02

J Street Drain Improvements
Oxnard, California

PLATE A-14

LOCATION: House No. 3935 on J Street, between Glacier Avenue and Bard Road.N 243,592 E 1,641,515

SURFACE EL: 17.8 ft +/ (rel. MSL datum)

ELEVAT ON ft	DEPTH ft	MATER AL SYMBOL	SAMPLE NO	SAMPLERS	SAMPLER BLOW COUNT	MATERIAL DESCRIPTION	UN T WET WE GHT pcf	UN T DRY WE GHT pcf	WATER CONTENT %	% PASS NG #200 S EVE	L QU D L MIT %	PLAST C TY NDEX %	UNDRA NED SHEAR STRENGTH S_u ksf
			Bulk			**ARTIFICIAL FILL (af)** Clayey SAND (SC): dark brown, moist							
16	2												
14	4		1		(11)	**ALLUVIUM (Qal)** Silty SAND (SM): loose, dark brown, wet, very fine sand	123	100	23	58			
12	6					Sandy Lean CLAY (CL): dark brown / reddish brown, moist, trace rootlets							
			2A 2B		6	Poorly graded SAND (SP): medium dense, gray, wet, medium to coarse sand, trace subrounded fine gravel			18				
10	8												
8	10		3		(40)								
6	12												
4	14					fine to medium sand, olive gray, at 14'							
2	16		4		14				16				
0	18												
-2	20		5		(42)	SAND (SP): medium dense oli ray, wet, fine nd, trace silt	128	106	20	8			
-4	22												
-6	24		6		4	Fat CLAY w h sand (C : medium tiff, olive gray, moist, fi sand			30		60	35	
-8	26					grades to s dy t clay							
-10	28												
-12	30		7		(4	Poorly grade SAND (P): medium dense, olive gray, wet, fine to edium sand	130	110	18	5			
-14	32												
-16	34		8		47	dense, trace subrounded gravel up to 1" in diameter, at 34'							
-18	36												
-20	38												
-22	40		9		(87)	very dense, increased fines, at 39'	130	111	17				
-24	42												
-26	44												

The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location Subsurface conditions may differ at other locations and with the passage of time

COMPLETION DEPTH: 40.5 ft
DEPTH TO WATER: 6.9 ft
BACKFILLED WITH: Cuttings and bentonite, topped with concrete.
DRILLING DATE: April 28, 2008

DRILLING METHOD: 8 inch dia. Hollow Stem Auger
HAMMER TYPE: Automatic Trip
DRILLED BY: Martini Drilling Corporation
LOGGED BY: K. Nelson
CHECKED BY: LE Prentice R.G.

DRAFT

LOG OF BORING NO. DH-03

J Street Drain Improvements
Oxnard, California

HDR Engineering, Inc.
Project No. 3161.014

LOCATION: House No. 4920 on J Street, just north of Sonoma Way.N 240,783 E 1,641,514

SURFACE EL: 13 ft +/ (rel. MSL datum)

ELEVAT ON ft	DEPTH ft	MATER AL SYMBOL	SAMPLE NO	SAMPLERS	SAMPLER BLOW COUNT	MATERIAL DESCRIPTION	UN T WET WE GHT pcf	UN T DRY WE GHT pcf	WATER CONTENT %	% PASS NG #200 S EVE	L QU D L MIT %	PLAST C TY NDEX %	UNDRA NED SHEAR STRENGTH S_u ksf
						5" Asphalt Concrete over 5" Base Materials							
						ALLUVIUM (Qal)							
	2		1		27	Clayey SAND (SC): medium dense, brown, slightly moist, fine to coarse sand			10	30			
	4												
	6		2		(11)	loose, with clay pockets, below 6'	124	108	15				
	8					Sandy Lean CLAY (CL): 6" thick							
			3		5	Poorly graded SAND (SP): loose, brown, wet, medium to coarse sand, trace clay			18				
	10												
	12												
	14		4A 4B		(30)	medium dense, fin to coarse sand, with fi to coarse subrounded gravel, at 14'	127	109	17				
	16												
	18					Well graded SAND (SW): medium dense, gra trace fine to coarse subrounded el							
	20		5		20								
	22												
	24					Silty Fine S ND (SM): " thick							
	26		6A 6B		(30)	Well grad SAND (S) dium dense, gray, trace fine to coa e sub ounded gra	133	110	21				
	28												
	30		7			Lean CLAY th sand CL): medium stiff, gray with white and orange ottles, moist, low plasticity, fine sand			28		30	8	p 1.5
	32												
	34					Sandy ILT (ML): stiff, dark gray, moist, very fine sand, with silty sand seams							
	36		8		(22)		125	94	33				p 1.5
	38												
	40		9		7								
	42												
	44												

The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location Subsurface conditions may differ at other locations and with the passage of time

COMPLETION DEPTH: 40.5 ft
DEPTH TO WATER: 6.7 ft
BACKFILLED WITH: Cuttings and bentonite, topped with concrete.
DRILLING DATE: April 29, 2008

DRILLING METHOD: 8 inch dia. Hollow Stem Auger
HAMMER TYPE: Automatic Trip
DRILLED BY: Martini Drilling Corporation
LOGGED BY: J. Hutchins
CHECKED BY: LE Prentice R.G.

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LOG OF BORING NO. DH-04

J Street Drain Improvements
Oxnard, California

PLATE A-16

LOCATION: Adjacent to the pump station, north of Ocean View Drive.N 235,240 E 1,640,668

SURFACE EL: 12.5 ft +/ (rel. MSL datum)

ELEVATION ft	DEPTH ft	MATERIAL SYMBOL	SAMPLE NO	SAMPLERS	SAMPLER BLOW COUNT	MATERIAL DESCRIPTION	UNIT WEIGHT pcf	UNIT DRY WEIGHT pcf	WATER CONTENT %	% PASSING #200 SIEVE	LIQUID LIMIT %	PLASTICITY INDEX %	UNDRAINED SHEAR STRENGTH S_u ksf
12			Bulk			**ARTIFICIAL FILL (af)** Silty SAND (SM): brown to dark brown, damp, fine to medium sand, trace clay, trace gravel up to 1" in diameter							
10	2												
8	4				(14)	**ALLUVIUM (Qal)** Poorly graded SAND (SP): loose, brown, damp, medium to coarse sand, trace silt							
6	6		1				102	97	6				
4	8		2		3	fine to medium sand, at 7' 1" thick clay lense, at 7.5'							
2	10				(20)	Silty SAND (SM): medium dense, brown, wet, fine sand							
0	12		3				120	101	18				
-2	14				17	Poorly graded SAND (SP): medium dense, brown to olive gray, wet, fine sand, trace silt							
-4	16		4			dark gray, below 15'							
-6	18												
-8	20		5		(53)	dense, fine to medium sand, at 19'	132	108	21				
-10	22												
-12	24		6		23	medium dense, at 24'							
-14	26												
-16	28												
-18	30		7		(5)	Fat CLAY (CH): soft, olive gray, wet, trace fine sand	115	80	44		52	27	
-20	32												
-22	34		8		18	Silty SAND (SM): medium dense, dark gray, wet, fine to coarse sand							
-24	36												
-26	38												
-28	40		9		(36)	fine sand below 39'	125	97	29	25			
-30	42												
-32	44												

The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location Subsurface conditions may differ at other locations and with the passage of time

COMPLETION DEPTH: 40.5 ft
DEPTH TO WATER: 11.3 ft
BACKFILLED WITH: Cuttings and bentonite, topped with concrete.
DRILLING DATE: April 28, 2008

DRILLING METHOD: 8 inch dia. Hollow Stem Auger
HAMMER TYPE: Automatic Trip
DRILLED BY: Martini Drilling Corporation
LOGGED BY: K. Nelson
CHECKED BY: LE Prentice R.G.

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LOG OF BORING NO. DH-05

J Street Drain Improvements
Oxnard, California

LOCATION: Northeast corner of the intersection of J Street and Teakwood Street.N 246,098 E 1,641,635

SURFACE EL: 21.5 ft +/ (rel. MSL datum)

ELEVAT ON ft	DEPTH ft	MATER AL SYMBOL	SAMPLE NO	SAMPLERS	SAMPLER BLOW COUNT	MATERIAL DESCRIPTION	MON TOR NG WELL	UN T WET WE GHT pcf	UN T DRY WE GHT pcf	WATER CONTENT %	% PASS NG #200 S EVE	L QU D L MIT %	PLAST C TY NDEX %	UNDRA NED SHEAR STRENGTH S_u ksf
20	2				(13)	**ALLUVIUM (Qal)** Well graded SAND with silt and gravel (SW SM): loose, brown, damp to moist, fine to coarse sand								
18	4		1			Silty Fine SAND (SM): loose, dark brown, wet, with trace clay pockets		121	105	15				
16	6		2		6					29	37			
14	8				(26)	Poorly graded SAND (SP): medium dense, olive gray, wet, medium to coarse sand								
12	10		3					129	109	18				
10	12													
8	14				(47)	Well graded SAND with gravel (SW): dens olive gray, wet, subangular gravel up to 1.25 n diameter								
6	16		4											
4	18													
2	20		5		5	Sandy SILT (ML): medium s ff, i e gray, mois fine sand				26		27	4	
0	22													
-2	24				(33)	very stiff th dark gr mottles, me calcium staining nd trace ro tlets at 24'								
-4	26		6					132	107	23				
-6	28													
-8	30		7		1	Poorly grade SAND w h silt (SP SM): medium dense, dark rown to reddish brown, wet, fine to medium san								
-10	32													
-12	34													
-14	36													
-16	38													
-18	40													
-20	42													
-22	44													

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The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location Subsurface conditions may differ at other locations and with the passage of time

COMPLETION DEPTH: 30.5 ft
DEPTH TO WATER: 4.5 ft
BACKFILLED WITH: Well Materials
DRILLING DATE: April 28, 2008

DRILLING METHOD: 8 inch dia. Hollow Stem Auger
HAMMER TYPE: Automatic Trip
DRILLED BY: Martini Drilling Corporation
LOGGED BY: K. Nelson
CHECKED BY: LE Prentice R.G.

LOG OF BORING NO. MW-01

J Street Drain Improvements
Oxnard, California

PLATE A-18

LOCATION: Southwest corner of the intersection of J Street and Clara Street.N 239,025 E 1,641,416

SURFACE EL: 11.2 ft +/ (rel. MSL datum)

ELEVAT ON ft	DEPTH ft	MATER AL SYMBOL	SAMPLE NO	SAMPLERS	SAMPLER BLOW COUNT	MATERIAL DESCRIPTION	MON TOR NG WELL	UN T WET WE GHT pcf	UN T DRY WE GHT pcf	WATER CONTENT %	% PASS NG #200 S EVE	L QU D L MIT %	PLAST C TY NDEX %	UNDRA NED SHEAR STRENGTH S_u ksf
						ALLUVIUM (Qal) Sandy Clayey SILT (ML CL): stiff, dark brown, moist, fine sand, trace fine gravel								
			1		(16)			127	111	14		25	7	p 4.0
			2		3									p 2.0
			3		(5)	Fat CLAY with sand (CH): medium stiff, orange and gray mottled, moist, trace decomposing wood pieces		02	68	51		75	44	p 1.0
						Poorly graded SAND (SP): medium dense, gray, wet, fine to medium sand, trace silt								
			4		16					23				
			5		(32)	Poorly graded SAND (SP): me dense, gray, wet, medium to coarse san trace ded fine gravel		132	113	17				
					5									
			6			SILT (ML) medium s y wet, t ace fine sand								
			7		(14)	stiff, brown at 29'		125	97	29				p 2.5

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The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location Subsurface conditions may differ at other locations and with the passage of time

COMPLETION DEPTH: 30.5 ft
DEPTH TO WATER: 9.0 ft
BACKFILLED WITH: Well Materials
DRILLING DATE: April 29, 2008

DRILLING METHOD: 8 inch dia. Hollow Stem Auger
HAMMER TYPE: Automatic Trip
DRILLED BY: Martini Drilling Corporation
LOGGED BY: J. Hutchins
CHECKED BY: LE Prentice R.G.

LOG OF BORING NO. MW-02

J Street Drain Improvements
Oxnard, California

PLATE A-19

LOCATION: South of Ventura County RRN
236,319 E 1,641,419

SURFACE EL: 10.4 ft +/ (rel. MSL datum)

ELEVATION ft	DEPTH ft	MATERIAL SYMBOL	SAMPLE NO	SAMPLERS	SAMPLER BLOW COUNT	MATERIAL DESCRIPTION	MONITORING WELL	UNIT WET WEIGHT pcf	UNIT DRY WEIGHT pcf	WATER CONTENT %	% PASSING #200 SIEVE	LIQUID LIMIT %	PLASTICITY INDEX %	UNDRAINED SHEAR STRENGTH S_u ksf
						ALLUVIUM (Qal)								
	2		1		8	Silty SAND (SM): loose, dark brown, moist, fine sand								
	4		2		(29)	silty sand lenses, medium dense, at 3'		122	112	9				
	6		3		8	loose, brown, at 5'								
	8													
	10		4		(4)	Lean CLAY with clayey fine sand pockets: soft, dark brown, moist, low plasticity		157	127	24				
	12					Poorly graded SAND (SP): medium dense, brown, wet, fine to medium sand, trace silt								
	14		5		16									
	16													
	18													
	20		6		(36)	gray, below 19'		126	108	16				
	22													
	24		7		20	medium dense, below 24'								
	26													
	28													
	30		8		(32)			133	116	15				
	32													
	34													
	36													
	38													
	40													
	42													
	44													

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The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location Subsurface conditions may differ at other locations and with the passage of time

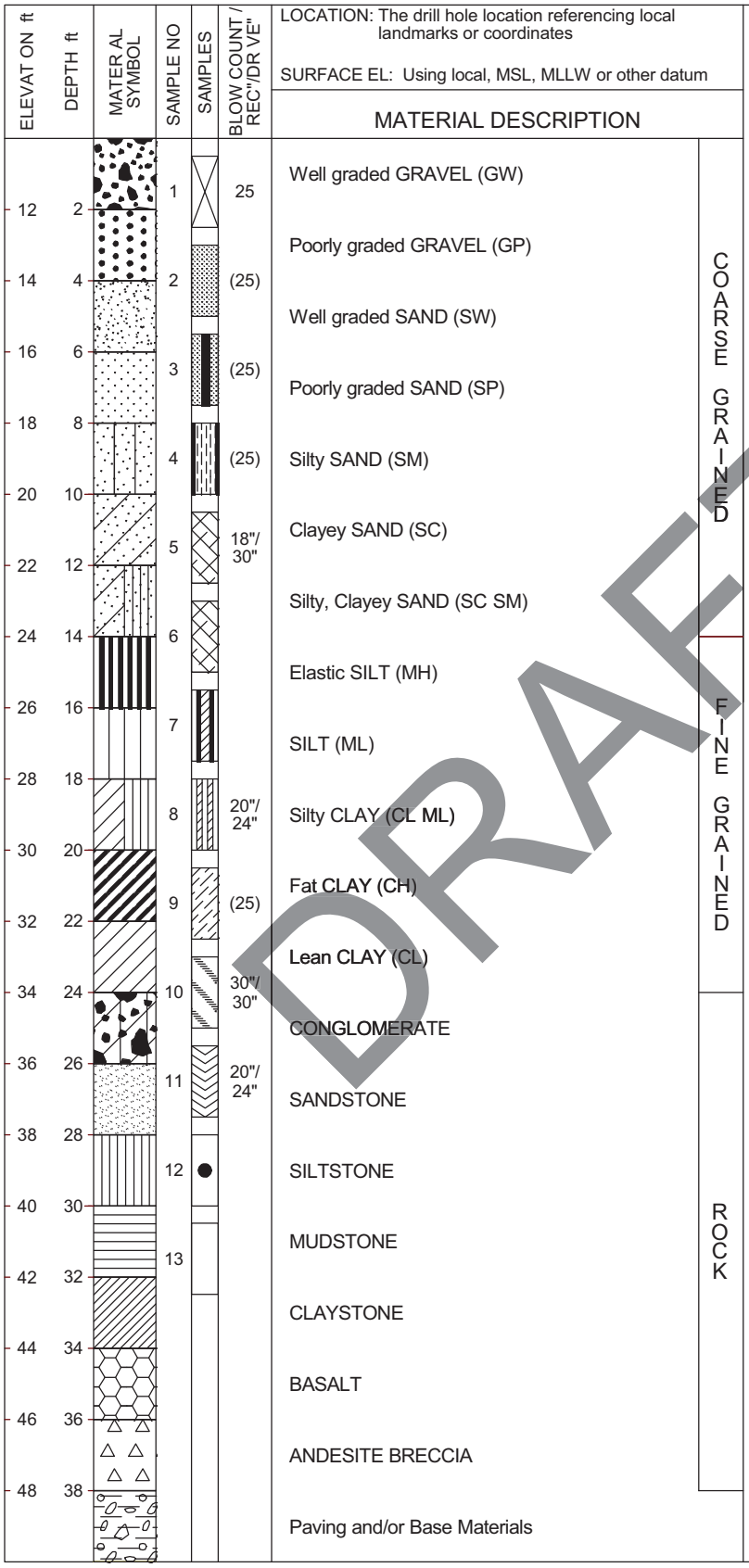
COMPLETION DEPTH: 30.5 ft
DEPTH TO WATER: 10.0 ft
BACKFILLED WITH: Well Materials.
DRILLING DATE: April 29, 2008

DRILLING METHOD: 8 inch dia. Hollow Stem Auger
HAMMER TYPE: Automatic Trip
DRILLED BY: Martini Drilling Corporation
LOGGED BY: J. Hutchins
CHECKED BY: LE Prentice R.G.

LOG OF BORING NO. MW-03

J Street Drain Improvements
Oxnard, California

BORING LOG VENTURA N \PROJECTS\3161 HDRENGINEERING\3161 014 JSTREETDRAIN\EXPLORATIONS\GINT\2008\3161 014 2008 VH08B GPJ 10/30/08 02 06 p



General Notes

Soil Texture Symbol

Sloped line in symbol column indicates transitional boundary

Samplers and sampler dimensions
(unless otherwise noted in report text) are as follows:

Symbol for:

1	SPT Sampler, driven 1 3/8" ID, 2" OD
2	CA Liner Sampler, driven 2 3/8" ID, 3" OD
3	CA Liner Sampler, disturbed 2 3/8" ID, 3" OD
4	Thin walled Tube, pushed 2 7/8" ID, 3" OD
5	Bulk Bag Sample (from cuttings)
6	CA Liner Sampler, Bagged
7	Hand Auger Sample
8	CME Core Sample
9	Pitcher Sample
10	Lexan Sample
11	Vibracore Sample
12	No Sample Recovered
13	Sonic Soil Core Sample

Sampler Driving Resistance

Number of blows with 140 lb. hammer, falling 30" to drive sampler 1 ft. after seating sampler 6"; for example,

Blows/ft	Description
25	25 blows drove sampler 12" after initial 6" of seating
86/11"	After driving sampler the initial 6" of seating, 36 blows drove sampler through the second 6" interval, and 50 blows drove the sampler 5" into the third interval
50/6"	50 blows drove sampler 6" after initial 6" of seating
Ref/3"	50 blows drove sampler 3" during initial 6" seating interval

Blow counts for California Liner Sampler shown in ( )

Length of sample symbol approximates recovery length

Classification of Soils per ASTM D2487 or D2488

Geologic Formation noted in bold font at the top of interpreted interval

Strength Legend

Q = Unconfined Compression
u = Unconsolidated Undrained Triaxial
t = Torvane
p = Pocket Penetrometer
m = Miniature Vane

Water Level Symbols

Initial or perched water level
Final ground water level
Seepages encountered

Rock Quality Designation (RQD) is the sum of recovered core pieces greater than 4 inches divided by the length of the cored interval.

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KEY TO TERMS & SYMBOLS USED ON LOGS

PLATE A-21

Well Construction Diagram

Well Cap

Protective concrete cover

Aboveground cover

Concrete

Grout/neat cement

Bentonite pellets

and

Gr t

lotted pipe in grout
w/bottom cap

Slotted pipe in sand
w/bottom cap

Grout plug

Sand Backfill

Native Backfill

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A. The different types of well constructed include but are not limited to monitoring, vapor extraction, and piezometer.

B. Types and sizes of the materials used are as described in report text.

KEY TO TERMS & SYMBOLS USED ON LOGS (con't)

APPENDIX B
LABORATORY TESTING

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APPENDIX B
LABORATORY TESTING

GENERAL

This appendix provides a discussion of the laboratory test program performed for this geotechnical study. Laboratory tests were performed on selected samples obtained from the field to help classify the soils and estimate some of their engineering properties. Laboratory tests were performed in general accordance with American Society for Testing and Materials (ASTM) test procedures.

Driven-ring and bulk samples used in the laboratory-testing program were obtained from various depths during the field exploration, as discussed in Appendix A. Each sample is identified by sample number and depth. Various laboratory tests that were performed are described below.

INDEX PROPERTIES TESTING

Classification

The method of identifying and classifying soils according to their engineering properties used in this study is ASTM Test Method D2487, which is based on the Unified Soil Classification System. Index properties tests discussed in this report include moisture content and dry density measurements, grain size distribution, and plasticity.

Moisture Content and Dry Density

Tests for moisture content of the soils were performed generally according to ASTM Test Method D2216, often in conjunction with other tests. The dry density of selected driven ring samples was obtained by trimming the end of the sample to obtain a smooth, flat face. The trimmed sample was measured to obtain volume and wet weight, extruded, and visually classified. The samples were dried in an oven maintained at approximately 110 degrees Celsius. After drying, eac ample was weighed, and the moisture content and dry density were calculated. The moisture content and dry density results are summarized on Plates B-1a and B-1b - Summary of Laboratory Test Results, and also are presented on the drill-hole logs.

Grain Size Distribution

Gradation tests were performed on selected samples in general accordance with ASTM D422. In addition, tests were performed to determine the amount of material in soils finer than the No. 200 sieve in general accordance with ASTM test method D1140-71. These tests were performed to assist in the classification of the soil and to determine its grain size distribution. Results of these tests are presented on Plates B-2a and B-2b - Grain Size Curves. The fines content results are also summarized on Plates B-1a and B-1b - Summary of Laboratory Test Results and presented on the drill hole logs.

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Plasticity Index

Atterberg limits (ASTM D4318) were performed on selected fine grained soil samples to measure the range of water contents over which the tested material exhibits plasticity. The limits were used to classify the soil in accordance with the United Soil Classification System and to evaluate the soil expansion potential. Results of the testing are presented on Plate B-3 - Plasticity Chart. The results are also summarized on Plates B-1a and B-1b - Summary of Laboratory Test Results and presented on the drill hole logs.

ENGINEERING PROPERTIES TESTING

Direct Shear

Direct shear tests were performed on two samples to evaluate the strength characteristics of the subsurface soil in accordance with ASTM D3080. The tests were performed at a constant rate of strain based on t_{50} and failure was taken as ultimate normal stress. The results of the direct shear tests are presented on Plates B-4a and 4b - Direct Shear Test Results and are also summarized on Plates B-1a and B-1b - Summary of Laboratory Test Results.

Consolidation

A consolidation test (ASTM D2453) was performed on a ring sample of highly plastic clay to assist in evaluating the compressibility properties of this unit. Results of the consolidation test are presented on Plate B-5 - Consolidation Test Results.

Soil Chemistry Tests

Three suites of soil chemical tests were performed selected samples of the near-surface soils to assess corrosion potential. Chemical tests consisted of pH, sulfate, chloride, and resistivity. Tests were performed by Cooper Testing Laboratory of Palo Alto, California. Results of the chemical tests are presented on Plate 1 - Summary of Laboratory Test Results, Plate B-6 - Corrosivity Test Summary, and summarized in the report text.

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DR LL HOLE	DEPTH, ft	SAMPLE NUMBER	MATER AL DESCR PT ON	UWW pcf	UDW pcf	MC %	F NES %	ATTERBERG LIMITS		COMPACTION TEST		DIRECT SHEAR		COMPRESSIVE STRENGTH TESTS		CORROS V TY TESTS				R VALUE	EXPANSION INDEX	SAND EQUIVALENT (SE)	SPECIFIC GRAVITY
								LL	P	MAX DD pcf	OPT MC %	C ksf	PH deg	Qu ksf	S_u (Cell Prs) ksf	R	pH	Cl	So_4 (%)				
DH-01	1 0	Bulk	SAND (SP)													7893	9 00	<2	<0 0005				
DH-01	4 0	1	SAND (SP)	106	101	5	7					0	39										
DH-01	20 0	5	Poorly-graded SAND (SP)	130	111	17	5																
DH-01	34 5	8	SAND (SP)			20	8																
DH-01	40 0	9	Sandy S LT (ML)	123	94	32																	
DH-02	1 5	1	Poorly-graded SAND (SP)	107	103	4																	
DH-02	5 5	3	Poorly-graded SAND (SP)	122	107	14	3																
DH-02	9 5	4	Well-graded SAND with gravel (SW)				1																
DH-02	14 5	5	Well-graded SAND (SW)	135	117	15	8																
DH-02	24 5	7	Clayey SAND (SC)	135	117	16	23																
DH-02	34 5	9	Poorly-graded SAND (SP)	133	114	1	6																
DH-03	0 3	Bulk	Clayey SAND (SC)													1100	8 10	10	0 05				
DH-03	4 0	1	Sandy Lean CLAY (CL)	123	100	23																	
DH-03	6 5	2B	Poorly-graded SAND (SP)			18	3																
DH-03	15 0	4	Poorly-graded SAND (SP)			16																	
DH-03	20 0	5	SAND (SP)	128	6	20																	
DH-03	24 5	6	Fat CLAY with sand (CH)			30	7	0	35														
DH-03	30 0	7	Poorly-graded SAND (SP)	13	0	18	5																
DH-03	40 0	9	Poorly-graded SAND (SP)	1	111	17																	
DH-04	2 5	1	Clayey SAND (SC)			10	30																
DH-04	5 5	2	Clayey SAND (SC)	12	108	15																	
DH-04	9 0	3	Poorly-graded SAND (SP)			18	4																
DH-04	15 0	4B	Poorly-graded SAND (SP)	127	109	17																	
DH-04	19 5	5	Well-graded SAND (SW)				5																
DH-04	25 0	6B	Well-graded SAND (SW)	133	110	21																	
DH-04	29 5	7	Lean CLAY with sand (CL)			28	73	30	8														
DH-04	34 5	8	Lean CLAY with sand (CL)	125	94	33																	
DH-05	0 0	Bulk	Silty SAND (SM)													1188	8 20	56	0 10				
DH-05	5 0	1	Poorly-graded SAND (SP)	102	97	6	9																
DH-05	11 0	3	Silty SAND (SM)	120	101	18																	

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SUMMARY OF LABORATORY TEST RESULTS

J Street Drain Improvements
Oxnard, California

LAB SUMMARY TABLE VENTURA N:\PROJECTS\3161 HDRENGINEERING\3161 014 JSTREETDRAINEXPLORATIONS\GINT\2008\3161 014 2008 VH08B.GPJ 10/30/08 02:13 PM.cab

DR LL HOLE	DEPTH, ft	SAMPLE NUMBER	MATER AL DESCR PT ON	UWW pcf	UDW pcf	MC %	F NES %	ATTERBERG LIMITS		COMPACTION TEST		DIRECT SHEAR		COMPRESSIVE STRENGTH TESTS		CORROS V TY TESTS				R VALUE	EXPANSION INDEX	SAND EQUIVALENT (SE)	SPECIFIC GRAVITY
								LL	P	MAX DD pcf	OPT MC %	C ksf	PH deg	Qu ksf	S_u (Cell Prs) ksf	R	pH	Cl	So_4 (%)				
DH-05	20 0	5	Poorly-graded SAND (SP)	132	108	21	7																
DH-05	30 0	7	Fat CLAY (CH)	115	80	44	94	52	27														
DH-05	40 0	9	Silty Fine SAND (SM)	125	97	29	25																
MW-01	3 0	1	Silty Fine SAND (SM)	121	105	15																	
MW-01	5 5	2	Silty Fine SAND (SM)			29	37																
MW-01	9 0	3	Poorly-graded SAND (SP)	129	109	18	5																
MW-01	19 5	5	Sandy S LT (ML)			26	69	27	4														
MW-01	25 0	6	Sandy S LT (ML)	132	107	23																	
MW-02	2 5	1	Sandy Clayey S LT (ML-CL)	127	111	14	54	2	7														
MW-02	4 5	2	Sandy Clayey S LT (ML-CL)																				
MW-02	8 5	3	Fat CLAY with sand (CH)	102	68	51	82	75	44														
MW-02	14 5	4	Poorly-graded SAND (SP)			2																	
MW-02	19 5	5	Poorly-graded SAND (SP)	132	113	17																	
MW-02	29 5	7	S LT (ML)	125	97	29																	
MW-03	3 5	2	Silty SAND (SM)	12	112	9	2					0 1	35										
MW-03	9 5	4	Lean CLAY (CL)	157	7	24																	
MW-03	19 5	6	Poorly-graded SAND (SP)	126	1	16	10																
MW-03	29 5	8	Poorly-graded SAND (SP)	13	6	15																	

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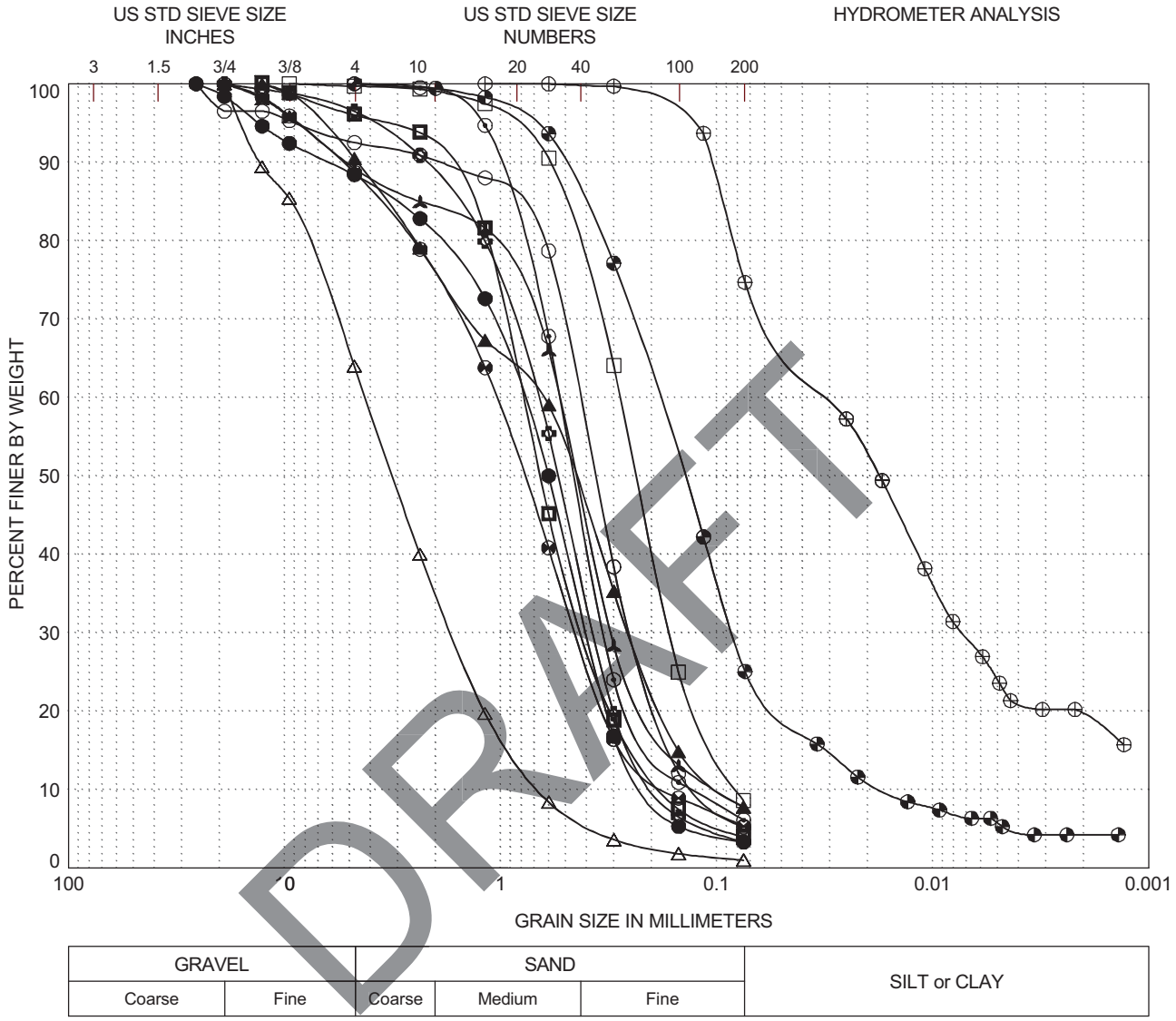
SUMMARY OF LABORATORY TEST RESULTS
J Street Drain Improvements
Oxnard, California

HDR Engineering, Inc.
Project No. 3161.014

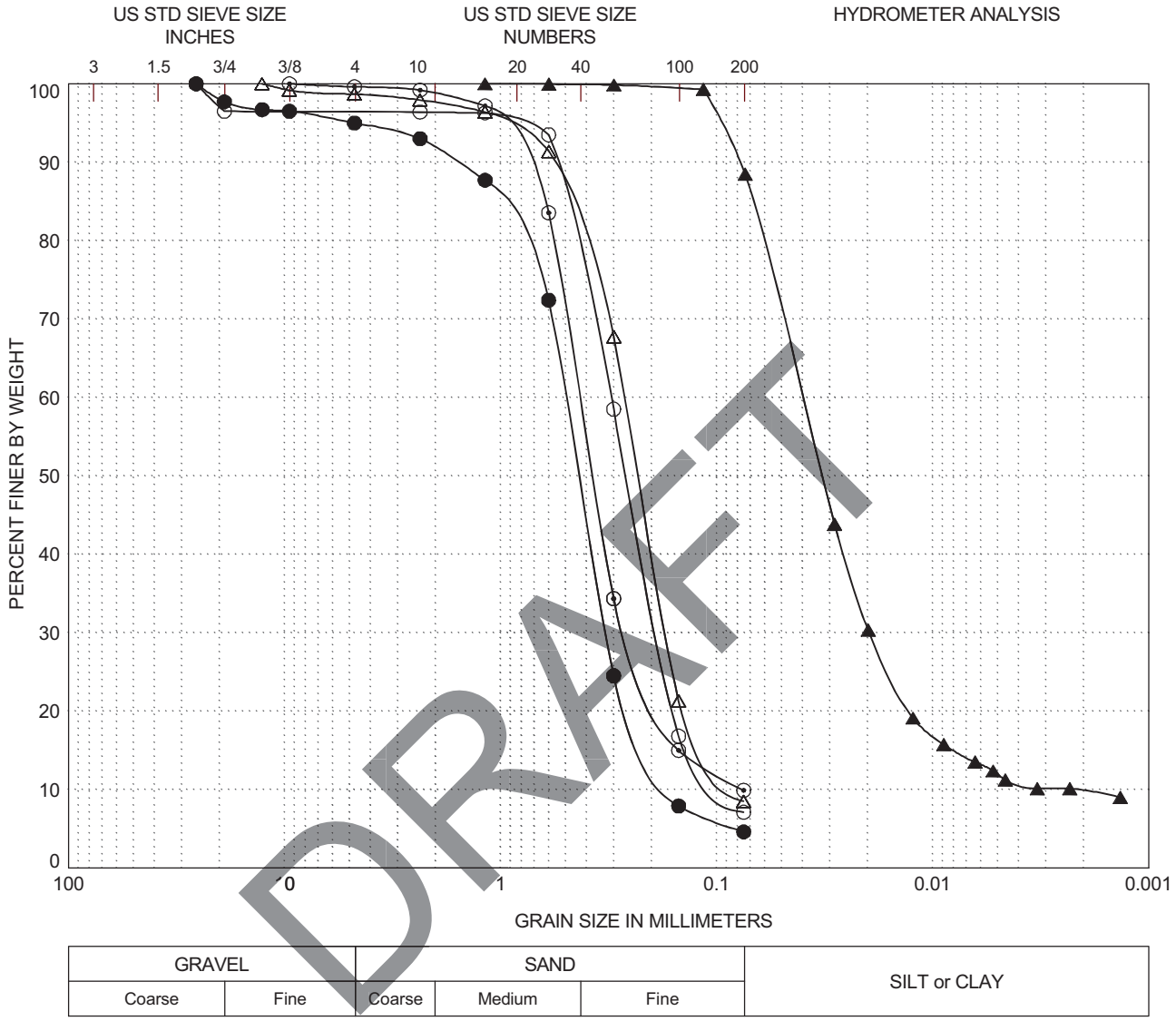


LEGEND (location)	(depth,ft)	CLASSIFICATION	Cc	Cu
DH 01	20.0	Poorly graded SAND (SP)	1.1	3.6
DH 02	5.5	Poorly graded SAND (SP)	1.0	4.1
DH 02	9.5	Well graded SAND with gravel (SW)	1.0	6.4
DH 02	14.5	Well graded SAND (SW)	1.0	7.0
DH 02	34.5	Poorly graded SAND (SP)	1.6	4.0
DH 03	6.5	Poorly graded SAND (SP)	1.1	3.8
DH 03	15.0	Poorly graded SAND (SP)	1.8	5.3
DH 04	9.0	Poorly graded SAND (SP)	1.2	4.5
DH 04	19.5	Well graded SAND (SW)	1.1	6.4
DH 04	34.5	Lean CLAY with sand (CL)		
DH 05	5.0	Poorly graded SAND (SP)	1.2	3.5
DH 05	11.0	Silty SAND (SM)	2.2	11.0

GRAIN SIZE CURVES
J Street Drain Improvements
Oxnard, California

PLATE B-2a

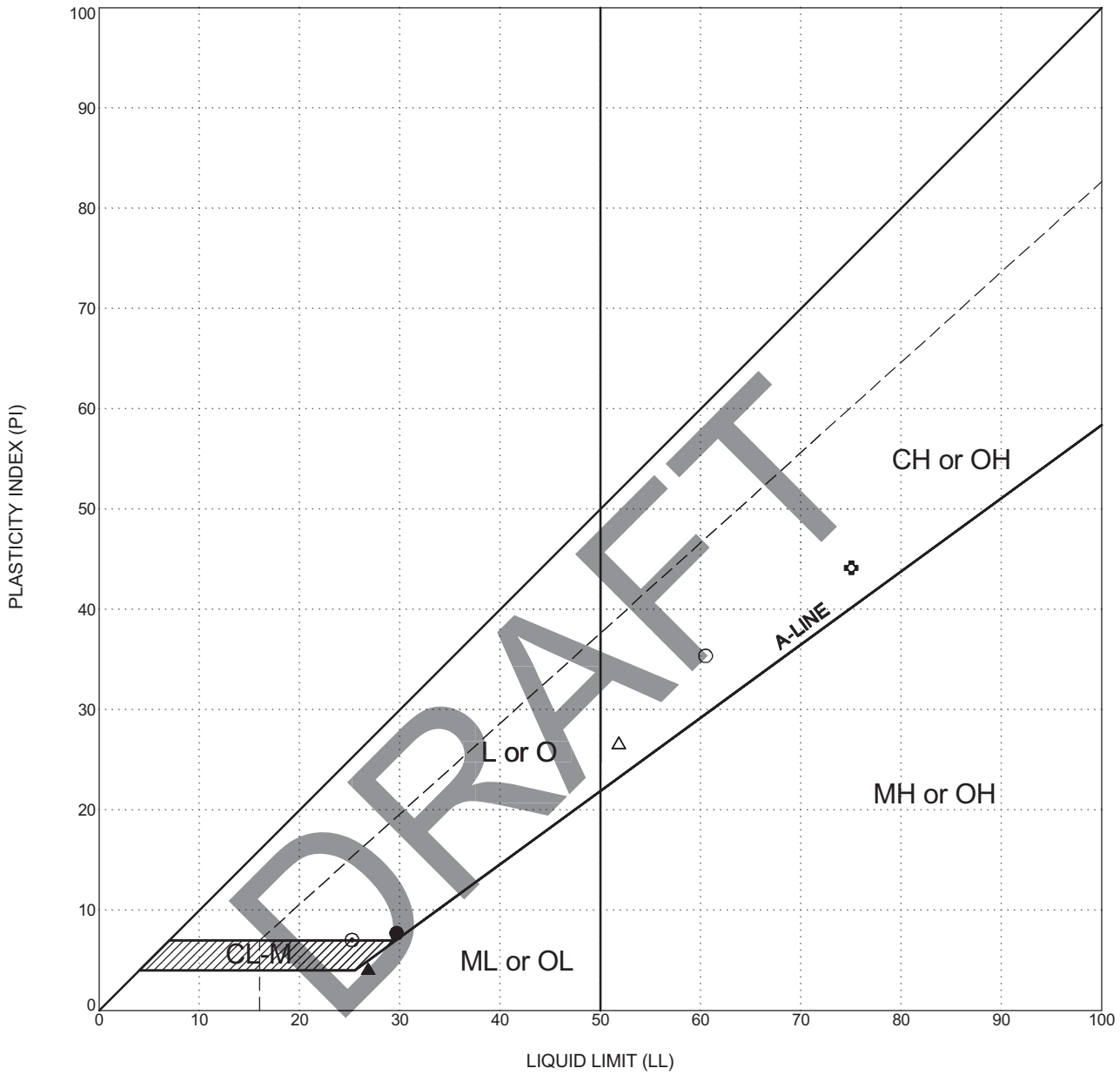
HDR Engineering, Inc.
Project No. 3161.014



LEGEND	(location)	(depth,ft)	CLASSIFICATION	Cc	Cu
○	DH 05	20.0	Poorly graded SAND (SP)	1.2	3.3
●	MW 01	9.0	Poorly graded SAND (SP)	1.3	3.1
△	MW 02	14.5	Poorly graded SAND (SP)	1.3	3.3
▲	MW 02	29.5	SILT (ML)	4.4	18.3
⊙	MW 03	19.5	Poorly graded SAND (SP)	2.0	5.7

GRAIN SIZE CURVES
J Street Drain Improvements
Oxnard, California

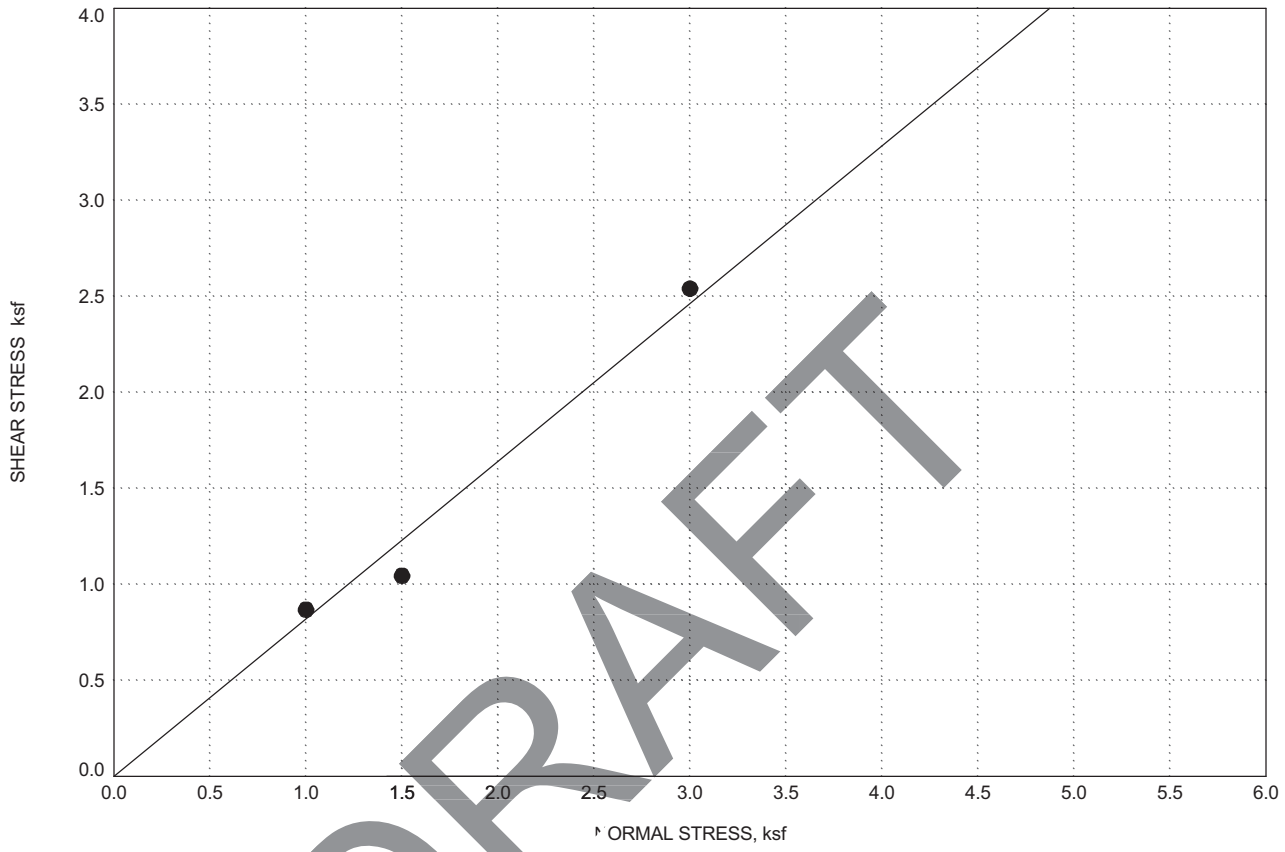
PLATE B-2b



LEGEND	location	depth, ft	CLASSIFICATION	ATTERBERG LIMITS TEST RESULTS LIQUID LIMIT(LL)	PLASTIC LIMIT(PL)	PLASTICITY INDEX (PI)
○	DH 03	24.5	Fat CLAY with sand (CH)	60	25	35
●	DH 04	29.5	Lean CLAY with sand (CL)	30	22	8
△	DH 05	30.0	Fat CLAY (CH)	52	25	27
▲	MW 01	19.5	Sandy SILT (ML)	27	23	4
⊙	MW 02	2.5	Sandy Clayey SILT (ML CL)	25	18	7
✿	MW 02	8.5	Fat CLAY with sand (CH)	75	31	44

PLASTICITY CHART
J Street Drain Improvements
Oxnard, California

PLATE B-3



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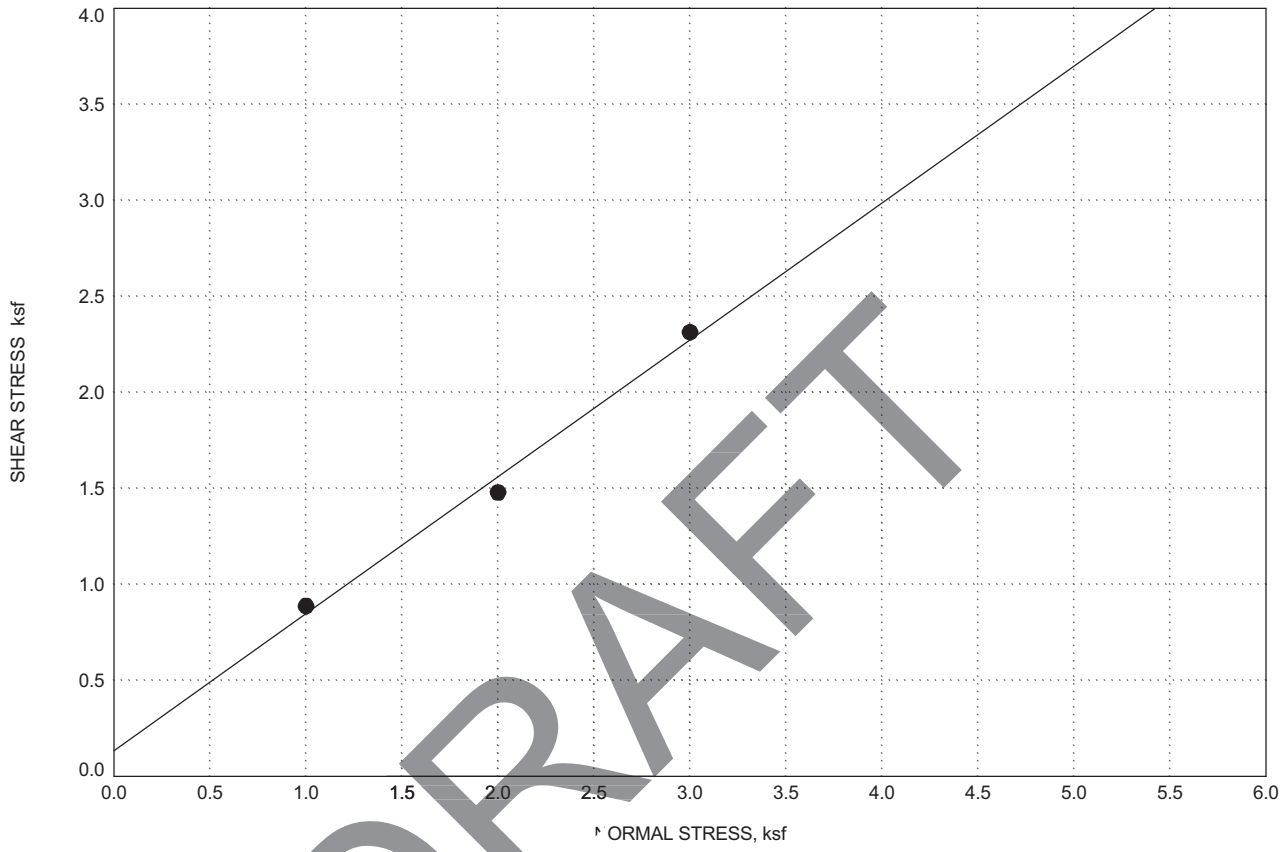
COHESION, ksf	0.0
ANGLE OF INTERNAL FRICTION, deg	39
LOCATION	DH-01
DEPTH, ft	4
MOISTURE CONTENT, %	19
UNIT DRY WEIGHT, pcf	102
MATERIAL DESCRIPTION	SAND (SP)
SAMPLE CONDITION	Ring Sample

DIRECT SHEAR TEST RESULTS
J Street Drain Improvements
Oxnard, California

PLATE B-4a

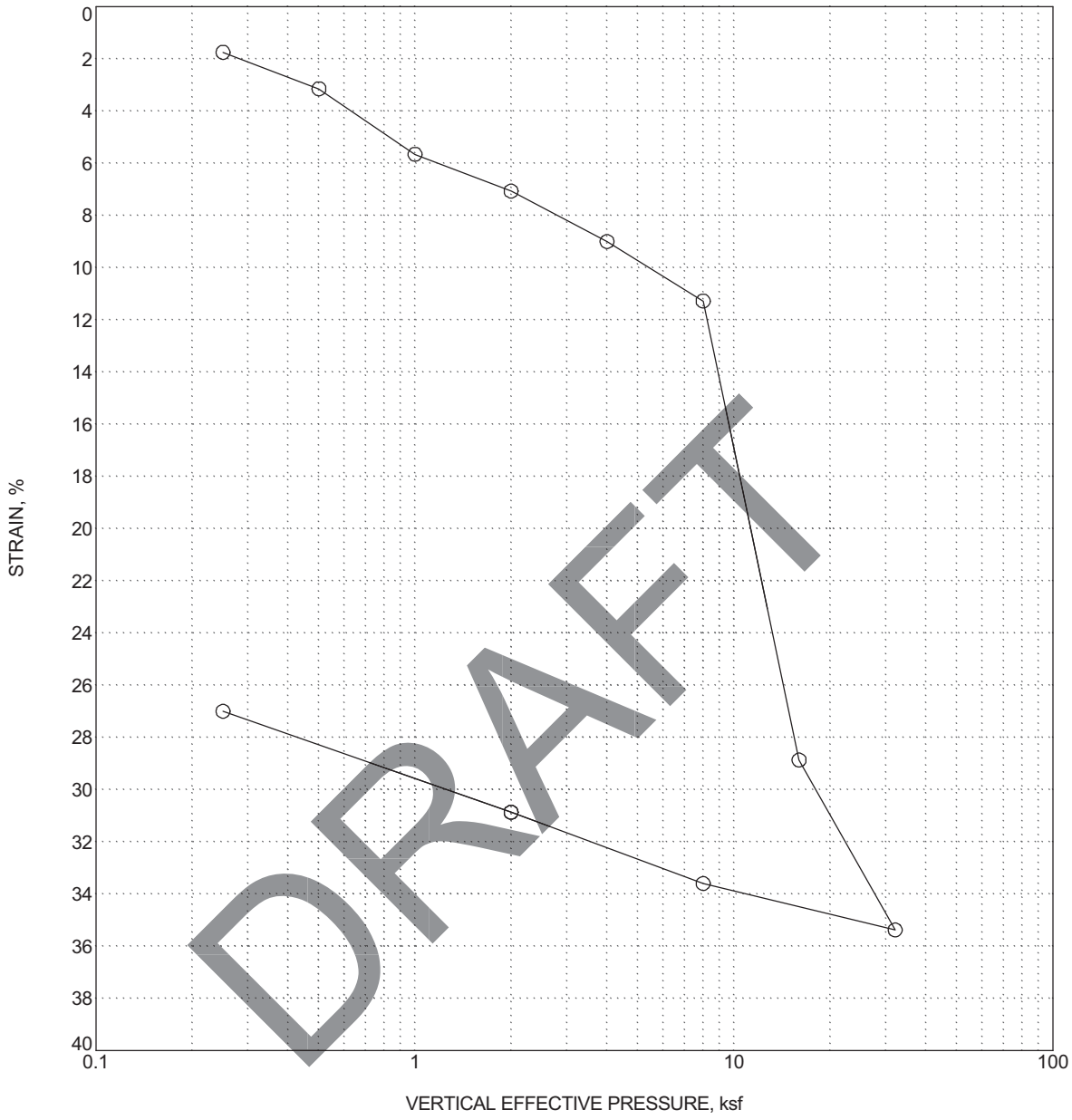


DRAFT

COHESION, ksf	0.1
ANGLE OF INTERNAL FRICTION, deg	35
LOCATION	MW-03
DEPTH, ft	3.5
MOISTURE CONTENT, %	20
UNIT DRY WEIGHT, pcf	108
MATERIAL DESCRIPTION	Silty SAND (SM)
SAMPLE CONDITION	Ring Sample

DIRECT SHEAR TEST RESULTS
J Street Drain Improvements
Oxnard, California

PLATE B-4b



LOCATION	MW-02
DEPTH, ft	8.5
INITIAL MOISTURE CONTENT, %	51
UNIT DRY WEIGHT, pcf	68
MATERIAL DESCRIPTION	Fat CLAY with sand (CH)
SAMPLE CONDITION	

CONSOLIDATION TEST RESULTS
J Street Drain Improvements
Oxnard, California

PLATE B-5

COOPER TESTING LABORATORY

Corrosivity Test Summary

CTL # 446-051 **Date:** 5/22/2008 **Tested By:** PJ **Checked:** PJ
Client: Fugro **Project:** J Street Dra n #3837 **Proj No:** 3161.014
Remarks:

Sample Location or ID			Resistivity @ 15.5 °C (Ohm-cm)			Chloride	Sulfate		pH	ORP	Moisture	Soil Visual Description
Boring	Sample, No.	Depth, ft.	As Rec.	Minimum	Saturated	mg/kg	mg/kg	%		(Re. ox)	As Received	
						Dry Wt	Dry Wt	Dry Wt		mv	%	
			ASTM G57	Cal 643	ASTM G57	Cal 422-mod	Cal 417-mod	C 17-mod	Cal 643	SM 2580B	ASTM D2216	
DH-1	-	0-5	-	7893	-	<2	<5	<0.0005	9.0	-	5.2	Brown Silty SAND
DH-3	-	0-5	-	1100	-	10	480	0.04 0	8.1	-	12.8	Brown Sandy CLAY w/ Gravel
DH-5	-	0-5	-	1188	-	56	991	0 991	8.2	-	5.1	Brown Silty SAND

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CORROSIVITY TEST SUMMARY
J Street Drain Improvements
Oxnard, California

APPENDIX C
HYDRAULIC CONDUCTIVITY TESTING

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APPENDIX C
HYDRAULIC CONDUCTIVITY TESTING

INTRODUCTION

This appendix describes the equipment and test methods employed to evaluate the hydraulic conductivity at two monitoring wells at the project site. The contents of this appendix shall be integrated with the geotechnical engineering study of which it is a part. They shall not be used in whole or in part as a sole source for information or recommendations regarding the subject site.

FIELD STUDY

Approximate hydraulic conductivity along the proposed alignment was evaluated within two of the constructed monitoring wells (piezometers), MW-1 and MW-2, by performing short-term constant rate pumping tests. The methods and materials involved in piezometer installation are summarized in Appendix A with complete as-built diagrams and details. The approximate locations of the piezometers are shown on Plates 1 and 2.

Test Method

ASTM Standards on Ground Water and Vadose Zone Investigations include guidance document D4043 - Standard Guide for Selection of Aquifer-Test Method in Determining of Hydraulic Properties by Well Techniques and is to be used in conjunction with D4050 - Standard Test Method (Field Technique) for Withdrawal and Injection Well Tests for Determining Hydraulic Properties of Aquifer Systems. ASTM D4043 contains a decision tree (flowchart) used to select an appropriate test procedure (attached). Selection of Single-Well Hydraulic Test Methods for Monitoring Wells, also contained in Standards on Ground Water and Vadose Zone Investigations, indicates that when hydraulic conductivity values are above 28 ft/d (209 gpd/ft2), as is the case in the sands and gravels underlying the site, slug testing is not appropriate. Rather, a constant head (injection) test or single-well (constant rate) pumping test is appropriate. Of these two tests, the single-well pumping test was chosen as an appropriate method, mainly because it did not involve introducing water into the aquifer.

Test Setup and Well Development

Short-term constant rate pump tests were performed on piezometers, MW-1 and MW-2, on Thursday, May 8, 2008. First, water levels were measured within each piezometer relative to the top of each traffic-rated vault. Next, each piezometer was instrumented with a submersible electric pump and an In-Situ MiniTroll Professional datalogger, programmed to read and record water level data at regular intervals. After several minutes of recording static water level data with the datalogger, the pump within each well was operated at varied pumping rates for approximately 15 minutes, until the produced water was relatively clear. This was the only development performed within each well.

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Pumping Tests

Following a brief period of recovery, the wells were pumped for about 100 minutes at constant rates of approximately 6.4 gallons per minute (pgm) for MW-1 and approximately 3.3 gpm for MW-2. The pumping rates were measured with the use of a calibrated 5-gallon bucket and chronograph. After about 100 minutes of pumping, the pumps were turned off and water level recovery data was collected until no further significant water level recovery was observed.

A summary of the pumping test data is presented below as Table 5 – Summary of Pump Test Data and Hydraulic Conductivity Results. Hydrographs of the entire period of pumping are presented as Plates C-1 and C-2. Hydrographs of the constant rate pumping tests are presented as Plates C-3 and C-4. Hydrographs of the constant rate pumping test recovery are presented as Plates C-5 and C-6.

Table 5 - Summary of Pump Test Data and Hydraulic Conductivity Results

Test Portion	Duration (minutes)	Pumping Rate (gpm)	Drawdown (feet)	Transmissivity (ft^2/d)	Saturated Thickness (ft)	Hydraulic Conductivity (ft/d)
MW-1 Pumping	100	6.4	3.12	1	5 (15)	223 (74)
MW-1 Recovery	40	0	3.90	2 271	5 (15)	454 (151)
MW-2 Pumping	85	3.3	49	673	10 (15)	67 (45)
MW-2 Recovery	12	0	0.48	4,213	10 (15)	421 (281)

Note: Two values for saturated thickness given; first value is thickness of likely water-bearing layer, value in parentheses is entire saturated thickness. Hydraulic conductivity value in parentheses is an average value.

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HYDRAULIC CONDUCTIVITY EVALUATION

Pumping test data were evaluated for transmissivity and hydraulic conductivity in accordance with the Cooper and Jacobs (1946) straight-line approximation method. A summary of the hydraulic conductivity results are presented in Table 5. In both piezometers, the data collected during the pumping tests were preferred over the recovery tests. Therefore, the results of the recovery tests, although presented, are not considered in the calculation of the site hydraulic conductivity. It appears that the pumping test performed within both piezometers resulted in a high enough discharge rate to sufficiently stress the aquifer. Therefore, the calculated values of hydraulic conductivity for the pumping tests presented in Table 5 are generally considered accurate.

Based on the analysis, the approximate value of hydraulic conductivity within MW-1 for the sand layer below 14 feet (total thickness of 5 feet) is approximately 223 feet per day (ft/d).

The average hydraulic conductivity of the entire saturated interval, including a 10 foot thick layer of sandy silt, is approximately 74 ft/d. Within MW-2, the approximate value of hydraulic conductivity for the sand layer (total thickness of 10 feet) is approximately 67 feet per day (ft/d). The average hydraulic conductivity of the entire saturated interval is approximately 45 ft/d.

Based on a literature search, the calculated values of hydraulic conductivity are characteristic of "silty sands" to "clean sands" (Freeze and Cherry, 1979). According to Driscoll (1986), these hydraulic conductivity values are representative of "fine to coarse sand". Fetter (1988) indicates that "well-sorted sands" have hydraulic conductivity values similar to those presented above. The calculated values of hydraulic conductivity reasonably represent the materials described on the drilling logs of the monitoring wells.

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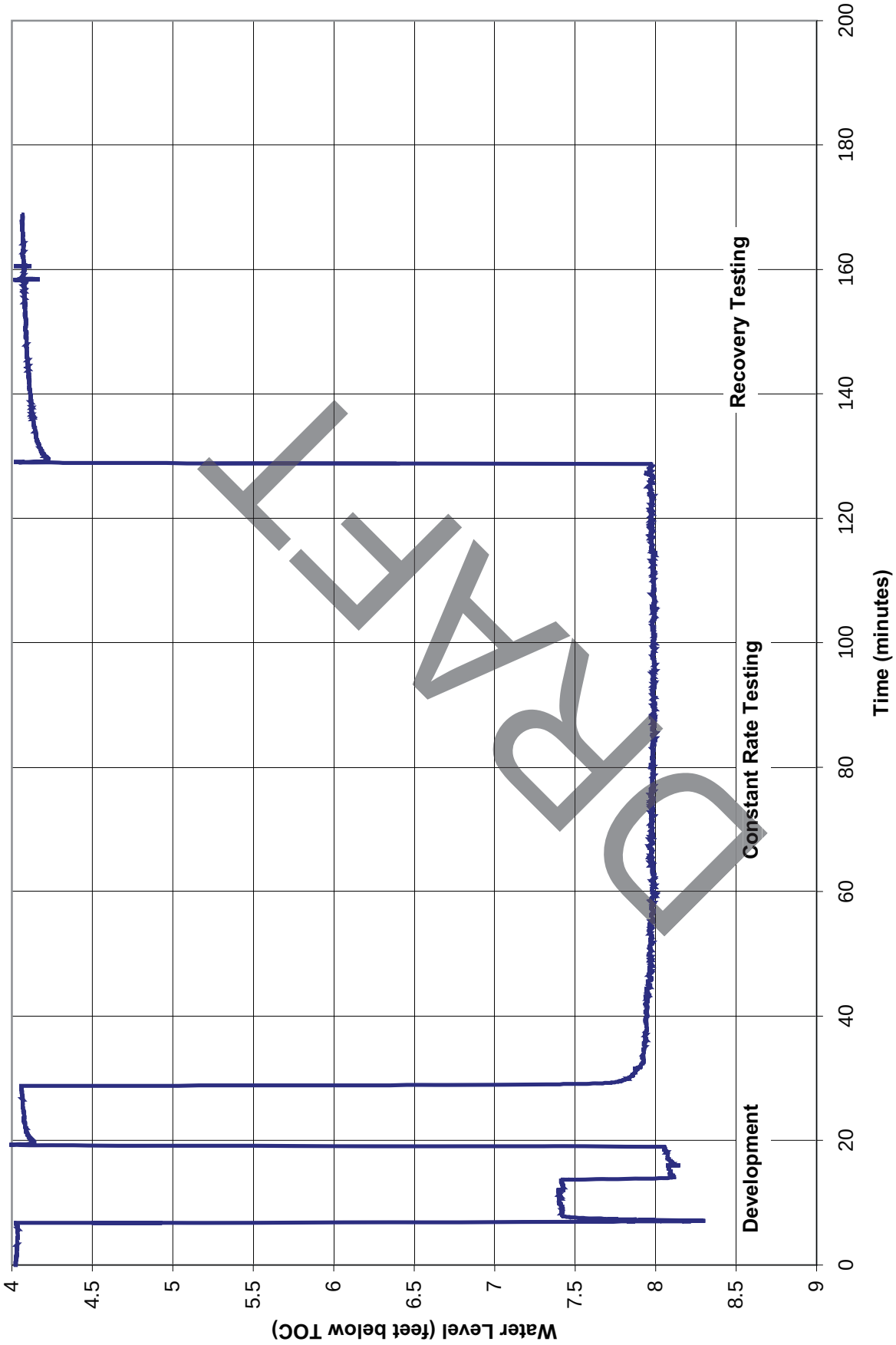

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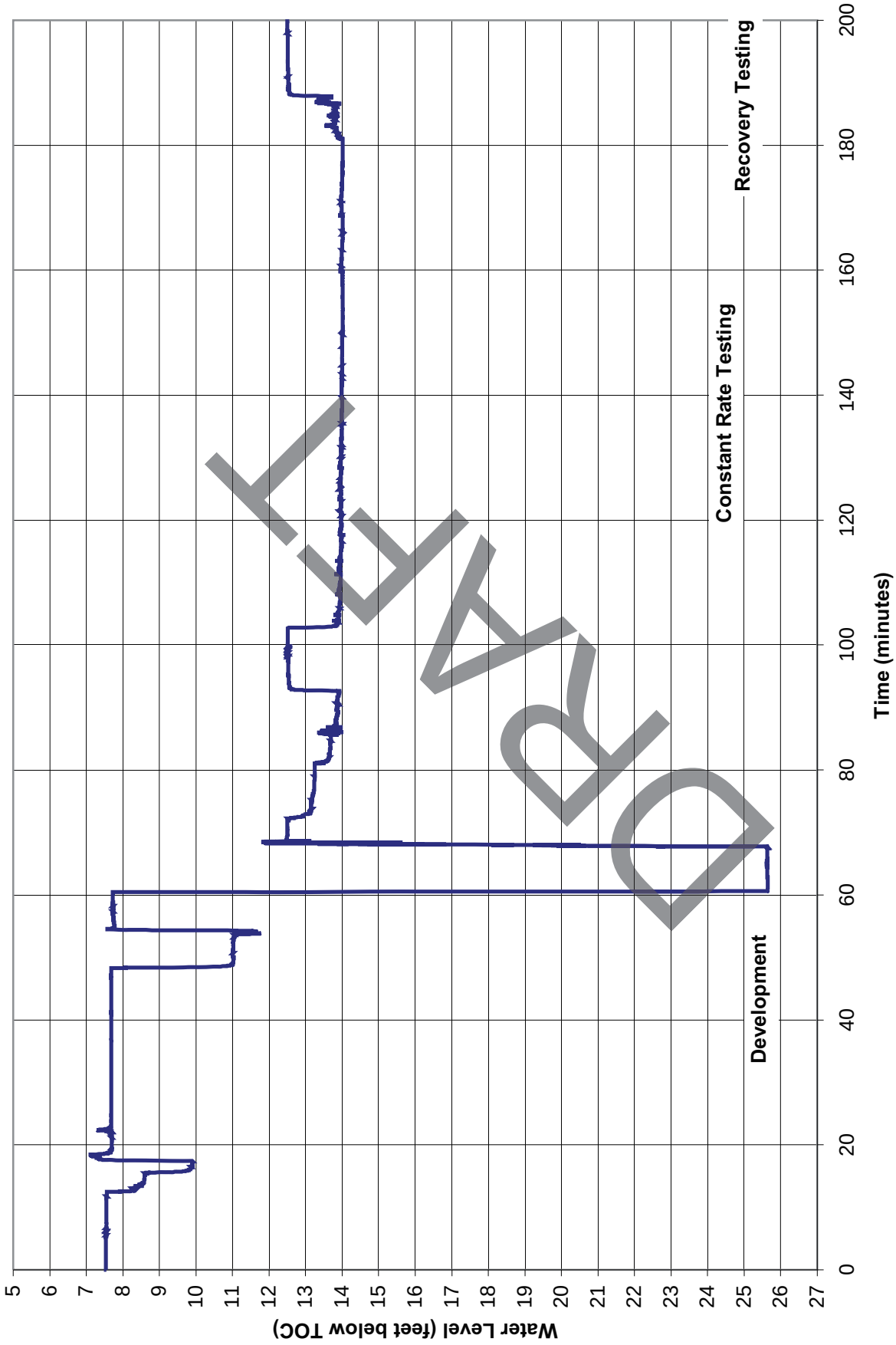
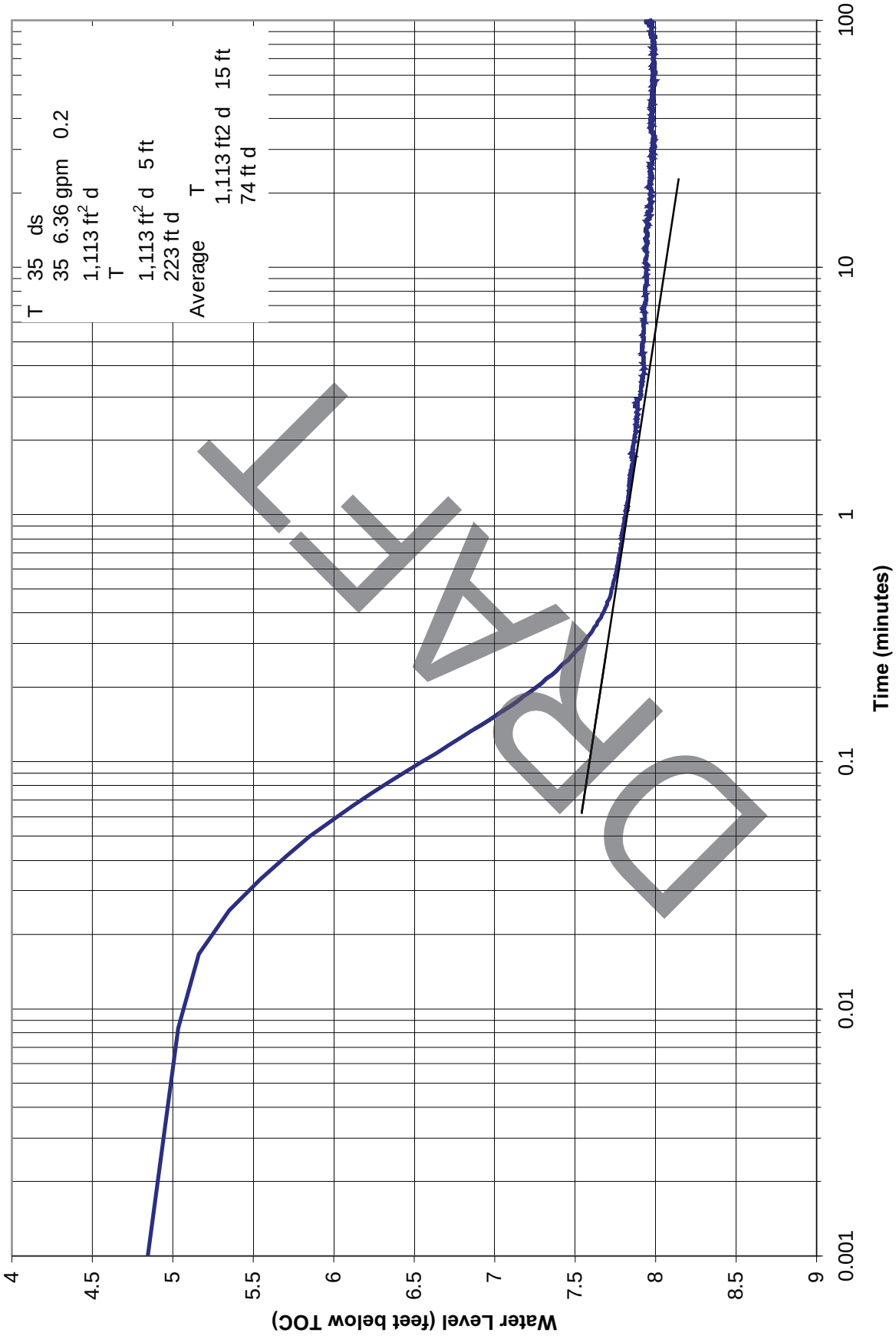
MW-1 PUMPING TEST
(Water Level vs. Time)
J Street Drain Improvements
Oxnard, California

M:\Drafting\JOBFILES\2008\3161\3161.014\Drawings\Plate C-1.cdr, 7-1-08



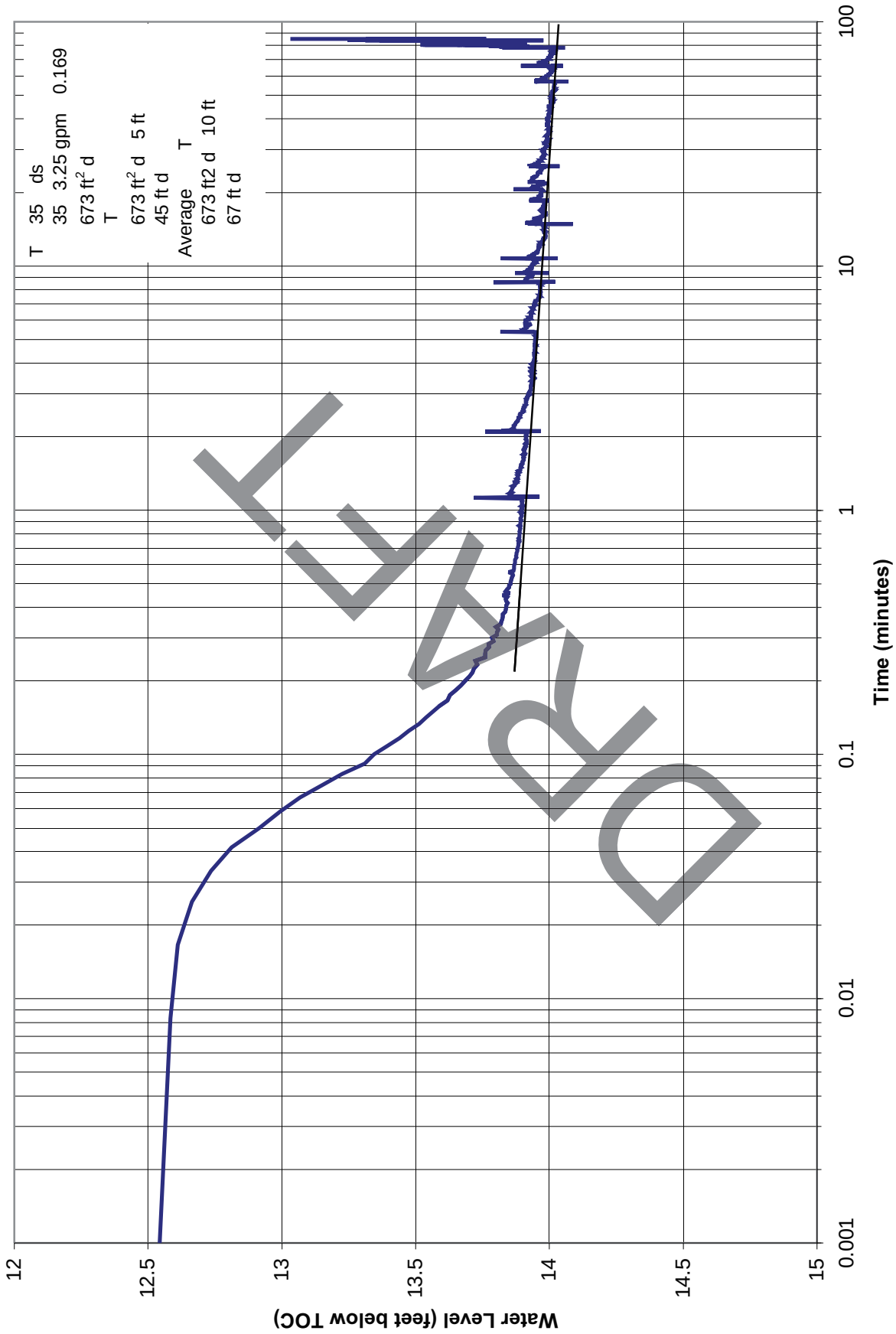
MW-2 PUMPING TEST
(Water Level vs. Time)
J Street Drain Improvements
Oxnard, California

M:\Drafting\JOBFILES\2008\3161\3161.014\Drawings\Plate C-2.cdr, 7-1-08



MW-1 PUMPING TEST
(Water Level vs. Log Time)
J Street Drain Improvements
Oxnard, California

M:\Drafting\JOBFILES\2008\3161\3161.014\Drawings\Plate C-3.cdr, 7-1-08



DRAFT

MW-2 PUMPING TEST
(Water Level vs. Log Time)
J Street Drain Improvements
Oxnard, California

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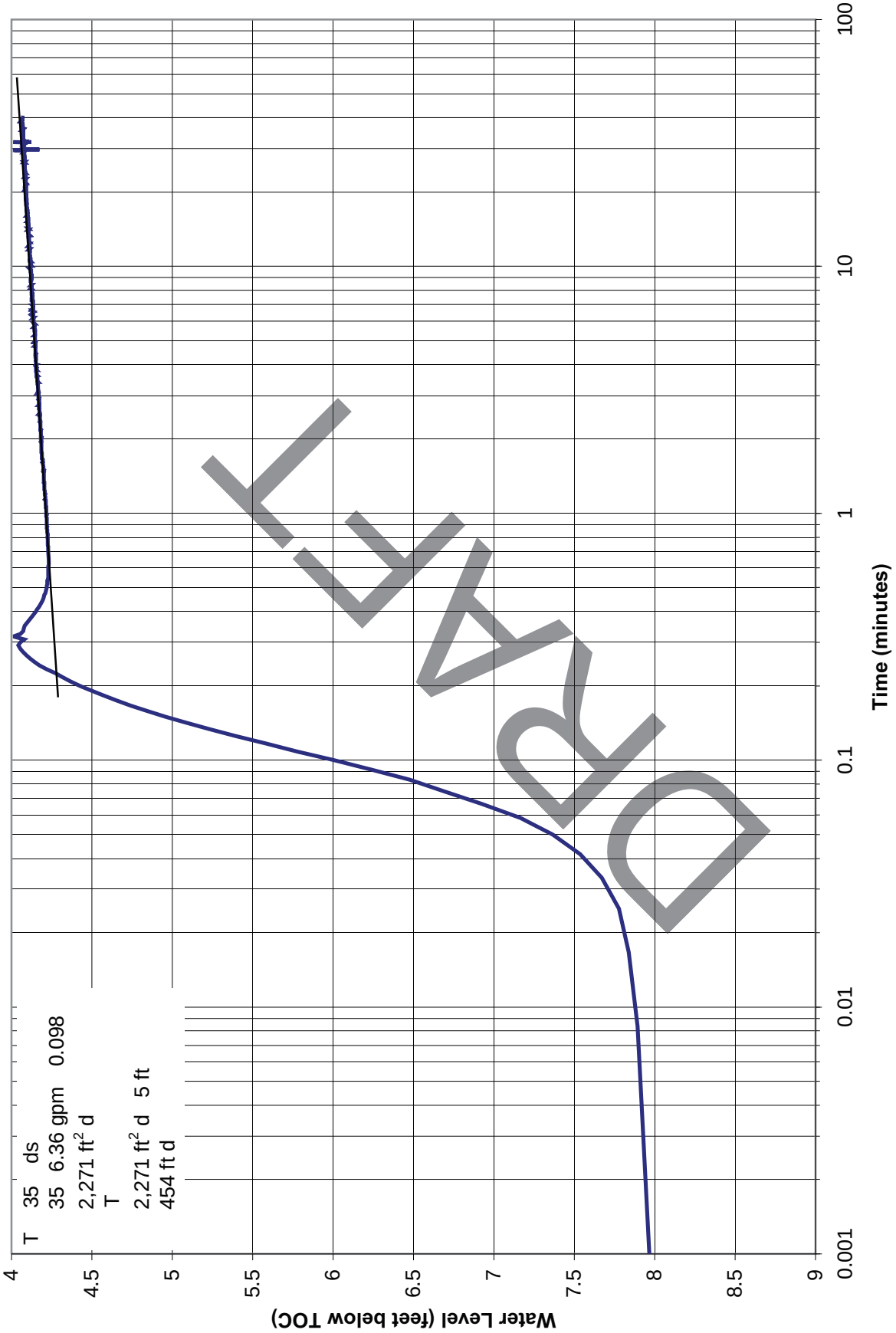
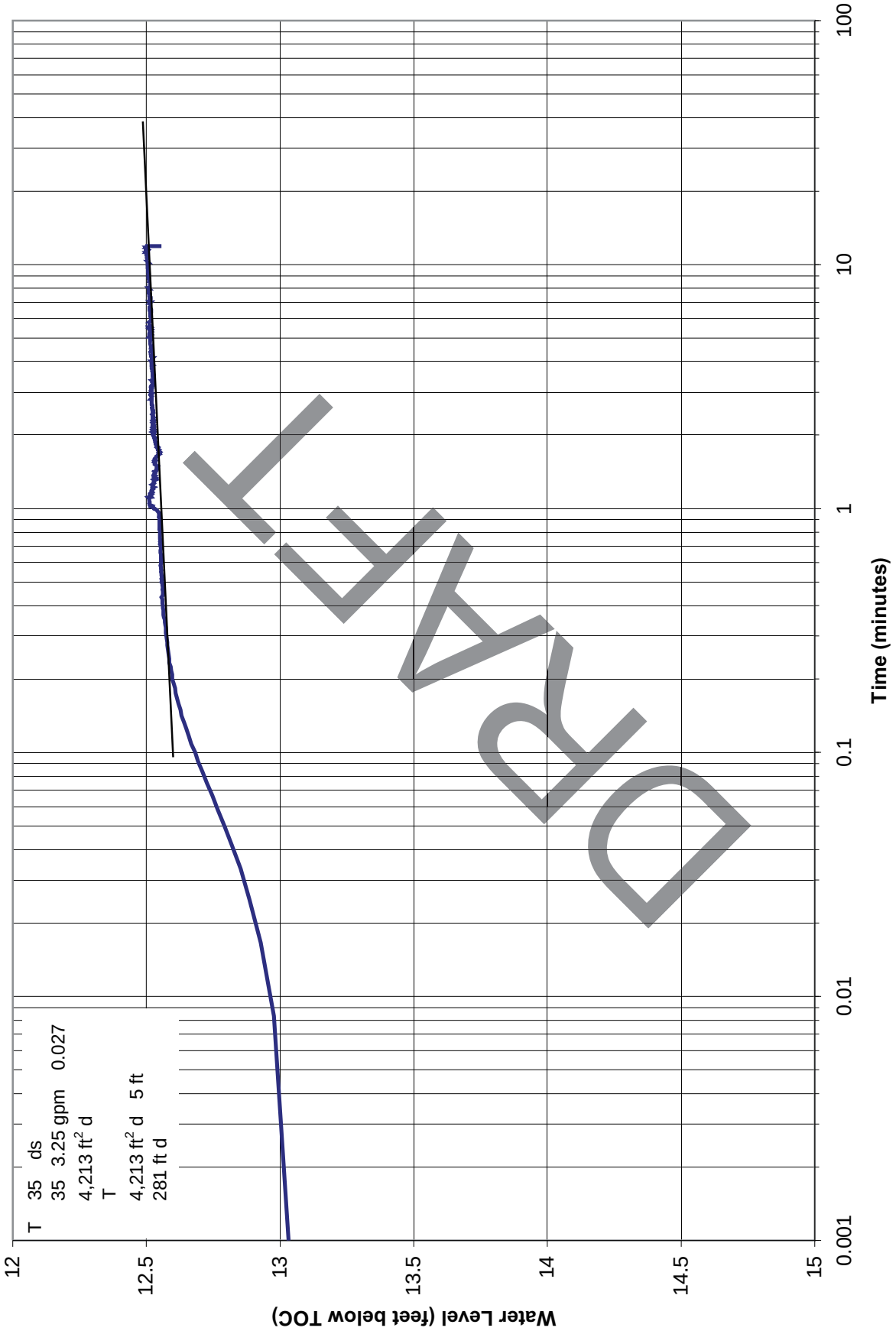


DRAFT

MW-1 RECOVERY TEST
(Water Level vs. Log Time)
J Street Drain Improvements
Oxnard, California

M:\Drafting\JOBFILES\2008\3161\3161.014\Drawings\Plate C-5.cdr, 7-1-08



MW-2 RECOVERY TEST
(Water Level vs. Log Time)
J Street Drain Improvements
Oxnard, California

M:\Drafting\JOBFILES\2008\3161\3161.014\Drawings\Plate C-6.cdr, 7-1-08

EDR DataMap®
Corridor Study

J Street Drain Project
Oxnard, CA 93033

May 02, 2008

Inquiry number 02208516.1r

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EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

OXNARD, CA 93033
OXNARD, CA 93033

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records within the requested search area for the following databases:

FEDERAL RECORDS

Delisted NPL	National Priority List Deletions
NPL LIENS	Federal Superfund Liens
LIENS 2	CERCLA Lien Information
RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generator
RCRA-NonGen	RCRA - Non Generators
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
DOT OPS	Incident and Accident Data
US CDL	Clandestine Drug Labs
US BROWNFIELDS	A Listing of Brownfields Sites
LUCIS	Land Use Control Information System
CONSENT	Superfund (CERCLA) Consent Decrees
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
MINES	Mines Master Index File
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database

STATE AND LOCAL RECORDS

CA BOND EXP. PLAN	Bond Expenditure Plan
SCH	School Property Evaluation Program
Toxic Pits	Toxic Pits Cleanup Act Sites
LIENS	Environmental Liens Listing
DEED	Deed Restriction Listing
DRYCLEANERS	Cleaner Facilities

EXECUTIVE SUMMARY

WIP ..... Well Investigation Program Case List
CDL ..... Clandestine Drug Labs
HAULERS ..... Registered Waste Tire Haulers Listing

TRIBAL RECORDS

INDIAN RESERV ..... Indian Reservations
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land
INDIAN UST ..... Underground Storage Tanks on Indian Land

EDR PROPRIETARY RECORDS

Manufactured Gas Plants ... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 01/31/2008 has revealed that there is 1 NPL site within the searched area.

Site	Address	Map ID	Page
HALACO ENGINEERING COMPANY	***6200 PERKINS***	***31***	***257***

Proposed NPL: Proposed NPL sites . The source of this database is the U.S. EPA.

A review of the Proposed NPL list, as provided by EDR, and dated 01/31/2008 has revealed that there is 1 Proposed NPL site within the searched area.

Site	Address	Map ID	Page
HALACO ENGINEERING COMPANY	***6200 PERKINS***	***31***	***257***

EXECUTIVE SUMMARY

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 01/09/2008 has revealed that there are 2 CERCLIS sites within the searched area.

Site	Address	Map ID	Page
NAVAL BASE VENTURA COUNTY PORT	***1000 23RD AVE***	***11***	***43***
HALACO ENGINEERING COMPANY	***6200 PERKINS***	***31***	***257***

CERC-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 12/03/2007 has revealed that there are 2 CERC-NFRAP sites within the searched area.

Site	Address	Map ID	Page
STAUFFER CHEM CO	***5800 PERKINS RD***	***22***	***159***
COOK COMPOSITES AND POLYMERS C	***5980 ARCTURUS AVE***	***28***	***216***

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 12/12/2007 has revealed that there is 1 CORRACTS site within the searched area.

Site	Address	Map ID	Page
NAVAL BASE VENTURA COUNTY PORT	***1000 23RD AVE***	***11***	***43***

RCRA-TSDF: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-TSDF list, as provided by EDR, and dated 03/06/2008 has revealed that there is 1 RCRA-TSDF site within the searched area.

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
NAVAL BASE VENTURA COUNTY PORT	***1000 23RD AVE***	***11***	***43***

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/06/2008 has revealed that there are 3 RCRA-LQG sites within the searched area.

Site	Address	Map ID	Page
NAVAL BASE VENTURA COUNTY PORT	***1000 23RD AVE***	***11***	***43***
Not reported	5936 PERKINS ROAD	24	187
COOK COMPOSITES AND POLYMERS C	***5980 ARCTURUS AVE***	***28***	***216***

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/06/2008 has revealed that there are 12 RCRA-SQG sites within the searched area.

Site	Address	Map ID	Page
CHEVRON STATION 94267	***4300 SAVIERS RD***	***10***	***32***
HUENEME HIGH SCHOOL	***500 W BARD RD***	***12***	***127***
AMSEC	***610 W HUENEME DR***	***22***	***149***
STAUFFER CHEM CO	***5800 PERKINS RD***	***22***	***159***
PORT HUENEME SHORE BASE	***760 W HUENEME RD***	***22***	***163***
HALLIBURTON SERVICES	***5800 PERKINS RD***	***24***	***177***
HYDRYL COMPANY	***5721 PERKINS ROAD***	***24***	***179***
CUSTOM INDUSTRIAL FINISHES	***5711 PERKINS RD***	***24***	***182***
WEYERHAEUSER COMPANY HUENEME M	***5936 PERKINS RD***	***24***	***188***
PAC FOUNDRIES	***705 INDUSTRIAL AVE***	***25***	***197***
PORT HUENEME WAREHOUSE C/O EXX	***757 INDUSTRIAL AVENUE***	***26***	***210***
HALACO INC	6200 PERKINS RD	31	255

DOD: Consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

A review of the DOD list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 DOD

site within the searched area.

Site	Address	Map ID	Page
PORT HUENEME NAVAL CONSTRUCTIO		0	3

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 12/31/2006 has revealed that there is 1 FUDS site within the searched area.

Site	Address	Map ID	Page
PORT HUENEME S/COAST DEF SITE		29	235

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 01/14/2008 has revealed that there is 1 ROD site within the searched area.

Site	Address	Map ID	Page
HALACO ENGINEERING COMPANY	***6200 PERKINS***	***31***	***257***

TRIS: The Toxic Chemical Release Inventory System identifies facilities that release toxic chemicals to the air, water, and land in reportable quantities under SARA Title III, Section 313. The source of this database is the U.S. EPA.

A review of the TRIS list, as provided by EDR, and dated 12/31/2006 has revealed that there is 1 TRIS site within the searched area.

Site	Address	Map ID	Page
COOK COMPOSITES AND POLYMERS C	***5980 ARCTURUS AVE***	***28***	***216***

PADS: The PCB Activity Database identifies generators, transporters, commercial storers and/or brokers and disposers of PCBs who are required to notify the United States Environmental Protection Agency of such activities. The source of this database is the U.S. EPA.

A review of the PADS list, as provided by EDR, and dated 12/04/2007 has revealed that there is 1 PADS site within the searched area.

Site	Address	Map ID	Page
NAVAL BASE VENTURA COUNTY PORT	***1000 23RD AVE***	***11***	***43***

EXECUTIVE SUMMARY

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 01/04/2008 has revealed that there are 12 FINDS sites within the searched area.

Site	Address	Map ID	Page
CHEVRON STATION 94267	*4300 SAVIERS RD*	*10*	*32*
HUENEME HIGH SCHOOL	*500 W BARD RD*	*12*	*127*
AMSEC	*610 W HUENEME DR*	*22*	*149*
STAUFFER CHEM CO	*5800 PERKINS RD*	*22*	*159*
PORT HUENEME SHORE BASE	*760 W HUENEME RD*	*22*	*163*
HYDRYL COMPANY	*5721 PERKINS ROAD*	*24*	*179*
CUSTOM INDUSTRIAL FINISHES	*5711 PERKINS RD*	*24*	*182*
WEYERHAEUSER COMPANY HUENEME M	*5936 PERKINS RD*	*24*	*188*
PAC FOUNDRIES	*705 INDUSTRIAL AVE*	*25*	*197*
PORT HUENEME WAREHOUSE C/O EXX	*757 INDUSTRIAL AVENUE*	*26*	*210*
COOK COMPOSITES AND POLYMERS C	*5980 ARCTURUS AVE*	*28*	*216*
HALACO ENGINEERING COMPANY	*6200 PERKINS*	*31*	*257*

RAATS: The RCRA Administration Action Tracking System contains records based on enforcement actions issued under RCRA and pertaining to major violators. It includes administrative and civil actions brought by the United States Environmental Protection Agency. The source of this database is the U.S. EPA.

A review of the RAATS list, as provided by EDR, and dated 04/17/1995 has revealed that there are 2 RAATS sites within the searched area.

Site	Address	Map ID	Page
NAVAL BASE VENTURA COUNTY PORT	*1000 23RD AVE*	*11*	*43*
COOK COMPOSITES AND POLYMERS C	*5980 ARCTURUS AVE*	*28*	*216*

STATE AND LOCAL RECORDS

HIST Cal-Sites: Formerly known as ASPIS, this database contains both known and potential hazardous substance sites. The source is the California Department of Toxic Substance Control. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

A review of the HIST Cal-Sites list, as provided by EDR, and dated 08/08/2005 has revealed that there is 1 HIST Cal-Sites site within the searched area.

Site	Address	Map ID	Page
NAVAL CONSTRUCTION BTTLN CTR	*1000 23RD AVE*	*11*	*73*

EXECUTIVE SUMMARY

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 03/10/2008 has revealed that there is 1 SWF/LF site within the searched area.

Site	Address	Map ID	Page
1X HALACO INC.	***6200 PERKINS ROAD***	***30***	***254***

CA WDS: California Water Resources Control Board - Waste Discharge System.

A review of the CA WDS list, as provided by EDR, and dated 06/19/2007 has revealed that there are 2 CA WDS sites within the searched area.

Site	Address	Map ID	Page
PAC FOUNDRIES	***705 INDUSTRIAL AVE***	***25***	***197***
COOK COMPOSITES AND POLYMERS C	***5980 ARCTURUS AVE***	***28***	***216***

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within the searched area.

Site	Address	Map ID	Page
PORT HUENEME WAREHOUSE C/O EXX	***757 INDUSTRIAL AVENUE***	***26***	***210***

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

A review of the Cortese list, as provided by EDR, and dated 04/01/2001 has revealed that there are 24 Cortese sites within the searched area.

Site	Address	Map ID	Page
SHELL SERVICE STATION	***1440 CHANNEL ISLANDS BL***	***2***	***4***
UNOCAL - 76 SS #5802	***1445 CHANNEL ISLANDS BL***	***2***	***8***
K-MART	***1345 CHANNEL ISLANDS BL***	***2***	***10***
CHEVRON SS #2991	2901 SAVIERS RD	5	15
U-HAUL CENTER OF OXNARD	***3020 SAVIERS ROAD***	***6***	***17***
KAYO OIL	***3211 SAVIERS RD***	***7***	***20***
AMERITONE PAINT	***3200 SAVIERS RD***	***7***	***23***
STEREO WAREHOUSE	***3434 SAVIERS RD***	***8***	***25***
ARCO SS #1933	***3650 SAVIERS RD***	***9***	***28***
CHEVRON STATION 94267	***4300 SAVIERS RD***	***10***	***32***
STEVE'S AUTO SERVICE	***4160 SAVIERS RD***	***10***	***41***
NAVAL CONSTRUCTION BTTLN CTR	***1000 23RD AVE***	***11***	***73***
FAITH OIL (NOW PHIL'S MOTORS)	***4530 SAVIERS RD***	***13***	***129***

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
U-RENT INC	***4700 SAVIERS RD***	***14***	***131***
MACELHENNY/LEVY & CO	***5156 SAVIERS RD***	***16***	***134***
USA PETROLEUM SS #223	***5040 SAVIERS RD***	***16***	***136***
SHELL SS - 5TH	***540 5TH ST***	***18***	***139***
SHARP AUTO SERVICE	***5577 SAVIERS RD***	***20***	***144***
HALLIBURTON ENERGY SERVICES	***5800 PERKINS RD***	***22***	***154***
MOBIL OIL SS (STEVE'S)	***801 HUENEME RD***	***22***	***161***
OXNARD WASTEWATER TREAT P	***6001 PERKINS***	***24***	***177***
B & C WELDING	***800 INDUSTRIAL AVE***	***26***	***206***
COOK COMPOSITES AND POLYMERS C	***5980 ARCTURUS AVE***	***28***	***216***
HALACO ENGINEERING COMPANY	***6200 PERKINS***	***31***	***257***

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 01/07/2008 has revealed that there is 1 SWRCY site within the searched area.

Site	Address	Map ID	Page
CALIFORNIA RECYCLING SERVICES	4220 SAVIERS RD	10	41

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 01/07/2008 has revealed that there are 29 LUST sites within the searched area.

Site	Address	Map ID	Page
SHELL SERVICE STATION Facility Status: Case Closed	***1440 CHANNEL ISLANDS BL***	***2***	***4***
UNOCAL - 76 SS #5802 Facility Status: Case Closed	***1445 CHANNEL ISLANDS BL***	***2***	***8***
K-MART Facility Status: Case Closed	***1345 CHANNEL ISLANDS BL***	***2***	***10***
CHEVRON #9-2991 Facility Status: Case Closed	2901 SAVIERS RD	5	15
U-HAUL CENTER OF OXNARD Facility Status: Case Closed	***3020 SAVIERS ROAD***	***6***	***17***
KAYO OIL Facility Status: Case Closed	***3211 SAVIERS RD***	***7***	***20***
AMERITONE PAINT Facility Status: Case Closed	***3200 SAVIERS RD***	***7***	***23***
STEREO WAREHOUSE Facility Status: Case Closed	***3434 SAVIERS RD***	***8***	***25***
ARCO SS #1933 Facility Status: Case Closed	***3650 SAVIERS RD***	***9***	***28***
CHEVRON #9-4267 (FORMER) Facility Status: Case Closed Facility Status: Case Closed	4300 SAVIERS RD	10	36

Site	Address	Map ID	Page
STEVE'S AUTO SERVICE	***4160 SAVIERS RD***	***10***	***41***
Facility Status: Case Closed			
NAVAL CONSTRUCTION BTTLN CTR	***1000 23RD AVE***	***11***	***73***
Facility Status: Preliminary site assessment underway			
FAITH OIL (NOW PHIL'S MOTORS)	***4530 SAVIERS RD***	***13***	***129***
Facility Status: Case Closed			
U-RENT INC	***4700 SAVIERS RD***	***14***	***131***
Facility Status: Case Closed			
MACELHENNY/LEVY & CO	***5156 SAVIERS RD***	***16***	***134***
Facility Status: Case Closed			
USA PETROLEUM SS #223	***5040 SAVIERS RD***	***16***	***136***
Facility Status: Post remedial action monitoring			
SHELL SS - 5TH	***540 5TH ST***	***18***	***139***
Facility Status: Remedial action (cleanup) Underway			
SHELL SS - 5TH	540 5TH ST	18	142
SHARP AUTO SERVICE	***5577 SAVIERS RD***	***20***	***144***
Facility Status: Case Closed			
CONSTANTINO GABRIE	136 5TH ST	21	147
Facility Status: Case Closed			
HALLIBURTON ENERGY SERVICES	***5800 PERKINS RD***	***22***	***154***
Facility Status: Case Closed			
MOBIL OIL SS (STEVE'S)	***801 HUENEME RD***	***22***	***161***
Facility Status: Case Closed			
OXNARD WASTEWATER TREAT PLT	6001 PERKINS RD S	24	168
Facility Status: Case Closed			
OXNARD WASTEWATER TREATMENT PL	6001 PERKINS RD	24	170
OXNARD WASTEWATER TREATMENT PL	***6001 PERKINS RD***	***24***	***172***
Facility Status: Case Closed			
B & C WELDING	***800 INDUSTRIAL AVE***	***26***	***206***
Facility Status: Case Closed			
JOHN LAING HOMES	757 INDUSTRIAL AVE	26	208
JOHN LAING HOMES	757 INDUSTRIAL AVE	26	208
Facility Status: Case Closed			
HALACO ENGINEERING COMPANY	***6200 PERKINS***	***31***	***257***
Facility Status: Case Closed			
Facility Status: Case Closed			

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 5 CA FID UST sites within the searched area.

Site	Address	Map ID	Page
SHELL SERVICE STATION	***1440 CHANNEL ISLANDS BL***	***2***	***4***
CHEVRON STATION 94267	***4300 SAVIERS RD***	***10***	***32***
HALLIBURTON SERVICES	***5800 PERKINS RD***	***22***	***158***

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
OXNARD WASTEWATER TREATMENT PL	***6001 PERKINS RD***	***24***	***172***
HALACO ENGINEERING CO.	***6200 PERKINS RD***	***30***	***251***

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 01/07/2008 has revealed that there are 8 SLIC sites within the searched area.

Site	Address	Map ID	Page
REGAL CLEANER Facility Status: Remedial Action Underway	2655 SAVIERS ROAD	3	13
REGAL CLEANERS	2655 SAVIERS	3	13
HALLIBURTON ENERGY SERVICES	***5800 PERKINS RD***	***22***	***154***
HALLIBURTON SERVICES Facility Status: Case Closed	***5800 PERKINS RD***	***22***	***158***
WILLAMETTE INDUSTRIES	***5936 PERKINS RD***	***24***	***188***
WILLAMETTE INDUSTRIES Facility Status: Case Closed	5936 PERKINS RD.	24	194
PAC FOUNDRIES Facility Status: Verification Monitoring Underway	***705 INDUSTRIAL AVE***	***25***	***197***
HALACO ENGINEERING COMPANY Facility Status: Reopen Previously Closed Case	***6200 PERKINS ROAD***	***30***	***245***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 04/08/2008 has revealed that there are 8 UST sites within the searched area.

Site	Address	Map ID	Page
U-HAUL CENTER OF OXNARD	***3020 SAVIERS ROAD***	***6***	***17***
LOS PADRES NATIONAL FOREST	PIRU CANYON ROAD	15	134
HALLIBURTON ENERGY SERVICES	***5800 PERKINS RD***	***22***	***154***
MARTIN V SMITH & ASSOC	801 HUENEME ROAD	22	166
HUENEME TOWING	280 SURFSIDE DRIVE	23	167
WILLAMETTE INDUSTRIES	***5936 PERKINS RD***	***24***	***188***
PAC FOUNDRIES	***705 INDUSTRIAL AVE***	***25***	***197***
B & C WELDING	800 INDUSTRIAL AVE.	26	208

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 11 HIST UST sites within the searched area.

Site	Address	Map ID	Page
U-HAUL CENTER OF OXNARD	***3020 SAVIERS ROAD***	***6***	***17***
CHASE BROS. DAIRY	732 W PLEASANT VALLEY R	17	139
HALLIBURTON SERVICES	5800 PERKINS RD	22	150
GASGO	801 W HUENEME RD	22	166
PORT HUENEME BLACKSMITH & WELD	280 S SURFSIDE DR	23	167
OXNARD WASTEWATER TREATMENT	6001 PERKINS RD	24	170
PORT HUENEME MILL	***5936 PERKINS RD***	***24***	***193***
HUENEME HIGH SCHOOL	500 BAND ROAD	25	196
PAC FOUNDRIES	***705 INDUSTRIAL AVE***	***25***	***197***
COOK COMPOSITES AND POLYMERS C	***5980 ARCTURUS AVE***	***28***	***216***
HALACO ENGINEERING COMPANY	***6200 PERKINS***	***31***	***257***

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the AST list, as provided by EDR, and dated 11/01/2007 has revealed that there are 3 AST sites within the searched area.

Site	Address	Map ID	Page
OXNARD WASTE WATER TREATMENT	6001 S PERKINS RD	24	172
HUENEME MILL	5936 PERKINS RD.	24	192
HALACO ENGINEERING COMPANY	***6200 PERKINS***	***31***	***257***

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within the searched area.

Site	Address	Map ID	Page
SHELL SERVICE STATION	***1440 CHANNEL ISLANDS BL***	***2***	***4***
CHEVRON STATION 94267	***4300 SAVIERS RD***	***10***	***32***
OXNARD WASTEWATER TREATMENT PL	***6001 PERKINS RD***	***24***	***172***
HALLIBURTON SERVICES	***5800 PERKINS RD***	***24***	***177***
HALACO ENGINEERING CO.	***6200 PERKINS RD***	***30***	***251***

CHMIRS: The California Hazardous Material Incident Report System contains information on reported hazardous material incidents, i.e., accidental releases or spills. The source is the California Office of Emergency Services.

A review of the CHMIRS list, as provided by EDR, and dated 12/31/2005 has revealed that there are 3

CHMIRS sites within the searched area.

Site	Address	Map ID	Page
PORT HUENEME MILL	***5936 PERKINS RD***	***24***	***193***
COOK COMPOSITES AND POLYMERS C	***5980 ARCTURUS AVE***	***28***	***216***
CITY OF OXNARD	***6001 S. PERKINS RD.***	***30***	***236***

Notify 65: Notify 65 records contain facility notifications about any release that could impact drinking water and thereby expose the public to a potential health risk. The data come from the State Water Resources Control Board's Proposition 65 database.

A review of the Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there are 3 Notify 65 sites within the searched area.

Site	Address	Map ID	Page
MANHOLE	MAYWOOD / CHANNEL ISL	4	14
COOK COMPOSITES AND POLYMERS C	***5980 ARCTURUS AVE***	***28***	***216***
CITY OF OXNARD	***6001 S. PERKINS RD.***	***30***	***236***

VCP: Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

A review of the VCP list, as provided by EDR, and dated 02/26/2008 has revealed that there are 3 VCP sites within the searched area.

Site	Address	Map ID	Page
PORT HUENEME HEATING AND PUMPI	***200 WEST CLARA STREET***	***19***	***142***
OCCIDENTAL CHEMICAL CORPORATIO	***6000 ARCTURUS AVENUE***	***27***	***212***
COOK COMPOSITES AND POLYMERS C	***5980 ARCTURUS AVE***	***28***	***216***

VENTURA CO. BWT: The Business Plan, Hazardous Waste Producers, & Operating Underground Tanks Site Address List indicates by site address whether EHD has Business Plan (BP), Waste Producer (W), and/or Underground Tank (T) Information.

A review of the VENTURA CO. BWT list, as provided by EDR, and dated 02/27/2008 has revealed that there is 1 VENTURA CO. BWT site within the searched area.

Site	Address	Map ID	Page
NAVAL CONSTRUCTION BTTLN CTR	***1000 23RD AVE***	***11***	***73***

EXECUTIVE SUMMARY

RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the RESPONSE list, as provided by EDR, and dated 02/26/2008 has revealed that there is 1 RESPONSE site within the searched area.

Site	Address	Map ID	Page
NAVAL CONSTRUCTION BTTLN CTR	*1000 23RD AVE*	*11*	*73*

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency

A review of the HAZNET list, as provided by EDR, and dated 12/31/2006 has revealed that there are 15 HAZNET sites within the searched area.

Site	Address	Map ID	Page
KAYO OIL	*3211 SAVIERS RD*	*7*	*20*
ARCO SS #1933	*3650 SAVIERS RD*	*9*	*28*
CHEVRON STATION 94267	*4300 SAVIERS RD*	*10*	*32*
HUENEME HIGH SCHOOL	*500 W BARD RD*	*12*	*127*
SHARP AUTO SERVICE	*5577 SAVIERS RD*	*20*	*144*
AMSEC	*610 W HUENEME DR*	*22*	*149*
HALLIBURTON ENERGY SERVICES	*5800 PERKINS RD*	*22*	*154*
PORT HUENEME SHORE BASE	*760 W HUENEME RD*	*22*	*163*
OXNARD WASTEWATER TREAT P	*6001 PERKINS*	*24*	*177*
HYDRYL COMPANY	*5721 PERKINS ROAD*	*24*	*179*
CUSTOM INDUSTRIAL FINISHES	*5711 PERKINS RD*	*24*	*182*
WEYERHAEUSER COMPANY HUENEME M	*5936 PERKINS RD*	*24*	*188*
PAC FOUNDRIES	*705 INDUSTRIAL AVE*	*25*	*197*
COOK COMPOSITES AND POLYMERS C	*5980 ARCTURUS AVE*	*28*	*216*
1X HALACO INC.	*6200 PERKINS ROAD*	*30*	*254*

AIRS: Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies

A review of the AIRS list, as provided by EDR, and dated 12/31/2005 has revealed that there are 5 AIRS sites within the searched area.

Site	Address	Map ID	Page
CUSTOM INDUSTRIAL FINISHES	*5711 PERKINS RD*	*24*	*182*
PAC FOUNDRIES	*705 INDUSTRIAL AVE*	*25*	*197*
COOK COMPOSITES AND POLYMERS C	*5980 ARCTURUS AVE*	*28*	*216*
CITY OF OXNARD	*6001 S. PERKINS RD.*	*30*	*236*
HALACO ENGINEERING COMPANY	*6200 PERKINS ROAD*	*30*	*245*

EXECUTIVE SUMMARY

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 02/26/2008 has revealed that there are 9 ENVIROSTOR sites within the searched area.

Site	Address	Map ID	Page
YUBETA FAMILY TRUST Facility Status: Refer: Other Agency	1284 SOUTH C STREET	1	3
ROSS CLEANERS Facility Status: Refer: 1248 Local Agency	2502 SAVIERS ROAD	3	13
NAVAL CONSTRUCTION BTTLN CTR Facility Status: Active	***1000 23RD AVE***	***11***	***73***
PORT HUENEME HEATING AND PUMPI Facility Status: Active	***200 WEST CLARA STREET***	***19***	***142***
STAUFFER CHEMICAL COMPANY Facility Status: No Further Action	5800 PERKINS ROAD	22	152
PACIFIC RECYCLING ENTERPRISES, Facility Status: No Further Action	5925 PERKINS ROAD	24	195
OCCIDENTAL CHEMICAL CORPORATIO Facility Status: No Further Action	***6000 ARCTURUS AVENUE***	***27***	***212***
COOK COMPOSITES AND POLYMERS C Facility Status: Active	***5980 ARCTURUS AVE***	***28***	***216***
HALACO ENGINEERING COMPANY Facility Status: Active	***6200 PERKINS ROAD***	***30***	***245***

EXECUTIVE SUMMARY

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.

MAP FINDINGS SUMMARY

Database	Total Plotted
FEDERAL RECORDS	
NPL	1
Proposed NPL	1
Delisted NPL	0
NPL LIENS	0
CERCLIS	2
CERC-NFRAP	2
LIENS 2	0
CORRACTS	1
RCRA-TSDF	1
RCRA-LQG	3
RCRA-SQG	12
RCRA-CESQG	0
RCRA-NonGen	0
US ENG CONTROLS	0
US INST CONTROL	0
ERNS	0
HMIRS	0
DOT OPS	0
US CDL	0
US BROWNFIELDS	0
DOD	1
FUDS	1
LUCIS	0
CONSENT	0
ROD	1
UMTRA	0
ODI	0
DEBRIS REGION 9	0
MINES	0
TRIS	1
TSCA	0
FTTS	0
HIST FTTS	0
SSTS	0
ICIS	0
PADS	1
MLTS	0
RADINFO	0
FINDS	12
RAATS	2
STATE AND LOCAL RECORDS	
HIST Cal-Sites	1
CA BOND EXP. PLAN	0
SCH	0
Toxic Pits	0
SWF/LF	1

MAP FINDINGS SUMMARY

Database	Total Plotted
CA WDS	2
WMUDS/SWAT	1
Cortese	24
SWRCY	1
LUST	29
CA FID UST	5
SLIC	8
UST	8
HIST UST	11
LIENS	0
AST	3
SWEEPS UST	5
CHMIRS	3
Notify 65	3
DEED	0
VCP	3
DRYCLEANERS	0
WIP	0
VENTURA CO. BWT	1
CDL	0
RESPONSE	1
HAZNET	15
AIRS	5
HAULERS	0
ENVIROSTOR	9
TRIBAL RECORDS	
INDIAN RESERV	0
INDIAN ODI	0
INDIAN LUST	0
INDIAN UST	0
EDR PROPRIETARY RECORDS	
Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

DOD **PORT HUENEME NAVAL CONSTRUCTION BATALLION CENTER** **DOD** **CUSA143061**
Region **N/A**

PORT HUENEME NAVAL CONSTR (County), CA

DOD:

Feature 1:	Navy DOD
Feature 2:	Not reported
Feature 3:	Not reported
URL:	Not reported
Name 1:	Port Hueneme Naval Construction Batallion Center
Name 2:	Not reported
Name 3:	Not reported
State:	CA
DOD Site:	Yes
Tile name:	CAVENTURA

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1 **YUBETA FAMILY TRUST** **ENVIROSTOR** **S104164704**
1284 SOUTH C STREET **N/A**
OXNARD, CA 93030

ENVIROSTOR:

Site Type:	Historical
Site Type Detailed:	* Historical
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	* MMONROY
Division Branch:	So Cal Glendale
Facility ID:	56550004
Site Code:	Not reported
Assembly:	35
Senate:	23
Special Program:	Not reported
Status:	Refer: Other Agency
Status Date:	1995 10 16 00:00:00
Restricted Use:	NO
Funding:	Not reported
Latitude:	34.1866666666667
Longitude:	119.181111111111
Alias Name:	56550004 POOLE OIL COMPANY YUBETA FAMILY TRUST
Alias Type:	Envirostor ID Number Alternate Name Alternate Name
APN:	NONE SPECIFIED
APN Description:	Not reported
Comments:	"Site Screening conducted by DTSC. Due to the evidence of onsite contamination, DTSC recommended a PEA."

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	06/25/93
Confirmed:	NONE SPECIFIED

YUBETA FAMILY TRUST (Continued) **S104164704**

Confirmed Description: Not reported
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: NONE SPECIFIED
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 10097, 10199, 30013
Potenital Description: * CONTAMINATED SOIL
Potenital Description: * WASTE OIL & MIXED OIL
Potenital Description: Lead
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: NONE SPECIFIED

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2 **SHELL SERVICE STATION** **LUST** **S101596316**
1440 CHANNEL ISLANDS BLVD **Cortese** **N/A**
OXNARD, CA 93030 **CA FID UST**
SWEEPS UST

LUST:
Region: STATE
Case Type: Other ground water affected
Cross Street: Not reported
Enf Type: F
Funding: TA GEN
How Discovered: Not reported
How Stopped: Not reported
Leak Cause: Not reported
Leak Source: Not reported
Global Id: T0611100344
Stop Date: Not reported
Confirm Leak: 1988 07 01 00:00:00
Workplan: 1988 05 02 00:00:00
Prelim Assess: 1988 12 14 00:00:00
Pollution Char: 1988 06 01 00:00:00
Remed Plan: 1991 08 06 00:00:00
Remed Action: 1990 06 30 00:00:00
Monitoring: 1996 04 29 00:00:00
Close Date: 1997 04 16 00:00:00
Discover Date: 2001 11 01 00:00:00
Enforcement Dt: 1988 09 02 00:00:00
Release Date: 2001 11 01 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 56

SHELL SERVICE STATION (Continued) **S101596316**

Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Gasoline
Contact Person: Not reported
Responsible Party: SHELL OIL CO ENGINEERING/ENV
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 1
MTBE Tested: MTBE Detected. Site tested for MTBE and MTBE detected
Staff: YR
Staff Initials: EHD
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 88102
Case Number: C 88102
Qty Leaked: Not reported
Abate Method: Excavate and Treat remove contaminated soil and treat (includes spreading or land farming), Excavate and Dispose remove contaminated soil and dispose in approved site, Cap Site install horizontal impermeable layer to reduce rainfall infiltration, Vent Soil bore holes in soil to allow volatilization of contaminants, Pump and Treat Ground Water generally employed to remove dissolved contaminants, Remove Free Product remove floating product from water table
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Groundwater
Status: Case Closed
Substance: Gasoline
Cross Street: Not reported
Global ID: T0611100344
Enforcement Type: TA GEN
Date Leak Discovered: 11/1/2001
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported

SHELL SERVICE STATION (Continued) **S101596316**

Leak Source: Not reported
Date Leak Stopped: Not reported
Date Confirmation Began: 7/1/1988
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 591.5290156870078589662230694 6
Abatement Method Used at the Site: ETEDCDVSGTFP
Source of Cleanup Funding: ETEDCDVSGTFP
Date Leak First Reported: 11/1/2001
Preliminary Site Assessment Workplan Submitted: 5/2/1988
Preliminary Site Assessment Began: 12/14/1988
Pollution Characterization Began: 6/1/1988
Remediation Plan Submitted: 8/6/1991
Remedial Action Underway: 6/30/1990
Post Remedial Action Monitoring Began: 4/29/1996
Date the Case was Closed: 4/16/1997
Date Case Last Changed on Database: Not reported
Enforcement Action Date: 9/2/1988
Historical Max MTBE Date: 2/1/2002
Hist Max MTBE Conc in Groundwater: 210
Hist Max MTBE Conc in Soil: 21
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: =
Soil Qualifier: =
Organization: Not reported
Regional Board: 04
Owner Contact: Not reported
Responsible Party: SHELL OIL CO ENGINEERING/ENV
RP Address: Not reported
Program: LUST
Lat/Long: 34.1752959 / 1
Local Agency Staff: EHD
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Local Case No: 88102
Substance Quantity: Not reported
Assigned Name: Not reported
W Global ID: Not reported
Summary: Not reported

LUST:
Region: VENTURA
Facility ID: 88102
Status: Case Closed

Cortese:
Region: CORTESE
Facility Addr2: 1440 CHANNEL ISLANDS BLVD

CA FID UST:
Facility ID: 56000270
Regulated By: UTNKA
Regulated ID: 6770

SHELL SERVICE STATION (Continued) **S101596316**

Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	Not reported
Mail To:	Not reported
Mailing Address:	1440 W CHANNEL ISLANDS BLVD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	OXNARD 93031
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	A
Comp Number:	569
Number:	9
Board Of Equalization:	44 000074
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 000569 000001
Actv Date:	Not reported
Capacity:	12000
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported
Number Of Tanks:	3

Status:	A
Comp Number:	569
Number:	9
Board Of Equalization:	44 000074
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 000569 000002
Actv Date:	Not reported
Capacity:	12000
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	A
Comp Number:	569
Number:	9
Board Of Equalization:	44 000074
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88

SHELL SERVICE STATION (Continued) **S101596316**

Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 000569 000003
Actv Date:	Not reported
Capacity:	12000
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

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2 **UNOCAL - 76 SS #5802** **LUST** **S104164547**
1445 CHANNEL ISLANDS BLVD **Cortese** **N/A**
OXNARD, CA 93030

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	F
Funding:	EF
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100708
Stop Date:	Not reported
Confirm Leak:	1990 12 31 00:00:00
Workplan:	1990 08 01 00:00:00
Prelim Assess:	1991 09 15 00:00:00
Pollution Char:	1991 09 15 00:00:00
Remed Plan:	1995 11 15 00:00:00
Remed Action:	1995 11 01 00:00:00
Monitoring:	Not reported
Close Date:	1997 02 20 00:00:00
Discover Date:	1990 08 01 00:00:00
Enforcement Dt:	1990 12 31 00:00:00
Release Date:	1990 08 01 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Waste Oil
Contact Person:	Not reported
Responsible Party:	UNOCAL CERT
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.

UNOCAL - 76 SS #5802 (Continued) **S104164547**

Staff: YR
Staff Initials: DCS
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 90135
Case Number: C 90135
Qty Leaked: Not reported
Abate Method: Excavate and Dispose remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Soil
Status: Case Closed
Substance: Waste Oil
Cross Street: Not reported
Global ID: T0611100708
Enforcement Type: EF
Date Leak Discovered: 8/1/1990
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date Leak Stopped: Not reported
Date Confirmation Began: 12/31/1990
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 546.1587341881596041841672071 1
Abatement Method Used at the Site: Excavate and Dispose
Source of Cleanup Funding: Excavate and Dispose
Date Leak First Reported: 8/1/1990
Preliminary Site Assessment Workplan Submitted: 8/1/1990
Preliminary Site Assessment Began: 9/15/1991
Pollution Characterization Began: 9/15/1991
Remediation Plan Submitted: 11/15/1995
Remedial Action Underway: 11/1/1995
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: 2/20/1997
Date Case Last Changed on Database: Not reported

UNOCAL - 76 SS #5802 (Continued) **S104164547**

Enforcement Action Date:	12/31/1990
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	UNOCAL CERT
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1755159 / 1
Local Agency Staff:	DCS
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	90135
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	90135
Status:	Case Closed

Cortese:

Region:	CORTESE
Facility Addr2:	1445 CHANNEL ISLANDS BLVD

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2 **K-MART** **LUST** **S104164715**
1345 CHANNEL ISLANDS BLVD **Cortese** **N/A**
OXNARD, CA 93030

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	F
Funding:	EF
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100632
Stop Date:	Not reported
Confirm Leak:	1989 02 23 00:00:00
Workplan:	1990 04 16 00:00:00
Prelim Assess:	1990 08 16 00:00:00
Pollution Char:	1990 09 07 00:00:00
Remed Plan:	1993 03 30 00:00:00
Remed Action:	1993 03 30 00:00:00
Monitoring:	1995 12 15 00:00:00

K-MART (Continued) **S104164715**

Close Date: 1996 09 04 00:00:00
Discover Date: 1989 02 23 00:00:00
Enforcement Dt: 1990 07 01 00:00:00
Release Date: 1989 02 23 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Waste Oil
Contact Person: Not reported
Responsible Party: K MART
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
Staff: YR
Staff Initials: EHD
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 90049
Case Number: C 90049
Qty Leaked: Not reported
Abate Method: Excavate and Treat remove contaminated soil and treat (includes spreading or land farming), Excavate and Dispose remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Soil
Status: Case Closed
Substance: Waste Oil

K-MART (Continued) **S104164715**

Cross Street:	Not reported
Global ID:	T0611100632
Enforcement Type:	EF
Date Leak Discovered:	2/23/1989
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	2/23/1989
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	976.3005098124157247049424701
Abatement Method Used at the Site:	ETED
Source of Cleanup Funding:	ETED
Date Leak First Reported:	2/23/1989
Preliminary Site Assessment Workplan Submitted:	4/16/1990
Preliminary Site Assessment Began:	8/16/1990
Pollution Characterization Began:	9/7/1990
Remediation Plan Submitted:	3/30/1993
Remedial Action Underway:	3/30/1993
Post Remedial Action Monitoring Began:	12/15/1995
Date the Case was Closed:	9/4/1996
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	7/1/1990
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	K MART
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1753939 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	90049
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	90049
Status:	Case Closed

K-MART (Continued) **S104164715**

Cortese:
Region: CORTESE
Facility Addr2: 1345 CHANNEL ISLANDS BLVD

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3 **REGAL CLEANER** **SLIC** **S106483929**
2655 SAVIERS ROAD **N/A**
OXNARD, CA

SLIC:
Region: STATE
Global Id: SL204431579
Assigned Name: SLICSITE
Lead Agency Contact: CURT M. CHARMLEY
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number: 0419
Responsible Party: Binder Realty Company
Recent Dtw: Not reported
Substance Released: PCE, TCE, VOC
Facility Status: Remedial Action Underway

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3 **REGAL CLEANERS** **SLIC** **S104404951**
2655 SAVIERS **N/A**
OXNARD, CA 93033

SLIC:
Region: 4
Facility Status: Remediation
SLIC: 0419
Substance: VOCs
Staff: CC

---

3 **ROSS CLEANERS** **ENVIROSTOR** **S106797764**
2502 SAVIERS ROAD **N/A**
OXNARD, CA 93033

ENVIROSTOR:
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Referred Not Assigned
Division Branch: So Cal Cypress
Facility ID: 56720003
Site Code: Not reported
Assembly: 35
Senate: 23
Special Program: Not reported
Status: Refer: 1248 Local Agency
Status Date: 2004 01 23 00:00:00
Restricted Use: NO
Funding: Not Applicable

ROSS CLEANERS (Continued) **S106797764**

Latitude: 0
Longitude: 0
Alias Name: 56720003
Alias Type: Envirostor ID Number

APN: NONE SPECIFIED
APN Description: Not reported
Comments: Not reported

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported

Confirmed: NONE SPECIFIED
Confirmed Description: Not reported
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: NONE SPECIFIED
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: NONE SPECIFIED
Potenital Description: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: NONE SPECIFIED

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4 **MANHOLE** **Notify 65** **S100178390**
MAYWOOD / CHANNEL ISLAND **N/A**
OXNARD, CA 90845

Notify 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Incident Description: 90845

5 **CHEVRON SS #2991**
2901 SAVIERS RD
OXNARD, CA 93033
Cortese **S104234334**
N/A

Cortese:

Region:	CORTESE
Facility Addr2:	2901 SAVIERS RD

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5 **CHEVRON #9-2991**
2901 SAVIERS RD
OXNARD, CA 93030
LUST **S105974877**
N/A

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	F
Funding:	LFOR
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100205
Stop Date:	1987 06 05 00:00:00
Confirm Leak:	1988 07 01 00:00:00
Workplan:	1987 06 11 00:00:00
Prelim Assess:	1989 04 25 00:00:00
Pollution Char:	1989 04 25 00:00:00
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	2003 05 06 00:00:00
Discover Date:	1987 06 05 00:00:00
Enforcement Dt:	1987 06 11 00:00:00
Release Date:	1987 06 05 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	1999 03 31 00:00:00
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	630
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Gasoline
Contact Person:	Not reported
Responsible Party:	CHEVRON USA PRODUCTS COMPANY
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	Not reported
MTBE Conc:	1
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE and MTBE detected
Staff:	YR

CHEVRON #9-2991 (Continued) **S105974877**

Staff Initials: EKO
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: AGR, GWR, MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 87064
Case Number: C87064
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Soil
Status: Case Closed
Substance: Gasoline
Cross Street: Not reported
Global ID: T0611100205
Enforcement Type: LFOR
Date Leak Discovered: 6/5/1987
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date Leak Stopped: 6/5/1987
Date Confirmation Began: 7/1/1988
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 1173.198214123483194553986409 9
Abatement Method Used at the Site: Not reported
Source of Cleanup Funding: F
Date Leak First Reported: 6/5/1987
Preliminary Site Assessment Workplan Submitted: 6/11/1987
Preliminary Site Assessment Began: 4/25/1989
Pollution Characterization Began: 4/25/1989
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: 5/6/2003
Date Case Last Changed on Database: Not reported
Enforcement Action Date: 6/11/1987
Historical Max MTBE Date: 3/31/1999

CHEVRON #9-2991 (Continued) **S105974877**

Hist Max MTBE Conc in Groundwater:	630
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	CHEVRON USA PRODUCTS COMPANY
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.173128 / 1
Local Agency Staff:	EKO
Beneficial Use:	AGR, GWR, MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	87064
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	87064
Status:	Case Closed

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6 **U-HAUL CENTER OF OXNARD** **LUST** **1000160031**
3020 SAVIERS ROAD **Cortese** **N/A**
OXNARD, CA **UST**
HIST UST

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	F
Funding:	CLOS
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100614
Stop Date:	Not reported
Confirm Leak:	1990 02 08 00:00:00
Workplan:	1990 02 08 00:00:00
Prelim Assess:	1992 05 19 00:00:00
Pollution Char:	1992 05 19 00:00:00
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	2001 10 04 00:00:00
Discover Date:	1990 02 08 00:00:00
Enforcement Dt:	1990 02 08 00:00:00
Release Date:	1990 02 08 00:00:00
Review Date:	Not reported

U-HAUL CENTER OF OXNARD (Continued) **1000160031**

Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Waste Oil
Contact Person: Not reported
Responsible Party: AMERCO REAL ESTATE
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
Staff: YR
Staff Initials: DCS
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 90030
Case Number: C 90030
Qty Leaked: Not reported
Abate Method: Excavate and Dispose remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Soil
Status: Case Closed
Substance: Waste Oil
Cross Street: Not reported
Global ID: T0611100614
Enforcement Type: CLOS
Date Leak Discovered: 2/8/1990
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported

U-HAUL CENTER OF OXNARD (Continued) **1000160031**

How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date Leak Stopped: Not reported
Date Confirmation Began: 2/8/1990
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 1203.3909043257633035351988055
Abatement Method Used at the Site: Excavate and Dispose
Source of Cleanup Funding: Excavate and Dispose
Date Leak First Reported: 2/8/1990
Preliminary Site Assessment Workplan Submitted: 2/8/1990
Preliminary Site Assessment Began: 5/19/1992
Pollution Characterization Began: 5/19/1992
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: 10/4/2001
Date Case Last Changed on Database: Not reported
Enforcement Action Date: 2/8/1990
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Regional Board: 04
Owner Contact: Not reported
Responsible Party: AMERCO REAL ESTATE
RP Address: Not reported
Program: LUST
Lat/Long: 34.171491 / 1
Local Agency Staff: DCS
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Local Case No: 90030
Substance Quantity: Not reported
Assigned Name: Not reported
W Global ID: Not reported
Summary: Not reported

LUST:
Region: VENTURA
Facility ID: 90030
Status: Case Closed

Cortese:
Region: CORTESE
Facility Addr2: 3020 SAVIERS RD

UST:
Facility ID: 577

U-HAUL CENTER OF OXNARD (Continued) **1000160031**

Box Number: 146057

HIST UST:

Region:	STATE
Facility ID:	00000004657
Facility Type:	Other
Other Type:	RENTAL FACILITY
Total Tanks:	0002
Contact Name:	TOM DEWITT
Telephone:	8054872754
Owner Name:	U HAUL CO OF VAN NUYS
Owner Address:	18160 PARTHENIA ST
Owner City,St,Zip:	NORTHRIDGE, CA 91324

Tank Num:	001
Container Num:	1
Year Installed:	1977
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	1/4 inches
Leak Detection:	Stock Inventor

Tank Num:	002
Container Num:	2
Year Installed:	1977
Tank Capacity:	00000550
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	10 gauge
Leak Detection:	None

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7 **KAYO OIL** **HAZNET** **S101305769**
3211 SAVIERS RD **LUST** **N/A**
OXNARD, CA 93030 **Cortese**

HAZNET:

Gepaid:	CAL000002060
Contact:	KAYO OIL COMPANY
Telephone:	0000000000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	900 S CHEROKEE LN
Mailing City,St,Zip:	LODI, CA 952400000
Gen County:	Ventura
TSD EPA ID:	CAT080011059
TSD County:	Los Angeles
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Recycler
Tons:	7.5685
Facility County:	Ventura

LUST:

Region:	STATE
Case Type:	Other ground water affected
Cross Street:	Not reported
Enf Type:	F

KAYO OIL (Continued) **S101305769**

Funding:	CLOS
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100113
Stop Date:	Not reported
Confirm Leak:	1988 07 01 00:00:00
Workplan:	1985 03 20 00:00:00
Prelim Assess:	1985 03 20 00:00:00
Pollution Char:	1985 03 20 00:00:00
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	2002 06 15 00:00:00
Close Date:	2004 06 08 00:00:00
Discover Date:	1985 05 20 00:00:00
Enforcement Dt:	1985 05 22 00:00:00
Release Date:	1985 05 20 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	1997 05 20 00:00:00
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	16,000
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Regular Gasoline
Contact Person:	Not reported
Responsible Party:	CONOCO INC.
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	1
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE and MTBE detected
Staff:	YR
Staff Initials:	KCK
Lead Agency:	Local Agency
Local Agency:	56000L
Hydr Basin #:	SANTA CLARA RIVER VA
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Local Case #:	85001
Case Number:	C85001
Qty Leaked:	Not reported
Abate Method:	Remove Free Product remove floating product from water table, Vapor Extraction, Vent Soil bore holes in soil to allow volatilization of contaminants, Excavate and Treat remove contaminated soil and treat (includes spreading or land farming), Enhanced Biodegradation use of any available technology to promote bacterial decomposition of contaminants

KAYO OIL (Continued) **S101305769**

Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:

Region:	4
Staff:	UNK
County:	Ventura
Local Agency:	56000L
Lead Agency:	Local Agency
Case Type:	Groundwater
Status:	Case Closed
Substance:	Regular Gasoline
Cross Street:	Not reported
Global ID:	T0611100113
Enforcement Type:	LFOR
Date Leak Discovered:	5/20/1985
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	7/1/1988
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	1594.1016134002798432053726624
Abatement Method Used at the Site:	FPVEVSETIT
Source of Cleanup Funding:	FPVEVSETIT
Date Leak First Reported:	5/20/1985
Preliminary Site Assessment Workplan Submitted:	3/20/1985
Preliminary Site Assessment Began:	3/20/1985
Pollution Characterization Began:	3/20/1985
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	6/15/2002
Date the Case was Closed:	6/8/2004
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	5/22/1985
Historical Max MTBE Date:	5/20/1997
Hist Max MTBE Conc in Groundwater:	16000
Hist Max MTBE Conc in Soil:	0
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	ND
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	CONOCO INC.
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.169939 / 1

KAYO OIL (Continued) **S101305769**

Local Agency Staff: KCK
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Local Case No: 85001
Substance Quantity: Not reported
Assigned Name: Not reported
W Global ID: Not reported
Summary: Not reported

LUST:
Region: VENTURA
Facility ID: 85001
Status: Case Closed

Cortese:
Region: CORTESE
Facility Addr2: 3211 SAVIERS RD

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7 **AMERITONE PAINT** **LUST** **S104164908**
3200 SAVIERS RD **Cortese** **N/A**
OXNARD, CA 93030

LUST:
Region: STATE
Case Type: Other ground water affected
Cross Street: Not reported
Enf Type: F
Funding: EF
How Discovered: Not reported
How Stopped: Not reported
Leak Cause: Not reported
Leak Source: Not reported
Global Id: T0611100534
Stop Date: Not reported
Confirm Leak: 1989 09 21 00:00:00
Workplan: 1989 09 21 00:00:00
Prelim Assess: 1994 12 01 00:00:00
Pollution Char: 1994 12 01 00:00:00
Remed Plan: 1995 05 05 00:00:00
Remed Action: 1996 01 01 00:00:00
Monitoring: 1996 05 01 00:00:00
Close Date: 1997 02 20 00:00:00
Discover Date: 1989 09 21 00:00:00
Enforcement Dt: 1989 09 21 00:00:00
Release Date: 1989 09 21 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region

AMERITONE PAINT (Continued) **S104164908**

Status: Case Closed
Chemical: Gasoline
Contact Person: Not reported
Responsible Party: AMERITONE PAINT
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 1
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Staff: YR
Staff Initials: EHD
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 89129
Case Number: C 89129
Qty Leaked: Not reported
Abate Method: Excavate and Dispose remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Groundwater
Status: Case Closed
Substance: Gasoline
Cross Street: Not reported
Global ID: T0611100534
Enforcement Type: EF
Date Leak Discovered: 9/21/1989
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date Leak Stopped: Not reported
Date Confirmation Began: 9/21/1989
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 1525.0502171900563765309581723

AMERITONE PAINT (Continued) **S104164908**

Abatement Method Used at the Site:	Excavate and Dispose
Source of Cleanup Funding:	Excavate and Dispose
Date Leak First Reported:	9/21/1989
Preliminary Site Assessment Workplan Submitted:	9/21/1989
Preliminary Site Assessment Began:	12/1/1994
Pollution Characterization Began:	12/1/1994
Remediation Plan Submitted:	5/5/1995
Remedial Action Underway:	1/1/1996
Post Remedial Action Monitoring Began:	5/1/1996
Date the Case was Closed:	2/20/1997
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	9/21/1989
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	AMERITONE PAINT
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.169979 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	89129
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	89129
Status:	Case Closed

Cortese:

Region:	CORTESE
Facility Addr2:	3200 SAVIERS RD

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8 **STEREO WAREHOUSE** **LUST** **S104396659**
3434 SAVIERS RD **Cortese** **N/A**
OXNARD, CA 93030

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	F
Funding:	EF
How Discovered:	Not reported
How Stopped:	Not reported

STEREO WAREHOUSE (Continued) **S104396659**

Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100833
Stop Date:	Not reported
Confirm Leak:	1992 12 16 00:00:00
Workplan:	1992 12 16 00:00:00
Prelim Assess:	1995 12 06 00:00:00
Pollution Char:	1995 12 06 00:00:00
Remed Plan:	1997 04 03 00:00:00
Remed Action:	1997 04 09 00:00:00
Monitoring:	1998 10 09 00:00:00
Close Date:	1998 12 08 00:00:00
Discover Date:	1992 12 16 00:00:00
Enforcement Dt:	1992 12 22 00:00:00
Release Date:	1992 12 16 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Waste Oil
Contact Person:	Not reported
Responsible Party:	JOHN W. KIRBY
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
Staff:	YR
Staff Initials:	EHD
Lead Agency:	Local Agency
Local Agency:	56000L
Hydr Basin #:	SANTA CLARA RIVER VA
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Local Case #:	92061
Case Number:	C 92061
Qty Leaked:	Not reported
Abate Method:	Excavate and Dispose remove contaminated soil and dispose in approved site
Operator:	Not reported
Water System Name:	Not reported
Well Name:	Not reported
Distance To Lust:	0
Waste Discharge Global ID:	Not reported
Waste Disch Assigned Name:	Not reported
Summary:	Not reported

STEREO WAREHOUSE (Continued) **S104396659**

LUST:

Region:	4
Staff:	UNK
County:	Ventura
Local Agency:	56000L
Lead Agency:	Local Agency
Case Type:	Soil
Status:	Case Closed
Substance:	Waste Oil
Cross Street:	Not reported
Global ID:	T0611100833
Enforcement Type:	EF
Date Leak Discovered:	12/16/1992
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	12/16/1992
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	1879.626190851299823423004 2562
Abatement Method Used at the Site:	Excavate and Dispose
Source of Cleanup Funding:	Excavate and Dispose
Date Leak First Reported:	12/16/1992
Preliminary Site Assessment Workplan Submitted:	12/16/1992
Preliminary Site Assessment Began:	12/6/1995
Pollution Characterization Began:	12/6/1995
Remediation Plan Submitted:	4/3/1997
Remedial Action Underway:	4/9/1997
Post Remedial Action Monitoring Began:	10/9/1998
Date the Case was Closed:	12/8/1998
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	12/22/1992
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	JOHN W. KIRBY
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.168257 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	92061
Substance Quantity:	Not reported
Assigned Name:	Not reported

STEREO WAREHOUSE (Continued) **S104396659**

W Global ID: Not reported
Summary: Not reported

LUST:
Region: VENTURA
Facility ID: 92061
Status: Case Closed

Cortese:
Region: CORTESE
Facility Addr2: 3434 SAVIERS RD

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9 **ARCO SS #1933** **HAZNET** **S102424437**
3650 SAVIERS RD **LUST** **N/A**
OXNARD, CA 93033 **Cortese**

HAZNET:
Gepaid: CAL000244198
Contact: JACK OMAN WASTE SPECIALIST
Telephone: 7146703958
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 80249
Mailing City,St,Zip: RCHO STA MARG, CA 926880000
Gen County: Ventura
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Recycler
Tons: 0.45
Facility County: Not reported

Gepaid: CAL000020102
Contact:
Telephone:
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 3650 SAVIERS RD
Mailing City,St,Zip: OXNARD, CA 930336204
Gen County: Ventura
TSD EPA ID: Not reported
TSD County: Orange
Waste Category: Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method: Transfer Station
Tons: 0.01
Facility County: Not reported

Gepaid: CAL000244198
Contact: JACK OMAN
Telephone: 7146705402
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 6038
Mailing City,St,Zip: ARTESIA, CA 907026038
Gen County: Ventura
TSD EPA ID: Not reported
TSD County: Los Angeles

ARCO SS #1933 (Continued) **S102424437**

Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Recycler
Tons: 0.67
Facility County: Not reported

Gepaid: CAL000244198
Contact: JACK OMAN WASTE SPECIALIST
Telephone: 7146703958
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 80249
Mailing City,St,Zip: RCHO STA MARG, CA 926880000
Gen County: Ventura
TSD EPA ID: CAT080013352
TSD County: Ventura
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Recycler
Tons: 7.92
Facility County: Ventura

Gepaid: CAL000244198
Contact: JACK OMAN WASTE SPECIALIST
Telephone: 7146703958
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 80249
Mailing City,St,Zip: RCHO STA MARG, CA 926880000
Gen County: Ventura
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Recycler
Tons: 0.45
Facility County: Not reported

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

LUST:
Region: STATE
Case Type: Other ground water affected
Cross Street: Not reported
Enf Type: F
Funding: IEA
How Discovered: Not reported
How Stopped: Not reported
Leak Cause: Not reported
Leak Source: Not reported
Global Id: T0611100249
Stop Date: Not reported
Confirm Leak: 1988 07 01 00:00:00
Workplan: 1987 05 21 00:00:00
Prelim Assess: 1989 08 31 00:00:00
Pollution Char: 1989 08 31 00:00:00
Remed Plan: 1991 02 12 00:00:00
Remed Action: 1996 06 30 00:00:00
Monitoring: 1996 06 30 00:00:00

ARCO SS #1933 (Continued) **S102424437**

Close Date: 1997 03 19 00:00:00
Discover Date: 1987 05 21 00:00:00
Enforcement Dt: 1965 01 01 00:00:00
Release Date: 1987 05 21 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Gasoline
Contact Person: Not reported
Responsible Party: ARCO PRODUCTS COMPANY
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 1
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Staff: YR
Staff Initials: EHD
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 87128
Case Number: C 87128
Qty Leaked: Not reported
Abate Method: Excavate and Dispose remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Groundwater
Status: Case Closed
Substance: Gasoline
Cross Street: Not reported

ARCO SS #1933 (Continued) **S102424437**

Global ID:	T0611100249
Enforcement Type:	Informal Enforcement Actions,including Notices of Violations and Staff Enforcement Letters
Date Leak Discovered:	5/21/1987
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	7/1/1988
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	1795.927514792554166099438529 7
Abatement Method Used at the Site:	Excavate and Dispose
Source of Cleanup Funding:	Excavate and Dispose
Date Leak First Reported:	5/21/1987
Preliminary Site Assessment Workplan Submitted:	5/21/1987
Preliminary Site Assessment Began:	8/31/1989
Pollution Characterization Began:	8/31/1989
Remediation Plan Submitted:	2/12/1991
Remedial Action Underway:	6/30/1996
Post Remedial Action Monitoring Began:	6/30/1996
Date the Case was Closed:	3/19/1997
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	1/1/1965
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	ARCO PRODUCTS COMPANY
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1662421 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	87128
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	87128
Status:	Case Closed

Cortese:

ARCO SS #1933 (Continued) **S102424437**

Region: CORTESE
Facility Addr2: 3650 SAVIERS RD

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10 CHEVRON STATION 94267
4300 SAVIERS RD
OXNARD, CA 93030

RCRA-SQG **1000597712**
FINDS **CAD983617374**
HAZNET
Cortese
CA FID UST
SWEEPS UST

RCRA SQG:

Date form received by agency:	01/30/1992
Facility name:	CHEVRON STATION 94267
Facility address:	4300 SAVIERS RD OXNARD, CA 93030
EPA ID:	CAD983617374
Mailing address:	SAVIERS RD OXNARD, CA 93030
Contact:	SHAHRYAR SHAHEENAZAR
Contact address:	4300 SAVIERS RD OXNARD, CA 93030
Contact country:	US
Contact telephone:	(805) 488 1511
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHEVRON U S A INC
Owner/operator address:	P O BOX 2833 LA HABRA, CA 90632
Owner/operator country:	Not reported
Owner/operator telephone:	(213) 694 7452
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No

CHEVRON STATION 94267 (Continued) **1000597712**

Used oil transfer facility: No
Used oil transporter: No
Off site waste receiver: Commercial status unknown

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:
Gepaid: CAD983617374
Contact: CHEVRON U S A INC
Telephone: 2136947452
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 4300 SAVIERS RD
Mailing City,St,Zip: OXNARD, CA 930337129
Gen County: Ventura
TSD EPA ID: CAD980883177
TSD County: Kern
Waste Category: Unspecified oil containing waste
Disposal Method: Recycler
Tons: .5004
Facility County: Ventura

Gepaid: CAD983617374
Contact: CHEVRON U S A INC
Telephone: 2136947452
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 4300 SAVIERS RD
Mailing City,St,Zip: OXNARD, CA 930337129
Gen County: Ventura
TSD EPA ID: CAD980883177
TSD County: Kern
Waste Category: Unspecified oil containing waste
Disposal Method: Recycler
Tons: .2293
Facility County: Ventura

Gepaid: CAD983617374
Contact: CHEVRON U S A INC
Telephone: 2136947452
Facility Addr2: Not reported
Mailing Name: Not reported

CHEVRON STATION 94267 (Continued) **1000597712**

Mailing Address: 4300 SAVIERS RD
Mailing City,St,Zip: OXNARD, CA 930337129
Gen County: Ventura
TSD EPA ID: CAD008302903
TSD County: Los Angeles
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Recycler
Tons: 0.3085
Facility County: Ventura

Gepaid: CAD983617374
Contact: CHEVRON U S A INC
Telephone: 2136947452
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 4300 SAVIERS RD
Mailing City,St,Zip: OXNARD, CA 930337129
Gen County: Ventura
TSD EPA ID: CAT080010101
TSD County: San Diego
Waste Category: Aqueous solution with 10% or more total organic residues
Disposal Method: Transfer Station
Tons: .4170
Facility County: Ventura

Gepaid: CAD983617374
Contact: CHEVRON U S A INC
Telephone: 2136947452
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 4300 SAVIERS RD
Mailing City,St,Zip: OXNARD, CA 930337129
Gen County: Ventura
TSD EPA ID: CAD050806850
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: Transfer Station
Tons: .1500
Facility County: Ventura

Click this hyperlink while viewing on your computer to access
4 additional CA_HAZNET: record(s) in the EDR Site Report.

Cortese:
Region: CORTESE
Facility Addr2: Not reported

Region: CORTESE
Facility Addr2: 4300 SAVIERS RD

CA FID UST:
Facility ID: 56000290
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported

CHEVRON STATION 94267 (Continued) **1000597712**

Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 4300 S SAVIERS RD
Mailing Address 2: Not reported
Mailing City,St,Zip: OXNARD 93030
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: A
Comp Number: 1064
Number: 9
Board Of Equalization: 44 030744
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 001064 000001
Actv Date: Not reported
Capacity: 10000
Tank Use: UNKNOWN
Stg: P
Content: Not reported
Number Of Tanks: 4

Status: A
Comp Number: 1064
Number: 9
Board Of Equalization: 44 030744
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 001064 000002
Actv Date: Not reported
Capacity: 10000
Tank Use: UNKNOWN
Stg: P
Content: Not reported
Number Of Tanks: Not reported

Status: A
Comp Number: 1064
Number: 9
Board Of Equalization: 44 030744
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported

CHEVRON STATION 94267 (Continued) **1000597712**

Swrcb Tank Id:	56 000 001064 000003
Actv Date:	Not reported
Capacity:	10000
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	A
Comp Number:	1064
Number:	9
Board Of Equalization:	44 030744
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 001064 000004
Actv Date:	Not reported
Capacity:	1000
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

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10 **CHEVRON #9-4267 (FORMER)** **LUST** **S105937088**
4300 SAVIERS RD **N/A**
OXNARD, CA 93033

LUST:

Region:	STATE
Case Type:	Other ground water affected
Cross Street:	Not reported
Enf Type:	F
Funding:	EF
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100343
Stop Date:	Not reported
Confirm Leak:	1988 08 03 00:00:00
Workplan:	1988 08 03 00:00:00
Prelim Assess:	1992 02 19 00:00:00
Pollution Char:	1992 02 19 00:00:00
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	1995 07 27 00:00:00
Discover Date:	1988 08 03 00:00:00
Enforcement Dt:	1988 08 03 00:00:00
Release Date:	1988 08 03 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported

CHEVRON #9-4267 (FORMER) (Continued) **S105937088**

Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Misc. Motor Vehicle Fuels
Contact Person: Not reported
Responsible Party: CHEVRON USA
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
Staff: YR
Staff Initials: EKO
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 88101
Case Number: C88101
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

Region: STATE
Case Type: Soil only
Cross Street: Not reported
Enf Type: F
Funding: CLOS
How Discovered: Not reported
How Stopped: Not reported
Leak Cause: Not reported
Leak Source: Not reported
Global Id: T0611101074
Stop Date: 1965 01 01 00:00:00
Confirm Leak: 1995 12 14 00:00:00
Workplan: 1995 12 14 00:00:00
Prelim Assess: Not reported
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: 2001 06 28 00:00:00
Discover Date: 1995 12 14 00:00:00
Enforcement Dt: Not reported

CHEVRON #9-4267 (FORMER) (Continued) **S105937088**

Release Date: 1995 12 14 00:00:00
Review Date: 2001 03 12 00:00:00
Enter Date: Not reported
MTBE Date: 1996 12 10 00:00:00
GW Qualifier: <
Soil Qualifier: <
Max MTBE GW ppb: 10
Max MTBE Soil ppb: 1.0
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Gasoline
Contact Person: Not reported
Responsible Party: CHEVRON USA PRODUCTS COMPANY
RP Address: P.O. BOX 2292, BREA, CA 92822 2292
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: Not reported
MTBE Conc: 2
MTBE Fuel: 1
MTBE Tested: MTBE Detected. Site tested for MTBE and MTBE detected
Staff: YR
Staff Initials: EKO
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: AGR, GWR, MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 95189
Case Number: C95189
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Groundwater
Status: Case Closed
Substance: Misc. Motor Vehicle Fuels
Cross Street: Not reported
Global ID: T0611100343
Enforcement Type: EF
Date Leak Discovered: 8/3/1988
Date Leak Record Entered: Not reported

CHEVRON #9-4267 (FORMER) (Continued) **S105937088**

How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	8/3/1988
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	2796.74610999677948408370013 12
Abatement Method Used at the Site:	Not reported
Source of Cleanup Funding:	F
Date Leak First Reported:	8/3/1988
Preliminary Site Assessment Workplan Submitted:	8/3/1988
Preliminary Site Assessment Began:	2/19/1992
Pollution Characterization Began:	2/19/1992
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	7/27/1995
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	8/3/1988
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	CHEVRON USA
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1608321 / 1
Local Agency Staff:	EKO
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	88101
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported
Region:	4
Staff:	UNK
County:	Ventura
Local Agency:	56000L
Lead Agency:	Local Agency
Case Type:	Soil
Status:	Case Closed
Substance:	Gasoline
Cross Street:	Not reported
Global ID:	T0611101074
Enforcement Type:	CLOS

CHEVRON #9-4267 (FORMER) (Continued) **S105937088**

Date Leak Discovered:	12/14/1995
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	1/1/1965
Date Confirmation Began:	12/14/1995
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	2784.2773407441012840739871338
Abatement Method Used at the Site:	Not reported
Source of Cleanup Funding:	F
Date Leak First Reported:	12/14/1995
Preliminary Site Assessment Workplan Submitted:	12/14/1995
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	Not reported
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	6/28/2001
Date Case Last Changed on Database:	3/12/2001
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	12/10/1996
Hist Max MTBE Conc in Groundwater:	10
Hist Max MTBE Conc in Soil:	1
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	<
Soil Qualifier:	<
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	CHEVRON USA PRODUCTS COMPANY
RP Address:	P.O. BOX 2292, BREA, CA 92822 2292
Program:	LUST
Lat/Long:	34.1607821 / 1
Local Agency Staff:	EKO
Beneficial Use:	AGR, GWR, MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	95189
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	95189
Status:	Case Closed

Region:	VENTURA
Facility ID:	88101
Status:	Case Closed

10 CALIFORNIA RECYCLING SERVICES — **SWRCY** — **S107136766**
4220 SAVIERS RD — **N/A**
OXNARD, CA 93033

SWRCY:

Certification Status:	O
Facility Phone Number:	Not reported
Date facility became certified:	02/16/00
Date facility began operating:	03/01/00
Date facility ceased operating:	Still operating
Whether The Facility Is Grandfathered:	Not reported
Convenience Zone Where Faciltiy Located:	2818
Convenience Zone Where Faciltiy Located 2:	2820
Convenience Zone Where Faciltiy Located 3:	0
Convenience Zone Where Faciltiy Located 4:	0
Convenience Zone Where Faciltiy Located 5:	0
Convenience Zone Where Faciltiy Located 6:	0
Convenience Zone Where Faciltiy Located 7:	0
Aluminum Beverage Containers Redeemed:	AL
Glass Beverage Containers Redeemed:	GL
Plastic Beverage Containers Redeemed:	PL
Other mat beverage containers redeemed:	Not reported
Refillable Beverage Containers Redeemed:	Not reported

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10 STEVE'S AUTO SERVICE — **LUST** — **S103891273**
4160 SAVIERS RD — **Cortese** — **N/A**
OXNARD, CA 93033

LUST:

Region:	STATE
Case Type:	Other ground water affected
Cross Street:	Not reported
Enf Type:	F
Funding:	TPA
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611101238
Stop Date:	1999 03 15 00:00:00
Confirm Leak:	Not reported
Workplan:	1999 06 04 00:00:00
Prelim Assess:	2003 03 28 00:00:00
Pollution Char:	1999 10 06 00:00:00
Remed Plan:	2002 12 11 00:00:00
Remed Action:	2003 01 17 00:00:00
Monitoring:	2002 10 24 00:00:00
Close Date:	2004 08 10 00:00:00
Discover Date:	1999 03 15 00:00:00
Enforcement Dt:	Not reported
Release Date:	1999 03 15 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	1999 01 25 00:00:00
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	55
Max MTBE Soil ppb:	10
County:	56
Org Name:	Not reported

STEVE'S AUTO SERVICE (Continued) **S103891273**

Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Gasoline
Contact Person: Not reported
Responsible Party: EDWARD S FRIEL TRUST
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: Not reported
MTBE Conc: 2
MTBE Fuel: 1
MTBE Tested: MTBE Detected. Site tested for MTBE and MTBE detected
Staff: YR
Staff Initials: DBW
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: AGR, MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 99040
Case Number: C99040
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Groundwater
Status: Preliminary site assessment underway
Substance: Gasoline
Cross Street: Not reported
Global ID: T0611101238
Enforcement Type: LFOR
Date Leak Discovered: 3/15/1999
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date Leak Stopped: Not reported
Date Confirmation Began: Not reported
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 2598.272583852602600325312670 4

STEVE'S AUTO SERVICE (Continued) **S103891273**

Abatement Method Used at the Site:	Not reported
Source of Cleanup Funding:	F
Date Leak First Reported:	3/15/1999
Preliminary Site Assessment Workplan Submitted:	6/4/1999
Preliminary Site Assessment Began:	3/28/2003
Pollution Characterization Began:	10/6/1999
Remediation Plan Submitted:	12/11/2002
Remedial Action Underway:	1/17/2003
Post Remedial Action Monitoring Began:	10/24/2002
Date the Case was Closed:	Not reported
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	1/25/1999
Hist Max MTBE Conc in Groundwater:	55
Hist Max MTBE Conc in Soil:	10
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	EDWARD S FRIEL TRUST
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1615921 / 1
Local Agency Staff:	DBW
Beneficial Use:	AGR, MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	99040
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	99040
Status:	Case Closed

Cortese:

Region:	CORTESE
Facility Addr2:	4160 SAVIERS RD

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11 **NAVAL BASE VENTURA COUNTY PORT HUENEME** **PADS** **1000392281**
1000 23RD AVE **CERCLIS** **CA6170023323**
PORT HUENEME, CA 93043 **RCRA-LQG**
RCRA-TSDF
RAATS
CORRACTS
MANIFEST

CERCLIS:

Site ID:	0902771
Federal Facility:	Federal Facility
NPL Status:	Not on the NPL

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Non NPL Status: Deferred to RCRA

CERCLIS Site Contact Name(s):

Contact Name: Matt Mitguard
Contact Tel: (415) 972 3096
Contact Title: Site Assessment Manager (SAM)

Contact Name: Philip Armstrong
Contact Tel: (415) 972 3098
Contact Title: Site Assessment Manager (SAM)

Contact Name: Dan McMindes
Contact Tel: (415) 972 3401
Contact Title: Site Assessment Manager (SAM)

Contact Name: Dawn Richmond
Contact Tel: (415) 972 3097
Contact Title: Site Assessment Manager (SAM)

Contact Name: Nuria Muniz
Contact Tel: (415) 972 3811
Contact Title: Site Assessment Manager (SAM)

CERCLIS Site Alias Name(s):

Alias Name: PORT HUENEME NAVAL CONSTR BATTALION CTR
Alias Address: SITE LOCATIONS A,B,C
PORT HUENEME, CA 93043
Alias Name: SCRAP BULK STORAGE AREA
Alias Address: SITE LOCATION D
NCBC PORT HUENEME, CA 93043
Alias Name: NAVAL CONSTRUCTION BATTALION CTR
Alias Address: Not reported
CA
Alias Name: PORT HUENEME NAVAL CONSTRUCTION BATTALION CENTER
Alias Address: VENTURA ROAD AND CHANNEL ISLAND BOULEVAR
PORT HUENEME, CA 96813
Alias Name: VENTURA NAVAL CONSTRUCTION BATTALION CENTER
Alias Address: PORT HUENEME
VENTURA, CA 96854
Site Description: Not reported

CERCLIS Assessment History:

Action: DISCOVERY
Date Started: Not reported
Date Completed: 06/01/1981
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 09/08/1989
Priority Level: High

Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 01/04/1993
Priority Level: High

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Action: SITE REASSESSMENT
Date Started: Not reported
Date Completed: 06/24/2004
Priority Level: Deferred to RCRA (Subtitle C)

RCRA LQG:
Date form received by agency: 02/16/2006
Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Facility address: 1000 23RD AVE
PORT HUENEME, CA 93043
EPA ID: CA6170023323
Mailing address: 311 MAIN ROAD, SUITE 1
CODE N45V ENVIRONMENTAL
POINT MUGU, CA 93042
Contact: NORMAN E GRIFFAW
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (805) 982 1970
Contact email: NORMAN.GRIFFAW@NAVY.MIL
EPA Region: 09
Land type: Federal
Classification: TSDF
Description: Handler is engaged in the treatment, storage or disposal of hazardous waste
TSD commencement date: Not reported
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: U. S. NAVY
Owner/operator address: 311 MAIN ROAD, SUITE 1
POINT MUGU, CA 93042
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Federal
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1942
Owner/Op end date: Not reported

Owner/operator name: U. S. NAVY
Owner/operator address: Not reported
Not reported
Owner/operator country: US

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Owner/operator telephone: Not reported
Legal status: Federal
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1942
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: Batteries
Accumulated waste on site: No
Generated waste on site: No

Waste type: Lamps
Accumulated waste on site: No
Generated waste on site: No

Waste type: Pesticides
Accumulated waste on site: No
Generated waste on site: No

Waste type: Thermostats
Accumulated waste on site: No
Generated waste on site: No

Historical Generators:
Date form received by agency: 02/26/2004
Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Classification: Large Quantity Generator

Date form received by agency: 02/26/2002
Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Classification: Large Quantity Generator

Date form received by agency: 10/12/2000
Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Site name: NAVAL CONSTRUCTION BATTALION CENTER
Classification: Large Quantity Generator

Date form received by agency: 04/15/1999

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Site name: NAVAL CONSTRUCTION BATTALION CENTER
Classification: Large Quantity Generator

Date form received by agency: 09/01/1996
Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Site name: USNAVY PORT HUENEME CONSTR BATTN CTR
Classification: Large Quantity Generator

Date form received by agency: 03/29/1996
Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Site name: USNAVY CONSTRUCTION BATTALION CTN
Classification: Large Quantity Generator

Date form received by agency: 03/31/1994
Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Site name: USNAVY NAVAL CONSTRUCTION BATTALION CTR
Classification: Large Quantity Generator

Date form received by agency: 03/13/1992
Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Site name: NAVAL CONSTRUCTION BATTALION CENTER
Classification: Large Quantity Generator

Date form received by agency: 08/07/1991
Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Site name: NAVAL CONSTRUCTION BATTALION CENT
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980
Facility name: NAVAL BASE VENTURA COUNTY PORT HUENEME
Site name: USNAVY PORT HUENEME CONSTR BATTN CTR
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Waste code: D018
Waste name: BENZENE

Waste code: D026
Waste name: CRESOL

Waste code: D035
Waste name: METHYL ETHYL KETONE

Waste code: D040
Waste name: TRICHLOROETHYLENE

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1 TRICHLOROETHANE, CHLOROBENZENE, 1,1,2 TRICHLORO 1,2,2 TRIFLUOROETHANE, ORTHO DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2 TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2 ETHOXYETHANOL, AND 2 NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: U080

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Waste name: METHANE, DICHLORO

Waste code: U220
Waste name: BENZENE, METHYL

Biennial Reports:

Last Biennial Reporting Year: 2005

Annual Waste Handled:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 93769

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 82440

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.
Amount (Lbs): 90225

Waste code: D007
Waste name: CHROMIUM
Amount (Lbs): 78490

Waste code: D008
Waste name: LEAD
Amount (Lbs): 94175

Waste code: D009
Waste name: MERCURY
Amount (Lbs): 81486

Waste code: D018
Waste name: BENZENE
Amount (Lbs): 78696

Waste code: D026
Waste name: CRESOL
Amount (Lbs): 78490

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Waste code: D035
Waste name: METHYL ETHYL KETONE
Amount (Lbs): 90225

Waste code: D040
Waste name: TRICHLOROETHYLENE
Amount (Lbs): 78490

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1 TRICHLOROETHANE, CHLOROBENZENE, 1,1,2 TRICHLORO 1,2,2 TRIFLUOROETHANE, ORTHO DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2 TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 11735

Waste code: F003
Waste name: THE FOLLOWING SPENT NON HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 11735

Waste code: F005
Waste name: THE FOLLOWING SPENT NON HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2 ETHOXYETHANOL, AND 2 NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 11735

Waste code: U080
Waste name: METHANE, DICHLORO
Amount (Lbs): 78490

Waste code: U220
Waste name: BENZENE, METHYL
Amount (Lbs): 78490

Corrective Action Summary:
Event date: 09/08/1989
Event: CA049PA

Event date: 02/01/1993

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Event:	RFA Completed, Assessment was an RFA.
Event date:	01/01/1994
Event:	CMS Imposition
Event date:	01/01/1994
Event:	RFI Imposition
Event date:	01/01/1994
Event:	Stabilization Measures Implemented, Primary measure is source removal and/or treatment (e.g., soil or waste excavation, in situ soil treatment, off site treatment).
Event date:	03/01/1995
Event:	CA Prioritization, Facility or area was assigned a high corrective action priority.
Event date:	07/17/1995
Event:	Stabilization Measures Evaluation,This facility is not amenable to stabilization activity because of a lack of technical data. An evaluation has been completed, but further data is necessary to determine stabilization measures, feasibility or appropriateness. This status should be changed when data becomes available.
Event date:	06/01/1997
Event:	Stabilization Construction Completed
Event date:	03/12/1998
Event:	CMS Approved
Event date:	03/12/1998
Event:	RFI Approved
Event date:	03/12/1998
Event:	CMS Workplan Approved
Event date:	03/12/1998
Event:	RFI Workplan Approved
Event date:	05/31/1998
Event:	Date For Remedy Selection (CM Imposed)
Event date:	06/10/1998
Event:	Igration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected.
Event date:	06/10/1998
Event:	CA210SM
Event date:	06/10/1998
Event:	Current Human Exposures under Control, Current human exposures are NOT under control.
Event date:	03/09/2001
Event:	Current Human Exposures under Control, Current human exposures are NOT under control.

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Event date: 03/09/2001
Event: Igration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected.

Event date: 10/13/2004
Event: Igration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the existing area of contaminated groundwater. This determination will be re evaluated when the Agency becomes aware of significant changes at the facility.

Event date: 10/13/2004
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re evaluated when the Agency/State becomes aware of significant changes at the facility.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators General
Date violation determined: 04/28/2004
Date achieved compliance: 05/28/2004
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/28/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 264.190 201.J
Area of violation: TSD General
Date violation determined: 10/29/1996
Date achieved compliance: 11/27/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/29/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 264.170 177.I
Area of violation: TSD General
Date violation determined: 10/29/1996

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Date achieved compliance: 11/27/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/29/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 262.30 34.C
Area of violation: Generators General
Date violation determined: 10/29/1996
Date achieved compliance: 11/27/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/29/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 262.50 60
Area of violation: Generators General
Date violation determined: 10/26/1996
Date achieved compliance: 11/27/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/29/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 262.50 60
Area of violation: Generators General
Date violation determined: 09/29/1995
Date achieved compliance: 09/29/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/29/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 262.30 34.C
Area of violation: Generators General
Date violation determined: 09/29/1995
Date achieved compliance: 09/29/1995

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/29/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.10 18.B
Area of violation: TSD General
Date violation determined: 09/28/1995
Date achieved compliance: 10/06/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/29/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 262.50 60
Area of violation: Generators General
Date violation determined: 05/04/1994
Date achieved compliance: 02/22/1995
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/19/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 48000
Paid penalty amount: 13500

Regulation violated: FR 262.50 60
Area of violation: Generators General
Date violation determined: 05/04/1994
Date achieved compliance: 02/22/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/04/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 268.7
Area of violation: LDR General
Date violation determined: 05/04/1994
Date achieved compliance: 02/22/1995
Violation lead agency: State

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/04/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.10 18.B
Area of violation: TSD General
Date violation determined: 05/04/1994
Date achieved compliance: 02/25/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/04/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.170 177.I
Area of violation: TSD General
Date violation determined: 05/04/1994
Date achieved compliance: 02/22/1995
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/19/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 48000
Paid penalty amount: 13500

Regulation violated: FR 268.7
Area of violation: LDR General
Date violation determined: 05/04/1994
Date achieved compliance: 02/22/1995
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/19/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 48000
Paid penalty amount: 13500

Regulation violated: FR 264.10 18.B
Area of violation: TSD General
Date violation determined: 05/04/1994
Date achieved compliance: 02/25/1995
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Enforcement action date: 03/19/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 48000
Paid penalty amount: 13500

Regulation violated: FR 262.30 34.C
Area of violation: Generators General
Date violation determined: 05/04/1994
Date achieved compliance: 02/22/1995
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/19/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 48000
Paid penalty amount: 13500

Regulation violated: FR 264.170 177.I
Area of violation: TSD General
Date violation determined: 05/04/1994
Date achieved compliance: 02/22/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/04/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 262.30 34.C
Area of violation: Generators General
Date violation determined: 05/04/1994
Date achieved compliance: 02/22/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/04/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.50 56.D
Area of violation: TSD General
Date violation determined: 03/12/1993
Date achieved compliance: 09/20/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/12/1993

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 262.10 12.A
Area of violation: Generators General
Date violation determined: 03/12/1993
Date achieved compliance: 09/20/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/12/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.70 77.E
Area of violation: TSD General
Date violation determined: 04/01/1992
Date achieved compliance: 03/15/1993
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 04/25/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.170 177.I
Area of violation: TSD General
Date violation determined: 04/01/1992
Date achieved compliance: 03/15/1993
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 04/25/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 268 ALL
Area of violation: LDR General
Date violation determined: 04/01/1992
Date achieved compliance: 03/15/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/01/1992
Enf. disposition status: Not reported

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 268 ALL
Area of violation: LDR General
Date violation determined: 04/01/1992
Date achieved compliance: 03/15/1993
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 04/25/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.30 37.C
Area of violation: TSD General
Date violation determined: 04/01/1992
Date achieved compliance: 03/15/1993
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 04/25/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.30 37.C
Area of violation: TSD General
Date violation determined: 04/01/1992
Date achieved compliance: 03/15/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/01/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.70 77.E
Area of violation: TSD General
Date violation determined: 04/01/1992
Date achieved compliance: 03/15/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/01/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.170 177.I
Area of violation: TSD General
Date violation determined: 04/01/1992
Date achieved compliance: 03/15/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/01/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 270
Area of violation: TSD General
Date violation determined: 12/13/1990
Date achieved compliance: 03/15/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/25/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 264.70 77.E
Area of violation: TSD General
Date violation determined: 12/13/1990
Date achieved compliance: 03/15/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/25/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 270
Area of violation: TSD General
Date violation determined: 12/06/1989
Date achieved compliance: 03/15/1993
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 268.7
Area of violation: LDR General
Date violation determined: 12/06/1989
Date achieved compliance: 02/22/1995
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 268 ALL
Area of violation: LDR General
Date violation determined: 12/06/1989
Date achieved compliance: 03/15/1993
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 268.7
Area of violation: LDR General
Date violation determined: 12/06/1989
Date achieved compliance: 02/22/1995
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 268 ALL
Area of violation: LDR General
Date violation determined: 12/06/1989
Date achieved compliance: 03/15/1993
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 270
Area of violation: TSD General
Date violation determined: 06/29/1989
Date achieved compliance: 03/15/1993
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 08/30/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 268 ALL
Area of violation: LDR General
Date violation determined: 06/29/1989
Date achieved compliance: 03/15/1993
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 08/30/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 268.7
Area of violation: LDR General
Date violation determined: 06/29/1989
Date achieved compliance: 02/22/1995
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 08/30/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 270
Area of violation: TSD General
Date violation determined: 06/29/1989
Date achieved compliance: 03/15/1993
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/30/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Paid penalty amount: Not reported

Regulation violated: F 268 ALL
Area of violation: LDR General
Date violation determined: 06/29/1989
Date achieved compliance: 03/15/1993
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/30/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F 268.7
Area of violation: LDR General
Date violation determined: 06/29/1989
Date achieved compliance: 02/22/1995
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/30/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 270
Area of violation: TSD General
Date violation determined: 01/13/1988
Date achieved compliance: 01/03/1989
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/28/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR 270
Area of violation: TSD General
Date violation determined: 01/13/1988
Date achieved compliance: 01/03/1989
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 04/22/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Evaluation Action Summary:

Evaluation date:	04/28/2004
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation:	Generators General
Date achieved compliance:	05/28/2004
Evaluation lead agency:	State Contractor/Grantee

Evaluation date:	03/25/1999
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	05/28/1998
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	10/29/1996
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation:	TSD General
Date achieved compliance:	11/27/1996
Evaluation lead agency:	State

Evaluation date:	10/29/1996
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation:	Generators General
Date achieved compliance:	11/27/1996
Evaluation lead agency:	State

Evaluation date:	05/16/1996
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	09/28/1995
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation:	TSD General
Date achieved compliance:	10/06/1995
Evaluation lead agency:	State

Evaluation date:	09/28/1995
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation:	Generators General
Date achieved compliance:	09/29/1995
Evaluation lead agency:	State

Evaluation date:	02/22/1995
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	04/29/1994
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Area of violation: Generators General
Date achieved compliance: 02/22/1995
Evaluation lead agency: State

Evaluation date: 04/29/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: TSD General
Date achieved compliance: 02/25/1995
Evaluation lead agency: State

Evaluation date: 04/29/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: LDR General
Date achieved compliance: 02/22/1995
Evaluation lead agency: State

Evaluation date: 04/29/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: TSD General
Date achieved compliance: 02/22/1995
Evaluation lead agency: State

Evaluation date: 03/03/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 01/28/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: TSD General
Date achieved compliance: 09/20/1993
Evaluation lead agency: State

Evaluation date: 01/28/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Generators General
Date achieved compliance: 09/20/1993
Evaluation lead agency: State

Evaluation date: 01/29/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA Initiated Oversight/Observation/Training Actions

Evaluation date: 01/29/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: TSD General
Date achieved compliance: 03/15/1993
Evaluation lead agency: State

Evaluation date: 01/29/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: LDR General
Date achieved compliance: 03/15/1993
Evaluation lead agency: State

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Evaluation date: 12/13/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: TSD General
Date achieved compliance: 03/15/1993
Evaluation lead agency: State

Evaluation date: 12/06/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: LDR General
Date achieved compliance: 03/15/1993
Evaluation lead agency: EPA

Evaluation date: 12/06/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: TSD General
Date achieved compliance: 03/15/1993
Evaluation lead agency: EPA

Evaluation date: 12/06/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: LDR General
Date achieved compliance: 02/22/1995
Evaluation lead agency: EPA

Evaluation date: 06/29/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: LDR General
Date achieved compliance: 02/22/1995
Evaluation lead agency: EPA

Evaluation date: 06/29/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: TSD General
Date achieved compliance: 03/15/1993
Evaluation lead agency: EPA

Evaluation date: 06/29/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: LDR General
Date achieved compliance: 03/15/1993
Evaluation lead agency: EPA

Evaluation date: 01/13/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: TSD General
Date achieved compliance: 01/03/1989
Evaluation lead agency: EPA

CORRACTS:

EPA ID: CA6170023323
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 1/1/1994
Action: CA100 RFI Imposition
NAICS Code(s): 92119
Other General Government Support

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: SITES 1 3
Actual Date: 1/1/1994
Action: CA600SR Stabilization Measures Implemented, Primary measure is source removal and/or treatment
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 3/1/1995
Action: CA075HI CA Prioritization, Facility or area was assigned a high corrective action priority
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 3/9/2001
Action: CA750NO Migration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected
NAICS Code(s): 92119
Other General Government Support
Original schedule date: 3/9/2001
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 3/9/2001
Action: CA725NO Current Human Exposures Under Control, Current human exposures are NOT under control
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: SITE 14 EARTH MOVING TRAINING AREA
Actual Date: 3/12/1998
Action: CA200 RFI Approved
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

EPA ID: CA6170023323
EPA Region: 9
Area Name: SITE 14 EARTH MOVING TRAINING AREA
Actual Date: 3/12/1998
Action: CA350 CMS Approved
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: SITE 14 EARTH MOVING TRAINING AREA
Actual Date: 3/12/1998
Action: CA300 CMS Workplan Approved
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 3/12/1998
Action: CA150 RFI Workplan Approved
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: SITE 14 EARTH MOVING TRAINING AREA
Actual Date: 5/31/1998
Action: CA400 Date For Remedy Selection (CM Imposed)
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: SITES 1 3
Actual Date: 6/1/1997
Action: CA650 Stabilization Construction Completed
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/10/1998
Action: CA750NO Migration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/10/1998
Action: CA725NO Current Human Exposures Under Control, Current human exposures are NOT under control
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 7/17/1995
Action: CA225IN Stabilization Measures Evaluation, This facility is not, amenable to stabilization activity because of, a lack of technical data. An evaluation has been completed, but further data is necessary to determine stabilization measures, feasibility or appropriateness. This status should be changed when data becomes available
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 10/13/2004
Action: CA750YE Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023323
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 10/13/2004
Action: CA725YE Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 92119
Other General Government Support
Original schedule date: Not reported
Schedule end date: Not reported

NY MANIFEST:
Document ID: NYA2743263
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: CACA57493
Trans2 State ID: ACFX88332

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Generator Ship Date:	850206
Trans1 Recv Date:	850206
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	850325
Part A Recv Date:	850419
Part B Recv Date:	850515
Generator EPA ID:	CA6170023323
Trans1 EPA ID:	CAD006913206
Trans2 EPA ID:	CAD006913206
TSDF ID:	NY7890008975
Waste Code:	D001 NON LISTED IGNITABLE WASTES
Quantity:	06401
Units:	G Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	85
Manifest Tracking Num:	Not reported
Import Ind:	Not reported
Export Ind:	Not reported
Discr Quantity Ind:	Not reported
Discr Type Ind:	Not reported
Discr Residue Ind:	Not reported
Discr Partial Reject Ind:	Not reported
Discr Full Reject Ind:	Not reported
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	Not reported
EPA ID:	CA6170023323
Facility Name:	UNITED STATES MILITARY DEFENSE PROPERTY
Facility Address:	DISPOSAL OFFICE USM CBC BLDG
Facility City:	513 PORT HUENEME
Facility Address 2:	Not reported
Country:	USA
Mailing Name:	UNITED STATES MILITARY DEFENSE PROPERTY
Mailing Contact:	UNITED STATES MILITARY DEFENSE PROPERTY
Mailing Address:	DISPOSAL OFFICE USM CBC BLDG
Mailing Address 2:	Not reported
Mailing City:	513 PORT HUENEME
Mailing State:	CA
Mailing Zip:	93043
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	805 982 5637

Document ID:	NYA2704572
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	Not reported
Trans2 State ID:	GATX48937
Generator Ship Date:	850328
Trans1 Recv Date:	850328
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	850506
Part A Recv Date:	850614
Part B Recv Date:	850528

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Generator EPA ID:	CA6170023323
Trans1 EPA ID:	CAD006913206
Trans2 EPA ID:	CAD006913206
TSDF ID:	NY7890008975
Waste Code:	D001 NON LISTED IGNITABLE WASTES
Quantity:	02965
Units:	G Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	85
Manifest Tracking Num:	Not reported
Import Ind:	Not reported
Export Ind:	Not reported
Discr Quantity Ind:	Not reported
Discr Type Ind:	Not reported
Discr Residue Ind:	Not reported
Discr Partial Reject Ind:	Not reported
Discr Full Reject Ind:	Not reported
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	Not reported
EPA ID:	CA6170023323
Facility Name:	UNITED STATES MILITARY DEFENSE PROPERTY
Facility Address:	DISPOSAL OFFICE USM CBC BLDG
Facility City:	513 PORT HUENEME
Facility Address 2:	Not reported
Country:	USA
Mailing Name:	UNITED STATES MILITARY DEFENSE PROPERTY
Mailing Contact:	UNITED STATES MILITARY DEFENSE PROPERTY
Mailing Address:	DISPOSAL OFFICE USM CBC BLDG
Mailing Address 2:	Not reported
Mailing City:	513 PORT HUENEME
Mailing State:	CA
Mailing Zip:	93043
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	805 982 5637

Document ID:	NYG0270927
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	HQ32091
Trans2 State ID:	Not reported
Generator Ship Date:	971119
Trans1 Recv Date:	971119
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	971204
Part A Recv Date:	971211
Part B Recv Date:	971223
Generator EPA ID:	CA6170023323
Trans1 EPA ID:	MOD095038998
Trans2 EPA ID:	Not reported
TSDF ID:	NYD067919340
Waste Code:	D011 SILVER 5.0 MG/L TCLP
Quantity:	00054

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Units:	P Pounds
Number of Containers:	001
Container Type:	DM Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00187
Units:	P Pounds
Number of Containers:	004
Container Type:	DF Fiberboard or plastic drums (glass)
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00060
Units:	P Pounds
Number of Containers:	001
Container Type:	CF Fiber or plastic boxes, cartons
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	97
Manifest Tracking Num:	Not reported
Import Ind:	Not reported
Export Ind:	Not reported
Discr Quantity Ind:	Not reported
Discr Type Ind:	Not reported
Discr Residue Ind:	Not reported
Discr Partial Reject Ind:	Not reported
Discr Full Reject Ind:	Not reported
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	Not reported
EPA ID:	CA6170023323
Facility Name:	UNITED STATES MILITARY DEFENSE PROPERTY
Facility Address:	DISPOSAL OFFICE USM CBC BLDG
Facility City:	513 PORT HUENEME
Facility Address 2:	Not reported
Country:	USA
Mailing Name:	UNITED STATES MILITARY DEFENSE PROPERTY
Mailing Contact:	UNITED STATES MILITARY DEFENSE PROPERTY
Mailing Address:	DISPOSAL OFFICE USM CBC BLDG
Mailing Address 2:	Not reported
Mailing City:	513 PORT HUENEME
Mailing State:	CA
Mailing Zip:	93043
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	805 982 5637
Document ID:	NYA2704338
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	54072
Trans2 State ID:	CATX48937
Generator Ship Date:	850401
Trans1 Recv Date:	850401
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	850506

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Part A Recv Date:	850514
Part B Recv Date:	850528
Generator EPA ID:	CA6170023323
Trans1 EPA ID:	CAD006913206
Trans2 EPA ID:	CAD006913206
TSDF ID:	NY7890008975
Waste Code:	D001 NON LISTED IGNITABLE WASTES
Quantity:	06488
Units:	G Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	85
Manifest Tracking Num:	Not reported
Import Ind:	Not reported
Export Ind:	Not reported
Discr Quantity Ind:	Not reported
Discr Type Ind:	Not reported
Discr Residue Ind:	Not reported
Discr Partial Reject Ind:	Not reported
Discr Full Reject Ind:	Not reported
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	Not reported
EPA ID:	CA6170023323
Facility Name:	UNITED STATES MILITARY DEFENSE PROPERTY
Facility Address:	DISPOSAL OFFICE USM CBC BLDG
Facility City:	513 PORT HUENEME
Facility Address 2:	Not reported
Country:	USA
Mailing Name:	UNITED STATES MILITARY DEFENSE PROPERTY
Mailing Contact:	UNITED STATES MILITARY DEFENSE PROPERTY
Mailing Address:	DISPOSAL OFFICE USM CBC BLDG
Mailing Address 2:	Not reported
Mailing City:	513 PORT HUENEME
Mailing State:	CA
Mailing Zip:	93043
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	805 982 5637

Document ID:	NYA2704014
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	CA1740184
Trans2 State ID:	ACFX88972
Generator Ship Date:	850215
Trans1 Recv Date:	850215
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	850325
Part A Recv Date:	850524
Part B Recv Date:	850515
Generator EPA ID:	CA6170023323
Trans1 EPA ID:	CAD006913206
Trans2 EPA ID:	CAD006913206
TSDF ID:	NY7890008975

NAVAL BASE VENTURA COUNTY PORT HUENEME (Continued) **1000392281**

Waste Code:	D001 NON LISTED IGNITABLE WASTES
Quantity:	01876
Units:	G Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	85
Manifest Tracking Num:	Not reported
Import Ind:	Not reported
Export Ind:	Not reported
Discr Quantity Ind:	Not reported
Discr Type Ind:	Not reported
Discr Residue Ind:	Not reported
Discr Partial Reject Ind:	Not reported
Discr Full Reject Ind:	Not reported
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	Not reported
EPA ID:	CA6170023323
Facility Name:	UNITED STATES MILITARY DEFENSE PROPERTY
Facility Address:	DISPOSAL OFFICE USM CBC BLDG
Facility City:	513 PORT HUENEME
Facility Address 2:	Not reported
Country:	USA
Mailing Name:	UNITED STATES MILITARY DEFENSE PROPERTY
Mailing Contact:	UNITED STATES MILITARY DEFENSE PROPERTY
Mailing Address:	DISPOSAL OFFICE USM CBC BLDG
Mailing Address 2:	Not reported
Mailing City:	513 PORT HUENEME
Mailing State:	CA
Mailing Zip:	93043
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	805 982 5637

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11 **NAVAL CONSTRUCTION BTTLN CTR** **LUST** **S101699294**
1000 23RD AVE **Cortese** **N/A**
PORT HUENEME, CA 93043 **RESPONSE**
VENTURA CO. BWT
ENVIROSTOR
HIST Cal-Sites

LUST:

Region:	STATE
Case Type:	Other ground water affected
Cross Street:	VENTURA RD
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global Id:	T0611101124
Stop Date:	1996 12 23 00:00:00
Confirm Leak:	Not reported
Workplan:	Not reported

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Prelim Assess: 1997 01 15 00:00:00
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: Not reported
Discover Date: 1996 12 23 00:00:00
Enforcement Dt: Not reported
Release Date: 1997 01 15 00:00:00
Review Date: 1997 01 15 00:00:00
Enter Date: 1997 01 22 00:00:00
MTBE Date: 1996 03 01 00:00:00
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: 20,000
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Preliminary site assessment underway
Chemical: Gasoline
Contact Person: Not reported
Responsible Party: U.S. NAVY (NAVAL CONTR. BTTLN)
RP Address: 1000 23RD AVE., PORT HUENEME CA 93043
Interim: Not reported
Oversight Prgm: Spills, Leaks, Investigations and Cleanup UST
MTBE Class: *
MTBE Conc: 1
MTBE Fuel: 1
MTBE Tested: MTBE Detected. Site tested for MTBE and MTBE detected
Staff: SLC
Staff Initials: Not reported
Lead Agency: Regional Board
Local Agency: 04
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: Not reported
Case Number: C 97002
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: SLC
County: Ventura
Local Agency: 56000L
Lead Agency: Regional Board

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Case Type:	Groundwater
Status:	Preliminary site assessment underway
Substance:	Gasoline
Cross Street:	VENTURA RD
Global ID:	T0611101124
Enforcement Type:	Not reported
Date Leak Discovered:	12/23/1996
Date Leak Record Entered:	1/22/1997
How Leak Discovered:	Tank Closure
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK
Date Leak Stopped:	12/23/1996
Date Confirmation Began:	Not reported
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	2612.7341428946022072500170146
Abatement Method Used at the Site:	Not reported
Source of Cleanup Funding:	Not reported
Date Leak First Reported:	1/15/1997
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	1/15/1997
Pollution Characterization Began:	Not reported
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	Not reported
Date Case Last Changed on Database:	1/15/1997
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	3/1/1996
Hist Max MTBE Conc in Groundwater:	20000
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	U.S. NAVY (NAVAL CONTR. BTTLN)
RP Address:	1000 23RD AVE., PORT HUENEME CA 93043
Program:	SLIC
Lat/Long:	34.161224 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	Not reported
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

Cortese:

Region:	CORTESE
Facility Addr2:	Not reported

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Region: CORTESE
Facility Addr2: Not reported

AWP:

AWP Facility ID:	56970002
Region Code:	3
Region:	GLENDALE
SMBR Branch Code:	SO
SMBR Branch Unit:	OMF SOUTHERN CALIF
Site Name.:	Not reported
Current Status Date:	05011986
Current Status:	ANNUAL WORKPLAN ACTIVE SITE
Lead Agency Code:	DTSC
Lead Agency:	DEPT OF TOXIC SUBSTANCES CONTROL
Facility Type:	Open military facility
Awp Site Type:	OPEN MILITARY BASE
NPL:	Not Listed
Tier Of AWP Site:	Not reported
Source Of Funding:	C
Responsible Staff Member:	PCHEN
Supervisor Responsible:	Not reported
SIC Code:	97
Facility SIC:	NATIONAL SECURITY/INTERNATIONAL AFFAIRS
RWQCB Code:	LA
RWQCB Associated With Site:	LOS ANGELES
Site Access Controlled:	Not reported
Site Listed HWS List:	Not reported
Hazard Ranking Score:	Not reported
Date Site Hazard Ranked:	Not reported
Groundwater Contamination:	Confirmed
# Of Contamination Sources:	1
Lat/Long:	Not reported
Lat/Long (dms):	0 0 0 / 0 0 0
Lat/long Method:	Not reported
Description Of Entity:	Not reported
State Assembly Distt Code:	41
State Senate District:	23

RESPONSE:

Facility ID:	56970002
Site Type:	State Response
Site Type Detail:	Open Base
Acres:	1670
National Priorities List:	NO
Cleanup Oversight Agencies:	DTSC, RWQCB 4 Los Angeles
Lead Agency:	DTSC
Lead Agency Description:	* DTSC
Project Manager:	PETER CHEN
Supervisor:	Shelia Lowe
Division Branch:	OMF So (Cypress)
Site Code:	300120
Assembly:	41
Senate:	23
Special Program Status:	Not reported
Status:	Active
Status Date:	2006 03 03 00:00:00

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Restricted Use:	NO
Funding:	DERA
Latitude:	34.1616055555556
Longitude:	119.197886111111
Alias Name:	P33044
	CA6170023323
	16548
	56970002
	PORT HUENEME NAVAL CONSTRUCTION CENTER
	US GOVT NAVAL CONSTRUCTION
	PORT HUENEME
	NAVAL CONSTRUCTION BATTALION CENTER
	300120
Alias Type:	PCode
	EPA Identification Number
	Project Code (Site Code)
	Alternate Name
	Alternate Name
	Alternate Name
	Alternate Name
	RB PCA
	Envirostor ID Number
APN:	NONE SPECIFIED
APN Description:	Not reported
Comments:	"RAW for Site 9,12B,23: The Removal Action Workplan describes a non time critical interim PCB contaminated soil removal at these sites to minimize risks to human health and the environment posed by exposure to PCB. The proposed removal activitiesDTSC approval letter sent."Site 9 TCRA Work Plan: The stockpile was tested and found to contain polychlorinated biphenyls (PCBs) and arsenic exceeding the U.S. Environmental Protection Agency (EPA) health based screening levels for industrial land usage. Although below the"Site 14 Landfill Removal Action: A site characterization concluded that the contaminants of potential concern include volatile and semivolatile organic compounds, polychlorinated biphenyls, polynuclear aromatic hydrocarbons, pesticides, total petr"Site 14 Landfill Postclosure Maintenance Plan: The site characterization concluded that exposure to contaminated surface soil during future industrial use at the site was a main concern. A remedial action, including the installation of a non ir5/2/06 The Department of Toxic Substances Control (DTSC) has reviewed and accepted the subject document. The report summarizes the Site 9 stockpile B excavation activities and results of confirmation samples. The excavation site was backefilled w"The stockpile was tested and found to contain polychlorinated biphenyls (PCBs) and arsenic exceeding the U.S. Environmental Protection Agency (EPA) health based screening levels for industrial land usage. Although below the industrial screening leDTSC completed commenting on the 6/1/04 (data gap) Work Plan on 8/24/04 (1st set of comments on 6/16/04). Phase 1 field work was conducted between 7 9/04. Phase 2 will start in 11/04. Groundwater results will require 4 quarters of sampling. The"5/2/06 The Department of Toxic Substances Control (DTSC) reviewed and accepted the subject document. The report provides a chronicle of sampling and analysis conducted in 1999 at 10 former underground storage tanks. The results of this report wiDTSC approval letter sent.7/18/06 Water Board indicates this task has been completed.7/26/05 Review comment letter sent to

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

NavyRoutine report for O&M in 9/04Rountine report for O&M in 12/04"4/4/06 Navy indicated that they will not submit revised plan, but will take into account remarks from commenting agencies during field work and in the reports."1/16/07 Navy indicates there will be no more revision to this technical memorandum. DTSC comments will be taken into consideration and incorporated in appropriate CERCLA documents such as RI and FS reports."5/2/06 The Department of Toxic Substances Control (DTSC) has reviewed the subject document. The report provides a chronicle of sampling and analysis conducted in 1999 at Site 20. The results of this report will be incorporated into and considere"Removal action completion for Sites 12B and 23 (soil only): A site characterization and screening level risk evaluation for Site 12B showed that although the PCB cancer risk was within the risk management range of 1 x10 4 to 1 x 10 6, the non ca"Removal action completion for Sites 12B and 23 (soil only): A site characterization and screening level risk evaluation for Site 12B showed that although the PCB cancer risk was within the risk management range of 1 x10 4 to 1 x 10 6, the non ca9/23/97 DTSC concurred with NFA for Site 13.1/30/97 DTSC concurred with NFA for Site 16."5/21/02 DTSC acknowledged soil closures for Site 17, Building 1340 (SWMU 30C), and Building 5258 (SWMU 33)."5/21/02 DTSC acknowledged soil closures for Site 17, Building 1340 (SWMU 30C), and Building 5258 (SWMU 33)."5/21/02 DTSC acknowledged soil closures for Site 17, Building 1340 (SWMU 30C), and Building 5258 (SWMU 33)."DTSC approval letter sent."PEA Commitment 06/30/1995: Sites 4, 8, 10, 11, 16, 18, 22, 2 PEA Commitment 12/31/1995: Sites 9, 14, 17, 21""Routine report for O&M in 12/02 (The uploaded RP Final document is an assemblage of 16 pdf files) Review of 2 separate reports for an O&M done in 12/02: 1) 4th Qtr Maintenance Report Postclosure Mainteneance Plan Site 14 Landfill, and 2) 2/5/"PEA SITE 5, 6, 12B & 13: A Preliminary Site Assessment (PSA): Technical Memorandum Report dated August 27, 1997 documented the soil investigation conducted at these sites. The PSA confirmed the presence of PCB and semi volatile organic compound "Routine report for O&M in 1/04Routine report for O&M in 3/04include excavating a total volume of about 850 cubic yards of contaminated soil and backfilling with clean soil. It is anticipated that this interim removal will be effective for many years until the final remedy of the sites is selected and implemvels, additional chemicals of potential concern in the stockpile include cadmium, chromium, copper, and lead. The stockpile, which is estimated to be 9,000 cubic yards, will be excavated, manifested, and transported in covered trucks in accordance"hot spots"" that exceeded the residential PRG of 0.06 mg/kg, respectively at Site 5, 6, & 12B, with the exception of Site 13. However, the Navy recommended a no further action. DTSC recommends per our letter of September 23, 1997 a targeted remova03 Groundwater Report 4th Qtr 2002 Site 14 landfill. In the 2/5/03 GW report, Table 3 1 indicated there were 4 other monitoring events starting from the installation of the monitoring wells, with which DTSC has no record of them on file. The 4ncer risk exceeded the threshold Hazard Index of 1 at the site. A removal action was conducted and completed in 2002. Although this was an interim action, the postremoval confirmation data indicated and it was agreed by DTSC on 6/27/2003 that if incer risk exceeded the threshold Hazard Index of 1 at the site. A removal action was conducted and completed in 2002. Although this was an interim action, the postremoval confirmation data indicated and it was agreed by DTSC on 6/27/2003

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

that if id when the Navy prepares the Remedial Investigation report for this site, at which time DTSC and other agencies will conduct a detailed review."ll be incorporated into and considered when the Navy prepares the Remedial Investigation (RI) report for these sites, at which time DTSC and other agencies will conduct a detailed review."Final Work Plan was dated 11/8/04 and was approval on 11/15/04.ith clean soil that met DTSC Advisory. The information has been incorporated into the November 2005 Draft Remedial Investigation Report for IRP Sites 4 and 9 which is in review by DTSC.rigated final cover suitable for municipal solid waste landfill, was chosen and implemented. The remedial action started in September 1998 and the landfill cover was completed in July 2000. The Navy installed 3 upgradient monitoring wells on the noleum hydrocarbons, and metals. Exposure to surface soil during future industrial use was a main concern. A removal action, including the installation of a nonirrigated final cover suitable for municipal solid waste landfill, was chosen and implemindustrial screening levels, additional chemicals of potential concern in the stockpile include cadmium, chromium, copper, and lead. The stockpile, which is estimated to be 9,000 cubic yards, will be excavated, manifested, and transported in covereorth side of the landfill and 5 downgradient wells on the south side. The Postclosure Maintenance Plan (PMP) has been prepared to account for and prevent threats to public and environmental health associated the Site 14 landfill. The PMP servesprevious event were: 3/8/02, 5/16/02, 6/5/02, and 9/5/02. "d trucks in accordance with EPA and U.S. Department of Transportation requirements and disposed at the Class I landfill at Kettleman Hills, California. Before backfilling the excavated area with clean soil, samples will be collected and analyzed fondustrial land use is maintained by institutional controls, no further action is required for Site 12B, and No Further Action for residnetial scenario for Site 23. DTSC approved the October 2004 On Scene Coordinator's Report for this action on Ocented. The removal action started in September 1998 and the landfill cover was completed in July 2000. The Navy installed 3 upgradient monitoring wells on the north side of the landfill and 5 downgradient wells on the south side. The long term coented."with EPA and U.S. Department of Transportation requirements and disposed at the Class I landfill at Kettleman Hills, California. Before backfilling the excavated area with clean soil, samples will be collected and analyzed for volatile and semi voll of localized areas of high contamination, also known as ""hot spots"" or an institutional control for Sites 5, 6, & 12B and concurs with the no further action recommendation for Site 13."ndustrial land use is maintained by institutional controls, no further action is required for Site 12B, and No Further Action for residnetial scenario for Site 23. DTSC approved the October 2004 On Scene Coordinator's Report for this action on October 25, 2004."atile organic compounds, pesticides, PCBs, total petroleum hydrocarbons diesel range organics, and metals. The risk assessment and the feasibility study for all of Site 9 will determine if more action is necessary for this location. The estimatedver maintenance and groundwater monitoring procedures are specified in the 3/04 Postclosure Maintenance Plan. DTSC approved the On Scene Coordinator's Report for this action on October 1, 2004. A copy of the approval letter is attached. 12/8/r volatile and semi volatile organic compounds, pesticides, PCBs, total petroleum hydrocarbons diesel range organics, and metals. The risk assessment and the feasibility study for all of Site 9 will determine

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

if more action is necessary for this loto provide explicit instructions to the maintenance contractor for conducting and reporting on inspection, evaluation and repair of the cover, monitoring of groundwater, and the Navy'srequirements for and prohibitions against certain future land usatober 25, 2004."ges on the cover. Institutional controls for the Site 14 cover are imposed under the Regional Shore Infrastructure Plan (RSIP). This PMP is to be used along with the CMECC protocol guidance to implement the institutional controls. The PMP is entecost for this interim action is $1.3 million. It is anticipated that institutional controls will be imposed as part of the Site 9 RAP to maintain the current industrial use. DTSC approved the Time Critical Removal Action Memorandum, and Work Pla04 Ask Navy to provide pdf file of the approved version for upload "cation. The estimated cost for this interim action is $1.3 million. It is anticipated that institutional controls will be imposed as part of the Site 9 RAP to maintain the current industrial use. DTSC approved the Time Critical Removal Action Mred in the operating record by reference in the RSIP. DTSC approved the 3/04 Postclosure Maintenance Plan for Site 14 Landfill Final Cover on October 27, 2004. 12/8/04 Ask Navy to provide pdf file of the approved version for upload"n on September 30 2004. "emorandum, and Work Plan on September 30 2004. Copies of the approval letter and project summaries are attached. 12/8/04 Ask Navy to provide pdf file for upload "

Completed Info:

Completed Area Name:	MULTIPLE SITES
Completed Sub Area Name:	Not reported
Completed Document Type:	Action Memorandum (if <$1M)
Completed Date:	03/18/02
Completed Area Name:	Sites With No Operable Unit
Completed Sub Area Name:	Site 14 Former Earthmoving Training Area
Completed Document Type:	Remedial Design
Completed Date:	06/01/99
Completed Area Name:	Sites With No Operable Unit
Completed Sub Area Name:	Site 14 Former Earthmoving Training Area
Completed Document Type:	Remedial Action Plan
Completed Date:	05/07/98
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Investigation Report
Completed Date:	07/05/06
Completed Area Name:	MULTIPLE SITES
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Investigation Report
Completed Date:	01/09/07
Completed Area Name:	Sites With No Operable Unit
Completed Sub Area Name:	Site 9 Burning Pits
Completed Document Type:	Removal Action Workplan
Completed Date:	09/30/04
Completed Area Name:	Sites With No Operable Unit
Completed Sub Area Name:	Site 14 Former Earthmoving Training Area

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Completed Document Type: Removal Action Completion Report
Completed Date: 10/01/04

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Plan
Completed Date: 10/27/04

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 9 Burning Pits
Completed Document Type: Removal Action Completion Report
Completed Date: 05/02/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 9 Burning Pits
Completed Document Type: Action Memorandum (if >$1M)
Completed Date: 09/30/04

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 11/15/04

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 03/18/02

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspection Report
Completed Date: 05/02/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 19A Drainage Ditches
Completed Document Type: Remedial Investigation Workplan
Completed Date: 01/11/07

Completed Area Name: Water Board Lead
Completed Sub Area Name: UST 2
Completed Document Type: Long Term Monitoring Report
Completed Date: 07/18/06

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Base / Site Management Plan
Completed Date: 07/26/05

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/15/05

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/15/05

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 12/07/05

Completed Area Name: Water Board Lead
Completed Sub Area Name: UST 2
Completed Document Type: Long Term Monitoring Report
Completed Date: 10/30/06

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Technical Memorandums
Completed Date: 02/23/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 20 Naval Construction Training Center Building Site (includes UST Site 796 04)
Completed Document Type: Technical Memorandums
Completed Date: 05/02/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 12B CED Maintenance Shop Area
Completed Document Type: Removal Action Completion Report
Completed Date: 10/25/04

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 23 Surface Targets
Completed Document Type: Removal Action Completion Report
Completed Date: 10/25/04

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 13 Former MUSE Storage
Completed Document Type: Preliminary Assessment Report
Completed Date: 09/23/97

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 16 Paint Storage Yard
Completed Document Type: Site Inspection Report
Completed Date: 01/30/97

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 17 Waste Magazines
Completed Document Type: Record of Decision
Completed Date: 05/21/02

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SWMU 30C CED Battery Shop
Completed Document Type: Record of Decision
Completed Date: 05/21/02

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SWMU 33 Hazardous Waste Storage Facility (Building 5258)
Completed Document Type: Record of Decision
Completed Date: 05/21/02

Completed Area Name: PROJECT WIDE

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Completed Sub Area Name: Not reported
Completed Document Type: Other Workplan
Completed Date: 10/12/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/30/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/30/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/30/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Feasibility Study Report
Completed Date: 03/12/98

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 23 Surface Targets
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/03/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 22 Aboveground Fuel Farm
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/03/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 18 Railroad Oil Spills
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/03/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 16 Paint Storage Yard
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/03/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 17 Waste Magazines
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 02/08/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: 8 STS
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/03/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Completed Date: 08/22/03

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SWMU/AOC
Completed Document Type: Site Inspection Work Plan
Completed Date: 10/18/04

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspection Work Plan
Completed Date: 04/22/04

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Feasibility Study Report
Completed Date: 05/26/99

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/30/98

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/18/03

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/18/03

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/15/05

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/15/05

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 23 Surface Targets
Completed Document Type: NFRAP No Further Response Action Planned
Completed Date: 10/17/06

Confirmed: 30018,, ,31000,, ,30594,, ,31000,, ,31000,,
,30005,30008,30014,30548,30018,30019,30058,, ,, ,30594,30153,,
,30001 NO,30005 NO,30008 NO,30013 NO,30018 NO,30019 NO,,
,30001 NO,30005 NO,30008 NO,30013 NO,30018 NO,30019 NO,, ,31000,, ,,
,30018,30019,300
Confirmed Description: Polychlorinated biphenyls (PCBs)
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found
Confirmed Description: Not reported

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Confirmed Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Confirmed Description:	DDT
Confirmed Description:	Mercury (elemental)
Confirmed Description:	Tin
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Antimony and compounds
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Not reported
Confirmed:	80,, ,30018,30019,30080,30207,, ,30019,30080,, ,31000,, ,30001,30335,30478,30018,, ,30001,30013,30025,, ,30594,30478,, ,31000,, ,31000,, ,30407,30018,30156,, ,31000,, ,30407,, ,31000 NO,, ,, ,30018,30019,30058,, ,31000,, ,30018,, ,31000,, ,31000,, ,
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Beryllium and compounds
Confirmed Description:	Dieldrin
Confirmed Description:	Not reported
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Beryllium and compounds
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Iron
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	TPH gas
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Copper and compounds
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Antimony and compounds
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed:	31000,, ,31000,, ,30407,30478,, ,30594,, ,31000,, ,30594,, ,31000,, ,31000,, ,31000,, ,31000,, ,31000,, ,30594,30478,30018,, ,30594,, ,30594,, ,30478,, ,30156,, ,31000,, ,31000,, ,30001,30013,30018,30024,30025,3002502,, ,30001,30005,30008,30013,3001
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	Copper and compounds
Confirmed Description:	Copper and compounds
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	TPH diesel
Confirmed Description:	TPH gas
Confirmed Description:	TPH MOTOR OIL
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Confirmed Description:	DDT
Confirmed Description:	Lead
Confirmed Description:	Not reported
Confirmed:	8,30019,, ,30005,30008,30014,30548,30018,30019,30058,, ,30001,30018,30080,, ,30018,30019,, ,30018,, ,30018,, ,31000,, ,30001,30013,30407,3002502,, ,30001,30013,30025,, ,30013,30153,, ,31000,, ,30407,, ,30594,30156,, ,31000,, ,30407,30153,, ,30478,,
Confirmed Description:	Not reported
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Not reported
Confirmed Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Confirmed Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Confirmed Description:	DDT
Confirmed Description:	Mercury (elemental)
Confirmed Description:	Tin
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Antimony and compounds
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Beryllium and compounds
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	Nickel
Confirmed Description:	TPH MOTOR OIL
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	TPH gas
Confirmed Description:	Not reported
Confirmed Description:	Lead
Confirmed Description:	Lead
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Copper and compounds
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed:	,30153,, ,31000,, ,31000,, ,30478,, ,31000,, ,30476,30478,30018,, ,30001,30013,30018,30024,30025,3002502,, ,30001,30013,30025,, ,30156,, ,30407,, ,31000,, ,30594,30478,, ,30594,, ,31000,, ,30407,, ,30478,30153,, ,30153,, ,30594,30467,, ,30407,, ,310
Confirmed Description:	Chromium VI
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Benzo[b]fluoranthene
Confirmed Description:	Benzo[b]fluoranthene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	TPH diesel
Confirmed Description:	TPH gas
Confirmed Description:	TPH MOTOR OIL
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	TPH gas
Confirmed Description:	Not reported
Confirmed Description:	Copper and compounds
Confirmed Description:	Copper and compounds
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Not reported
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	Chromium VI
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Polybrominated biphenyls
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed:	00,, ,30478,, ,31000,, ,31000,, ,30594,, ,31000,, ,31000,, ,31000,, ,30478,, ,31000,, ,31000,, ,31000,, ,31000,,

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

,30001 NO,30005 NO,30008 NO,30013 NO,30018 NO,30019 NO,,
,30001,30478,30080,, ,30018,, ,30001,30025,,
,30001,30013,30024,30025,30027,300

Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Beryllium and compounds
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	TPH gas
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	TPH diesel
Confirmed Description:	TPH gas
Confirmed Description:	Trichloroethylene (TCE)
Confirmed Description:	Not reported
Confirmed:	2502,, ,30001,30013,30478,30018,30025,, ,31000,, ,31000,, ,30001,30003,30018,30024,30025,30193,, ,, ,30020,, ,31000,, ,31000,, ,30594,30153,, ,30153,, ,31000,, ,31000,, ,31000,, ,31000,, ,31000
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	TPH gas
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Benzene
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	TPH diesel
Confirmed Description:	TPH gas
Confirmed Description:	1,2 Dichloroethane (EDC)
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Radioactive Isotopes
Confirmed Description:	Radioactive Isotopes
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	Chromium VI
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Proposed Plan
Future Due Date:	2009
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Record of Decision
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Proposed Plan
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Record of Decision
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Feasibility Study Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 9 Burning Pits
Future Document Type:	Record of Decision
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Long Term Monitoring Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Long Term Monitoring Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 9 Burning Pits
Future Document Type:	Feasibility Study Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 19A Drainage Ditches
Future Document Type:	Remedial Investigation Report
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	10WOT
Future Document Type:	Remedial Investigation Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 20 Naval Construction Training Center Building Site (includes UST

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

	Site 796 04)
Future Document Type:	Feasibility Study Report
Future Due Date:	2009
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Record of Decision
Future Due Date:	2009
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Investigation Report
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 17 Waste Magazines
Future Document Type:	Remedial Investigation Report
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 20 Naval Construction Training Center Building Site (includes UST Site 796 04)
Future Document Type:	Remedial Investigation Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 19 Hueneme Harbor
Future Document Type:	Remedial Investigation Report
Future Due Date:	2012
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 20 Naval Construction Training Center Building Site (includes UST Site 796 04)
Future Document Type:	Proposed Plan
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 20 Naval Construction Training Center Building Site (includes UST Site 796 04)
Future Document Type:	Record of Decision
Future Due Date:	2010
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Feasibility Study Report
Future Due Date:	2010
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 9 Burning Pits
Future Document Type:	Proposed Plan
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Remedial Investigation Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 17 Waste Magazines
Future Document Type:	Feasibility Study Report
Future Due Date:	2009
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Preliminary Assessment Report
Future Due Date:	2008
Future Area Name:	Water Board Lead
Future Sub Area Name:	UST 2
Future Document Type:	Long Term Monitoring Report

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Future Due Date:	2008
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Feasibility Study Report
Future Due Date:	2008
Media Affected:	OTH, SED, SOIL, SV, IA, SURFW, OTH, SOIL, SV, IA, OTH, OTH, SED, OTH, SED, OTH, OTH, SED, OTH, SED, SOIL, OTH, SOIL, OTH, SOIL, OTH, NMA, SED, SURFW, NMA, NMA, OTH, SOIL, OTH, OTH, OTH, SOIL, OTH, OTH, SOIL, OTH, NMA, NMA, OTH, SED, SED, OTH, SOIL,
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Soil
Media Affected Desc:	Not reported
Media Affected Desc:	Not reported
Media Affected Desc:	Surface water affected
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Not reported
Media Affected Desc:	Not reported
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Not reported
Media Affected Desc:	Sediments
Media Affected Desc:	Surface water affected
Media Affected Desc:	Not reported
Media Affected Desc:	Not reported
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Not reported
Media Affected Desc:	Not reported
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Sediments
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Media Affected:	SOIL, NMA, OTH, SOIL, OTH, OTH, SOIL, OTH, SOIL, SOIL, OTH, OTH, OTH, OTH, SOIL, OTH, OTH, SOIL, OTH, SOIL, OTH, SOIL, NMA, OTH, SED, SOIL, SOIL, NMA, NMA, OTH, SOIL, OTH, OTH, OTH, OTH
Media Affected Desc:	Soil
Media Affected Desc:	Not reported
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Not reported
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Soil
Media Affected Desc:	Soil
Media Affected Desc:	Not reported
Media Affected Desc:	Not reported
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)

Management:

Management Required:	NONE SPECIFIED
Management Required Desc:	Not reported
Potential:	10031, 10086, 10087, 10077, 10198, 10193, 10179, 30001, 30003, 30018, 30024, 30025, 30193, 30001, 30005, 30008, 30013, 30018, 30019, 30001, 30005, 30008, 30013, 30018, 30019, 30001, 30005, 30008, 30013, 30018, 30019, 30001, 30005, 30008, 30013, 3001
Potenital Description:	* Metals Mercury (Elemental)
Potenital Description:	* Photochemicals/Photoprocessing Waste
Potenital Description:	* Polychlorinated Biphenyls
Potenital Description:	* Pesticides Wastes From Production
Potenital Description:	* UNSPECIFIED SOLVENT MIXTURES
Potenital Description:	* UNSPECIFIED ACID SOLUTION
Potenital Description:	* Sludge Paint
Potenital Description:	Arsenic
Potenital Description:	Benzene
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	TPH diesel
Potenital Description:	TPH gas
Potenital Description:	1,2 Dichloroethane (EDC)

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Potenital Description:	Arsenic
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	DDT
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Arsenic
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	DDT
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Arsenic
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	DDT
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Arsenic
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	DDT
Potenital Description:	Lead
Potenital Description:	Not reported
	8, 30019, 30001, 30013, 30018, 30024, 30025, 3002502, 30001, 30013, 30018, 30024, 30025, 3002502, 30001, 30013, 30018, 30025, 30478, 30001, 30013, 30019, 30058, 30407, 30001, 30013, 30024, 30025, 3002502, 30027, 30001, 30013, 30025, 30001, 30013, 30
Potenital Description:	Not reported
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	TPH diesel
Potenital Description:	TPH gas
Potenital Description:	TPH MOTOR OIL
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	TPH diesel
Potenital Description:	TPH gas
Potenital Description:	TPH MOTOR OIL
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	TPH gas
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Antimony and compounds
Potenital Description:	Nickel
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	TPH diesel
Potenital Description:	TPH gas
Potenital Description:	TPH MOTOR OIL
Potenital Description:	Trichloroethylene (TCE)

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	TPH gas
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Not reported
	025, 30001, 30013, 30025, 30001, 30013, 3002502, 30407, 30001, 30013, 30058, 30156, 30335, 30548, 30594, 30001, 30013, 30058, 30156, 30335, 30548, 30594, 30001, 30018, 30080, 30001, 30018, 30335, 30478, 30001, 30025, 30001, 30080, 30478, 30005, 3000
Potenital Description:	Not reported
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	TPH gas
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	TPH MOTOR OIL
Potenital Description:	Nickel
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Antimony and compounds
Potenital Description:	Copper and compounds
Potenital Description:	Iron
Potenital Description:	Tin
Potenital Description:	Zinc
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Antimony and compounds
Potenital Description:	Copper and compounds
Potenital Description:	Iron
Potenital Description:	Tin
Potenital Description:	Zinc
Potenital Description:	Arsenic
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Beryllium and compounds
Potenital Description:	Arsenic
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Iron
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Arsenic
Potenital Description:	TPH gas
Potenital Description:	Arsenic
Potenital Description:	Beryllium and compounds
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	Not reported
	8, 30014, 30018, 30019, 30058, 30548, 30005, 30008, 30014, 30018, 30019, 30058, 30548, 30013, 30153, 30018, 30018, 30018, 30018, 30018, 30018, 30019, 30018, 30019, 30058, 30018, 30019, 30080, 30018, 30019, 30080, 30207, 30018, 30019, 30080, 30207, 3
Potenital Description:	Not reported
Potenital Description:	Mercury (elemental)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Antimony and compounds
Potenital Description:	Tin
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Potenital Description:	DDT
Potenital Description:	Mercury (elemental)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Antimony and compounds
Potenital Description:	Tin
Potenital Description:	Lead
Potenital Description:	Chromium VI
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Antimony and compounds
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Beryllium and compounds
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Beryllium and compounds
Potenital Description:	Dieldrin
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Beryllium and compounds
Potenital Description:	Dieldrin
Potenital Description:	Not reported
	0018, 30156, 30407, 30018, 30476, 30478, 30018, 30478, 30594, 30019, 30080, 30020, 30153, 30153, 30153, 30153, 30407, 30153, 30478, 30153, 30594, 30153, 30594, 30156, 30156, 30156, 30594, 30407, 30407, 30407, 30407, 30407, 30407, 30478, 30467, 30594
Potenital Description:	Not reported
Potenital Description:	Copper and compounds
Potenital Description:	Nickel
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Benzo[b]fluoranthene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Zinc
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Beryllium and compounds
Potenital Description:	Radioactive Isotopes
Potenital Description:	Chromium VI
Potenital Description:	Chromium VI
Potenital Description:	Chromium VI
Potenital Description:	Chromium VI
Potenital Description:	Nickel
Potenital Description:	Chromium VI
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Chromium VI
Potenital Description:	Zinc
Potenital Description:	Chromium VI
Potenital Description:	Zinc

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Potenital Description:	Copper and compounds
Potenital Description:	Copper and compounds
Potenital Description:	Copper and compounds
Potenital Description:	Zinc
Potenital Description:	Nickel
Potenital Description:	Nickel
Potenital Description:	Nickel
Potenital Description:	Nickel
Potenital Description:	Nickel
Potenital Description:	Nickel
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Polybrominated biphenyls
Potenital Description:	Zinc
	, 30478, 30478, 30478, 30478, 30478, 30478, 30594, 30478, 30594, 30594, 30594, 30594, 30594, 30594, 30594, 30594
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Zinc
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Zinc
Potenital Description:	Zinc
Potenital Description:	Zinc
Potenital Description:	Zinc
Potenital Description:	Zinc
Potenital Description:	Zinc
Potenital Description:	Zinc
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported
PastUse:	DEGREASING FACILITY, EQUIPMENT/INSTRUMENT REPAIR, FIRE TRAINING AREAS, FIRING RANGE SMALL ARMS ETC..., LANDFILL DOMESTIC, MACHINE SHOP, PAINT/DEPAINT FACILITY, PORT, SHIPYARD TERMINAL, VEHICLE MAINTENANCE, WASTE SEWAGE TREATMENT PLANT, TRANS ATION, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, FIRE TRAINING AREAS, TRANSFER STATION, VEHICLE MAINTENANCE, DEGREA SING FACILITY, VEHICLE MAINTENANCE, VEHICLE MAINTENANCE, BATTERY STORAGE, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, FIRE TRAINING AREAS, OIL/WATER SEPARATORS, ELECTRIC GENERATION/SUBSTATION, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE, BATTERY RECLAMA TION, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, ILLEGAL DUMPING, RAILROAD RIGHT OF WAY, TRANSFORMER REPAIR, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, TRANSPO RTATION WAREHOUSING, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, FUEL VEHICLE STORAGE/ REFUELING, FIRING RANGE SMALL ARMS ETC..., LANDFILL CONSTRUCTION, OIL/WATER SEPARATORS, VEHICLE MAINTENANCE, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, H AZARDOUS WASTE STORAGE TANKS/CONTAINERS, EQUIPMENT/INSTRUMENT

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

REPAIR, VEHICLE MAINTENANCE, TRANSFER STATION, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, VEHICLE MAINTENANCE
FORMER REPAIR, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, TRANSFER STATION, ELECTRIC GENERATION/SUBSTATION, ILLEGAL DUMPING, PORT, WASTE WATER PONDS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, ILLEGAL DUMPING, FIRING RANGE SMALL ARMS ETC..., WAS
TE SEWAGE TREATMENT PLANT, WASTE WATER PONDS, OIL/WATER SEPARATORS, TRANSPORTATION WAREHOUSING, LANDFILL CONSTRUCTION, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, PAINT/DEPAINT FACILITY, VEHICLE MAINTENANCE, HAZARDOUS WASTE STORAGE TANKS/CON
TAINERS, EQUIPMENT/INSTRUMENT REPAIR, FIRE TRAINING AREAS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, FIRING RANGE SMALL ARMS ETC..., LANDFILL DOMESTIC, TRANSFER STATION, TRANSFORMER REPAIR, TRANSPORT
ATION WAREHOUSING, MACHINE SHOP, MACHINE SHOP, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE, VEHICLE MAINTENANCE, VEHICLE MAINTENANCE, VEHICLE MAINTENANCE, VEHICLE MAINTENANCE, TRANSFER STATION, FUEL VEHICLE STORAGE/ REFUELING, TRANSPORTATION WAREH
OUSING, ELECTRIC GENERATION/SUBSTATION, TRANSFER STATION, ELECTRIC GENERATION/SUBSTATION, ILLEGAL DUMPING, MACHINE SHOP, TRANSFER STATION, TRANSFER STATION, RECREATION SERVICES, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, PORT, JUNKYARD, FIRE TRAINI
NG AREAS, LANDFILL DOMESTIC, PAINT/DEPAINT FACILITY, TRANSFORMER REPAIR, ILLEGAL DUMPING, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, PAINT/DEPAINT FACILITY, MACHINE SHOP, VEHICLE MAINTENANCE, VEHICLE MA
INTENANCE, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, TRANSFORMER REPAIR, TRANSFER STATION, PAINT/DEPAINT FACILITY, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, PAINT/DEPAINT FACILITY, MACHINE SHOP, TRANSFORMER REPAIR, PAINT/DEPAINT FACILITY, VEHICLE MAINTENANCE, BATTERY RECLAM

VENTURA CO. BWT:

Facility ID:	FA0005827
Program:	BUSINESS PLAN CUPA UNDERGROUND TANKS HAZ WASTE GENERATOR (RCRA LQG) GENERAL

ENVIROSTOR:

Site Type:	State Response
Site Type Detailed:	Open Base
Acres:	1670
NPL:	NO
Regulatory Agencies:	DTSC, RWQCB 4 Los Angeles
Lead Agency:	DTSC
Program Manager:	PETER CHEN
Supervisor:	Shelia Lowe
Division Branch:	OMF So (Cypress)
Facility ID:	56970002
Site Code:	300120
Assembly:	41
Senate:	23
Special Program:	Not reported
Status:	Active

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Status Date: 2006 03 03 00:00:00
Restricted Use: NO
Funding: DERA
Latitude: 34.1616055555556
Longitude: 119.197886111111
Alias Name: P33044
CA6170023323
16548
56970002
PORT HUENEME NAVAL CONSTRUCTION CENTER
US GOVT NAVAL CONSTRUCTION
PORT HUENEME
NAVAL CONSTRUCTION BATTALION CENTER
300120
Alias Type: PCode
EPA Identification Number
Project Code (Site Code)
Alternate Name
Alternate Name
Alternate Name
Alternate Name
RB PCA
Envirostor ID Number

APN: NONE SPECIFIED
APN Description: Not reported
Comments: "RAW for Site 9,12B,23: The Removal Action Workplan describes a non time critical interim PCB contaminated soil removal at these sites to minimize risks to human health and the environment posed by exposure to PCB. The proposed removal activitiesDTSC approval letter sent."Site 9 TCRA Work Plan: The stockpile was tested and found to contain polychlorinated biphenyls (PCBs) and arsenic exceeding the U.S. Environmental Protection Agency (EPA) health based screening levels for industrial land usage. Although below the"Site 14 Landfill Removal Action: A site characterization concluded that the contaminants of potential concern include volatile and semivolatile organic compounds, polychlorinated biphenyls, polynuclear aromatic hydrocarbons, pesticides, total petr"Site 14 Landfill Postclosure Maintenance Plan: The site characterization concluded that exposure to contaminated surface soil during future industrial use at the site was a main concern. A remedial action, including the installation of a non ir5/2/06 The Department of Toxic Substances Control (DTSC) has reviewed and accepted the subject document. The report summarizes the Site 9 stockpile B excavation activities and results of confirmation samples. The excavation site was backefilled w"The stockpile was tested and found to contain polychlorinated biphenyls (PCBs) and arsenic exceeding the U.S. Environmental Protection Agency (EPA) health based screening levels for industrial land usage. Although below the industrial screening leDTSC completed commenting on the 6/1/04 (data gap) Work Plan on 8/24/04 (1st set of comments on 6/16/04). Phase 1 field work was conducted between 7 9/04. Phase 2 will start in 11/04. Groundwater results will require 4 quarters of sampling. The"5/2/06 The Department of Toxic Substances Control (DTSC) reviewed and accepted the subject document. The report provides a chronicle of sampling and analysis conducted in 1999 at 10 former underground storage tanks. The results of this report wiDTSC approval letter sent.7/18/06 Water Board indicates

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

this task has been completed.7/26/05 Review comment letter sent to NavyRoutine report for O&M in 9/04Rountine report for O&M in 12/04"4/4/06 Navy indicated that they will not submit revised plan, but will take into account remarks from commenting agencies during field work and in the reports."1/16/07 Navy indicates there will be no more revision to this technical memorandum. DTSC comments will be taken into consideration and incorporated in appropriate CERCLA documents such as RI and FS reports."5/2/06 The Department of Toxic Substances Control (DTSC) has reviewed the subject document. The report provides a chronicle of sampling and analysis conducted in 1999 at Site 20. The results of this report will be incorporated into and considere"Removal action completion for Sites 12B and 23 (soil only): A site characterization and screening level risk evaluation for Site 12B showed that although the PCB cancer risk was within the risk management range of 1 x10 4 to 1 x 10 6, the non ca"Removal action completion for Sites 12B and 23 (soil only): A site characterization and screening level risk evaluation for Site 12B showed that although the PCB cancer risk was within the risk management range of 1 x10 4 to 1 x 10 6, the non ca9/23/97 DTSC concurred with NFA for Site 13.1/30/97 DTSC concurred with NFA for Site 16."5/21/02 DTSC acknowledged soil closures for Site 17, Building 1340 (SWMU 30C), and Building 5258 (SWMU 33)."5/21/02 DTSC acknowledged soil closures for Site 17, Building 1340 (SWMU 30C), and Building 5258 (SWMU 33)."5/21/02 DTSC acknowledged soil closures for Site 17, Building 1340 (SWMU 30C), and Building 5258 (SWMU 33)."DTSC approval letter sent."PEA Commitment 06/30/1995: Sites 4, 8, 10, 11, 16, 18, 22, 2 PEA Commitment 12/31/1995: Sites 9, 14, 17, 21""Routine report for O&M in 12/02 (The uploaded RP Final document is an assemblage of 16 pdf files) Review of 2 separate reports for an O&M done in 12/02: 1) 4th Qtr Maintenance Report Postclosure Mainteneance Plan Site 14 Landfill, and 2) 2/5/"PEA SITE 5, 6, 12B & 13: A Preliminary Site Assessment (PSA): Technical Memorandum Report dated August 27, 1997 documented the soil investigation conducted at these sites. The PSA confirmed the presence of PCB and semi volatile organic compound "Routine report for O&M in 1/04Routine report for O&M in 3/04include excavating a total volume of about 850 cubic yards of contaminated soil and backfilling with clean soil. It is anticipated that this interim removal will be effective for many years until the final remedy of the sites is selected and implemvels, additional chemicals of potential concern in the stockpile include cadmium, chromium, copper, and lead. The stockpile, which is estimated to be 9,000 cubic yards, will be excavated, manifested, and transported in covered trucks in accordance"hot spots"" that exceeded the residential PRG of 0.06 mg/kg, respectively at Site 5, 6, & 12B, with the exception of Site 13. However, the Navy recommended a no further action. DTSC recommends per our letter of September 23, 1997 a targeted remova03 Groundwater Report 4th Qtr 2002 Site 14 landfill. In the 2/5/03 GW report, Table 3 1 indicated there were 4 other monitoring events starting from the installation of the monitoring wells, with which DTSC has no record of them on file. The 4ncer risk exceeded the threshold Hazard Index of 1 at the site. A removal action was conducted and completed in 2002. Although this was an interim action, the postremoval confirmation data indicated and it was agreed by DTSC on 6/27/2003 that if incer risk exceeded the threshold Hazard Index of 1 at the site. A removal action was conducted and completed in 2002. Although this was an interim action, the postremoval

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

confirmation data indicated and it was agreed by DTSC on 6/27/2003 that if id when the Navy prepares the Remedial Investigation report for this site, at which time DTSC and other agencies will conduct a detailed review."ll be incorporated into and considered when the Navy prepares the Remedial Investigation (RI) report for these sites, at which time DTSC and other agencies will conduct a detailed review."Final Work Plan was dated 11/8/04 and was approval on 11/15/04.ith clean soil that met DTSC Advisory. The information has been incorporated into the November 2005 Draft Remedial Investigation Report for IRP Sites 4 and 9 which is in review by DTSC.rigated final cover suitable for municipal solid waste landfill, was chosen and implemented. The remedial action started in September 1998 and the landfill cover was completed in July 2000. The Navy installed 3 upgradient monitoring wells on the noleum hydrocarbons, and metals. Exposure to surface soil during future industrial use was a main concern. A removal action, including the installation of a nonirrigated final cover suitable for municipal solid waste landfill, was chosen and implemindustrial screening levels, additional chemicals of potential concern in the stockpile include cadmium, chromium, copper, and lead. The stockpile, which is estimated to be 9,000 cubic yards, will be excavated, manifested, and transported in covereorth side of the landfill and 5 downgradient wells on the south side. The Postclosure Maintenance Plan (PMP) has been prepared to account for and prevent threats to public and environmental health associated the Site 14 landfill. The PMP servesprevious event were: 3/8/02, 5/16/02, 6/5/02, and 9/5/02. "d trucks in accordance with EPA and U.S. Department of Transportation requirements and disposed at the Class I landfill at Kettleman Hills, California. Before backfilling the excavated area with clean soil, samples will be collected and analyzed fondustrial land use is maintained by institutional controls, no further action is required for Site 12B, and No Further Action for residnetial scenario for Site 23. DTSC approved the October 2004 On Scene Coordinator's Report for this action on Ocented. The removal action started in September 1998 and the landfill cover was completed in July 2000. The Navy installed 3 upgradient monitoring wells on the north side of the landfill and 5 downgradient wells on the south side. The long term coented."with EPA and U.S. Department of Transportation requirements and disposed at the Class I landfill at Kettleman Hills, California. Before backfilling the excavated area with clean soil, samples will be collected and analyzed for volatile and semi voll of localized areas of high contamination, also known as ""hot spots"" or an institutional control for Sites 5, 6, & 12B and concurs with the no further action recommendation for Site 13."ndustrial land use is maintained by institutional controls, no further action is required for Site 12B, and No Further Action for residnetial scenario for Site 23. DTSC approved the October 2004 On Scene Coordinator's Report for this action on October 25, 2004."atile organic compounds, pesticides, PCBs, total petroleum hydrocarbons diesel range organics, and metals. The risk assessment and the feasibility study for all of Site 9 will determine if more action is necessary for this location. The estimatedver maintenance and groundwater monitoring procedures are specified in the 3/04 Postclosure Maintenance Plan. DTSC approved the On Scene Coordinator's Report for this action on October 1, 2004. A copy of the approval letter is attached. 12/8/r volatile and semi volatile organic compounds, pesticides, PCBs, total petroleum hydrocarbons diesel range organics, and metals. The risk

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

assessment and the feasibility study for all of Site 9 will determine if more action is necessary for this loto provide explicit instructions to the maintenance contractor for conducting and reporting on inspection, evaluation and repair of the cover, monitoring of groundwater, and the Navy'srequirements for and prohibitions against certain future land usatober 25, 2004."ges on the cover. Institutional controls for the Site 14 cover are imposed under the Regional Shore Infrastructure Plan (RSIP). This PMP is to be used along with the CMECC protocol guidance to implement the institutional controls. The PMP is entecost for this interim action is $1.3 million. It is anticipated that institutional controls will be imposed as part of the Site 9 RAP to maintain the current industrial use. DTSC approved the Time Critical Removal Action Memorandum, and Work Pla04 Ask Navy to provide pdf file of the approved version for upload "cation. The estimated cost for this interim action is $1.3 million. It is anticipated that institutional controls will be imposed as part of the Site 9 RAP to maintain the current industrial use. DTSC approved the Time Critical Removal Action Mred in the operating record by reference in the RSIP. DTSC approved the 3/04 Postclosure Maintenance Plan for Site 14 Landfill Final Cover on October 27, 2004. 12/8/04 Ask Navy to provide pdf file of the approved version for upload"n on September 30 2004. "emorandum, and Work Plan on September 30 2004. Copies of the approval letter and project summaries are attached. 12/8/04 Ask Navy to provide pdf file for upload "

Completed Info:

Completed Area Name:	MULTIPLE SITES
Completed Sub Area Name:	Not reported
Completed Document Type:	Action Memorandum (if <$1M)
Completed Date:	03/18/02
Completed Area Name:	Sites With No Operable Unit
Completed Sub Area Name:	Site 14 Former Earthmoving Training Area
Completed Document Type:	Remedial Design
Completed Date:	06/01/99
Completed Area Name:	Sites With No Operable Unit
Completed Sub Area Name:	Site 14 Former Earthmoving Training Area
Completed Document Type:	Remedial Action Plan
Completed Date:	05/07/98
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Investigation Report
Completed Date:	07/05/06
Completed Area Name:	MULTIPLE SITES
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Investigation Report
Completed Date:	01/09/07
Completed Area Name:	Sites With No Operable Unit
Completed Sub Area Name:	Site 9 Burning Pits
Completed Document Type:	Removal Action Workplan
Completed Date:	09/30/04
Completed Area Name:	Sites With No Operable Unit

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Removal Action Completion Report
Completed Date: 10/01/04

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Plan
Completed Date: 10/27/04

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 9 Burning Pits
Completed Document Type: Removal Action Completion Report
Completed Date: 05/02/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 9 Burning Pits
Completed Document Type: Action Memorandum (if >$1M)
Completed Date: 09/30/04

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 11/15/04

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 03/18/02

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspection Report
Completed Date: 05/02/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 19A Drainage Ditches
Completed Document Type: Remedial Investigation Workplan
Completed Date: 01/11/07

Completed Area Name: Water Board Lead
Completed Sub Area Name: UST 2
Completed Document Type: Long Term Monitoring Report
Completed Date: 07/18/06

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Base / Site Management Plan
Completed Date: 07/26/05

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/15/05

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Completed Date: 06/15/05

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 12/07/05

Completed Area Name: Water Board Lead
Completed Sub Area Name: UST 2
Completed Document Type: Long Term Monitoring Report
Completed Date: 10/30/06

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Technical Memorandums
Completed Date: 02/23/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 20 Naval Construction Training Center Building Site (includes UST Site 796 04)
Completed Document Type: Technical Memorandums
Completed Date: 05/02/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 12B CED Maintenance Shop Area
Completed Document Type: Removal Action Completion Report
Completed Date: 10/25/04

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 23 Surface Targets
Completed Document Type: Removal Action Completion Report
Completed Date: 10/25/04

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 13 Former MUSE Storage
Completed Document Type: Preliminary Assessment Report
Completed Date: 09/23/97

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 16 Paint Storage Yard
Completed Document Type: Site Inspection Report
Completed Date: 01/30/97

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 17 Waste Magazines
Completed Document Type: Record of Decision
Completed Date: 05/21/02

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SWMU 30C CED Battery Shop
Completed Document Type: Record of Decision
Completed Date: 05/21/02

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SWMU 33 Hazardous Waste Storage Facility (Building 5258)
Completed Document Type: Record of Decision
Completed Date: 05/21/02

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Workplan
Completed Date: 10/12/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/30/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/30/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/30/06

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Feasibility Study Report
Completed Date: 03/12/98

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 23 Surface Targets
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/03/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 22 Aboveground Fuel Farm
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/03/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 18 Railroad Oil Spills
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/03/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 16 Paint Storage Yard
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/03/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 17 Waste Magazines
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 02/08/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: 8 STS
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/03/96

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Completed Document Type: Operations and Maintenance Report
Completed Date: 08/22/03

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SWMU/AOC
Completed Document Type: Site Inspection Work Plan
Completed Date: 10/18/04

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspection Work Plan
Completed Date: 04/22/04

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Feasibility Study Report
Completed Date: 05/26/99

Completed Area Name: MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/30/98

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/18/03

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/18/03

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/15/05

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 14 Former Earthmoving Training Area
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/15/05

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Site 23 Surface Targets
Completed Document Type: NFRAP No Further Response Action Planned
Completed Date: 10/17/06

Confirmed: 30018,, ,31000,, ,30594,, ,31000,, ,31000,,
,30005,30008,30014,30548,30018,30019,30058,, ,, ,30594,30153,,
,30001 NO,30005 NO,30008 NO,30013 NO,30018 NO,30019 NO,,
,30001 NO,30005 NO,30008 NO,30013 NO,30018 NO,30019 NO,, ,31000,, ,,
,30018,30019,300
Confirmed Description: Polychlorinated biphenyls (PCBs)
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Confirmed Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Confirmed Description:	DDT
Confirmed Description:	Mercury (elemental)
Confirmed Description:	Tin
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Antimony and compounds
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Not reported
Confirmed:	80,, ,30018,30019,30080,30207,, ,30019,30080,, ,31000,, ,30001,30335,30478,30018,, ,30001,30013,30025,, ,30594,30478,, ,31000,, ,31000,, ,30407,30018,30156,, ,31000,, ,30407,, ,31000 NO,, ,, ,30018,30019,30058,, ,31000,, ,30018,, ,31000,, ,31000,, ,
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Beryllium and compounds
Confirmed Description:	Dieldrin
Confirmed Description:	Not reported
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Beryllium and compounds
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Iron
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	TPH gas
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Copper and compounds
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Antimony and compounds
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed:	31000,, ,31000,, ,30407,30478,, ,30594,, ,31000,, ,30594,, ,31000,, ,31000,, ,31000,, ,31000,, ,31000,, ,30594,30478,30018,, ,30594,, ,30594,, ,30478,, ,30156,, ,31000,, ,31000,, ,30001,30013,30018,30024,30025,3002502,, ,30001,30005,30008,30013,3001
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Not reported
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	Copper and compounds
Confirmed Description:	Copper and compounds
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	TPH diesel
Confirmed Description:	TPH gas
Confirmed Description:	TPH MOTOR OIL
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Confirmed Description:	DDT
Confirmed Description:	Lead
Confirmed Description:	Not reported
Confirmed:	8,30019,, ,30005,30008,30014,30548,30018,30019,30058,, ,30001,30018,30080,, ,30018,30019,, ,30018,, ,30018,, ,31000,, ,30001,30013,30407,3002502,, ,30001,30013,30025,, ,30013,30153,, ,31000,, ,30407,, ,30594,30156,, ,31000,, ,30407,30153,, ,30478,,
Confirmed Description:	Not reported
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Not reported
Confirmed Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Confirmed Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Confirmed Description:	DDT
Confirmed Description:	Mercury (elemental)
Confirmed Description:	Tin
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Antimony and compounds
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Beryllium and compounds
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polynuclear aromatic hydrocarbons (PAHs)
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Polychlorinated biphenyls (PCBs)

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	Nickel
Confirmed Description:	TPH MOTOR OIL
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	TPH gas
Confirmed Description:	Not reported
Confirmed Description:	Lead
Confirmed Description:	Lead
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Copper and compounds
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed:	,30153,, ,31000,, ,31000,, ,30478,, ,31000,, ,30476,30478,30018,, ,30001,30013,30018,30024,30025,3002502,, ,30001,30013,30025,, ,30156,, ,30407,, ,31000,, ,30594,30478,, ,30594,, ,31000,, ,30407,, ,30478,30153,, ,30153,, ,30594,30467,, ,30407,, ,310
Confirmed Description:	Chromium VI
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Not reported
Confirmed Description:	Benzo[b]fluoranthene
Confirmed Description:	Benzo[b]fluoranthene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	TPH diesel
Confirmed Description:	TPH gas
Confirmed Description:	TPH MOTOR OIL
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	TPH gas
Confirmed Description:	Not reported
Confirmed Description:	Copper and compounds
Confirmed Description:	Copper and compounds
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Not reported
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	Chromium VI
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Polybrominated biphenyls
Confirmed Description:	Not reported
Confirmed Description:	Nickel
Confirmed Description:	Nickel
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed:	00,, ,30478,, ,31000,, ,31000,, ,30594,, ,31000,, ,31000,, ,31000,,

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

,30478,, ,31000,, ,31000,, ,31000,, ,31000,,
,30001 NO,30005 NO,30008 NO,30013 NO,30018 NO,30019 NO,,
,30001,30478,30080,, ,30018,, ,30001,30025,,
,30001,30013,30024,30025,30027,300

Confirmed Description: Not reported
Confirmed Description: Not reported
Confirmed Description: Benzo[a]pyrene
Confirmed Description: Benzo[a]pyrene
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found
Confirmed Description: Not reported
Confirmed Description: Zinc
Confirmed Description: Zinc
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found
Confirmed Description: Not reported
Confirmed Description: Benzo[a]pyrene
Confirmed Description: Benzo[a]pyrene
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found
Confirmed Description: Not reported
Confirmed Description: No Contaminants found
Confirmed Description: No Contaminants found
Confirmed Description: Not reported
Confirmed Description: Not reported
Confirmed Description: Not reported
Confirmed Description: Not reported
Confirmed Description: Not reported
Confirmed Description: Not reported
Confirmed Description: Not reported
Confirmed Description: Not reported
Confirmed Description: Not reported
Confirmed Description: Arsenic
Confirmed Description: Arsenic
Confirmed Description: Benzo[a]pyrene
Confirmed Description: Beryllium and compounds
Confirmed Description: Not reported
Confirmed Description: Polychlorinated biphenyls (PCBs)
Confirmed Description: Polychlorinated biphenyls (PCBs)

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	TPH gas
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	TPH diesel
Confirmed Description:	TPH gas
Confirmed Description:	Trichloroethylene (TCE)
Confirmed Description:	Not reported
Confirmed:	2502,, ,30001,30013,30478,30018,30025,, ,31000,, ,31000,, ,30001,30003,30018,30024,30025,30193,, ,, ,30020,, ,31000,, ,31000,, ,30594,30153,, ,30153,, ,31000,, ,31000,, ,31000,, ,31000,, ,31000
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Lead
Confirmed Description:	Benzo[a]pyrene
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	TPH gas
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Arsenic
Confirmed Description:	Arsenic
Confirmed Description:	Benzene
Confirmed Description:	Polychlorinated biphenyls (PCBs)
Confirmed Description:	TPH diesel
Confirmed Description:	TPH gas
Confirmed Description:	1,2 Dichloroethane (EDC)
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Not reported
Confirmed Description:	Radioactive Isotopes
Confirmed Description:	Radioactive Isotopes
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	Zinc
Confirmed Description:	Zinc
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	Chromium VI
Confirmed Description:	Chromium VI
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Confirmed Description:	No Contaminants found
Confirmed Description:	Not reported
Confirmed Description:	No Contaminants found
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Proposed Plan
Future Due Date:	2009
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Record of Decision
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Proposed Plan
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Record of Decision
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Feasibility Study Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 9 Burning Pits
Future Document Type:	Record of Decision
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Long Term Monitoring Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Long Term Monitoring Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 9 Burning Pits
Future Document Type:	Feasibility Study Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 19A Drainage Ditches
Future Document Type:	Remedial Investigation Report
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	10WOT
Future Document Type:	Remedial Investigation Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Future Sub Area Name:	Site 20 Naval Construction Training Center Building Site (includes UST Site 796 04)
Future Document Type:	Feasibility Study Report
Future Due Date:	2009
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Record of Decision
Future Due Date:	2009
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Investigation Report
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 17 Waste Magazines
Future Document Type:	Remedial Investigation Report
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 20 Naval Construction Training Center Building Site (includes UST Site 796 04)
Future Document Type:	Remedial Investigation Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 19 Hueneme Harbor
Future Document Type:	Remedial Investigation Report
Future Due Date:	2012
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 20 Naval Construction Training Center Building Site (includes UST Site 796 04)
Future Document Type:	Proposed Plan
Future Due Date:	2009
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 20 Naval Construction Training Center Building Site (includes UST Site 796 04)
Future Document Type:	Record of Decision
Future Due Date:	2010
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Feasibility Study Report
Future Due Date:	2010
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 9 Burning Pits
Future Document Type:	Proposed Plan
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 14 Former Earthmoving Training Area
Future Document Type:	Remedial Investigation Report
Future Due Date:	2008
Future Area Name:	Sites With No Operable Unit
Future Sub Area Name:	Site 17 Waste Magazines
Future Document Type:	Feasibility Study Report
Future Due Date:	2009
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Preliminary Assessment Report
Future Due Date:	2008
Future Area Name:	Water Board Lead
Future Sub Area Name:	UST 2

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Future Document Type:	Long Term Monitoring Report
Future Due Date:	2008
Future Area Name:	MULTIPLE SITES
Future Sub Area Name:	Not reported
Future Document Type:	Feasibility Study Report
Future Due Date:	2008
Media Affected:	OTH, SED, SOIL, SV, IA, SURFW, OTH, SOIL, SV, IA, OTH, OTH, SED, OTH, SED, OTH, OTH, SED, OTH, SED, SOIL, OTH, SOIL, OTH, SOIL, OTH, NMA, SED, SURFW, NMA, NMA, OTH, SOIL, OTH, OTH, OTH, SOIL, OTH, OTH, SOIL, OTH, NMA, NMA, OTH, SED, SED, OTH, SOIL,
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Soil
Media Affected Desc:	Not reported
Media Affected Desc:	Not reported
Media Affected Desc:	Surface water affected
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Not reported
Media Affected Desc:	Not reported
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Not reported
Media Affected Desc:	Sediments
Media Affected Desc:	Surface water affected
Media Affected Desc:	Not reported
Media Affected Desc:	Not reported
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Soil
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Not reported
Media Affected Desc:	Not reported
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)
Media Affected Desc:	Sediments
Media Affected Desc:	Sediments
Media Affected Desc:	Other Groundwater affected (uses other than drinking water)

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Media Affected Desc: Soil
Media Affected: SOIL, NMA, OTH, SOIL, OTH, OTH, SOIL, OTH, SOIL, SOIL, OTH, OTH, OTH, OTH, SOIL, OTH, OTH, SOIL, OTH, SOIL, OTH, SOIL, NMA, OTH, SED, SOIL, SOIL, NMA, NMA, OTH, SOIL, OTH, OTH, OTH, OTH
Media Affected Desc: Soil
Media Affected Desc: Not reported
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Soil
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Soil
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Soil
Media Affected Desc: Soil
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Soil
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Soil
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Soil
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Soil
Media Affected Desc: Not reported
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Sediments
Media Affected Desc: Soil
Media Affected Desc: Soil
Media Affected Desc: Not reported
Media Affected Desc: Not reported
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Soil
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Other Groundwater affected (uses other than drinking water)

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 10031, 10086, 10087, 10077, 10198, 10193, 10179, 30001, 30003, 30018, 30024, 30025, 30193, 30001, 30005, 30008, 30013, 30018, 30019, 30001, 30005, 30008, 30013, 30018, 30019, 30001, 30005, 30008, 30013, 30018, 30019, 30001, 30005, 30008, 30013, 3001
Potenital Description: * Metals Mercury (Elemental)
Potenital Description: * Photochemicals/Photoprocessing Waste
Potenital Description: * Polychlorinated Biphenyls
Potenital Description: * Pesticides Wastes From Production
Potenital Description: * UNSPECIFIED SOLVENT MIXTURES
Potenital Description: * UNSPECIFIED ACID SOLUTION
Potenital Description: * Sludge Paint
Potenital Description: Arsenic
Potenital Description: Benzene
Potenital Description: Polychlorinated biphenyls (PCBs)
Potenital Description: TPH diesel
Potenital Description: TPH gas

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Potenital Description:	1,2 Dichloroethane (EDC)
Potenital Description:	Arsenic
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	DDT
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Arsenic
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	DDT
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Arsenic
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	DDT
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Arsenic
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	DDT
Potenital Description:	Lead
Potenital Description:	Not reported
	8, 30019, 30001, 30013, 30018, 30024, 30025, 3002502, 30001, 30013, 30018, 30024, 30025, 3002502, 30001, 30013, 30018, 30025, 30478, 30001, 30013, 30019, 30058, 30407, 30001, 30013, 30024, 30025, 3002502, 30027, 30001, 30013, 30025, 30001, 30013, 30
Potenital Description:	Not reported
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	TPH diesel
Potenital Description:	TPH gas
Potenital Description:	TPH MOTOR OIL
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	TPH diesel
Potenital Description:	TPH gas
Potenital Description:	TPH MOTOR OIL
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	TPH gas
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Antimony and compounds
Potenital Description:	Nickel
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	TPH diesel
Potenital Description:	TPH gas
Potenital Description:	TPH MOTOR OIL

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Potenital Description:	Trichloroethylene (TCE)
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	TPH gas
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Not reported
	025, 30001, 30013, 30025, 30001, 30013, 3002502, 30407, 30001, 30013, 30058, 30156, 30335, 30548, 30594, 30001, 30013, 30058, 30156, 30335, 30548, 30594, 30001, 30018, 30080, 30001, 30018, 30335, 30478, 30001, 30025, 30001, 30080, 30478, 30005, 3000
Potenital Description:	Not reported
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	TPH gas
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	TPH MOTOR OIL
Potenital Description:	Nickel
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Antimony and compounds
Potenital Description:	Copper and compounds
Potenital Description:	Iron
Potenital Description:	Tin
Potenital Description:	Zinc
Potenital Description:	Arsenic
Potenital Description:	Lead
Potenital Description:	Antimony and compounds
Potenital Description:	Copper and compounds
Potenital Description:	Iron
Potenital Description:	Tin
Potenital Description:	Zinc
Potenital Description:	Arsenic
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Beryllium and compounds
Potenital Description:	Arsenic
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Iron
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Arsenic
Potenital Description:	TPH gas
Potenital Description:	Arsenic
Potenital Description:	Beryllium and compounds
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	Not reported
	8, 30014, 30018, 30019, 30058, 30548, 30005, 30008, 30014, 30018, 30019, 30058, 30548, 30013, 30153, 30018, 30018, 30018, 30018, 30018, 30018, 30019, 30018, 30019, 30058, 30018, 30019, 30080, 30018, 30019, 30080, 30207, 30018, 30019, 30080, 30207, 3
Potenital Description:	Not reported
Potenital Description:	Mercury (elemental)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Antimony and compounds
Potenital Description:	Tin

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Potenital Description:	Total Chromium (1:6 ratio Cr VI:Cr III)
Potenital Description:	DDT
Potenital Description:	Mercury (elemental)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Antimony and compounds
Potenital Description:	Tin
Potenital Description:	Lead
Potenital Description:	Chromium VI
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Antimony and compounds
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Beryllium and compounds
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Beryllium and compounds
Potenital Description:	Dieldrin
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Beryllium and compounds
Potenital Description:	Dieldrin
Potenital Description:	Not reported
	0018, 30156, 30407, 30018, 30476, 30478, 30018, 30478, 30594, 30019, 30080, 30020, 30153, 30153, 30153, 30153, 30407, 30153, 30478, 30153, 30594, 30153, 30594, 30156, 30156, 30156, 30594, 30407, 30407, 30407, 30407, 30407, 30407, 30478, 30467, 30594
Potenital Description:	Not reported
Potenital Description:	Copper and compounds
Potenital Description:	Nickel
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Benzo[b]fluoranthene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Polychlorinated biphenyls (PCBs)
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Zinc
Potenital Description:	Polynuclear aromatic hydrocarbons (PAHs)
Potenital Description:	Beryllium and compounds
Potenital Description:	Radioactive Isotopes
Potenital Description:	Chromium VI
Potenital Description:	Chromium VI
Potenital Description:	Chromium VI
Potenital Description:	Chromium VI
Potenital Description:	Nickel
Potenital Description:	Chromium VI
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Chromium VI
Potenital Description:	Zinc
Potenital Description:	Chromium VI

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Potenital Description:	Zinc
Potenital Description:	Copper and compounds
Potenital Description:	Copper and compounds
Potenital Description:	Copper and compounds
Potenital Description:	Zinc
Potenital Description:	Nickel
Potenital Description:	Nickel
Potenital Description:	Nickel
Potenital Description:	Nickel
Potenital Description:	Nickel
Potenital Description:	Nickel
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Polybrominated biphenyls
Potenital Description:	Zinc
	, 30478, 30478, 30478, 30478, 30478, 30478, 30594, 30478, 30594, 30594, 30594, 30594, 30594, 30594, 30594, 30594
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Zinc
Potenital Description:	Benzo[a]pyrene
Potenital Description:	Zinc
Potenital Description:	Zinc
Potenital Description:	Zinc
Potenital Description:	Zinc
Potenital Description:	Zinc
Potenital Description:	Zinc
Potenital Description:	Zinc
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported
PastUse:	DEGREASING FACILITY, EQUIPMENT/INSTRUMENT REPAIR, FIRE TRAINING AREAS, FIRING RANGE SMALL ARMS ETC..., LANDFILL DOMESTIC, MACHINE SHOP, PAINT/DEPAINT FACILITY, PORT, SHIPYARD TERMINAL, VEHICLE MAINTENANCE, WASTE SEWAGE TREATMENT PLANT, TRANS ATION, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, FIRE TRAINING AREAS, TRANSFER STATION, VEHICLE MAINTENANCE, DEGREA SING FACILITY, VEHICLE MAINTENANCE, VEHICLE MAINTENANCE, BATTERY STORAGE, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, FIRE TRAINING AREAS, OIL/WATER SEPARATORS, ELECTRIC GENERATION/SUBSTATION, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE, BATTERY RECLAMA TION, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, ILLEGAL DUMPING, RAILROAD RIGHT OF WAY, TRANSFORMER REPAIR, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, TRANSPO RTATION WAREHOUSING, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, FUEL VEHICLE STORAGE/ REFUELING, FIRING RANGE SMALL ARMS ETC..., LANDFILL CONSTRUCTION, OIL/WATER SEPARATORS, VEHICLE MAINTENANCE, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, H

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

AZARDOUS WASTE STORAGE TANKS/CONTAINERS, EQUIPMENT/INSTRUMENT REPAIR, VEHICLE MAINTENANCE, TRANSFER STATION, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, VEHICLE MAINTENANCE
FORMER REPAIR, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, TRANSFER STATION, ELECTRIC GENERATION/SUBSTATION, ILLEGAL DUMPING, PORT, WASTE WATER PONDS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, ILLEGAL DUMPING, FIRING RANGE SMALL ARMS ETC..., WAS
TE SEWAGE TREATMENT PLANT, WASTE WATER PONDS, OIL/WATER SEPARATORS, TRANSPORTATION WAREHOUSING, LANDFILL CONSTRUCTION, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, PAINT/DEPAINT FACILITY, VEHICLE MAINTENANCE, HAZARDOUS WASTE STORAGE TANKS/CON
TAINERS, EQUIPMENT/INSTRUMENT REPAIR, FIRE TRAINING AREAS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, FIRING RANGE SMALL ARMS ETC..., LANDFILL DOMESTIC, TRANSFER STATION, TRANSFORMER REPAIR, TRANSPORT
ATION WAREHOUSING, MACHINE SHOP, MACHINE SHOP, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE, VEHICLE MAINTENANCE, VEHICLE MAINTENANCE, VEHICLE MAINTENANCE, VEHICLE MAINTENANCE, TRANSFER STATION, FUEL VEHICLE STORAGE/ REFUELING, TRANSPORTATION WAREH
OUSING, ELECTRIC GENERATION/SUBSTATION, TRANSFER STATION, ELECTRIC GENERATION/SUBSTATION, ILLEGAL DUMPING, MACHINE SHOP, TRANSFER STATION, TRANSFER STATION, RECREATION SERVICES, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, PORT, JUNKYARD, FIRE TRAINI
NG AREAS, LANDFILL DOMESTIC, PAINT/DEPAINT FACILITY, TRANSFORMER REPAIR, ILLEGAL DUMPING, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, PAINT/DEPAINT FACILITY, MACHINE SHOP, VEHICLE MAINTENANCE, VEHICLE MA
INTENANCE, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, TRANSFORMER REPAIR, TRANSFER STATION, PAINT/DEPAINT FACILITY, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, HAZARDOUS WASTE STORAGE TANKS/CONTAINERS, PAINT/DEPAINT FACILITY, MACHINE SHOP, TRANSFORMER REPAIR, PAINT/DEPAINT FACILITY, VEHICLE MAINTENANCE, BATTERY RECLAM

HISTORICAL CAL SITES:

Facility ID:	56970002
Region:	3
Region Name:	GLENDALE
Branch:	SO
Branch Name:	OMF SOUTHERN CALIF
File Name:	Not reported
State Senate District:	05011986
Status:	AWP ANNUAL WORKPLAN (AWP) ACTIVE SITE
Status Name:	ANNUAL WORKPLAN ACTIVE SITE
Lead Agency:	DTSC
Lead Agency:	DEPT OF TOXIC SUBSTANCES CONTROL
Facility Type:	OPEN
Type Name:	OPEN MILITARY BASE
NPL:	Not Listed
SIC Code:	97
SIC Name:	NATIONAL SECURITY/INTERNATIONAL AFFAIRS
Access:	Not reported
Cortese:	Not reported
Hazardous Ranking Score:	Not reported
Date Site Hazard Ranked:	Not reported

NAVAL CONSTRUCTION BTTLN CTR (Continued) **S101699294**

Groundwater Contamination:	Confirmed
Staff Member Responsible for Site:	PCHEN
Supervisor Responsible for Site:	Not reported
Region Water Control Board:	LA
Region Water Control Board Name:	LOS ANGELES
Lat/Long Direction:	Not reported
Lat/Long (dms):	0 0 0 / 0 0 0
Lat/long Method:	Not reported
Lat/Long Description:	Not reported
State Assembly District Code:	41
State Senate District Code:	23

Click this hyperlink while viewing on your computer to access additional CA_CALSITE: detail in the EDR Site Report.

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12 HUENEME HIGH SCHOOL **RCRA-SQG 1005904394**
500 W BARD RD **FINDS CAR000122176**
OXNARD, CA 93033 **HAZNET**

RCRA SQG:

Date form received by agency:	07/18/2002
Facility name:	HUENEME HIGH SCHOOL
Facility address:	500 W BARD RD OXNARD, CA 93033
EPA ID:	CAR000122176
Mailing address:	309 S K ST OXNARD, CA 93030
Contact:	LOUIS CUNNINGHAM
Contact address:	309 S K ST OXNARD, CA 93030
Contact country:	US
Contact telephone:	(805) 385 2562
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	OXNARD UNION H S DISTRICT
Owner/operator address:	309 S K ST OXNARD, CA 93030
Owner/operator country:	Not reported
Owner/operator telephone:	(805) 385 2562
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No

HUENEME HIGH SCHOOL (Continued) **1005904394**

Treater, storer or disposer of HW:	No
Underground injection activity:	No
On site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off site waste receiver:	Commercial status unknown

Historical Generators:

Date form received by agency:	07/18/2002
Facility name:	HUENEME HIGH SCHOOL
Classification:	Small Quantity Generator
Violation Status:	No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site

Not reported

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

NCES (National Center for Education Statistics) is the primary federal entity for collecting and analyzing data related to education in the United States and other nations and the institute of education sciences.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	CAR000122176
Contact:	Louis Cunningham
Telephone:	8053852562
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	309 S K St
Mailing City,St,Zip:	Oxnard, CA 93030
Gen County:	Ventura
TSD EPA ID:	Not reported
TSD County:	Kings
Waste Category:	Other inorganic solid waste
Disposal Method:	Disposal, Other
Tons:	16.85
Facility County:	Not reported

13 FAITH OIL (NOW PHIL'S MOTORS) **LUST** **S103684234**
4530 SAVIERS RD **Cortese** **N/A**
OXNARD, CA 93030

LUST:

Region:	STATE
Case Type:	Other ground water affected
Cross Street:	Not reported
Enf Type:	F
Funding:	IEA
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100695
Stop Date:	Not reported
Confirm Leak:	1990 11 05 00:00:00
Workplan:	1990 11 05 00:00:00
Prelim Assess:	1991 02 26 00:00:00
Pollution Char:	1996 05 15 00:00:00
Remed Plan:	1992 07 09 00:00:00
Remed Action:	1993 02 02 00:00:00
Monitoring:	1995 11 13 00:00:00
Close Date:	1996 09 23 00:00:00
Discover Date:	1990 11 05 00:00:00
Enforcement Dt:	1965 01 01 00:00:00
Release Date:	1990 11 05 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Gasoline
Contact Person:	Not reported
Responsible Party:	PHIL'S MOTORS
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Staff:	YR
Staff Initials:	DCS
Lead Agency:	Local Agency
Local Agency:	56000L
Hydr Basin #:	SANTA CLARA RIVER VA
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Local Case #:	90122
Case Number:	C 90122

FAITH OIL (NOW PHIL'S MOTORS) (Continued) **S103684234**

Qty Leaked: Not reported
Abate Method: Excavate and Dispose remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Groundwater
Status: Case Closed
Substance: Gasoline
Cross Street: Not reported
Global ID: T0611100695
Enforcement Type: Informal Enforcement Actions,including Notices of Violations and Staff Enforcement Letters
Date Leak Discovered: 11/5/1990
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date Leak Stopped: Not reported
Date Confirmation Began: 11/5/1990
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 3046.186781690893788367949756
Abatement Method Used at the Site: Excavate and Dispose
Source of Cleanup Funding: Excavate and Dispose
Date Leak First Reported: 11/5/1990
Preliminary Site Assessment Workplan Submitted: 11/5/1990
Preliminary Site Assessment Began: 2/26/1991
Pollution Characterization Began: 5/15/1996
Remediation Plan Submitted: 7/9/1992
Remedial Action Underway: 2/2/1993
Post Remedial Action Monitoring Began: 11/13/1995
Date the Case was Closed: 9/23/1996
Date Case Last Changed on Database: Not reported
Enforcement Action Date: 1/1/1965
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Regional Board: 04
Owner Contact: Not reported
Responsible Party: PHIL'S MOTORS

FAITH OIL (NOW PHIL'S MOTORS) (Continued) **S103684234**

RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1581321 / 1
Local Agency Staff:	DCS
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	90122
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	90122
Status:	Case Closed

Cortese:

Region:	CORTESE
Facility Addr2:	Not reported

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14 **U-RENT INC** **LUST** **S104164904**
4700 SAVIERS RD **Cortese** **N/A**
OXNARD, CA 93030

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	F
Funding:	CLOS
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100871
Stop Date:	Not reported
Confirm Leak:	1994 01 06 00:00:00
Workplan:	1994 02 14 00:00:00
Prelim Assess:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	2000 08 09 00:00:00
Discover Date:	1994 01 06 00:00:00
Enforcement Dt:	1994 02 14 00:00:00
Release Date:	1994 01 06 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	0.07

U-RENT INC (Continued) **S104164904**

County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Gasoline
Contact Person:	Not reported
Responsible Party:	U RENT INC
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	1
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE and MTBE detected
Staff:	YR
Staff Initials:	EHD
Lead Agency:	Local Agency
Local Agency:	56000L
Hydr Basin #:	SANTA CLARA RIVER VA
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Local Case #:	94003
Case Number:	C 94003
Qty Leaked:	Not reported
Abate Method:	Not reported
Operator:	Not reported
Water System Name:	Not reported
Well Name:	Not reported
Distance To Lust:	0
Waste Discharge Global ID:	Not reported
Waste Disch Assigned Name:	Not reported
Summary:	Not reported

LUST:

Region:	4
Staff:	UNK
County:	Ventura
Local Agency:	56000L
Lead Agency:	Local Agency
Case Type:	Soil
Status:	Case Closed
Substance:	Gasoline
Cross Street:	Not reported
Global ID:	T0611100871
Enforcement Type:	CLOS
Date Leak Discovered:	1/6/1994
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	1/6/1994
Operator:	Not reported
Water System:	Not reported

U-RENT INC (Continued) **S104164904**

Well Name:	Not reported
Approx. Dist To Production Well (ft):	3112.4109847787362141514707607
Abatement Method Used at the Site:	Not reported
Source of Cleanup Funding:	F
Date Leak First Reported:	1/6/1994
Preliminary Site Assessment Workplan Submitted:	2/14/1994
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	Not reported
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	8/9/2000
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	2/14/1994
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	.07
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	U RENT INC
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1571922 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	94003
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	94003
Status:	Case Closed

Cortese:

Region:	CORTESE
Facility Addr2:	4700 SAVIERS RD

15 **LOS PADRES NATIONAL FOREST** **UST** **U002244176**
PIRU CANYON ROAD **N/A**
PIRU, CA

UST:
Facility ID: 493
Box Number: 146057

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16 **MACELHENNY/LEVY & CO** **LUST** **S102432857**
5156 SAVIERS RD **Cortese** **N/A**
OXNARD, CA 93030

LUST:

Region:	STATE
Case Type:	Other ground water affected
Cross Street:	Not reported
Enf Type:	F
Funding:	EF
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100463
Stop Date:	Not reported
Confirm Leak:	1989 03 27 00:00:00
Workplan:	1987 08 05 00:00:00
Prelim Assess:	1989 04 26 00:00:00
Pollution Char:	1989 04 26 00:00:00
Remed Plan:	1990 07 06 00:00:00
Remed Action:	1995 03 07 00:00:00
Monitoring:	1997 04 01 00:00:00
Close Date:	1997 09 09 00:00:00
Discover Date:	1987 08 05 00:00:00
Enforcement Dt:	1989 04 07 00:00:00
Release Date:	1987 08 05 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Unleaded Gasoline
Contact Person:	Not reported
Responsible Party:	RAZNICK & SONS, INC.
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Staff:	YR

MACELHENNY/LEVY & CO (Continued) **S102432857**

Staff Initials: EHD
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 89041
Case Number: C 89041
Qty Leaked: Not reported
Abate Method: Vent Soil bore holes in soil to allow volatilization of contaminants, Vapor Extraction
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Groundwater
Status: Case Closed
Substance: Unleaded Gasoline
Cross Street: Not reported
Global ID: T0611100463
Enforcement Type: EF
Date Leak Discovered: 8/5/1987
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date Leak Stopped: Not reported
Date Confirmation Began: 3/27/1989
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 1992.9474444866091090844959467
Abatement Method Used at the Site: VSVE
Source of Cleanup Funding: VSVE
Date Leak First Reported: 8/5/1987
Preliminary Site Assessment Workplan Submitted: 8/5/1987
Preliminary Site Assessment Began: 4/26/1989
Pollution Characterization Began: 4/26/1989
Remediation Plan Submitted: 7/6/1990
Remedial Action Underway: 3/7/1995
Post Remedial Action Monitoring Began: 4/1/1997
Date the Case was Closed: 9/9/1997
Date Case Last Changed on Database: Not reported
Enforcement Action Date: 4/7/1989

MACELHENNY/LEVY & CO (Continued) **S102432857**

Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	RAZNICK & SONS, INC.
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1526022 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	89041
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	89041
Status:	Case Closed

Cortese:

Region:	CORTESE
Facility Addr2:	5156 SAVIERS RD

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16 **USA PETROLEUM SS #223** **LUST** **S104161097**
5040 SAVIERS RD **Cortese** **N/A**
OXNARD, CA 93030

LUST:

Region:	STATE
Case Type:	Other ground water affected
Cross Street:	Not reported
Enf Type:	F
Funding:	TC
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100443
Stop Date:	1989 02 11 00:00:00
Confirm Leak:	1989 02 10 00:00:00
Workplan:	1989 02 10 00:00:00
Prelim Assess:	1989 06 14 00:00:00
Pollution Char:	1989 06 14 00:00:00
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	2005 02 25 00:00:00
Close Date:	Not reported

USA PETROLEUM SS #223 (Continued) **S104161097**

Discover Date: 1989 02 10 00:00:00
Enforcement Dt: 1989 02 10 00:00:00
Release Date: 1989 02 10 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: 1997 12 09 00:00:00
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: 70,000
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Post remedial action monitoring
Chemical: Gasoline
Contact Person: Not reported
Responsible Party: USA PETROLEUM CORP
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 1
MTBE Fuel: 1
MTBE Tested: MTBE Detected. Site tested for MTBE and MTBE detected
Staff: YR
Staff Initials: GLT
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: AGR, MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 89021
Case Number: 89021
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Groundwater
Status: Pollution Characterization
Substance: Gasoline
Cross Street: Not reported
Global ID: T0611100443
Enforcement Type: FREV

USA PETROLEUM SS #223 (Continued) **S104161097**

Date Leak Discovered:	2/10/1989
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	2/10/1989
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	2497.871436593638516153151762 8
Abatement Method Used at the Site:	Not reported
Source of Cleanup Funding:	F
Date Leak First Reported:	2/10/1989
Preliminary Site Assessment Workplan Submitted:	2/10/1989
Preliminary Site Assessment Began:	6/14/1989
Pollution Characterization Began:	6/14/1989
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	Not reported
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	2/10/1989
Historical Max MTBE Date:	12/9/1997
Hist Max MTBE Conc in Groundwater:	70000
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	USA PETROLEUM CORP
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1548582 / 1
Local Agency Staff:	KCK
Beneficial Use:	AGR, MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	89021
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	89021
Status:	Post remedial action monitoring

Cortese:

Region:	CORTESE
Facility Addr2:	5040 SAVIERS RD

17 **CHASE BROS. DAIRY** **HIST UST** **U001579710**
732 W PLEASANT VALLEY RD **N/A**
OXNARD, CA 93030

HIST UST:

Region:	STATE
Facility ID:	00000001383
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0003
Contact Name:	Not reported
Telephone:	8054874981
Owner Name:	MARTIN V. SMITH REAL ESTATE
Owner Address:	500 ESPLANADE DRIVE, P. O. BOX
Owner City,St,Zip:	OXNARD, CA 93031

Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Visual, Stock Inventor

Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00008000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	None

Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Tank Construction:	Not reported
Leak Detection:	None

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18 **SHELL SS - 5TH** **LUST** **S103684049**
540 5TH ST **Cortese** **N/A**
OXNARD, CA 93030

LUST:

Region:	STATE
Case Type:	Other ground water affected
Cross Street:	Not reported
Enf Type:	F
Funding:	TC
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611101149
Stop Date:	Not reported
Confirm Leak:	1997 07 18 00:00:00

SHELL SS - 5TH (Continued) **S103684049**

Workplan: 1996 02 06 00:00:00
Prelim Assess: 1996 02 06 00:00:00
Pollution Char: Not reported
Remed Plan: 2000 05 25 00:00:00
Remed Action: 2007 07 31 00:00:00
Monitoring: 2003 07 31 00:00:00
Close Date: Not reported
Discover Date: 1997 07 18 00:00:00
Enforcement Dt: Not reported
Release Date: 1997 07 18 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: <
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: 60
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Remedial action (cleanup) Underway
Chemical: Gasoline
Contact Person: Not reported
Responsible Party: EQUIVA INC
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 1
MTBE Fuel: 1
MTBE Tested: MTBE Detected. Site tested for MTBE and MTBE detected
Staff: YR
Staff Initials: DBW
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 97033
Case Number: C97033
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L

SHELL SS - 5TH (Continued) **S103684049**

Lead Agency:	Local Agency
Case Type:	Soil
Status:	Pollution Characterization
Substance:	Gasoline
Cross Street:	Not reported
Global ID:	T0611101149
Enforcement Type:	LFOR
Date Leak Discovered:	7/18/1997
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	7/18/1997
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	1605.1878542367928809879179745
Abatement Method Used at the Site:	Not reported
Source of Cleanup Funding:	F
Date Leak First Reported:	7/18/1997
Preliminary Site Assessment Workplan Submitted:	2/6/1996
Preliminary Site Assessment Began:	2/6/1996
Pollution Characterization Began:	12/23/2003
Remediation Plan Submitted:	5/25/2000
Remedial Action Underway:	5/25/2000
Post Remedial Action Monitoring Began:	7/31/2003
Date the Case was Closed:	Not reported
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	2/21/2002
Hist Max MTBE Conc in Groundwater:	2.2
Hist Max MTBE Conc in Soil:	60
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	=
Soil Qualifier:	<
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	EQUIVA INC
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1970098 / 1
Local Agency Staff:	DBW
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	97033
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

Cortese:
Region: CORTESE

SHELL SS - 5TH (Continued) **S103684049**

Facility Addr2: 540 5TH ST

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18 **SHELL SS - 5TH** **LUST** **S105974804**
540 5TH ST **N/A**
OXNARD, CA

LUST:
Region: VENTURA
Facility ID: 97033
Status: Remedial action (cleanup) Underway

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19 **PORT HUENEME HEATING AND PUMPING STATION** **VCP** **S107737053**
200 WEST CLARA STREET **ENVIROSTOR** **N/A**
PORT HUENEME, CA 93041

VCP:
Facility ID: 60000139
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Acres: 6
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC Site Mitigation And Brownfield Reuse Program
Project Manager: TEDD YARGEAU
Supervisor: Rita Kamat
Division Branch: So Cal Glendale
Site Code: Not reported
Assembly: 41
Senate: 23
Special Programs Code: Not reported
Status: Active
Status Date: 2005 09 07 00:00:00
Restricted Use: NO
Funding: Responsible Party
Lat/Long: 34.15139 / 119.20222
Alias Name: 60000139
206 020 17
Alias Type: Envirostor ID Number
APN

APN: 206 020 17
APN Description: Not reported
Comments: Closure report completed and approved

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 01/02/07

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Clean up Agreement
Completed Date: 09/07/05

Confirmed: 30024

PORT HUENEME HEATING AND PUMPING STATION (Continued) **S107737053**

Confirmed Description: TPH diesel
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: SOIL
Media Affected Desc: Soil

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 30024
Potenital Description: TPH diesel
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: TRANSFER STATION, TRANSPORTATION PIPELINE

ENVIROSTOR:
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 6
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: TEDD YARGEAU
Supervisor: Rita Kamat
Division Branch: So Cal Glendale
Facility ID: 60000139
Site Code: Not reported
Assembly: 41
Senate: 23
Special Program: Not reported
Status: Active
Status Date: 2005 09 07 00:00:00
Restricted Use: NO
Funding: Responsible Party
Latitude: 34.15139
Longitude: 119.20222
Alias Name: 60000139
206 020 17
Alias Type: Envirostor ID Number
APN

APN: 206 020 17
APN Description: Not reported
Comments: Closure report completed and approved

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 01/02/07

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

PORT HUENEME HEATING AND PUMPING STATION (Continued) **S107737053**

Completed Document Type: Voluntary Clean up Agreement
Completed Date: 09/07/05

Confirmed: 30024
Confirmed Description: TPH diesel
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: SOIL
Media Affected Desc: Soil

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 30024
Potenital Description: TPH diesel
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: TRANSFER STATION, TRANSPORTATION PIPELINE

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20 **SHARP AUTO SERVICE** **HAZNET** **S102436772**
5577 SAVIERS RD **LUST** **N/A**
OXNARD, CA 93033 **Cortese**

HAZNET:
Gepaid: CAL000058933
Contact: JIM SHARP OWNER
Telephone: 8054861708
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 5577 SAVIERS RD
Mailing City,St,Zip: OXNARD, CA 930338414
Gen County: Ventura
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Unspecified oil containing waste
Disposal Method: Recycler
Tons: 0.18
Facility County: Not reported

LUST:
Region: STATE
Case Type: Other ground water affected
Cross Street: Not reported
Enf Type: F
Funding: CLOS
How Discovered: Not reported
How Stopped: Not reported
Leak Cause: Not reported
Leak Source: Not reported
Global Id: T0611100825
Stop Date: Not reported
Confirm Leak: 1992 10 29 00:00:00
Workplan: 1992 10 29 00:00:00

SHARP AUTO SERVICE (Continued) **S102436772**

Prelim Assess: 1992 10 29 00:00:00
Pollution Char: 1992 10 29 00:00:00
Remed Plan: 1993 01 29 00:00:00
Remed Action: Not reported
Monitoring: Not reported
Close Date: 1999 08 11 00:00:00
Discover Date: 1992 10 29 00:00:00
Enforcement Dt: 1992 10 29 00:00:00
Release Date: 1992 10 29 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: 1998 06 04 00:00:00
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: 32
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Waste Oil
Contact Person: Not reported
Responsible Party: JIM SHARP AUTO SERVICE
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: Not reported
MTBE Conc: 1
MTBE Fuel: 0
MTBE Tested: MTBE Detected. Site tested for MTBE and MTBE detected
Staff: YR
Staff Initials: KCK
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 92043
Case Number: C 92043
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency

SHARP AUTO SERVICE (Continued) **S102436772**

Case Type:	Groundwater
Status:	Case Closed
Substance:	Waste Oil
Cross Street:	Not reported
Global ID:	T0611100825
Enforcement Type:	CLOS
Date Leak Discovered:	10/29/1992
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	10/29/1992
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	1778.1109300983429764600194721
Abatement Method Used at the Site:	Not reported
Source of Cleanup Funding:	F
Date Leak First Reported:	10/29/1992
Preliminary Site Assessment Workplan Submitted:	10/29/1992
Preliminary Site Assessment Began:	10/29/1992
Pollution Characterization Began:	10/29/1992
Remediation Plan Submitted:	1/29/1993
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	8/11/1999
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	10/29/1992
Historical Max MTBE Date:	6/4/1998
Hist Max MTBE Conc in Groundwater:	32
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	JIM SHARP AUTO SERVICE
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1482362 / 1
Local Agency Staff:	KCK
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	92043
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	92043

SHARP AUTO SERVICE (Continued) **S102436772**

Status: Case Closed

Cortese:
Region: CORTESE
Facility Addr2: 5577 SAVIERS RD

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21 **CONSTANTINO GABRIE** **LUST** **S103684048**
136 5TH ST **N/A**
OXNARD, CA 93030

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	F
Funding:	EF
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100839
Stop Date:	Not reported
Confirm Leak:	1993 03 12 00:00:00
Workplan:	1993 03 12 00:00:00
Prelim Assess:	1993 04 20 00:00:00
Pollution Char:	1993 03 12 00:00:00
Remed Plan:	1993 04 20 00:00:00
Remed Action:	1993 05 03 00:00:00
Monitoring:	1993 05 03 00:00:00
Close Date:	1993 07 15 00:00:00
Discover Date:	1993 03 12 00:00:00
Enforcement Dt:	1993 03 15 00:00:00
Release Date:	1993 03 12 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Kerosene
Contact Person:	Not reported
Responsible Party:	CONSTANTIO GABRIE
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
Staff:	YR
Staff Initials:	EHD
Lead Agency:	Local Agency

CONSTANTINO GABRIE (Continued) **S103684048**

Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 93010
Case Number: C 93010
Qty Leaked: Not reported
Abate Method: Excavate and Dispose remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Soil
Status: Case Closed
Substance: Kerosene
Cross Street: Not reported
Global ID: T0611100839
Enforcement Type: EF
Date Leak Discovered: 3/12/1993
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date Leak Stopped: Not reported
Date Confirmation Began: 3/12/1993
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 1072.5588693645328064881920951
Abatement Method Used at the Site: Excavate and Dispose
Source of Cleanup Funding: Excavate and Dispose
Date Leak First Reported: 3/12/1993
Preliminary Site Assessment Workplan Submitted: 3/12/1993
Preliminary Site Assessment Began: 4/20/1993
Pollution Characterization Began: 3/12/1993
Remediation Plan Submitted: 4/20/1993
Remedial Action Underway: 5/3/1993
Post Remedial Action Monitoring Began: 5/3/1993
Date the Case was Closed: 7/15/1993
Date Case Last Changed on Database: Not reported
Enforcement Action Date: 3/15/1993
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported

CONSTANTINO GABRIE (Continued) **S103684048**

Hist Max MTBE Conc in Soil:		Not reported
Significant Interim Remedial Action Taken:		Not reported
GW Qualifier:	Not reported	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Regional Board:	04	
Owner Contact:	Not reported	
Responsible Party:	CONSTANTIO GABRIE	
RP Address:	Not reported	
Program:	LUST	
Lat/Long:	34.1974998 / 1	
Local Agency Staff:	EHD	
Beneficial Use:	Not reported	
Priority:	Not reported	
Cleanup Fund Id:	Not reported	
Suspended:	Not reported	
Local Case No:	93010	
Substance Quantity:	Not reported	
Assigned Name:	Not reported	
W Global ID:	Not reported	
Summary:	Not reported	

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22 **AMSEC** **RCRA-SQG** **1001195355**
610 W HUENEME DR **FINDS** **CAR000019224**
OXNARD, CA 93033 **HAZNET**

RCRA SQG:

Date form received by agency:	04/15/1997
Facility name:	AMSEC
Facility address:	610 W HUENEME DR OXNARD, CA 93033
EPA ID:	CAR000019224
Contact:	BRIAN CRENSHAW
Contact address:	2829 GUARDIAN LN VA BEACH, VA 23452
Contact country:	US
Contact telephone:	(805) 986 8512
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	THE CARLSON CO
Owner/operator address:	325 E HILLCREST DR NO 200 THOUSAND OAKS, CA 91360
Owner/operator country:	Not reported
Owner/operator telephone:	(805) 495 4410
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

AMSEC (Continued) **1001195355**

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off site waste receiver:	Commercial status unknown

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	CAL000179410
Contact:	AMSEC CORPORATION
Telephone:	8054954410
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	2829 GUARDIAN LANE
Mailing City,St,Zip:	VIRGINIA BEACH, VA 234520000
Gen County:	Ventura
TSD EPA ID:	CAD008252405
TSD County:	Los Angeles
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Recycler
Tons:	.2293
Facility County:	Ventura

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22 **HALLIBURTON SERVICES** **HIST UST** **U001579963**
5800 PERKINS RD **N/A**
OXNARD, CA 93033

HIST UST:

Region:	STATE
Facility ID:	00000008761
Facility Type:	Other
Other Type:	OIL FIELD SERVICES
Total Tanks:	0010

HALLIBURTON SERVICES (Continued) **U001579963**

Contact Name: SAMMY L. WILEY
Telephone: 8059863771
Owner Name: HALLIBURTON SERVICES
Owner Address: 5800 PERKINS RD
Owner City,St,Zip: OXNARD, CA 93033

Tank Num: 001
Container Num: S3 1
Year Installed: 1983
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: .25 inches
Leak Detection: Stock Inventor, Pressure Test, 10

Tank Num: 002
Container Num: S3 2
Year Installed: 1983
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: .25 inches
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: S3 3
Year Installed: 1983
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: .25 inches
Leak Detection: Stock Inventor, Pressure Test

Tank Num: 004
Container Num: 4
Year Installed: 1983
Tank Capacity: 00012400
Tank Used for: WASTE
Type of Fuel: Not reported
Tank Construction: 9 inches
Leak Detection: None

Tank Num: 005
Container Num: 5
Year Installed: 1983
Tank Capacity: 00012566
Tank Used for: WASTE
Type of Fuel: Not reported
Tank Construction: 9 inches
Leak Detection: Not reported

Tank Num: 006
Container Num: M 001
Year Installed: 1966
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: DIESEL

HALLIBURTON SERVICES (Continued) **U001579963**

Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 007
Container Num: M 002
Year Installed: 1966
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 008
Container Num: M 003
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 009
Container Num: M 004
Year Installed: 1975
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 010
Container Num: M 005
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: None

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22 **STAUFFER CHEMICAL COMPANY** **ENVIROSTOR** **S101482865**
5800 PERKINS ROAD **N/A**
OXNARD, CA 93033

ENVIROSTOR:
Site Type: Historical
Site Type Detailed: * Historical
Acres: 0
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: * MMONROY
Division Branch: So Cal Glendale
Facility ID: 56280099
Site Code: 400264
Assembly: 41
Senate: 23
Special Program: * Site Char & Assess Grant (CERCLA 104)

STAUFFER CHEMICAL COMPANY (Continued) **S101482865**

Status: No Further Action
Status Date: 1985 06 30 00:00:00
Restricted Use: NO
Funding: Not reported
Latitude: 34.1438888888889
Longitude: 119.183888888889
Alias Name: 56280099
400264
OCEAN LABS (PRE 1973)
HALLIBURTON SERVICES(1982 PRESENT)
CAD076207935
Alias Type: Envirostor ID Number
Project Code (Site Code)
EPA Identification Number
Alternate Name
Alternate Name

APN: NONE SPECIFIED
APN Description: Not reported
Comments: CALSITES VALIDATION PROGRAM CONFIRMS NFA FOR DTSC."SOURCE ACT: T/C STAUFFER, 3/1/85 HARVST & PROCESS SEA KELP. FINAL STRATEGY TO CO ENVR HLTH SUBMIT TO EPA PRELIM ASSESS DONE CERCLA 104""FACILITY IDENTIFIED ID FROM Q & 1979 ECKHART SURVEY WASTES TAKEN TO SIMI SANITARY LANDFILL & CARNEY & SON LDFL INC BY CROSBY & OVERTN (1975 79), & E.J. HARRISON & SONS INC. WASTE: HEAVY METALS,TRACE METALS,INDUST ORG CHEM, & INORG. PRE LOC OF HALLIBURTN SEE FILE #56 36 0006. (OCEAN)PROD & HARVEST SEA KELPS. (STAUFFER)FOOD INGRED IENTS DIVISION."

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 11/07/94

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 06/30/85

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Discovery
Completed Date: 08/18/80

Confirmed: NONE SPECIFIED
Confirmed Description: Not reported
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: SOIL
Media Affected Desc: Soil

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 10064, 10093, 20011, 20017

STAUFFER CHEMICAL COMPANY (Continued) **S101482865**

Potenital Description:	* OTHER ORGANIC SOLIDS
Potenital Description:	* AQUEOUS SOLUTION WITH METALS
Potenital Description:	* OTHER INORGANIC SOLID WASTE
Potenital Description:	* UNSPECIFIED ORGANIC LIQUID MIXTURE
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported
PastUse:	MANUFACTURING CHEMICALS

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22 **HALLIBURTON ENERGY SERVICES**
5800 PERKINS RD
OXNARD, CA

HAZNET **U002244171**
LUST **N/A**
Cortese
UST
SLIC

HAZNET:

Gepaid:	CAD981166705
Contact:	HALLIBURTON ENERGY SERVICES
Telephone:	4052513565
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 80118
Mailing City,St,Zip:	BAKERSFIELD, CA 933800118
Gen County:	Ventura
TSD EPA ID:	CAD008252405
TSD County:	Los Angeles
Waste Category:	Unspecified solvent mixture Waste
Disposal Method:	Not reported
Tons:	.4587
Facility County:	Ventura

Gepaid:	CAD981166705
Contact:	HALLIBURTON ENERGY SERVICES
Telephone:	4052513565
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 80118
Mailing City,St,Zip:	BAKERSFIELD, CA 933800118
Gen County:	Ventura
TSD EPA ID:	CAD980883177
TSD County:	Kern
Waste Category:	Unspecified oil containing waste
Disposal Method:	Recycler
Tons:	4.0240
Facility County:	Ventura

Gepaid:	CAD981166705
Contact:	HALLIBURTON ENERGY SERVICES
Telephone:	4052513565
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 80118
Mailing City,St,Zip:	BAKERSFIELD, CA 933800118
Gen County:	Ventura
TSD EPA ID:	CAD980883177
TSD County:	Kern

HALLIBURTON ENERGY SERVICES (Continued) **U002244171**

Waste Category: Unspecified oil containing waste
Disposal Method: Recycler
Tons: 7.6310
Facility County: Ventura

Gepaid: CAD981166705
Contact: HALLIBURTON ENERGY SERVICES
Telephone: 4052513565
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 80118
Mailing City,St,Zip: BAKERSFIELD, CA 933800118
Gen County: Ventura
TSD EPA ID: CAD008252405
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: Treatment, Incineration
Tons: .6672
Facility County: Ventura

Gepaid: CAD981166705
Contact: HALLIBURTON ENERGY SERVICES
Telephone: 4052513565
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 80118
Mailing City,St,Zip: BAKERSFIELD, CA 933800118
Gen County: Ventura
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Tons: 15.4290
Facility County: Ventura

Click this hyperlink while viewing on your computer to access
11 additional CA_HAZNET: record(s) in the EDR Site Report.

LUST:
Region: STATE
Case Type: Other ground water affected
Cross Street: Not reported
Enf Type: F
Funding: EF
How Discovered: Not reported
How Stopped: Not reported
Leak Cause: Not reported
Leak Source: Not reported
Global Id: T0611100881
Stop Date: Not reported
Confirm Leak: 1994 03 14 00:00:00
Workplan: 1994 04 28 00:00:00
Prelim Assess: 1995 01 18 00:00:00
Pollution Char: 1995 01 18 00:00:00
Remed Plan: 1996 01 10 00:00:00
Remed Action: 1995 10 23 00:00:00
Monitoring: 1996 10 15 00:00:00

HALLIBURTON ENERGY SERVICES (Continued) **U002244171**

Close Date: 1996 10 16 00:00:00
Discover Date: 1994 03 14 00:00:00
Enforcement Dt: 1994 04 28 00:00:00
Release Date: 1994 03 14 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Gasoline
Contact Person: Not reported
Responsible Party: HALLIBURTON ENERGY SERVICES
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 1
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Staff: YR
Staff Initials: EHD
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 94019
Case Number: C 94019
Qty Leaked: Not reported
Abate Method: Excavate and Dispose remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Groundwater
Status: Case Closed
Substance: Gasoline
Cross Street: Not reported

HALLIBURTON ENERGY SERVICES (Continued) **U002244171**

Global ID:	T0611100881
Enforcement Type:	EF
Date Leak Discovered:	3/14/1994
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	3/14/1994
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	2497.036546393882774110538179 1
Abatement Method Used at the Site:	Excavate and Dispose
Source of Cleanup Funding:	Excavate and Dispose
Date Leak First Reported:	3/14/1994
Preliminary Site Assessment Workplan Submitted:	4/28/1994
Preliminary Site Assessment Began:	1/18/1995
Pollution Characterization Began:	1/18/1995
Remediation Plan Submitted:	1/10/1996
Remedial Action Underway:	10/23/1995
Post Remedial Action Monitoring Began:	10/15/1996
Date the Case was Closed:	10/16/1996
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	4/28/1994
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	HALLIBURTON ENERGY SERVICES
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1431603 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	94019
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	94019
Status:	Case Closed

Cortese:

HALLIBURTON ENERGY SERVICES (Continued) **U002244171**

Region: CORTESE
Facility Addr2: Not reported

UST:
Facility ID: 1111
Box Number: UGTCLO 12

SLIC:
Region: 4
Facility Status: No further action required
SLIC: 0567
Substance: VOCs
Staff: Not reported

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22 **HALLIBURTON SERVICES** **SLIC** **S101630015**
5800 PERKINS RD **CA FID UST** **N/A**
OXNARD, CA 93033

SLIC:
Region: STATE
Global Id: SL184411424
Assigned Name: SLICSITE
Lead Agency Contact: SLIC UNASSIGNED
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number: 0567
Responsible Party: Not reported
Recent Dtw: Not reported
Substance Released: Not reported
Facility Status: Case Closed

CA FID UST:
Facility ID: 56001947
Regulated By: UTNKA
Regulated ID: CAD981166
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 5800 PERKINS RD
Mailing Address 2: Not reported
Mailing City,St,Zip: OXNARD 93033
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

22 STAUFFER CHEM CO — **RCRA-SQG** — **1000424835**
5800 PERKINS RD — **FINDS** — **CAD076207935**
OXNARD, CA 93030 — **CERC-NFRAP**

RCRA SQG:

Date form received by agency:	09/01/1996
Facility name:	STAUFFER CHEM CO
Facility address:	5800 PERKINS RD OXNARD, CA 93030
EPA ID:	CAD076207935
Mailing address:	PERKINS RD OXNARD, CA 93030
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	STAUFFER CHEMICAL COMPANY
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555 1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555 1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No

STAUFFER CHEM CO (Continued) **1000424835**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off site waste receiver: Commercial status unknown

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CERC NFRAP:
Site ID: 0901585
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP

CERCLIS NFRAP Site Contact Name(s):
Contact Name: Matt Mitguard
Contact Tel: (415) 972 3096
Contact Title: Site Assessment Manager (SAM)

Contact Name: Dan McMindes
Contact Tel: (415) 972 3401
Contact Title: Site Assessment Manager (SAM)

Contact Name: Dawn Richmond
Contact Tel: (415) 972 3097
Contact Title: Site Assessment Manager (SAM)

Contact Name: Nuria Muniz
Contact Tel: (415) 972 3811
Contact Title: Site Assessment Manager (SAM)

CERCLIS NFRAP Site Alias Name(s):
Alias Name: OCEAN LABS
Alias Address: Not reported
CA
Alias Name: HALLIBURTON SERVICES (OWNER)
Alias Address: Not reported
CA
Alias Name: STAUFFER CHEM CO W COAST DIV
Alias Address: 636 CALIFORNIA ST
SAN FRANCISCO, CA 94108
Site Description: Not reported

CERCLIS NFRAP Assessment History:
Action: DISCOVERY

STAUFFER CHEM CO (Continued) **1000424835**

Date Started:	Not reported
Date Completed:	09/01/1985
Priority Level:	Not reported
Action:	ARCHIVE SITE
Date Started:	Not reported
Date Completed:	01/01/1986
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT
Date Started:	07/01/1985
Date Completed:	01/01/1986
Priority Level:	NFRAP (No Futher Remedial Action Planned

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22 **MOBIL OIL SS (STEVE'S)** **LUST** **S102433671**
801 HUENEME RD **Cortese** **N/A**
OXNARD, CA 93033

LUST:

Region:	STATE
Case Type:	Other ground water affected
Cross Street:	Not reported
Enf Type:	F
Funding:	EF
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100433
Stop Date:	Not reported
Confirm Leak:	1989 01 20 00:00:00
Workplan:	1988 10 01 00:00:00
Prelim Assess:	1990 03 01 00:00:00
Pollution Char:	1993 12 27 00:00:00
Remed Plan:	1996 02 13 00:00:00
Remed Action:	1997 12 23 00:00:00
Monitoring:	1998 03 02 00:00:00
Close Date:	1998 08 04 00:00:00
Discover Date:	1989 01 20 00:00:00
Enforcement Dt:	1988 10 29 00:00:00
Release Date:	1989 01 20 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Unleaded Gasoline
Contact Person:	Not reported
Responsible Party:	MARTIN V. SMITH ASSOC
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST

MOBIL OIL SS (STEVE'S) (Continued) **S102433671**

MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 1
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Staff: YR
Staff Initials: DCS
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 89010
Case Number: C 89010
Qty Leaked: Not reported
Abate Method: Vent Soil bore holes in soil to allow volatilization of contaminants, Pump and Treat Ground Water generally employed to remove dissolved contaminants, Air Sparging
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Groundwater
Status: Case Closed
Substance: Unleaded Gasoline
Cross Street: Not reported
Global ID: T0611100433
Enforcement Type: EF
Date Leak Discovered: 1/20/1989
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date Leak Stopped: Not reported
Date Confirmation Began: 1/20/1989
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 1613.77136871031714396162722 43
Abatement Method Used at the Site: VSGTAS
Source of Cleanup Funding: VSGTAS
Date Leak First Reported: 1/20/1989
Preliminary Site Assessment Workplan Submitted: 10/1/1988
Preliminary Site Assessment Began: 3/1/1990
Pollution Characterization Began: 12/27/1993

MOBIL OIL SS (STEVE'S) (Continued) **S102433671**

Remediation Plan Submitted:	2/13/1996
Remedial Action Underway:	12/23/1997
Post Remedial Action Monitoring Began:	3/2/1998
Date the Case was Closed:	8/4/1998
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	10/29/1988
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	MARTIN V. SMITH ASSOC
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1476562 / 1
Local Agency Staff:	DCS
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	89010
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

Cortese:

Region:	CORTESE
Facility Addr2:	801 HUENEME RD

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22 **PORT HUENEME SHORE BASE** **RCRA-SQG** **1001111692**
760 W HUENEME RD **FINDS** **CAR000012302**
PORT HUENEME, CA 93030 **HAZNET**

RCRA SQG:

Date form received by agency:	08/13/2004
Facility name:	PORT HUENEME SHORE BASE
Facility address:	760 W HUENEME RD PORT HUENEME, CA 93030 0000
EPA ID:	CAR000012302
Mailing address:	201 S BROADWAY ORCUTT, CA 93455
Contact:	GEORGE N FOLKS
Contact address:	201 S BROADWAY ORCUTT, CA 93455
Contact country:	US
Contact telephone:	805 934 8202
Contact email:	GFOLKS@PLAINSXP.COM
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous

PORT HUENEME SHORE BASE (Continued) **1001111692**

waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	PXP
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	05/16/2004
Owner/Op end date:	Not reported

Owner/operator name:	PXP
Owner/operator address:	201 S BROADWAY ORCUTT, CA 93455
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	08/05/2004
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off site waste receiver:	Commercial status unknown

Historical Generators:

Date form received by agency:	04/11/1997
Facility name:	PORT HUENEME SHORE BASE
Site name:	NUEVO HUENEME
Classification:	Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE

PORT HUENEME SHORE BASE (Continued) **1001111692**

MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D018
Waste name: BENZENE

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site

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HAZNET:

Gepaid:	CAR000012302
Contact:	M MARISCAL/ENVT'L ANALYST
Telephone:	8059348241
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	201 S BROADWAY ST
Mailing City,St,Zip:	ORCUTT, CA 934554606
Gen County:	Ventura
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Waste oil and mixed oil
Disposal Method:	Not reported
Tons:	2.71
Facility County:	Not reported

Gepaid:	CAR000012302
Contact:	M MARISCAL/ENVT'L ANALYST
Telephone:	8059348241
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	201 S BROADWAY ST
Mailing City,St,Zip:	ORCUTT, CA 934554606
Gen County:	Ventura
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Waste oil and mixed oil
Disposal Method:	Not reported
Tons:	2.71
Facility County:	Not reported

Gepaid:	CAR000012302
Contact:	M MARISCAL/ENVT'L ANALYST
Telephone:	8059348241
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	201 S BROADWAY ST
Mailing City,St,Zip:	ORCUTT, CA 934554606

PORT HUENEME SHORE BASE (Continued) **1001111692**

Gen County: Ventura
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Tons: 2.5
Facility County: Ventura

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22 **MARTIN V SMITH & ASSOC** **UST** **U003906795**
801 HUENEME ROAD **N/A**
PORT HUENEME, CA

UST:
Facility ID: 1109
Box Number: 146064

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22 **GASGO** **HIST UST** **U001579958**
801 W HUENEME RD **N/A**
OXNARD, CA 93033

HIST UST:
Region: STATE
Facility ID: 00000048828
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0004
Contact Name: JAFFAR TAJEDINI
Telephone: 8054889165
Owner Name: JAFFAR TAJEDINI
Owner Address: 801 WEST HUENEME RD.
Owner City,St,Zip: OXNARD, CA 93033

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 2
Year Installed: Not reported

GASGO (Continued) **U001579958**

Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00000050
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Stock Inventor

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23 **PORT HUENEME BLACKSMITH & WELD** **HIST UST** **U001580034**
280 S SURFSIDE DR **N/A**
PORT HUENEME, CA 93041

HIST UST:
Region: STATE
Facility ID: 00000054864
Facility Type: Other
Other Type: TOWING & SALVAGE
Total Tanks: 0001
Contact Name: Not reported
Telephone: 8054883514
Owner Name: PORT HUENEME BLACKSMITH & WELD
Owner Address: 280 S. SURFSIDE DR.
Owner City,St,Zip: PORT HUENEME, CA 93041

Tank Num: 001
Container Num: 1
Year Installed: 1969
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

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23 **HUENEME TOWING** **UST** **U002244254**
280 SURFSIDE DRIVE **N/A**
PORT HUENEME, CA

UST:
Facility ID: 604
Box Number: 146058

24 OXNARD WASTEWATER TREAT PLT — **LUST** — **S104161105**
6001 PERKINS RD S — **N/A**
OXNARD, CA 93033

LUST:

Region:	STATE
Case Type:	Other ground water affected
Cross Street:	MCWANE BLVD
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global Id:	T0611100075
Stop Date:	1989 04 10 00:00:00
Confirm Leak:	Not reported
Workplan:	Not reported
Prelim Assess:	1989 07 13 00:00:00
Pollution Char:	Not reported
Remed Plan:	1990 06 19 00:00:00
Remed Action:	Not reported
Monitoring:	1991 07 09 00:00:00
Close Date:	1996 07 18 00:00:00
Discover Date:	1989 04 10 00:00:00
Enforcement Dt:	Not reported
Release Date:	1989 07 05 00:00:00
Review Date:	1996 08 14 00:00:00
Enter Date:	1989 08 11 00:00:00
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Diesel
Contact Person:	Not reported
Responsible Party:	OXNARD WASTEWATER TREAT PLT
RP Address:	SAME AS SITE D
Interim:	Yes
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
Staff:	YR
Staff Initials:	EHD
Lead Agency:	Regional Board
Local Agency:	56000L
Hydr Basin #:	SANTA CLARA RIVER VA
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Local Case #:	Not reported
Case Number:	930330189

OXNARD WASTEWATER TREAT PLT (Continued) **S104161105**

Qty Leaked: Not reported
Abate Method: Excavate and Dispose remove contaminated soil and dispose in approved site
Operator: NORRIS MARK
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: OTHER CONTAMINATION FOUND AT SITE. ONLY PARTIAL CLOSURE OF CASE.

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Regional Board
Case Type: Groundwater
Status: Case Closed
Substance: Diesel
Cross Street: MCWANE BLVD
Global ID: T0611100075
Enforcement Type: Not reported
Date Leak Discovered: 4/10/1989
Date Leak Record Entered: 8/11/1989
How Leak Discovered: Tank Closure
How Leak Stopped: Not reported
Cause of Leak: UNK
Leak Source: UNK
Date Leak Stopped: 4/10/1989
Date Confirmation Began: Not reported
Operator: NORRIS MARK
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 3066.2661449089059458261499076
Abatement Method Used at the Site: Excavate and Dispose
Source of Cleanup Funding: Excavate and Dispose
Date Leak First Reported: 7/5/1989
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: 7/13/1989
Pollution Characterization Began: Not reported
Remediation Plan Submitted: 6/19/1990
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: 7/9/1991
Date the Case was Closed: 7/18/1996
Date Case Last Changed on Database: 8/14/1996
Enforcement Action Date: Not reported
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Yes
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Regional Board: 04
Owner Contact: Not reported
Responsible Party: OXNARD WASTEWATER TREAT PLT

OXNARD WASTEWATER TREAT PLT (Continued) **S104161105**

RP Address:	SAME AS SITE
Program:	LUST
Lat/Long:	34.1416113 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	Not reported
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	OTHER CONTAMINATION FOUND AT SITE. ONLY PARTIAL CLOSURE OF CASE.

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24 **OXNARD WASTEWATER TREATMENT PLT** **LUST** **S106446532**
6001 PERKINS RD **N/A**
OXNARD, CA

LUST:

Region:	VENTURA
Facility ID:	04009
Status:	Case Closed

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24 **OXNARD WASTEWATER TREATMENT** **HIST UST** **U001579980**
6001 PERKINS RD **N/A**
OXNARD, CA 93033

HIST UST:

Region:	STATE
Facility ID:	00000024854
Facility Type:	Other
Other Type:	WASTEWATER TREATMENT
Total Tanks:	0009
Contact Name:	MICHAEL DEAN GRIFFITH
Telephone:	8054883517
Owner Name:	VENTURA REGIONAL SANITATION
Owner Address:	P.O. BOX AB
Owner City,St,Zip:	VENTURA, CA 93001
Tank Num:	001
Container Num:	9
Year Installed:	1970
Tank Capacity:	00000550
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	3/8 inches
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	8
Year Installed:	1970
Tank Capacity:	00000550
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	3/8 inches
Leak Detection:	Stock Inventor

OXNARD WASTEWATER TREATMENT (Continued) **U001579980**

Tank Num: 003
Container Num: 7
Year Installed: 1980
Tank Capacity: 00009500
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 004
Container Num: 6
Year Installed: 1980
Tank Capacity: 00005750
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 005
Container Num: 0000000001
Year Installed: 1980
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 006
Container Num: 4
Year Installed: 1980
Tank Capacity: 00002500
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 007
Container Num: 3
Year Installed: 1980
Tank Capacity: 00000550
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: 3/8 inches
Leak Detection: None

Tank Num: 008
Container Num: 0000000001
Year Installed: 1980
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: 3/8 inches
Leak Detection: Stock Inventor

Tank Num: 009
Container Num: 0000000002
Year Installed: 1980

OXNARD WASTEWATER TREATMENT (Continued) **U001579980**

Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: Not reported
Tank Construction: 3/8 inches
Leak Detection: Stock Inventor

---

24 **OXNARD WASTE WATER TREATMENT** **AST** **A100226401**
6001 S PERKINS RD **N/A**
OXNARD, CA 93033

AST:
Owner: OXNARD WASTE WATER TREATMENT
Total Gallons: 15000

---

24 **OXNARD WASTEWATER TREATMENT PLT** **LUST** **S101631226**
6001 PERKINS RD **CA FID UST** **N/A**
OXNARD, CA 93033 **SWEEPS UST**

LUST:
Region: STATE
Case Type: Undefined
Cross Street: HUENEME RD
Enf Type: Not reported
Funding: CLOS
How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: UNK
Leak Source: UNK
Global Id: T0611138060
Stop Date: 2003 11 01 00:00:00
Confirm Leak: 2004 02 25 00:00:00
Workplan: Not reported
Prelim Assess: Not reported
Pollution Char: 2005 01 01 00:00:00
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: 2005 03 22 00:00:00
Discover Date: 2003 11 01 00:00:00
Enforcement Dt: Not reported
Release Date: 2004 02 25 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: 8

OXNARD WASTEWATER TREATMENT PLT (Continued) **S101631226**

Contact Person: Not reported
Responsible Party: DOUG CARLSON
RP Address: 6001 PERKINS RD
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
Staff: YR
Staff Initials: EKO
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: Not reported
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 04009
Case Number: C04009
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Undefined
Status: Leak being confirmed
Substance: 8
Cross Street: HUENEME RD
Global ID: T0611138060
Enforcement Type: Not reported
Date Leak Discovered: 11/1/2003
Date Leak Record Entered: Not reported
How Leak Discovered: Tank Closure
How Leak Stopped: Close Tank
Cause of Leak: UNK
Leak Source: UNK
Date Leak Stopped: 11/1/2003
Date Confirmation Began: 2/25/2004
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): Not reported
Abatement Method Used at the Site: Not reported
Source of Cleanup Funding: Not reported
Date Leak First Reported: 2/25/2004

OXNARD WASTEWATER TREATMENT PLT (Continued) **S101631226**

Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: Not reported
Date Case Last Changed on Database: Not reported
Enforcement Action Date: Not reported
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Regional Board: 04
Owner Contact: Not reported
Responsible Party: DOUG CARLSON
RP Address: 6001 PERKINS RD
Program: Not reported
Lat/Long: 0 / 0
Local Agency Staff: KCK
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Local Case No: 04009
Substance Quantity: Not reported
Assigned Name: Not reported
W Global ID: Not reported
Summary: Not reported

CA FID UST:
Facility ID: 56000413
Regulated By: UTNKA
Regulated ID: 24854
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 6001 PERKINS RD
Mailing Address 2: Not reported
Mailing City,St,Zip: OXNARD 93033
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: A
Comp Number: 145
Number: 9

OXNARD WASTEWATER TREATMENT PLT (Continued) **S101631226**

Board Of Equalization: 44 030567
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 000145 000001
Actv Date: Not reported
Capacity: 500
Tank Use: UNKNOWN
Stg: P
Content: Not reported
Number Of Tanks: 7

Status: A
Comp Number: 145
Number: 9
Board Of Equalization: 44 030567
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 000145 000002
Actv Date: Not reported
Capacity: 550
Tank Use: UNKNOWN
Stg: P
Content: Not reported
Number Of Tanks: Not reported

Status: A
Comp Number: 145
Number: 9
Board Of Equalization: 44 030567
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 000145 000003
Actv Date: Not reported
Capacity: 550
Tank Use: UNKNOWN
Stg: P
Content: Not reported
Number Of Tanks: Not reported

Status: A
Comp Number: 145
Number: 9
Board Of Equalization: 44 030567
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported

OXNARD WASTEWATER TREATMENT PLT (Continued) **S101631226**

Swrcb Tank Id:	56 000 000145 000004
Actv Date:	Not reported
Capacity:	550
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	A
Comp Number:	145
Number:	9
Board Of Equalization:	44 030567
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 000145 000005
Actv Date:	Not reported
Capacity:	550
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	A
Comp Number:	145
Number:	9
Board Of Equalization:	44 030567
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 000145 000006
Actv Date:	Not reported
Capacity:	5000
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	A
Comp Number:	145
Number:	9
Board Of Equalization:	44 030567
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 000145 000007
Actv Date:	Not reported
Capacity:	500
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported

OXNARD WASTEWATER TREATMENT PLT (Continued) **S101631226**

Number Of Tanks: Not reported

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24 **OXNARD WASTEWATER TREAT P** **HAZNET** **S103957181**
6001 PERKINS **Cortese** **N/A**
OXNARD, CA 93033

HAZNET:

Gepaid:	CAC002129056
Contact:	CITY OF OXNARD
Telephone:	8052712212
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	6001 PERKINS RD
Mailing City,St,Zip:	OXNARD, CA 930330000
Gen County:	Ventura
TSD EPA ID:	CAT080033681
TSD County:	Los Angeles
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Recycler
Tons:	.4500
Facility County:	Ventura

Cortese:

Region:	CORTESE
Facility Addr2:	Not reported

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24 **HALLIBURTON SERVICES** **RCRA-SQG** **1000284359**
5800 PERKINS RD **SWEEPS UST** **CAD981166705**
OXNARD, CA 93030

RCRA SQG:

Date form received by agency:	09/01/1996
Facility name:	HALLIBURTON SERVICES
Facility address:	5800 PERKINS RD OXNARD, CA 93030
EPA ID:	CAD981166705
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	HALLIBURTON CO
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999

HALLIBURTON SERVICES (Continued) **1000284359**

Owner/operator country: Not reported
Owner/operator telephone: (415) 555 1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555 1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: Unknown
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On site burner exemption: Unknown
Furnace exemption: Unknown
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off site waste receiver: Commercial status unknown

Historical Generators:
Date form received by agency: 12/10/1985
Facility name: HALLIBURTON SERVICES
Classification: Large Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 02/09/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

SWEEPS UST:
Status: A
Comp Number: 588
Number: 9
Board Of Equalization: 44 005210
Ref Date: 09 30 92
Act Date: 09 30 92

HALLIBURTON SERVICES (Continued) **1000284359**

Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 000588 000001
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: 3

Status: A
Comp Number: 588
Number: 9
Board Of Equalization: 44 005210
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 000588 000002
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

Status: A
Comp Number: 588
Number: 9
Board Of Equalization: 44 005210
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 000588 000003
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: LEADED
Number Of Tanks: Not reported

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24 **HYDRYL COMPANY** **RCRA-SQG** **1000372819**
5721 PERKINS ROAD **FINDS** **CAD982480337**
OXNARD, CA 93033 **HAZNET**

RCRA SQG:
Date form received by agency: 09/01/1996
Facility name: HYDRYL COMPANY
Facility address: 5721 PERKINS ROAD
OXNARD, CA 93033
EPA ID: CAD982480337
Contact: Not reported
Contact address: Not reported
Not reported

HYDRYL COMPANY (Continued) **1000372819**

Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555 1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	HYDRIL COMPANY
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555 1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off site waste receiver:	Commercial status unknown

Historical Generators:

Date form received by agency:	07/19/1988
Facility name:	HYDRYL COMPANY
Classification:	Large Quantity Generator

HYDRYL COMPANY (Continued) **1000372819**

Facility Has Received Notices of Violations:

Regulation violated:	FR 262.10 12.A
Area of violation:	Generators General
Date violation determined:	10/30/1992
Date achieved compliance:	10/30/1997
Violation lead agency:	State
Enforcement action:	Not reported
Enforcement action date:	Not reported
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	Not reported
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Evaluation Action Summary:

Evaluation date:	10/30/1992
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation:	Generators General
Date achieved compliance:	10/30/1997
Evaluation lead agency:	State Contractor/Grantee

FINDS:

Other Pertinent Environmental Activity Identified at Site

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	CAD982480337
Contact:	Not reported
Telephone:	0000000000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	5721 PERKINS ROAD
Mailing City,St,Zip:	OXNARD, CA 930330000
Gen County:	Ventura
TSD EPA ID:	CAT080033681
TSD County:	Los Angeles
Waste Category:	Aqueous solution with metals (restricted levels and Alkaline solution (pH <UN > 12.5) with metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc))
Disposal Method:	Recycler
Tons:	2.5020
Facility County:	Ventura

24 CUSTOM INDUSTRIAL FINISHES
5711 PERKINS RD
OXNARD, CA 93033

RCRA-SQG **1000985212**
FINDS **CA0001022417**
HAZNET
AIRS

RCRA SQG:

Date form received by agency:	02/07/1995
Facility name:	CUSTOM INDUSTRIAL FINISHES
Facility address:	5711 PERKINS RD OXNARD, CA 93033
EPA ID:	CA0001022417
Mailing address:	PERKINS RD OXNARD, CA 93033
Contact:	WILLIAM DRIGGS
Contact address:	5711 PERKINS RD OXNARD, CA 93033
Contact country:	US
Contact telephone:	(805) 488 6374
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	WILLIAM DRIGGS
Owner/operator address:	5711 PERKINS OXNARD, CA 93033
Owner/operator country:	Not reported
Owner/operator telephone:	(805) 488 6374
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off site waste receiver:	Commercial status unknown

Violation Status: No violations found

CUSTOM INDUSTRIAL FINISHES (Continued) **1000985212**

FINDS:
Other Pertinent Environmental Activity Identified at Site

California Hazardous Waste Tracking System Datamart

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	CA0001022417
Contact:	WILLIAM DRIGGS
Telephone:	8054886374
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	5711 PERKINS RD
Mailing City,St,Zip:	OXNARD, CA 930330000
Gen County:	Ventura
TSD EPA ID:	CAD044429835
TSD County:	Los Angeles
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Disposal, Other
Tons:	0.91
Facility County:	Ventura

EMI:

Year:	1990
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	1799
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	5
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1993
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN

CUSTOM INDUSTRIAL FINISHES (Continued) **1000985212**

SIC Code:	1799
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	5
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	1799
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	5
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1996
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	3479
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1997
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	3479
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2

CUSTOM INDUSTRIAL FINISHES (Continued) **1000985212**

Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1998
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	3479
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1999
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	3479
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2000
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	3479
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

CUSTOM INDUSTRIAL FINISHES (Continued) **1000985212**

Year:	2001
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	3479
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2002
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	3479
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2003
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	3479
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2004
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	3479

CUSTOM INDUSTRIAL FINISHES (Continued) **1000985212**

Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.91
Reactive Organic Gases Tons/Yr:	2.76
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2005
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	103
Air District Name:	VEN
SIC Code:	3479
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.91
Reactive Organic Gases Tons/Yr:	2.75976
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	0
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

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24 **RCRA-LQG** **1007199203**

5936 PERKINS ROAD **CAD981379498**
OXNARD, CA 93033

RCRA LQG:

Date form received by agency:	02/21/1992
Facility name:	Not reported
Facility address:	5936 PERKINS ROAD OXNARD, CA 93033
EPA ID:	CAD981379498
Contact:	MIKE MARSH
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(805) 986 3881
Telephone ext.:	280
Contact email:	Not reported
EPA Region:	Not reported
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	Unknown

(Continued) **1007199203**

Transporter of hazardous waste: Unknown
Treater, storer or disposer of HW: No
Underground injection activity: Unknown
On site burner exemption: Unknown
Furnace exemption: Unknown
Used oil fuel burner: Unknown
Used oil processor: Unknown
User oil refiner: Unknown
Used oil fuel marketer to burner: Unknown
Used oil Specification marketer: Unknown
Used oil transfer facility: Unknown
Used oil transporter: Unknown
Off site waste receiver: Commercial status unknown

Violation Status: No violations found

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24 **WILLAMETTE INDUSTRIES** **UST** **U003042645**
5936 PERKINS RD **SLIC** **N/A**
OXNARD, CA

UST:
Facility ID: 1210
Box Number: 146068

SLIC:
Region: 4
Facility Status: No further action required
SLIC: 0031
Substance: TPH
Staff: Not reported

---

24 **WEYERHAEUSER COMPANY HUENEME MILL** **RCRA-SQG** **1005441353**
5936 PERKINS RD **FINDS** **CAR000119222**
OXNARD, CA 93033 **HAZNET**

RCRA SQG:
Date form received by agency: 06/06/2002
Facility name: WEYERHAEUSER COMPANY HUENEME MILL
Facility address: 5936 PERKINS RD
OXNARD, CA 93033
EPA ID: CAR000119222
Mailing address: P O BOX 519
PORT HUENEME, CA 93044
Contact: VICTOR KUMPERA
Contact address: 5936 PERKINS RD
OXNARD, CA 93033
Contact country: US
Contact telephone: (805) 986 3881
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

WEYERHAEUSER COMPANY HUENEME MILL (Continued) **1005441353**

Owner/Operator Summary:

Owner/operator name:	WEYERHAEUSER CO
Owner/operator address:	P O BOX 9777 FEDERAL WAY, WA 98063
Owner/operator country:	Not reported
Owner/operator telephone:	(253) 924 2345
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off site waste receiver:	Commercial status unknown

Hazardous Waste Summary:

Waste code: D000
Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

Waste code: D009
Waste name: MERCURY

WEYERHAEUSER COMPANY HUENEME MILL (Continued) **1005441353**

Waste code: D011
Waste name: SILVER

Waste code: D018
Waste name: BENZENE

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Waste code: D040
Waste name: TRICHLOROETHYLENE

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1 TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2 ETHOXYETHANOL, AND 2 NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: U210
Waste name: ETHENE, TETRACHLORO

Waste code: U220
Waste name: BENZENE, METHYL

Waste code: U239
Waste name: BENZENE, DIMETHYL (I,T)

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

California Hazardous Waste Tracking System Datamart

WEYERHAEUSER COMPANY HUENEME MILL (Continued) **1005441353**

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off site.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	CAR000119222
Contact:	STEPHANIE FELLA/ENVT'L ENGR
Telephone:	8059863881
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	5936 Perkins Rd
Mailing City,St,Zip:	Oxnard, CA 93033
Gen County:	Ventura
TSD EPA ID:	CAD008252405
TSD County:	Los Angeles
Waste Category:	Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method:	Recycler
Tons:	0.02
Facility County:	Not reported

Gepaid:	CAR000119222
Contact:	STEPHANIE FELLA/ENVT'L ENGR
Telephone:	8059863881
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	5936 Perkins Rd
Mailing City,St,Zip:	Oxnard, CA 93033
Gen County:	Ventura
TSD EPA ID:	Not reported
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	0.1
Facility County:	Ventura

Gepaid:	CAR000119222
Contact:	Victor Kumpera
Telephone:	8059863881
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	5936 Perkins Rd
Mailing City,St,Zip:	Oxnard, CA 93033
Gen County:	Ventura
TSD EPA ID:	Not reported

WEYERHAEUSER COMPANY HUENEME MILL (Continued) **1005441353**

TSD County: Orange
Waste Category: Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method: Transfer Station
Tons: 0.25
Facility County: Not reported

Gepaid: CAR000119222
Contact: Victor Kumpera
Telephone: 8059863881
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 5936 Perkins Rd
Mailing City,St,Zip: Oxnard, CA 93033
Gen County: Ventura
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Unspecified alkaline solution
Disposal Method: Recycler
Tons: 0.02
Facility County: Not reported

Gepaid: CAR000119222
Contact: Victor Kumpera
Telephone: 8059863881
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 5936 Perkins Rd
Mailing City,St,Zip: Oxnard, CA 93033
Gen County: Ventura
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Off specification, aged, or surplus inorganics
Disposal Method: Recycler
Tons: 0.00
Facility County: Not reported

Click this hyperlink while viewing on your computer to access
20 additional CA_HAZNET: record(s) in the EDR Site Report.

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24 **HUENEME MILL** **AST** **A100271647**
5936 PERKINS RD. **N/A**
OXNARD, CA 93033

AST:
Owner: WEYERHAEUSER COMPANY
Total Gallons: 84000

24 PORT HUENEME MILL — **CHMIRS** — **U001579982**
5936 PERKINS RD — **HIST UST** — **N/A**
OXNARD, CA 93033

CHMIRS:

OES Incident Number:	98 1575
OES notification:	4/1/199802:49:23 PM
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Storm Drain.
Spill Site:	Not reported
Cleanup By:	City of Oxnard Waste Water Div.
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1998
Agency:	Willamette Ind.
Incident Date:	4/1/199812:00:00 AM
Admin Agency:	Oxnard Fire Department
Amount:	Not reported
Contained:	Unknown
Site Type:	Industrial Plant

PORT HUENEME MILL (Continued) **U001579982**

E Date:	Not reported
Substance:	papermill effluent
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	500
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Description:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	At a construction site a containment wall was breached for construction purposes and the effluent ran over the sandbags that had been placed in the breach. 50 gal went into a storm drain containment area that was dry and it has been cleaned up.

HIST UST:

Region:	STATE
Facility ID:	00000035112
Facility Type:	Other
Other Type:	PAPER MILL
Total Tanks:	0001
Contact Name:	BOB CAMPBELL
Telephone:	8059863881
Owner Name:	WILLIAMETTE INDUSTRIES, INC.
Owner Address:	1ST INTERSTATE BANK TOWER
Owner City,St,Zip:	PORTLAND, OR 97201
Tank Num:	001
Container Num:	1
Year Installed:	1982
Tank Capacity:	00000500
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	None

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24 **WILLAMETTE INDUSTRIES** **SLIC** **S106485424**
5936 PERKINS RD. **N/A**
OXNARD, CA 93033

SLIC:

Region:	STATE
Global Id:	SLT4301816
Assigned Name:	SLICSITE
Lead Agency Contact:	SLIC UNASSIGNED
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number:	0031

WILLAMETTE INDUSTRIES (Continued) **S106485424**

Responsible Party: Not reported
Recent Dtw: Not reported
Substance Released: Not reported
Facility Status: Case Closed

---

24 **PACIFIC RECYCLING ENTERPRISES, INC** **ENVIROSTOR** **1000251909**
5925 PERKINS ROAD **N/A**
PORT HUENEME, CA 93041

ENVIROSTOR:
Site Type: Historical
Site Type Detailed: * Historical
Acres: 0
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: * MMONROY
Division Branch: So Cal Glendale
Facility ID: 56330008
Site Code: Not reported
Assembly: 41
Senate: 23
Special Program: * CERC2
Status: No Further Action
Status Date: 1989 03 31 00:00:00
Restricted Use: NO
Funding: Not reported
Latitude: 34.1653
Longitude: 119.1888
Alias Name: 56330008
PACIFIC RECYCLING ENTERPRISES INC.
BAY CITY PIPE & STEEL
Alias Type: Envirostor ID Number
Alternate Name
Alternate Name

APN: NONE SPECIFIED
APN Description: Not reported
Comments: CALSITES VALIDATION PROGRAM CONFIRMS NFA FOR DTSC.FACILITY IDENTIFIED ID FROM INDUSTRY DIR VENTURA CO 1974. RECYCLE ALL METALS.SITE SCREENING DONEPRELIM ASSESS DONE NO FURTHER ACTION BASED ON THE THE LOW QUANTITIES OF WASTE AND THE FACT THAT THE SITE IS BEING USED AS A WASTEWATER TREATMENT PLANT.

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 10/25/94

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 03/31/89

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

PACIFIC RECYCLING ENTERPRISES, INC (Continued) **1000251909**

Completed Document Type: Site Screening
Completed Date: 04/08/87

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Discovery
Completed Date: 01/03/84

Confirmed: NONE SPECIFIED
Confirmed Description: Not reported
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: NMA
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 10193, 10195, 10196
Potenital Description: * UNSPECIFIED ACID SOLUTION
Potenital Description: * UNSPECIFIED AQUEOUS SOLUTION
Potenital Description: * UNSPECIFIED OIL CONTAINING WASTE
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: NONE

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25 **HUENEME HIGH SCHOOL** **HIST UST** **U001579762**
500 BAND ROAD **N/A**
OXNARD, CA 93030

HIST UST:
Region: STATE
Facility ID: 00000043531
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0001
Contact Name: FRANK GUTIERREZ
Telephone: 8054864777
Owner Name: OXNARD UNION HIGH SCHOOL DIST
Owner Address: 309 SOUTH "K" STR.
Owner City,St,Zip: OXNARD, CA 93030

Tank Num: 001
Container Num: #1 GAS REG
Year Installed: 1959
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

25 PAC FOUNDRIES
705 INDUSTRIAL AVE
PORT HUENEME, CA 93041

RCRA-SQG
FINDS
HAZNET
UST
SLIC
HIST UST
AIRS
CA WDS

1000114457
CAD981456841

RCRA SQG:

Date form received by agency:	09/01/1996
Facility name:	PAC FOUNDRIES
Facility address:	705 INDUSTRIAL AVE PORT HUENEME, CA 93041
EPA ID:	CAD981456841
Mailing address:	INDUSTRIAL AVE PORT HUENEME, CA 93041
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	FEHR CAROL
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555 1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555 1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No

PAC FOUNDRIES (Continued) **1000114457**

Treater, storer or disposer of HW: No
Underground injection activity: No
On site burner exemption: Unknown
Furnace exemption: Unknown
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off site waste receiver: Commercial status unknown

Historical Generators:
Date form received by agency: 06/27/1991
Facility name: PAC FOUNDRIES
Classification: Large Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 09/29/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 04/28/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

FINDS:
Other Pertinent Environmental Activity Identified at Site

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off site.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:
Gepaid: CAD981456841
Contact: PAC FOUNDRIES

PAC FOUNDRIES (Continued) **1000114457**

Telephone: 8054886451
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 705 INDUSTRIAL WAY
Mailing City,St,Zip: PORT HUENEME, CA 930413505
Gen County: Ventura
TSD EPA ID: CAD008302903
TSD County: Los Angeles
Waste Category: Other inorganic solid waste
Disposal Method: Transfer Station
Tons: 1.7500
Facility County: Ventura

Gepaid: CAD981456841
Contact: PAC FOUNDRIES
Telephone: 8054886451
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 705 INDUSTRIAL WAY
Mailing City,St,Zip: PORT HUENEME, CA 930413505
Gen County: Ventura
TSD EPA ID: CAT000646117
TSD County: Kings
Waste Category: Other inorganic solid waste
Disposal Method: Disposal, Land Fill
Tons: 1.4000
Facility County: Ventura

Gepaid: CAD981456841
Contact: CHARLES KELLY SR. SAFETY DIR
Telephone: 8054886451
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 705 INDUSTRIAL WAY
Mailing City,St,Zip: PORT HUENEME, CA 930413505
Gen County: Ventura
TSD EPA ID: CAD008302903
TSD County: Los Angeles
Waste Category: Other inorganic solid waste
Disposal Method: Transfer Station
Tons: 3.12
Facility County: Not reported

Gepaid: CAD981456841
Contact: PAC FOUNDRIES
Telephone: 8054886451
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 705 INDUSTRIAL WAY
Mailing City,St,Zip: PORT HUENEME, CA 930413505
Gen County: Ventura
TSD EPA ID: CAD009452657
TSD County: San Mateo
Waste Category: Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method: Recycler
Tons: .6880
Facility County: Ventura

PAC FOUNDRIES (Continued) **1000114457**

Gepaid: CAD981456841
Contact: PAC FOUNDRIES
Telephone: 8054886451
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 705 INDUSTRIAL WAY
Mailing City,St,Zip: PORT HUENEME, CA 930413505
Gen County: Ventura
TSD EPA ID: CAT000646117
TSD County: Kings
Waste Category: Other inorganic solid waste
Disposal Method: Disposal, Land Fill
Tons: 1.7500
Facility County: Ventura

Click this hyperlink while viewing on your computer to access
28 additional CA_HAZNET: record(s) in the EDR Site Report.

UST:
Facility ID: 240
Box Number: 146055

SLIC:
Region: STATE
Global Id: SL2043K1567
Assigned Name: SLICSITE
Lead Agency Contact: ANGELICA CASTANEDA
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number: 0797
Responsible Party: Consolidate Foundries
Recent Dtw: Not reported
Substance Released: PET, VOC
Facility Status: Verification Monitoring Underway

SLIC:
Region: 4
Facility Status: Post Remediation Monitoring
SLIC: 0797
Substance: VOCs
Staff: ACJ

HIST UST:
Region: STATE
Facility ID: 00000050202
Facility Type: Other
Other Type: FOUNDRY
Total Tanks: 0002
Contact Name: KEVIN HOLMES
Telephone: 8054886451
Owner Name: PAC FOUNDRIES
Owner Address: 705 INDUSTRIAL AVE.
Owner City,St,Zip: PORT HUENEME, CA 93041

Tank Num: 001
Container Num: #1

PAC FOUNDRIES (Continued) **1000114457**

Year Installed: Not reported
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: #2
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: None

EMI:

Year: 1987
Carbon Monoxide Emissions Tons/Yr: 56
Air Basin: SCC
Facility ID: 1300
Air District Name: VEN
SIC Code: 3361
Air District Name: VENTURA COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 86
Reactive Organic Gases Tons/Yr: 13
Carbon Monoxide Emissions Tons/Yr: 0
NOX Oxides of Nitrogen Tons/Yr: 1
SOX Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1990
Carbon Monoxide Emissions Tons/Yr: 56
Air Basin: SCC
Facility ID: 1300
Air District Name: VEN
SIC Code: 3361
Air District Name: VENTURA COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 25
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX Oxides of Nitrogen Tons/Yr: 0
SOX Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1995
Carbon Monoxide Emissions Tons/Yr: 56
Air Basin: SCC
Facility ID: 1300
Air District Name: VEN
SIC Code: 3365

PAC FOUNDRIES (Continued) **1000114457**

Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	108
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	1
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1996
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1300
Air District Name:	VEN
SIC Code:	3365
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	108
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	1
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1997
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1300
Air District Name:	VEN
SIC Code:	3365
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	108
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	1
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1998
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1300
Air District Name:	VEN
SIC Code:	3365
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	108
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0

PAC FOUNDRIES (Continued) **1000114457**

NOX Oxides of Nitrogen Tons/Yr:	1
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1999
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1300
Air District Name:	VEN
SIC Code:	3365
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	108
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	1
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2000
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1300
Air District Name:	VEN
SIC Code:	3365
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	1
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2001
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1300
Air District Name:	VEN
SIC Code:	3365
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	1
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2002

PAC FOUNDRIES (Continued) **1000114457**

Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1300
Air District Name:	VEN
SIC Code:	3365
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	1
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2003
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1300
Air District Name:	VEN
SIC Code:	3365
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	1
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2004
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1300
Air District Name:	VEN
SIC Code:	3365
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.26
Reactive Organic Gases Tons/Yr:	0.91
Carbon Monoxide Emissions Tons/Yr:	1.01
NOX Oxides of Nitrogen Tons/Yr:	2.6
SOX Oxides of Sulphur Tons/Yr:	0.01
Particulate Matter Tons/Yr:	0.4
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.39

Year:	2005
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1300
Air District Name:	VEN
SIC Code:	3365
Air District Name:	VENTURA COUNTY APCD

PAC FOUNDRIES (Continued) **1000114457**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.26
Reactive Organic Gases Tons/Yr:	.910882
Carbon Monoxide Emissions Tons/Yr:	1.01
NOX Oxides of Nitrogen Tons/Yr:	2.6
SOX Oxides of Sulphur Tons/Yr:	.01
Particulate Matter Tons/Yr:	.4
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.391

CA WDS:

Facility ID:	4 56I010387
Facility Type:	Not reported
Facility Status:	Active Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion:	4
Facility Telephone:	Not reported
Facility Contact:	Not reported
Agency Name:	PAC FOUNDRIES
Agency Address:	Not reported
Agency City,St,Zip:	0
Agency Contact:	Not reported
Agency Telephone:	Not reported
Agency Type:	Not reported
SIC Code:	3365
SIC Code 2:	Not reported
Primary Waste:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	No reclamation requirements associated with this facility.
POTW:	The facility is not a POTW.
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category C Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

26 B & C WELDING — **LUST** — **S104164788**
800 INDUSTRIAL AVE — **Cortese** — **N/A**
PORT HUENEME, CA 93041

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	S
Funding:	EF
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100649
Stop Date:	Not reported
Confirm Leak:	1990 05 24 00:00:00
Workplan:	1990 05 24 00:00:00
Prelim Assess:	1991 02 07 00:00:00
Pollution Char:	1991 02 07 00:00:00
Remed Plan:	1991 02 07 00:00:00
Remed Action:	1991 02 07 00:00:00
Monitoring:	1991 02 07 00:00:00
Close Date:	1991 02 07 00:00:00
Discover Date:	1990 05 24 00:00:00
Enforcement Dt:	1990 05 24 00:00:00
Release Date:	1990 05 24 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Gasoline
Contact Person:	Not reported
Responsible Party:	B & C WELDING
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Staff:	YR
Staff Initials:	EHD
Lead Agency:	Local Agency
Local Agency:	56000L
Hydr Basin #:	SANTA CLARA RIVER VA
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Local Case #:	90068
Case Number:	C 90068

B & C WELDING (Continued) **S104164788**

Qty Leaked: Not reported
Abate Method: Excavate and Dispose remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:

Region:	4
Staff:	UNK
County:	Ventura
Local Agency:	56000L
Lead Agency:	Local Agency
Case Type:	Soil
Status:	Case Closed
Substance:	Gasoline
Cross Street:	Not reported
Global ID:	T0611100649
Enforcement Type:	EF
Date Leak Discovered:	5/24/1990
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	5/24/1990
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	2684.045222831712297008110189 8
Abatement Method Used at the Site:	Excavate and Dispose
Source of Cleanup Funding:	Excavate and Dispose
Date Leak First Reported:	5/24/1990
Preliminary Site Assessment Workplan Submitted:	5/24/1990
Preliminary Site Assessment Began:	2/7/1991
Pollution Characterization Began:	2/7/1991
Remediation Plan Submitted:	2/7/1991
Remedial Action Underway:	2/7/1991
Post Remedial Action Monitoring Began:	2/7/1991
Date the Case was Closed:	2/7/1991
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	5/24/1990
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	B & C WELDING

B & C WELDING (Continued) **S104164788**

RP Address: Not reported
Program: LUST
Lat/Long: 34.1437372 / 1
Local Agency Staff: EHD
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Local Case No: 90068
Substance Quantity: Not reported
Assigned Name: Not reported
W Global ID: Not reported
Summary: Not reported

LUST:
Region: VENTURA
Facility ID: 90068
Status: Case Closed

Cortese:
Region: CORTESE
Facility Addr2: 800 INDUSTRIAL AVE

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26 **B & C WELDING** **UST** **U002244023**
800 INDUSTRIAL AVE. **N/A**
PORT HUENEME, CA

UST:
Facility ID: 241
Box Number: 146055

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26 **JOHN LAING HOMES** **LUST** **S108245878**
757 INDUSTRIAL AVE **N/A**
PORT HUENEME, CA

LUST:
Region: VENTURA
Facility ID: SR028
Status: Case Closed

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26 **JOHN LAING HOMES** **LUST** **S108243719**
757 INDUSTRIAL AVE **N/A**
PORT HUENEME, CA 93041

LUST:
Region: STATE
Case Type: Other ground water affected
Cross Street: Not reported
Enf Type: COSTRE
Funding: CLOS
How Discovered: Not reported

JOHN LAING HOMES (Continued) **S108243719**

How Stopped: Not reported
Leak Cause: Not reported
Leak Source: Not reported
Global Id: T0611123421
Stop Date: 2006 01 02 00:00:00
Confirm Leak: 2006 08 01 00:00:00
Workplan: Not reported
Prelim Assess: 2006 12 21 00:00:00
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: 2007 06 05 00:00:00
Monitoring: Not reported
Close Date: 2007 06 14 00:00:00
Discover Date: 1965 01 01 00:00:00
Enforcement Dt: Not reported
Release Date: 2006 01 01 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Perchlorethylene
Contact Person: Not reported
Responsible Party: STEVE PENN
RP Address: 5805 SEPULVEDA BLVD STE 800
Interim: Not reported
Oversight Prgm: LOCNL
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
Staff: DPP
Staff Initials: EKO
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: Not reported
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: SR02832
Case Number: SR02832
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

26 PORT HUENEME WAREHOUSE C/O EXXON — **RCRA-SQG** — **1000392284**
757 INDUSTRIAL AVENUE — **FINDS** — **CAT080031040**
PORT HUENEME, CA 93041 — **WMUDS/SWAT**

RCRA SQG:

Date form received by agency:	09/01/1996
Facility name:	PORT HUENEME WAREHOUSE C/O EXXON
Facility address:	757 INDUSTRIAL AVENUE PORT HUENEME, CA 93041
EPA ID:	CAT080031040
Mailing address:	PO BOX D O VENTURA, CA 93002
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555 1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	EXXON CORPORATION AND OTHERS
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555 1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No

PORT HUENEME WAREHOUSE C/O EXXON (Continued) **1000392284**

User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off site waste receiver:	Commercial status unknown

Historical Generators:

Date form received by agency:	04/10/1981
Facility name:	PORT HUENEME WAREHOUSE C/O EXXON
Classification:	Large Quantity Generator
Violation Status:	No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

WMUDS/SWAT:

Edit Date:	Not reported
Complexity:	Not reported
Primary Waste:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Base Meridian:	Not reported
NPID:	Not reported
Tonnage:	0
Regional Board ID:	Not reported
Municipal Solid Waste:	False
Superorder:	False
Open To Public:	False
Waste List:	False
Agency Type:	Not reported
Agency Name:	Not reported
Agency Department:	Not reported
Agency Address:	Not reported
Agency City,St,Zip:	Not reported
Agency Contact:	Not reported
Agency Telephone:	Not reported
Land Owner Name:	Not reported
Land Owner Address:	Not reported
Land Owner City,St,Zip:	CA
Land Owner Contact:	Not reported
Land Owner Phone:	Not reported
Region:	4
Facility Type:	Not reported
Facility Description:	Not reported
Facility Telephone:	Not reported
SWAT Facility Name:	Not reported

PORT HUENEME WAREHOUSE C/O EXXON (Continued) **1000392284**

Primary SIC:	Not reported
Secondary SIC:	Not reported
Comments:	Not reported
Last Facility Editors:	Not reported
Waste Discharge System:	False
Solid Waste Assessment Test Program:	True
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	True
Solid Waste Assessment Test Program:	Not reported
Threat to Water Quality:	Not reported
Sub Chapter 15:	False
Regional Board Project Officer:	LT
Number of WMUDS at Facility:	1
Section Range:	Not reported
RCRA Facility:	Not reported
Waste Discharge Requirements:	Not reported
Self Monitoring Rept. Frequency:	Not reported
Waste Discharge System ID:	4 560022NUR
Solid Waste Information ID:	Not reported

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27 **OCCIDENTAL CHEMICAL CORPORATION** **VCP** **S106568366**
6000 ARCTURUS AVENUE **ENVIROSTOR** **N/A**
OXNARD, CA 93033

VCP:

Facility ID:	56280001
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Acres:	6
National Priorities List:	NO
Cleanup Oversight Agencies:	DTSC
Lead Agency:	NONE SPECIFIED
Lead Agency Description:	Not reported
Project Manager:	GABRIEL FARKAS
Supervisor:	Harlan Jeche
Division Branch:	So Cal Glendale
Site Code:	300597
Assembly:	41
Senate:	23
Special Programs Code:	Voluntary Cleanup Program
Status:	No Further Action
Status Date:	1997 02 27 00:00:00
Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	34.1413888888889 / 119.172222222222
Alias Name:	56280001
	300597
	CAD044422327
	110001155268
	DIAMOND SHAMROCK CHEMICAL COMPANY
	OXYCHEM
	BARNARD, RAY & JANE
Alias Type:	Envirostor ID Number
	Project Code (Site Code)
	EPA Identification Number
	Alternate Name
	Alternate Name

OCCIDENTAL CHEMICAL CORPORATION (Continued) **S106568366**

Alternate Name
EPA (FRS #)

APN: NONE SPECIFIED
APN Description: Not reported
Comments: "The PEA was completed and a No Further Action letter for investigation and remediation of hazardous substances was sent to Occidental Chemical Company. However, potential upgradient offsite sources of acetone and benzene were identified.""The Department received a referral from the RWQCB. Also, DTSC received a Preliminary Site Investigation Report from RP. The report indicates that the site is contaminated. Staff's contact with Ventura County Environmental Health indicates that thCALSITES VALIDATION PROGRAM CONFIRMS NFA FOR DTSC.DTSC and Occidental Chemical Corp. entered into a Volunta Cleanup Agreement for a Preliminary Endangerment Assessme for this site where sodium silicate glasses were produced until July 1995.FACILITY IDENTIFIED ON ECKHARDT LIST1984 ASP QUESTIONNAIRE: 1966 1978 DIAMOND RAN POLYESTER RESIN PT & SODIUM SILICATE PT. IN 1978 POLYESTER 1) SOURCE ACT: MFG SODIUM SILICATE WAS SOLD TO KOPPERS CO (#56 28 0098) 2)YR OF OPER: 1966 TO PRESENT 3)WASTE TYPE: SODIUM CARBONATE 4)FAC TYPE:1500 TO 12000GAL TANKS INCIDENT: 1966 1969 10 TO 20T SOLID SODA ASH BURIED IN SHALLOW DITCH (ONLY ONCE) SUBMIT TO EPA PRELIM ASSESS DONE CERCLA 104e site is an active Generator. Therefore, DTSC is referring the site to the County."

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 02/27/97

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 09/21/95

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 11/15/94

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 04/01/85

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Order
Completed Date: 05/02/96

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Discovery
Completed Date: 04/01/79

Confirmed: NONE SPECIFIED
Confirmed Description: Not reported

OCCIDENTAL CHEMICAL CORPORATION (Continued) **S106568366**

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: SOIL, SV
Media Affected Desc: Soil
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 10060
Potenital Description: * OIL/WATER SEPARATION SLUDGE
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: MANUFACTURING OTHER

ENVIROSTOR:
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 6
NPL: NO
Regulatory Agencies: DTSC
Lead Agency: NONE SPECIFIED
Program Manager: GABRIEL FARKAS
Supervisor: Harlan Jeche
Division Branch: So Cal Glendale
Facility ID: 56280001
Site Code: 300597
Assembly: 41
Senate: 23
Special Program: Voluntary Cleanup Program
Status: No Further Action
Status Date: 1997 02 27 00:00:00
Restricted Use: NO
Funding: Responsible Party
Latitude: 34.1413888888889
Longitude: 119.172222222222
Alias Name: 56280001
300597
CAD044422327
110001155268
DIAMOND SHAMROCK CHEMICAL COMPANY
OXYCHEM
BARNARD, RAY & JANE
Alias Type: Envirostor ID Number
Project Code (Site Code)
EPA Identification Number
Alternate Name
Alternate Name
Alternate Name
EPA (FRS #)

APN: NONE SPECIFIED

OCCIDENTAL CHEMICAL CORPORATION (Continued) **S106568366**

APN Description: Not reported
Comments: "The PEA was completed and a No Further Action letter for investigation and remediation of hazardous substances was sent to Occidental Chemical Company. However, potential upgradient offsite sources of acetone and benzene were identified.""The Department received a referral from the RWQCB. Also, DTSC received a Preliminary Site Investigation Report from RP. The report indicates that the site is contaminated. Staff's contact with Ventura County Environmental Health indicates that thCALSITES VALIDATION PROGRAM CONFIRMS NFA FOR DTSC.DTSC and Occidental Chemical Corp. entered into a Volunta Cleanup Agreement for a Preliminary Endangerment Assessme for this site where sodium silicate glasses were produced until July 1995.FACILITY IDENTIFIED ON ECKHARDT LIST1984 ASP QUESTIONNAIRE: 1966 1978 DIAMOND RAN POLYESTER RESIN PT & SODIUM SILICATE PT. IN 1978 POLYESTER 1) SOURCE ACT: MFG SODIUM SILICATE WAS SOLD TO KOPPERS CO (#56 28 0098) 2)YR OF OPER: 1966 TO PRESENT 3)WASTE TYPE: SODIUM CARBONATE 4)FAC TYPE:1500 TO 12000GAL TANKS INCIDENT: 1966 1969 10 TO 20T SOLID SODA ASH BURIED IN SHALLOW DITCH (ONLY ONCE) SUBMIT TO EPA PRELIM ASSESS DONE CERCLA 104e site is an active Generator. Therefore, DTSC is referring the site to the County."

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 02/27/97

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 09/21/95

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 11/15/94

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 04/01/85

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Order
Completed Date: 05/02/96

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Discovery
Completed Date: 04/01/79

Confirmed: NONE SPECIFIED
Confirmed Description: Not reported
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported

OCCIDENTAL CHEMICAL CORPORATION (Continued) **S106568366**

Media Affected: SOIL, SV
Media Affected Desc: Soil
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 10060
Potenital Description: * OIL/WATER SEPARATION SLUDGE
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: MANUFACTURING OTHER

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28 **COOK COMPOSITES AND POLYMERS CO.**
5980 ARCTURUS AVE
OXNARD, CA 93033

Notify 65 **1000346599**
FINDS **93033KPPRS59**
HAZNET
CHMIRS
Cortese
RCRA-LQG
TRIS
RAATS
CERC-NFRAP
HIST UST
VCP
AIRS
CA WDS
ENVIROSTOR

Notify 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Incident Description: 90845

Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Incident Description: 90845

FINDS:
Other Pertinent Environmental Activity Identified at Site

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

redesign to support facility operating permits required under Title V of the Clean Air Act.

California Hazardous Waste Tracking System Datamart

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off site.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	CAD087163267
Contact:	COOK COMPOSITES & POLYMERS CO
Telephone:	8163916000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 419389
Mailing City,St,Zip:	KANSAS CITY, CA 930339004
Gen County:	Ventura
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	29.4980
Facility County:	Ventura

Gepaid:	CAD087163267
Contact:	COOK COMPOSITES & POLYMERS CO
Telephone:	8163916000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 419389
Mailing City,St,Zip:	KANSAS CITY, CA 930339004
Gen County:	Ventura
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Waste Category:	Aqueous solution with 10% or more total organic residues
Disposal Method:	Transfer Station
Tons:	3.8989
Facility County:	Ventura

Gepaid:	CAD087163267
Contact:	COOK COMPOSITES & POLYMERS CO
Telephone:	8163916000
Facility Addr2:	Not reported

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Mailing Name:	Not reported
Mailing Address:	PO BOX 419389
Mailing City,St,Zip:	KANSAS CITY, CA 930339004
Gen County:	Ventura
TSD EPA ID:	CAT080033681
TSD County:	Los Angeles
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Recycler
Tons:	52.1250
Facility County:	Ventura

Gepaid:	CAD087163267
Contact:	COOK COMPOSITES & POLYMERS CO
Telephone:	8163916000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 419389
Mailing City,St,Zip:	KANSAS CITY, CA 930339004
Gen County:	Ventura
TSD EPA ID:	088438817
TSD County:	0
Waste Category:	Polymeric resin waste
Disposal Method:	Treatment, Incineration
Tons:	17.6800
Facility County:	Ventura

Gepaid:	CAD087163267
Contact:	COOK COMPOSITES & POLYMERS CO
Telephone:	8163916000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 419389
Mailing City,St,Zip:	KANSAS CITY, CA 930339004
Gen County:	Ventura
TSD EPA ID:	KYD088438817
TSD County:	99
Waste Category:	Off specification, aged, or surplus organics
Disposal Method:	***
Tons:	7.2000
Facility County:	Ventura

Click this hyperlink while viewing on your computer to access
130 additional CA_HAZNET: record(s) in the EDR Site Report.

CHMIRS:

OES Incident Number:	60965
OES notification:	Not reported
OES Date:	11/17/1993
OES Time:	09:35:00 PM
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	YES
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	rp
Containment:	Not reported
What Happened:	Not reported
Type:	CHEMICAL
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1993
Agency:	reicghold chemical
Incident Date:	11/17/93 1558
Admin Agency:	Not reported
Amount:	500lbs
Contained:	NO
Site Type:	IND PLT
E Date:	Not reported
Substance:	phthalic anhydride
Quantity Released:	Not reported
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Unknown: Not reported
Description: rail car off loading line had a blockage, when it was removed the spill occured.
Evacuations: YES
Number of Injuries: YES
Number of Fatalities: NO
Description: Not reported

Cortese:
Region: CORTESE
Facility Addr2: Not reported

RCRA LQG:
Date form received by agency: 02/27/2006
Facility name: COOK COMPOSITES AND POLYMERS CO.
Facility address: 5980 ARCTURUS AVE
OXNARD, CA 93033
EPA ID: CAD087163267
Mailing address: PO BOX 419389
KANSAS CITY, MO 64141
Contact: JON SCHUCKMAN
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (816) 391 6324
Contact email: SCHUCKMAN@CCPONLINE.COM
EPA Region: 09
Land type: Private
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: COOK COMPOSITES AND POLYMERS
Owner/operator address: SAME
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 06/15/1995
Owner/Op end date: Not reported

Owner/operator name: RON KRAMER
Owner/operator address: Not reported
Not reported

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 04/01/2004
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: Batteries
Accumulated waste on site: No
Generated waste on site: No

Waste type: Lamps
Accumulated waste on site: No
Generated waste on site: No

Waste type: Pesticides
Accumulated waste on site: No
Generated waste on site: No

Waste type: Thermostats
Accumulated waste on site: No
Generated waste on site: No

Historical Generators:
Date form received by agency: 02/23/2004
Facility name: COOK COMPOSITES AND POLYMERS CO.
Classification: Large Quantity Generator

Date form received by agency: 02/18/2002
Facility name: COOK COMPOSITES AND POLYMERS CO.
Site name: COOK COMPOSITES AND POLYMERS
Classification: Large Quantity Generator

Date form received by agency: 10/12/2000
Facility name: COOK COMPOSITES AND POLYMERS CO.
Site name: COOK COMPOSITES &
Classification: Large Quantity Generator

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Date form received by agency: 03/04/1999
Facility name: COOK COMPOSITES AND POLYMERS CO.
Site name: COOK COMPOSITES & POLYMERS CO.
Classification: Large Quantity Generator

Date form received by agency: 03/11/1996
Facility name: COOK COMPOSITES AND POLYMERS CO.
Site name: COOK COMPOSITES AND POLYMERS CO
Classification: Not a generator, verified

Date form received by agency: 03/11/1996
Facility name: COOK COMPOSITES AND POLYMERS CO.
Site name: COOK COMPOSITES AND POLYMERS CO
Classification: Large Quantity Generator

Date form received by agency: 03/07/1996
Facility name: COOK COMPOSITES AND POLYMERS CO.
Site name: REICHHOLD CHEMICALS, INC.
Classification: Large Quantity Generator

Date form received by agency: 03/22/1994
Facility name: COOK COMPOSITES AND POLYMERS CO.
Site name: REICHOLD CHEMICALS
Classification: Large Quantity Generator

Date form received by agency: 02/21/1992
Facility name: COOK COMPOSITES AND POLYMERS CO.
Site name: REICHHOLD CHEMICALS
Classification: Large Quantity Generator

Date form received by agency: 04/05/1990
Facility name: COOK COMPOSITES AND POLYMERS CO.
Site name: REICHOLD CHEMICALS/KOPPERS COMPANY INC
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N BUTYL

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: U147
Waste name: 2,5 FURANDIONE

Waste code: U190
Waste name: 1,3 ISOBENZOFURANDIONE

Biennial Reports:

Last Biennial Reporting Year: 2005

Annual Waste Handled:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 1347791

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 3253

Waste code: F003
Waste name: THE FOLLOWING SPENT NON HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 12400

Waste code: U147
Waste name: 2,5 FURANDIONE
Amount (Lbs): 3253

Waste code: U190

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Waste name: 1,3 ISOBENZOFURANDIONE
Amount (Lbs): 3253

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators General
Date violation determined: 10/26/2004
Date achieved compliance: 11/16/2004
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/26/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators General
Date violation determined: 11/01/1983
Date achieved compliance: 01/01/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/01/1983
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 02/12/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 10/26/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Generators General
Date achieved compliance: 11/16/2004
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 03/06/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 02/24/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Not reported
Date achieved compliance: Not reported

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Evaluation lead agency: State

Evaluation date: 02/24/1986
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 11/01/1983
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Generators General
Date achieved compliance: 01/01/1984
Evaluation lead agency: State

Evaluation date: 06/21/1983
Evaluation: COMPLIANCE EVALUATION INSPECTION ON SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

CERC NFRAP:
Site ID: 0901641
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP

CERCLIS NFRAP Site Contact Name(s):
Contact Name: Matt Mitguard
Contact Tel: (415) 972 3096
Contact Title: Site Assessment Manager (SAM)

Contact Name: Nuria Muniz
Contact Tel: (415) 972 3811
Contact Title: Site Assessment Manager (SAM)

Site Description: Not reported

CERCLIS NFRAP Assessment History:
Action: DISCOVERY
Date Started: Not reported
Date Completed: 09/01/1985
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: 07/01/1985
Date Completed: 02/01/1986
Priority Level: High

Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 09/01/1986
Priority Level: High

Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 07/12/1990
Priority Level: NFRAP (No Futher Remedial Action Planned

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 07/12/1990
Priority Level: Not reported

HIST UST:
Region: STATE
Facility ID: 00000000646
Facility Type: Other
Other Type: POLYESTER RESIN MFG.
Total Tanks: 0001
Contact Name: NORMAN F FAHNOA
Telephone: 8054880831
Owner Name: KOPPERS CO., INC
Owner Address: KOPPERS BUILDING
Owner City,St,Zip: PITTSBURG, PA 15219

Tank Num: 001
Container Num: 1
Year Installed: 1968
Tank Capacity: 00015000
Tank Used for: WASTE
Type of Fuel: Not reported
Tank Construction: 10 inches
Leak Detection: Visual

VCP:
Facility ID: 56280098
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Acres: 10.5
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC Site Mitigation And Brownfield Reuse Program
Project Manager: ALBERTO VALMIDIANO
Supervisor: Juli Oborne
Division Branch: So Cal Glendale
Site Code: 301065
Assembly: 41
Senate: 23
Special Programs Code: Voluntary Cleanup Program
Status: Active
Status Date: 2002 01 02 00:00:00
Restricted Use: NO
Funding: Responsible Party
Lat/Long: 34.144425 / 119.172305555556
Alias Name: 56280098
301065
CAD087163267
RAY AND JANE BARNARD (TO 1966)
DIAMOND SHAMROCK (1966 1978)
DIAMOND SHAMROCK CHEMICALS COMPANY
KOPPER
DIAMOND ALKAL
Alias Type: Envirostor ID Number

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Project Code (Site Code)
EPA Identification Number
Alternate Name
Alternate Name
Alternate Name
Alternate Name
Alternate Name

APN: NONE SPECIFIED
APN Description: Not reported
Comments: "Based on information in the above document, DTSC concludes that the soil at the Site poses an acceptable risk for industrial/commercial use and NO Further Action is necessary for soil, if the use is limited to commercial or industrial land use. How"SOURCE ACT: (DIAMOND) A SILICA PT & POLY STER RESIN PT, 0N 1/78 SOLD RESIN PT TO KOPPER'S. (KOPPER)POLYESTER RESIN PORD. WASTE: HAULED TO CASMALIA & KETTLEMAN AFTER NEUTRALIZATION & INCINERATION. YR OF OPER: 10 TAX ASSESSOR 1978 TO PRESENT SUBMIT T"FACILITY IDENTIFIED ID OLD ASP Q 1980. WADE QUEST. OPER AT THE SITE FOR 12 YRS. UNK DISP ON/OFF PRE72 & AFTER 72. HAULER : ECOLOGY CONTROL INC(1968 79), REED LAND CLEARING IN VENTURA(1970 79). WASTE : BASE SOLUTION PH<12, SCRUBBER RESIDUAL HEAVY MEA Voluntary Cleanup Agreement was signed for PEA under Reichhold Chemical."On Permitting list, therefore not NFA, should be REFRC, per B. Coler."DATABASE VALIDATION PROGRAM CONFIRMS NFA FOR DTSC.O EPA PRELIM ASSESS DONE CERCLA 104"TALS & TRACE METALS(HEXAVALENT CHROMIUM). ORG(HALOGENATED ALIPHATICS, RESINS,POLAR SOLVENTS,HALOGENATED ALPI PHATIC SOLVENTS,ALCOHOLS,KETONES & ALDE HYDES. INORG(SALTS)."ever, the risk is unacceptable for sensitive land use, such as single family homes, schools, and day care facilities for children. Accordingly, the implementation of a Land Use Covenant for commercial and/or industrial land use will be necessary."

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 01/15/08

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 01/15/08

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 03/22/96

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 03/01/95

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 06/30/85

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Clean up Agreement
Completed Date: 01/02/02

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Discovery
Completed Date: 03/25/80

Confirmed: 30003,30016,30593
Confirmed Description: Benzene
Confirmed Description: Methyl tertbutyl ether (MTBE)
Confirmed Description: Xylenes
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: OTH, SOIL
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Soil

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 30003, 30016, 30593
Potenital Description: Benzene
Potenital Description: Methyl tertbutyl ether (MTBE)
Potenital Description: Xylenes
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: MANUFACTURING CHEMICALS

EMI:
Year: 1987
Carbon Monoxide Emissions Tons/Yr: 56
Air Basin: SCC
Facility ID: 146
Air District Name: VEN
SIC Code: 2821
Air District Name: VENTURA COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 69
Reactive Organic Gases Tons/Yr: 52
Carbon Monoxide Emissions Tons/Yr: 0
NOX Oxides of Nitrogen Tons/Yr: 3
SOX Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1990
Carbon Monoxide Emissions Tons/Yr: 56
Air Basin: SCC

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	84
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	1
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	37
Reactive Organic Gases Tons/Yr:	26
Carbon Monoxide Emissions Tons/Yr:	1
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1996
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	1
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1997
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	1
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1998
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	13
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	2
NOX Oxides of Nitrogen Tons/Yr:	2
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1999
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	9
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	1
NOX Oxides of Nitrogen Tons/Yr:	2
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2000
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	11
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	2
NOX Oxides of Nitrogen Tons/Yr:	2
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2001
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	2
NOX Oxides of Nitrogen Tons/Yr:	2
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2002
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	3
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	2003
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	3
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2004
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	15.918
Reactive Organic Gases Tons/Yr:	6.667
Carbon Monoxide Emissions Tons/Yr:	2.505
NOX Oxides of Nitrogen Tons/Yr:	2.981
SOX Oxides of Sulphur Tons/Yr:	0.014
Particulate Matter Tons/Yr:	0.622
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.42

Year:	2005
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	146
Air District Name:	VEN
SIC Code:	2821
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	14.936
Reactive Organic Gases Tons/Yr:	5.837
Carbon Monoxide Emissions Tons/Yr:	2.048
NOX Oxides of Nitrogen Tons/Yr:	2.438
SOX Oxides of Sulphur Tons/Yr:	.018
Particulate Matter Tons/Yr:	.639
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.4125

CA WDS:

Facility ID:	4 56I012454
Facility Type:	Not reported
Facility Status:	Active Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion:	4
Facility Telephone:	Not reported
Facility Contact:	Not reported
Agency Name:	COOK COMPOSITES & POLYMERS
Agency Address:	Not reported
Agency City,St,Zip:	0
Agency Contact:	Not reported
Agency Telephone:	Not reported
Agency Type:	Not reported
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	Not reported
POTW:	Not reported
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.

Complexity: Category C Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

ENVIROSTOR:

Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	10.5
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	ALBERTO VALMIDIANO
Supervisor:	Juli Oborne
Division Branch:	So Cal Glendale
Facility ID:	56280098
Site Code:	301065
Assembly:	41
Senate:	23
Special Program:	Voluntary Cleanup Program
Status:	Active
Status Date:	2002 01 02 00:00:00
Restricted Use:	NO
Funding:	Responsible Party
Latitude:	34.144425
Longitude:	119.172305555556
Alias Name:	56280098
	301065
	CAD087163267
	RAY AND JANE BARNARD (TO 1966)
	DIAMOND SHAMROCK (1966 1978)
	DIAMOND SHAMROCK CHEMICALS COMPANY
	KOPPER
	DIAMOND ALKAL
Alias Type:	Envirostor ID Number
	Project Code (Site Code)
	EPA Identification Number
	Alternate Name
	Alternate Name
	Alternate Name
	Alternate Name
	Alternate Name
APN:	NONE SPECIFIED
APN Description:	Not reported
Comments:	"Based on information in the above document, DTSC concludes that the soil at the Site poses an acceptable risk for industrial/commercial use and NO Further Action is necessary for soil, if the use is limited to commercial or industrial land use. How"SOURCE ACT: (DIAMOND) A SILICA PT & POLY STER RESIN PT, 0N 1/78 SOLD RESIN PT TO

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

KOPPER'S. (KOPPER)POLYESTER RESIN PORD. WASTE: HAULED TO CASMALIA & KETTLEMAN AFTER NEUTRALIZATION & INCINERATION. YR OF OPER: 10 TAX ASSESSOR 1978 TO PRESENT SUBMIT T"FACILITY IDENTIFIED ID OLD ASP Q 1980. WADE QUEST. OPER AT THE SITE FOR 12 YRS. UNK DISP ON/OFF PRE72 & AFTER 72. HAULER : ECOLOGY CONTROL INC(1968 79), REED LAND CLEARING IN VENTURA(1970 79). WASTE : BASE SOLUTION PH<12, SCRUBBER RESIDUAL HEAVY MEA Voluntary Cleanup Agreement was signed for PEA under Reichhold Chemical."On Permitting list, therefore not NFA, should be REFRC, per B. Coler."DATABASE VALIDATION PROGRAM CONFIRMS NFA FOR DTSC.O EPA PRELIM ASSESS DONE CERCLA 104"TALS & TRACE METALS(HEXAVALENT CHROMIUM). ORG(HALOGENATED ALIPHATICS, RESINS,POLAR SOLVENTS,HALOGENATED ALPI PHATIC SOLVENTS,ALCOHOLS,KETONES & ALDE HYDES. INORG(SALTS)."ever, the risk is unacceptable for sensitive land use, such as single family homes, schools, and day care facilities for children. Accordingly, the implementation of a Land Use Covenant for commercial and/or industrial land use will be necessary."

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	01/15/08
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	01/15/08
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	03/22/96
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	03/01/95
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Assessment Report
Completed Date:	06/30/85
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Clean up Agreement
Completed Date:	01/02/02
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Discovery
Completed Date:	03/25/80
Confirmed:	30003,30016,30593
Confirmed Description:	Benzene
Confirmed Description:	Methyl tertbutyl ether (MTBE)
Confirmed Description:	Xylenes

COOK COMPOSITES AND POLYMERS CO. (Continued) **1000346599**

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: OTH, SOIL
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Soil

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 30003, 30016, 30593
Potenital Description: Benzene
Potenital Description: Methyl tertbutyl ether (MTBE)
Potenital Description: Xylenes
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: MANUFACTURING CHEMICALS

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29 **PORT HUENEME S/COAST DEF SITE** **FUDS** **1009484547**
N/A

PORT HUENEME, CA

FUDS:
Federal Facility ID: CA9799F5561
FUDS #: J09CA0550
Facility Name: PORT HUENEME S/COAST DEF SITE
City: PORT HUENEME
State: CA
EPA Region: 9
County: VENTURA
Congressional District: 23
US Army District: Los Angeles District (SPL)
Fiscal Year: 2006
Telephone: 213 452 3921
NPL Status: Not Listed
RAB: Not reported
CTC: 2758.85
Current Owner: Not reported
Current Prog: Not reported
Future Prog: Not reported

FUDS Description Details:
N/A

FUDS History Details:
N/A

30 CITY OF OXNARD — **Notify 65** — **S100177945**
6001 S. PERKINS RD. — **CHMIRS** — **N/A**
OXNARD, CA 90845 — **AIRS**

Notify 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Incident Description:	90845

CHMIRS:

OES Incident Number:	03 5204
OES notification:	10/7/200308:12:11 AM
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported

CITY OF OXNARD (Continued) **S100177945**

Date/Time:	Not reported
Year:	2003
Agency:	City of Oxnard
Incident Date:	10/7/200312:00:00 AM
Admin Agency:	Oxnard Fire Department
Amount:	Not reported
Contained:	Yes
Site Type:	Treatment/Sewage Facility
E Date:	Not reported
Substance:	Final Effluent
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	4
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Description:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	A stuck air release valve on a serge tank caused this release. Unknown amount entered into and was contained in the storm drain catch basin, no waterway involvement.Mechanical failure caused this release.The spill was due to an overflow from serge tank.Air relief valve on a serge tank stuck open causing this release.
OES Incident Number:	03 5229
OES notification:	10/8/200301:59:36 PM
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported

CITY OF OXNARD (Continued) **S100177945**

Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2003
Agency:	City of Oxnard
Incident Date:	10/8/200312:00:00 AM
Admin Agency:	Oxnard Fire Department
Amount:	Not reported
Contained:	Yes
Site Type:	Treatment/Sewage Facility
E Date:	Not reported
Substance:	Final effluent, chlorine free
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	1000
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Description:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	A stuck air release valve on a serge tank caused this release. Unknown amount entered into and was contained in the storm drain catch basin, no waterway involvement.Mechanical failure caused this release.The spill was due to an overflow from serge tank.Air relief valve on a serge tank stuck open causing this release.

CITY OF OXNARD (Continued) **S100177945**

OES Incident Number:	01 5839
OES notification:	10/15/200111:31:54 AM
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Yes
Waterway:	Storm drain catch basin
Spill Site:	Not reported
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2001
Agency:	City of Oxnard Waste Water Division
Incident Date:	10/14/200112:00:00 AM
Admin Agency:	Oxnard Fire Department
Amount:	Not reported
Contained:	Yes
Site Type:	Road
E Date:	Not reported
Substance:	Treated sewage
Quantity Released:	Not reported

CITY OF OXNARD (Continued) **S100177945**

BBLS:	0
Cups:	0
CUFT:	0
Gallons:	200
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0.000000
Description:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	A stuck air release valve on a serge tank caused this release. Unknown amount entered into and was contained in the storm drain catch basin, no waterway involvement.Mechanical failure caused this release.The spill was due to an overflow from serge tank.Air relief valve on a serge tank stuck open causing this release.
OES Incident Number:	01 5682
OES notification:	10/8/200109:53:50 AM
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported

CITY OF OXNARD (Continued) **S100177945**

Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2001
Agency:	City of Oxnard
Incident Date:	10/8/200112:00:00 AM
Admin Agency:	Not reported
Amount:	Not reported
Contained:	Yes
Site Type:	Treatment/Sewage Facility
E Date:	Not reported
Substance:	Plant effluent
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	200
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0.000000
Description:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	A stuck air release valve on a serge tank caused this release. Unknown amount entered into and was contained in the storm drain catch basin, no waterway involvement.Mechanical failure caused this release.The spill was due to an overflow from serge tank.Air relief valve on a serge tank stuck open causing this release.

EMI:

Year:	1987
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1

CITY OF OXNARD (Continued) **S100177945**

Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	7
NOX Oxides of Nitrogen Tons/Yr:	24
SOX Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	1990
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	8
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	14
NOX Oxides of Nitrogen Tons/Yr:	8
SOX Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	1995
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	11
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	16
NOX Oxides of Nitrogen Tons/Yr:	9
SOX Oxides of Sulphur Tons/Yr:	2
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	1996
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	17
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	39
NOX Oxides of Nitrogen Tons/Yr:	8
SOX Oxides of Sulphur Tons/Yr:	2
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

CITY OF OXNARD (Continued) **S100177945**

Year:	1997
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	17
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	39
NOX Oxides of Nitrogen Tons/Yr:	8
SOX Oxides of Sulphur Tons/Yr:	2
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	1998
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	125
Reactive Organic Gases Tons/Yr:	12
Carbon Monoxide Emissions Tons/Yr:	139
NOX Oxides of Nitrogen Tons/Yr:	10
SOX Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	1999
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	111
Reactive Organic Gases Tons/Yr:	10
Carbon Monoxide Emissions Tons/Yr:	129
NOX Oxides of Nitrogen Tons/Yr:	9
SOX Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	2000
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952

CITY OF OXNARD (Continued) **S100177945**

Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	82
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	124
NOX Oxides of Nitrogen Tons/Yr:	10
SOX Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	2001
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	91
Reactive Organic Gases Tons/Yr:	9
Carbon Monoxide Emissions Tons/Yr:	129
NOX Oxides of Nitrogen Tons/Yr:	9
SOX Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	2002
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	85
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	123
NOX Oxides of Nitrogen Tons/Yr:	9
SOX Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	2003
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	91
Reactive Organic Gases Tons/Yr:	9
Carbon Monoxide Emissions Tons/Yr:	135

CITY OF OXNARD (Continued) **S100177945**

NOX Oxides of Nitrogen Tons/Yr:	10
SOX Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	2004
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	9.67
Reactive Organic Gases Tons/Yr:	1.04
Carbon Monoxide Emissions Tons/Yr:	10.609
NOX Oxides of Nitrogen Tons/Yr:	2.174
SOX Oxides of Sulphur Tons/Yr:	1.259
Particulate Matter Tons/Yr:	0.809
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.813

Year:	2005
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	1137
Air District Name:	VEN
SIC Code:	4952
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	22.752
Reactive Organic Gases Tons/Yr:	2.2080931
Carbon Monoxide Emissions Tons/Yr:	14.495
NOX Oxides of Nitrogen Tons/Yr:	2.734
SOX Oxides of Sulphur Tons/Yr:	1.284
Particulate Matter Tons/Yr:	.804
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.798122

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30 **HALACO ENGINEERING COMPANY** **SLIC** **S101482879**
6200 PERKINS ROAD **AIRS** **N/A**
OXNARD, CA 93030 **ENVIROSTOR**

SLIC:

Region:	STATE
Global Id:	SL0611114905
Assigned Name:	SLICSITE
Lead Agency Contact:	GARY SCHULTZ
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number:	70 24
Responsible Party:	Not reported
Recent Dtw:	Not reported
Substance Released:	Not reported
Facility Status:	**Reopen Previously Closed Case**

EMI:

Year:	1987

HALACO ENGINEERING COMPANY (Continued) **S101482879**

Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX Oxides of Nitrogen Tons/Yr:	6
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	23
Part. Matter 10 Micrometers & Smllr Tons/Yr:	15

Year:	1990
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	1
NOX Oxides of Nitrogen Tons/Yr:	29
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	25
Part. Matter 10 Micrometers & Smllr Tons/Yr:	16

Year:	1993
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	4
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	21
NOX Oxides of Nitrogen Tons/Yr:	31
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	26
Part. Matter 10 Micrometers & Smllr Tons/Yr:	16

Year:	1995
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD

HALACO ENGINEERING COMPANY (Continued) **S101482879**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	8
NOX Oxides of Nitrogen Tons/Yr:	12
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	11
Part. Matter 10 Micrometers & Smllr Tons/Yr:	11

Year:	1996
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	11
NOX Oxides of Nitrogen Tons/Yr:	9
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	9
Part. Matter 10 Micrometers & Smllr Tons/Yr:	6

Year:	1997
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	11
NOX Oxides of Nitrogen Tons/Yr:	9
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	9
Part. Matter 10 Micrometers & Smllr Tons/Yr:	6

Year:	1998
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	11
NOX Oxides of Nitrogen Tons/Yr:	9

HALACO ENGINEERING COMPANY (Continued) **S101482879**

SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	9
Part. Matter 10 Micrometers & Smllr Tons/Yr:	6

Year:	1999
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	11
NOX Oxides of Nitrogen Tons/Yr:	9
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	9
Part. Matter 10 Micrometers & Smllr Tons/Yr:	6

Year:	2000
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	11
NOX Oxides of Nitrogen Tons/Yr:	9
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	9
Part. Matter 10 Micrometers & Smllr Tons/Yr:	6

Year:	2001
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	10
NOX Oxides of Nitrogen Tons/Yr:	8
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	8
Part. Matter 10 Micrometers & Smllr Tons/Yr:	5

Year:	2002
Carbon Monoxide Emissions Tons/Yr:	56

HALACO ENGINEERING COMPANY (Continued) **S101482879**

Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	7
NOX Oxides of Nitrogen Tons/Yr:	6
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	6
Part. Matter 10 Micrometers & Smllr Tons/Yr:	4

Year:	2003
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	3
NOX Oxides of Nitrogen Tons/Yr:	3
SOX Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	2
Part. Matter 10 Micrometers & Smllr Tons/Yr:	2

Year:	2004
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.307
Reactive Organic Gases Tons/Yr:	0.21
Carbon Monoxide Emissions Tons/Yr:	3.125
NOX Oxides of Nitrogen Tons/Yr:	2.562
SOX Oxides of Sulphur Tons/Yr:	0.009
Particulate Matter Tons/Yr:	2.472
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1.56

Year:	2005
Carbon Monoxide Emissions Tons/Yr:	56
Air Basin:	SCC
Facility ID:	22
Air District Name:	VEN
SIC Code:	3341
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Y

HALACO ENGINEERING COMPANY (Continued) **S101482879**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.307
Reactive Organic Gases Tons/Yr:	.2144702
Carbon Monoxide Emissions Tons/Yr:	3.125
NOX Oxides of Nitrogen Tons/Yr:	2.562
SOX Oxides of Sulphur Tons/Yr:	.009
Particulate Matter Tons/Yr:	2.472
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1.564776

ENVIROSTOR:

Site Type:	Federal Superfund
Site Type Detailed:	State Response or NPL
Acres:	38
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	STEPHEN MCARDLE
Supervisor:	Juli Oborne
Division Branch:	So Cal Glendale
Facility ID:	56330002
Site Code:	Not reported
Assembly:	41
Senate:	23
Special Program:	Not reported
Status:	Active
Status Date:	2007 03 28 00:00:00
Restricted Use:	NO
Funding:	Not Applicable
Latitude:	34.1397222222222
Longitude:	119.183888888889
Alias Name:	56330002
	CAD009688052
	P31061
	OPEN BURNING DUMP
Alias Type:	Envirostor ID Number
	Alternate Name
	PCode
	EPA Identification Number
APN:	NONE SPECIFIED
APN Description:	Not reported
Comments:	"THE SITE WAS REFERRED TO ENFORCEMENT ON 08/14/1992. THE SITE WAS AN ACTIVE FACILITY AND STORING WASTE PILES WITHOUT A PERMIT. THE MARCH 21, 1994 CORRESPONDENCE FROM VENTURA COUNTY FORWARDED TO ENFORCEMENT."FACILITY IDENTIFIED ID FROM ERRISSITE SCREENING DONE

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	04/06/94
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	03/30/87

HALACO ENGINEERING COMPANY (Continued) **S101482879**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Discovery
Completed Date: 10/12/83

Confirmed: NONE SPECIFIED
Confirmed Description: Not reported
Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Remedial Investigation / Feasibility Study
Future Due Date: 2010
Media Affected: CSS, OTH, SED, SOIL, SURFW, UE
Media Affected Desc: Not reported
Media Affected Desc: Other Groundwater affected (uses other than drinking water)
Media Affected Desc: Sediments
Media Affected Desc: Soil
Media Affected Desc: Surface water affected
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: 10002, 10037, 10061, 10093, 10195, 10197, 10199, 30001, 30153, 30407
Potenital Description: * HALOGENATED ORGANIC COMPOUNDS
Potenital Description: * Metals Sludge
Potenital Description: * ORGANIC LIQUIDS WITH METALS
Potenital Description: * AQUEOUS SOLUTION WITH METALS
Potenital Description: * UNSPECIFIED AQUEOUS SOLUTION
Potenital Description: * UNSPECIFIED SLUDGE WASTE
Potenital Description: * WASTE OIL & MIXED OIL
Potenital Description: Arsenic
Potenital Description: Chromium VI
Potenital Description: Nickel
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: METAL RECLAMATION, RECYCLING SCRAP METAL, WASTE WATER PONDS

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30 **HALACO ENGINEERING CO.** **CA FID UST** **S101703440**
6200 PERKINS RD **SWEEPS UST** **N/A**
OXNARD, CA 93030

CA FID UST:
Facility ID: 56000540
Regulated By: UTNKA
Regulated ID: 64760
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 6200 PERKINS RD
Mailing Address 2: Not reported
Mailing City,St,Zip: OXNARD 93030
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported

HALACO ENGINEERING CO. (Continued) **S101703440**

NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: A
Comp Number: 1514
Number: 9
Board Of Equalization: 44 030833
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 001514 000001
Actv Date: Not reported
Capacity: 11780
Tank Use: UNKNOWN
Stg: P
Content: Not reported
Number Of Tanks: 8

Status: A
Comp Number: 1514
Number: 9
Board Of Equalization: 44 030833
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 001514 000002
Actv Date: Not reported
Capacity: 11780
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

Status: A
Comp Number: 1514
Number: 9
Board Of Equalization: 44 030833
Ref Date: 09 30 92
Act Date: 09 30 92
Created Date: 02 29 88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 56 000 001514 000003
Actv Date: Not reported
Capacity: 11780
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

HALACO ENGINEERING CO. (Continued) **S101703440**

Status:	A
Comp Number:	1514
Number:	9
Board Of Equalization:	44 030833
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 001514 000004
Actv Date:	Not reported
Capacity:	11780
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Status:	A
Comp Number:	1514
Number:	9
Board Of Equalization:	44 030833
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 001514 000005
Actv Date:	Not reported
Capacity:	11780
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Status:	A
Comp Number:	1514
Number:	9
Board Of Equalization:	44 030833
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 001514 000006
Actv Date:	Not reported
Capacity:	1171801
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Status:	A
Comp Number:	1514
Number:	9
Board Of Equalization:	44 030833
Ref Date:	09 30 92
Act Date:	09 30 92

HALACO ENGINEERING CO. (Continued) **S101703440**

Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 001514 000007
Actv Date:	Not reported
Capacity:	1970
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	Not reported

Status:	A
Comp Number:	1514
Number:	9
Board Of Equalization:	44 030833
Ref Date:	09 30 92
Act Date:	09 30 92
Created Date:	02 29 88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	56 000 001514 000008
Actv Date:	Not reported
Capacity:	20000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

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30 **1X HALACO INC.** **HAZNET** **S103667153**
6200 PERKINS ROAD **SWF/LF** **N/A**
OXNARD, CA 93033

HAZNET:

Gepaid:	CAC000251401
Contact:	HALACO INC
Telephone:	0000000000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	6200 PERKINS ROAD
Mailing City,St,Zip:	OXNARD, CA 930330000
Gen County:	Ventura
TSD EPA ID:	CAD980883177
TSD County:	Kern
Waste Category:	Unspecified oil containing waste
Disposal Method:	Recycler
Tons:	.2502
Facility County:	Ventura

SWF/LF:

Region:	VENTURA
Facility ID:	#65
Facility Telephone:	805 488 3684
Operator:	Not reported
Permit Date:	Not reported
Land Use:	Industrial Adjacent to Pacific Ocean
Land Owner:	Halaco Engineering
Closure Approve:	N/A

1X HALACO INC. (Continued) **S103667153**

Disposal Acreage:	13 acres
Location:	6200 Perkins Road Oxnard 93003
Swisnumber:	56 CR 0054
Disposal Area:	13 acres
SWFP Date:	N/A
WDR Number:	File# 70 24
Dates Operation:	20 years to present
Dt Of Field Units:	9/5/96 Quarterly Inspection
Surface Condition:	No Cover. Surface disposal of dross from metal furnace and dirt and salt from evaporation pond.
Leachate:	None Observed
Emrgncy Response:	N/A
Site Size:	Not reported
Site Type:	Above ground land disposal
Reassess Site:	No
Other Observations:	Site subject to Waste Discharge Requirements (Order No. 80 58) adobted by LA RWQCB on 10/29/80.
Date:	10/8/96
Prep By:	Barry Marczuk LEA
CIWMB:	C&R Branch
Recommendations:	Not reported
Othr Recommendation:	ARCHIVE. Eliminate from the required inspection frequency.
Explanation:	Site classified as an inert landfill by the LA RWQCB on 9/13/96.
No Further Action:	D Priority. Archive
Issues & Observations:	Not reported

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31 **HALACO INC** **RCRA-SQG** **1010313762**
6200 PERKINS RD **CAR000177709**
OXNARD, CA 93033

RCRA SQG:

Date form received by agency:	09/15/2006
Facility name:	HALACO INC
Facility address:	6200 PERKINS RD OXNARD, CA 93033
EPA ID:	CAR000177709
Contact:	DAVE GABLE
Contact address:	6200 PERKINS RD OXNARD, CA 93033
Contact country:	Not reported
Contact telephone:	805 443 6878
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	HAACK JOHN HAACK CLARENCE HAACK ROBERT
Owner/operator address:	6200 PERKINS RD OXNARD, CA 93033
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private

HALACO INC (Continued) **1010313762**

Owner/Operator Type: Owner
Owner/Op start date: 06/12/1965
Owner/Op end date: Not reported

Owner/operator name: HALACO INC
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 08/15/1968
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off site waste receiver: Commercial status unknown

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Violation Status: No violations found

31 HALACO ENGINEERING COMPANY
6200 PERKINS
OXNARD, CA 93033

CERCLIS **1000144948**
FINDS **CAD009688052**
LUST
NPL
Cortese
AST
LOS ANGELES CO. HMS
ROD
HIST UST
Proposed NPL

CERCLIS:
Site ID: 0901242
Federal Facility: Not a Federal Facility
NPL Status: Currently on the Final NPL
Non NPL Status: Not reported

CERCLIS Site Contact Name(s):
Contact Name: Matt Mitguard
Contact Tel: (415) 972 3096
Contact Title: Site Assessment Manager (SAM)

Contact Name: Robert Wise
Contact Tel: (562) 499 6312
Contact Title: On Scene Coordinator (OSC)

Contact Name: Wayne Praskins
Contact Tel: (415) 972 3181
Contact Title: Remedial Project Manager (RPM)

Contact Name: Nuria Muniz
Contact Tel: (415) 972 3811
Contact Title: Site Assessment Manager (SAM)

CERCLIS Site Alias Name(s):
Alias Name: HALACO ENGINEERING CO
Alias Address: Not reported
OXNARD, CA
Alias Name: HALACO ENGINEERING CO
Alias Address: 6200 PERKINS ROAD
OXNARD, CA 93033
Alias Name: HALACO ENGINEERING COMPANY
Alias Address: 6200 PERKINS
OXNARD, CA 93033
Site Description: Not reported

CERCLIS Assessment History:
Action: DISCOVERY
Date Started: Not reported
Date Completed: 11/01/1979
Priority Level: Not reported

Action: SITE INSPECTION
Date Started: 11/01/1979
Date Completed: 04/01/1983
Priority Level: High

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported

HALACO ENGINEERING COMPANY (Continued) **1000144948**

Date Completed: 04/01/1983
Priority Level: Low

Action: EXPANDED SITE INSPECTION
Date Started: 09/18/1990
Date Completed: 08/07/1992
Priority Level: Recommended for HRS Scoring

Action: REMOVAL ASSESSMENT
Date Started: 04/20/2006
Date Completed: 04/21/2006
Priority Level: Not reported

Action: REMOVAL ASSESSMENT
Date Started: 06/19/2006
Date Completed: 07/05/2006
Priority Level: Not reported

Action: ADMINISTRATIVE ORDER ON CONSENT
Date Started: Not reported
Date Completed: 07/19/2006
Priority Level: Not reported

Action: REMOVAL
Date Started: 06/19/2006
Date Completed: 08/31/2006
Priority Level: Cleaned up

Action: POTENTIALLY RESPONSIBLE PARTY REMOVAL
Date Started: 08/21/2006
Date Completed: 09/12/2006
Priority Level: Cleaned up

Action: OTHER CLEANUP ACTIVITY
Date Started: 10/10/2000
Date Completed: 01/10/2007
Priority Level: High

Action: INTEGRATED REMOVAL ASSESSMENT AND EXPANDED SITE INSPECTION
Date Started: 02/01/2006
Date Completed: 01/10/2007
Priority Level: Recommended for HRS Scoring

Action: PROPOSAL TO NATIONAL PRIORITIES LIST
Date Started: Not reported
Date Completed: 03/07/2007
Priority Level: Not reported

Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: 04/06/2006
Date Completed: 03/07/2007
Priority Level: Being considered for proposal to the NPL

Action: REMEDIAL INVESTIGATION
Date Started: 03/21/2007
Date Completed: Not reported
Priority Level: Not reported

HALACO ENGINEERING COMPANY (Continued) **1000144948**

Action: FINAL LISTING ON NATIONAL PRIORITIES LIST
Date Started: Not reported
Date Completed: 09/19/2007
Priority Level: Not reported

FINDS:
Other Pertinent Environmental Activity Identified at Site

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off site.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and its Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

LUST:
Region: STATE

HALACO ENGINEERING COMPANY (Continued) **1000144948**

Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	F
Funding:	EF
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0611100834
Stop Date:	Not reported
Confirm Leak:	1993 01 08 00:00:00
Workplan:	1993 03 01 00:00:00
Prelim Assess:	1993 03 01 00:00:00
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	1993 06 07 00:00:00
Monitoring:	Not reported
Close Date:	1994 03 21 00:00:00
Discover Date:	1993 12 15 00:00:00
Enforcement Dt:	1993 01 12 00:00:00
Release Date:	1993 12 15 00:00:00
Review Date:	Not reported
Enter Date:	Not reported
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	56
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Case Closed
Chemical:	Gasoline
Contact Person:	Not reported
Responsible Party:	HALACO ENGINEERING INC
RP Address:	Not reported
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Staff:	YR
Staff Initials:	EHD
Lead Agency:	Local Agency
Local Agency:	56000L
Hydr Basin #:	SANTA CLARA RIVER VA
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Local Case #:	93001
Case Number:	C 93001
Qty Leaked:	Not reported
Abate Method:	Excavate and Dispose remove contaminated soil and dispose in approved site
Operator:	Not reported

HALACO ENGINEERING COMPANY (Continued) **1000144948**

Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

Region: STATE
Case Type: Soil only
Cross Street: Not reported
Enf Type: F
Funding: EF
How Discovered: Not reported
How Stopped: Not reported
Leak Cause: Not reported
Leak Source: Not reported
Global Id: T0611100980
Stop Date: Not reported
Confirm Leak: 1995 03 08 00:00:00
Workplan: 1995 03 08 00:00:00
Prelim Assess: 1995 05 01 00:00:00
Pollution Char: 1995 05 01 00:00:00
Remed Plan: 1995 05 01 00:00:00
Remed Action: Not reported
Monitoring: Not reported
Close Date: 1995 05 16 00:00:00
Discover Date: 1995 03 08 00:00:00
Enforcement Dt: 1995 03 28 00:00:00
Release Date: 1995 03 08 00:00:00
Review Date: Not reported
Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 56
Org Name: Not reported
Reg Board: Los Angeles Region
Status: Case Closed
Chemical: Diesel
Contact Person: Not reported
Responsible Party: HALACO ENGINEERING INC
RP Address: Not reported
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
Staff: YR
Staff Initials: EHD
Lead Agency: Local Agency
Local Agency: 56000L
Hydr Basin #: SANTA CLARA RIVER VA
Beneficial: Not reported
Priority: Not reported

HALACO ENGINEERING COMPANY (Continued) **1000144948**

Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: 95081
Case Number: C 95081
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 4
Staff: UNK
County: Ventura
Local Agency: 56000L
Lead Agency: Local Agency
Case Type: Soil
Status: Case Closed
Substance: Gasoline
Cross Street: Not reported
Global ID: T0611100834
Enforcement Type: EF
Date Leak Discovered: 12/15/1993
Date Leak Record Entered: Not reported
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date Leak Stopped: Not reported
Date Confirmation Began: 1/8/1993
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 3631.02917887117160617344572 25
Abatement Method Used at the Site: Excavate and Dispose
Source of Cleanup Funding: Excavate and Dispose
Date Leak First Reported: 12/15/1993
Preliminary Site Assessment Workplan Submitted: 3/1/1993
Preliminary Site Assessment Began: 3/1/1993
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: 6/7/1993
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: 3/21/1994
Date Case Last Changed on Database: Not reported
Enforcement Action Date: 1/12/1993
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported

HALACO ENGINEERING COMPANY (Continued) **1000144948**

Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	HALACO ENGINEERING INC
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1400473 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	93001
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

Region:	4
Staff:	UNK
County:	Ventura
Local Agency:	56000L
Lead Agency:	Local Agency
Case Type:	Soil
Status:	Case Closed
Substance:	Diesel
Cross Street:	Not reported
Global ID:	T0611100980
Enforcement Type:	EF
Date Leak Discovered:	3/8/1995
Date Leak Record Entered:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Date Leak Stopped:	Not reported
Date Confirmation Began:	3/8/1995
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	3624.8249471363313088822854784
Abatement Method Used at the Site:	Not reported
Source of Cleanup Funding:	F
Date Leak First Reported:	3/8/1995
Preliminary Site Assessment Workplan Submitted:	3/8/1995
Preliminary Site Assessment Began:	5/1/1995
Pollution Characterization Began:	5/1/1995
Remediation Plan Submitted:	5/1/1995
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	5/16/1995
Date Case Last Changed on Database:	Not reported
Enforcement Action Date:	3/28/1995
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported

HALACO ENGINEERING COMPANY (Continued) **1000144948**

Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	HALACO ENGINEERING INC
RP Address:	Not reported
Program:	LUST
Lat/Long:	34.1400623 / 1
Local Agency Staff:	EHD
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	95081
Substance Quantity:	Not reported
Assigned Name:	Not reported
W Global ID:	Not reported
Summary:	Not reported

LUST:

Region:	VENTURA
Facility ID:	95081
Status:	Case Closed

Region:	VENTURA
Facility ID:	93001
Status:	Case Closed

NPL:

EPA ID:	CAD009688052
EPA Region:	09
Federal:	N
Final Date:	09/19/2007

Site Details:

Site Name:	HALACO ENGINEERING COMPANY
Site Status:	Final
Site Zip:	93033
Site City:	OXNARD
Site State:	CA
Federal Site:	No
Site County:	VENTURA
EPA Region:	09
Date Proposed:	03/07/07
Date Deleted:	Not reported
Date Finalized:	09/19/07

Cortese:

Region:	CORTESE
Facility Addr2:	6200 PERKINS RD

Region:	CORTESE
Facility Addr2:	6200 PERKINS RD

HALACO ENGINEERING COMPANY (Continued) **1000144948**

AST:
Owner: HALACO, INC.
Total Gallons: 18600

LOS ANGELES CO. HMS:
Region: LA
Facility Id: 001555 I03753
Facility Status: Closed
Area: 22
Permit Number: 000001746
Permit Status: Closed
Facility Type: I02

ROD:
Full text of USEPA Record of Decision(s) is available from EDR.

HIST UST:
Region: STATE
Facility ID: 00000064760
Facility Type: Other
Other Type: FOUNDRY
Total Tanks: 0008
Contact Name: J.D. GABLE PLANT MANAGER
Telephone: 9054883684
Owner Name: HALACO ENGINEERING CO.
Owner Address: 6200 PERKINS ROAD
Owner City,St,Zip: OXNARD, CA 93033

Tank Num: 001
Container Num: 1
Year Installed: 1979
Tank Capacity: 00011780
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: .26 inches
Leak Detection: Visual, None

Tank Num: 002
Container Num: 2
Year Installed: 1979
Tank Capacity: 00011780
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: .26 inches
Leak Detection: Visual, None

Tank Num: 003
Container Num: 3
Year Installed: 1979
Tank Capacity: 00011780
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: .26 inches
Leak Detection: Visual, None

HALACO ENGINEERING COMPANY (Continued) **1000144948**

Tank Num: 004
Container Num: 4
Year Installed: 1979
Tank Capacity: 00011780
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: .26 inches
Leak Detection: Visual, None

Tank Num: 005
Container Num: 5
Year Installed: 1979
Tank Capacity: 00011780
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: .26 inches
Leak Detection: Visual, None

Tank Num: 006
Container Num: 6
Year Installed: 1979
Tank Capacity: 00011780
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: .26 inches
Leak Detection: Visual, None

Tank Num: 007
Container Num: G
Year Installed: 1970
Tank Capacity: 00001970
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: ULUG8 gauge
Leak Detection: Visual

Tank Num: 008
Container Num: G331784
Year Installed: 1972
Tank Capacity: 00020000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: 6 gauge
Leak Detection: Visual, None

ORPHAN SUMMARY

City	EDR D	Site Name	Site Address	Zip	Database(s)
OXNARD	S104228071	TEXACO	74180 HWY 111		LUST
OXNARD	99630288	BETWEEN F AND J DOCKS AT CHANNEL SLAND MAR NA	BETWEEN F AND J DOCKS AT CHANNEL SLAND MAR NA	93035	ERNS
OXNARD	U004066737	KAYO O L COMPANY	1445 CHANNEL SLANDS BOULEVARD	93033	UST
OXNARD	U004066758	CHANNEL SLANDS SHELL	1440 CHANNEL SLANDS BOULEVARD	93033	UST
OXNARD	S104539648	UNOCAL STAT ON #5802	1445 CHANNEL SLAND W BLVD	93033	LUST
OXNARD	S105974816	SHELL SS - CHANNEL SLANDS	1440 CHANNEL SLANDS BLVD	93033	LUST
OXNARD	S105693583	UNOCAL SS #5802	1445 CHANNEL SLAND W BLVD		LUST
OXNARD	2003639566	4521 FALK RK STREET	4521 FALK RK STREET		ERNS
OXNARD	S106483923	SCE - MANDALAY GENERAT NG STAT ON	303 NORTH HARBOR BLVD	93035	SL C
OXNARD	S106483950	NORTH SHORE MANDALAY BAY	500 W HARBOR BLVD		SL C
OXNARD	U001579979	OXNARD FLORAL NC	3360 S H GHWAY 1	93033	H ST UST
OXNARD	94362970	HOLLYWOOD BEACH LA CRESENTA STREET	HOLLYWOOD BEACH LA CRESENTA STREET		ERNS
OXNARD	S105974834	MOB L O L SS (STEVE'S)	801 HUENEME RD		LUST
OXNARD	U003859861	FEDERAL EXPRESS	MARKET BUS PARK # 710		UST
OXNARD	1007198855		1001 MCWANE BLVD	93033	RCRA-LQG
OXNARD	1003879094	O L EXTRACTS NC	319 MONTGOMERY ST	93033	CERC-NFRAP
OXNARD	S107030351	ARNOLD ROAD DUMP	NONE		SWF/LF
OXNARD	S106665381	NORTH SHORE AT MANDALAY BAY	(NO NUMBER) HARBOR BLVD WEST 5TH ST	93035	VCP ENV ROSTOR
OXNARD	S108541390	V NTAGE RESTORAT ON	1653 PAC F C AVE STE 308	93033	DRYCLEANERS
OXNARD	S106568386	OXNARD (C TY) TREATMENT PLANT	PERK NS RD		LUST
OXNARD	S106568387	OXNARD (C TY) TREATMENT PLANT	PERK NS RD		LUST
OXNARD	S106568388	OXNARD (C TY) TREATMENT PLANT	PERK NS RD		LUST
OXNARD	S106103479	REDWOOD TRUNK SEWER PROJECT	P PEL NE ROUTE NO 1		CA WDS
OXNARD	S101700595	F T J NC /VUJOV CH NC	3615 E PLEASANT VALLEY RD		VENTURA CO BWT
OXNARD	S104549304	TOWN & COUNTRY CLEANERS	129 PLEASANT VALLEY	93033	SL C
OXNARD	S106874566	OXNARD F RE STAT ON #2	531 PLEASANT VALLEY RD	93033	LUST
OXNARD	S105643395		R CE AVE SOUTH OF WOOLEY RD		CHM RS SL C
OXNARD	2000541941	RODR CK STREET AND OXNARD	RODR CK STREET AND OXNARD		ERNS
OXNARD	U003913158	GTE CAL FORN A	751 ROSE AVENUE		UST
OXNARD	S105974873	MOB L O L SS #18-P7C	121 ROSE AVE		LUST
OXNARD	S105689280	R VER PARK PROJECT	SANTA CLARA R VER / V NEYARD		CA WDS
OXNARD	93305642	J ST LAGOON	J ST LAGOON		ERNS
OXNARD	S106446525	VER ZON OXNARD CENTRAL OFF CE	900 C ST		LUST
OXNARD	U003758228	C TY OF OXNARD-WASTEWATER	STAT ON 28 HUENEME RD		UST
OXNARD	U003913119	AT&T CORPORAT ON	1050 C STREET		UST
OXNARD	U003913120	SHELL SERV CE STAT ON	1137 C STREET		UST
OXNARD	U002243853	M LDRED BERKOW TZ	210 A STREET		UST
OXNARD	U003978800	GLENWOOD CONVALESCENT HOSP	1300 C STREET		UST
OXNARD	1004676741	CALTRANS	VEN 1 K P 16 0 / 23 1	93033	RCRA-SQG F NDS
OXNARD	U004003806	MOB L	600 VENTURA RD		UST
OXNARD	U003913169	VACANT FAC L TY	550 VENTURA RD		UST
OXNARD	1007443899	BA LARD SAN TARY LANDF LL	2501 NORTH VENTURA ROAD		OD

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
PORT HUENEME	1007199160	MAZDA MOTOR OF AMER CA NC	32ND AVE & TRK 13 RD USN-CBC	93043	RCRA-LQG
PORT HUENEME	1000253141	USNAVY C V L ENG NEER NG LAB	560 CENTER DR VE	93043	RCRA-SQG F NDS CERC-NFRAP
PORT HUENEME	S106661694	ROADRUNNER CLEANERS	315 E CHANNEL SLAND BLVD	93041	HAZNET DRYCLEANERS
PORT HUENEME	S108541295	SPR NG CLEANERS	475 W CHANNEL SLANDS BLVD STE 102	93041	DRYCLEANERS
PORT HUENEME	S101482877	TESORO PETROLEUM CORPORAT ON	150 HUENEME ROAD	93041	ENV ROSTOR
PORT HUENEME	S105911436	TESORO REF N NG	141 HUENEME	93041	SL C
PORT HUENEME	S103684152	PORT HUENEME (C TY)-C TY YARD	700 HUENEME RD	93041	LUST
PORT HUENEME	S103684153	PORT HUENEME (C TY)-SCH D ST	700 HUENEME RD	93041	LUST
PORT HUENEME	S103891114	HUENEME C TY YARD (B)	700 HUENEME RD E	93041	LUST Cortese
PORT HUENEME	S103891115	HUENEME SCHOOL D ST BUS YARD	700 HUENEME RD	93041	LUST
PORT HUENEME	S106446530	HUENEME SCHOOL D ST-MA NT SHOP	700C HUENEME RD	93041	LUST
PORT HUENEME	S108541254	RUDY S O LF ELD WELD NG SERV CES NC	430 L GHTHOUSE	93041	DRYCLEANERS
PORT HUENEME	1003879068	PAC F C RECYCL NG ENTERPR SES NC	5925 PERK NS AVE RD	93041	CERC-NFRAP
PORT HUENEME	1000161930	NL BARO D PORT HUENEME SERV CE CENTER	PORT HUENEME COMMERC AL DOCK	93041	RCRA-SQG F NDS
PORT HUENEME	U001580078	SECUR TY B-11	SECUR TY B-11	93043	H ST UST
PORT HUENEME	S105790947	PORT HUENEME NCBC	VENTURA ROAD	93043	LUST
PORT HUENEME	S102435382	PORT HUENEME (C TY)	250 VENTURA RD	93041	LUST Cortese

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/31/2008
Date Data Arrived at EDR: 02/08/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 38

Source: EPA
Telephone: N/A
Last EDR Contact: 04/28/2008
Next Scheduled EDR Contact: 07/28/2008
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202 564 7333

EPA Region 1
Telephone 617 918 1143

EPA Region 3
Telephone 215 814 5418

EPA Region 4
Telephone 404 562 8033

EPA Region 5
Telephone 312 886 6686

EPA Region 10
Telephone 206 553 8665

EPA Region 6
Telephone: 214 655 6659

EPA Region 7
Telephone: 913 551 7247

EPA Region 8
Telephone: 303 312 6774

EPA Region 9
Telephone: 415 947 4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 01/31/2008
Date Data Arrived at EDR: 02/04/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 42

Source: EPA
Telephone: N/A
Last EDR Contact: 04/28/2008
Next Scheduled EDR Contact: 07/28/2008
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/31/2008
Date Data Arrived at EDR: 02/08/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 38

Source: EPA
Telephone: N/A
Last EDR Contact: 04/28/2008
Next Scheduled EDR Contact: 07/28/2008
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202 564 4267
Last EDR Contact: 02/19/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: No Update Planned

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/09/2008
Date Data Arrived at EDR: 02/05/2008
Date Made Active in Reports: 02/20/2008
Number of Days to Update: 15

Source: EPA
Telephone: 703 412 9810
Last EDR Contact: 04/25/2008
Next Scheduled EDR Contact: 06/16/2008
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/03/2007
Date Data Arrived at EDR: 12/06/2007
Date Made Active in Reports: 02/20/2008
Number of Days to Update: 76

Source: EPA
Telephone: 703 412 9810
Last EDR Contact: 03/17/2008
Next Scheduled EDR Contact: 06/16/2008
Data Release Frequency: Quarterly

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/08/2008
Date Data Arrived at EDR: 03/07/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202 564 6023
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/12/2007
Date Data Arrived at EDR: 12/18/2007
Date Made Active in Reports: 02/20/2008
Number of Days to Update: 64

Source: EPA
Telephone: 800 424 9346
Last EDR Contact: 03/03/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: Quarterly

RCRA-TSDF: RCRA Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/06/2008
Date Data Arrived at EDR: 03/06/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: (415) 495 8895
Last EDR Contact: 03/06/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Quarterly

RCRA-LQG: RCRA Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/06/2008
Date Data Arrived at EDR: 03/06/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: (415) 495 8895
Last EDR Contact: 03/06/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Quarterly

RCRA-SQG: RCRA Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/06/2008
Date Data Arrived at EDR: 03/06/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: (415) 495 8895
Last EDR Contact: 03/06/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/06/2008
Date Data Arrived at EDR: 03/06/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: (415) 495 8895
Last EDR Contact: 03/06/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

RCRA-NonGen: RCRA Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non Generators do not presently generate hazardous waste.

Date of Government Version: 03/06/2008
Date Data Arrived at EDR: 03/06/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: (415) 495 8895
Last EDR Contact: 03/06/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 01/18/2008
Date Data Arrived at EDR: 01/31/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 703 603 0695
Last EDR Contact: 03/31/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 01/18/2008
Date Data Arrived at EDR: 01/31/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 703 603 0695
Last EDR Contact: 03/31/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Varies

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 01/23/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 54

Source: National Response Center, United States Coast Guard
Telephone: 202 267 2180
Last EDR Contact: 04/22/2008
Next Scheduled EDR Contact: 07/21/2008
Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 10/31/2007
Date Data Arrived at EDR: 01/17/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 60

Source: U.S. Department of Transportation
Telephone: 202 366 4555
Last EDR Contact: 04/16/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Annually

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 02/14/2008
Date Data Arrived at EDR: 02/27/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 22

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202 366 4595
Last EDR Contact: 02/27/2008
Next Scheduled EDR Contact: 05/26/2008
Data Release Frequency: Varies

CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 12/28/2007
Number of Days to Update: 25

Source: Drug Enforcement Administration
Telephone: 202 307 1000
Last EDR Contact: 03/28/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: Quarterly

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities especially those without EPA Brownfields Assessment Demonstration Pilots minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields related cleanup activities.

Date of Government Version: 01/03/2008
Date Data Arrived at EDR: 01/17/2008
Date Made Active in Reports: 02/20/2008
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 202 566 2777
Last EDR Contact: 04/30/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Semi Annually

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703 692 8801
Last EDR Contact: 02/08/2008
Next Scheduled EDR Contact: 05/05/2008
Data Release Frequency: Semi Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 08/31/2007
Date Made Active in Reports: 10/11/2007
Number of Days to Update: 41

Source: U.S. Army Corps of Engineers
Telephone: 202 528 4285
Last EDR Contact: 04/03/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843 820 7326
Last EDR Contact: 03/10/2008
Next Scheduled EDR Contact: 06/09/2008
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 12/28/2007
Number of Days to Update: 25

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/22/2008
Next Scheduled EDR Contact: 07/21/2008
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/14/2008
Date Data Arrived at EDR: 01/22/2008
Date Made Active in Reports: 01/30/2008
Number of Days to Update: 8

Source: EPA
Telephone: 703 416 0223
Last EDR Contact: 03/31/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 07/13/2007
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Department of Energy
Telephone: 505 845 0011
Last EDR Contact: 03/17/2008
Next Scheduled EDR Contact: 06/16/2008
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800 424 9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 12/28/2007
Date Data Arrived at EDR: 12/28/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 27

Source: EPA, Region 9
Telephone: 415 972 3336
Last EDR Contact: 03/24/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/07/2008
Date Data Arrived at EDR: 03/26/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 23

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303 231 5959
Last EDR Contact: 03/26/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: Semi Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: EPA
Telephone: 202 566 0250
Last EDR Contact: 02/29/2008
Next Scheduled EDR Contact: 06/16/2008
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202 260 5521
Last EDR Contact: 04/28/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right to Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/22/2008
Date Made Active in Reports: 01/30/2008
Number of Days to Update: 8

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202 566 1667
Last EDR Contact: 03/17/2008
Next Scheduled EDR Contact: 06/16/2008
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/22/2008
Date Made Active in Reports: 01/30/2008
Number of Days to Update: 8

Source: EPA
Telephone: 202 566 1667
Last EDR Contact: 03/17/2008
Next Scheduled EDR Contact: 06/16/2008
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202 564 2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202 564 2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 35

Source: EPA
Telephone: 202 564 4203
Last EDR Contact: 04/14/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/27/2007
Date Data Arrived at EDR: 08/13/2007
Date Made Active in Reports: 10/11/2007
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202 564 5088
Last EDR Contact: 04/14/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/04/2007
Date Data Arrived at EDR: 02/07/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 39

Source: EPA
Telephone: 202 566 0500
Last EDR Contact: 02/07/2008
Next Scheduled EDR Contact: 05/05/2008
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 02/07/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 39

Source: Nuclear Regulatory Commission
Telephone: 301 415 7169
Last EDR Contact: 03/31/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/29/2008
Date Data Arrived at EDR: 01/31/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202 343 9775
Last EDR Contact: 05/01/2008
Next Scheduled EDR Contact: 07/28/2008
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 01/04/2008
Date Data Arrived at EDR: 01/10/2008
Date Made Active in Reports: 02/20/2008
Number of Days to Update: 41

Source: EPA
Telephone: (415) 947 8000
Last EDR Contact: 03/31/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202 564 4104
Last EDR Contact: 03/03/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/13/2007
Number of Days to Update: 38

Source: EPA/NTIS
Telephone: 800 424 9346
Last EDR Contact: 03/13/2008
Next Scheduled EDR Contact: 06/09/2008
Data Release Frequency: Biennially

STATE AND LOCAL RECORDS

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916 323 3400
Last EDR Contact: 02/25/2008
Next Scheduled EDR Contact: 05/26/2008
Data Release Frequency: No Update Planned

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916 255 2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 02/26/2008
Date Data Arrived at EDR: 02/27/2008
Date Made Active in Reports: 03/27/2008
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916 323 3400
Last EDR Contact: 02/27/2008
Next Scheduled EDR Contact: 02/25/2008
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916 227 4364
Last EDR Contact: 04/28/2008
Next Scheduled EDR Contact: 07/28/2008
Data Release Frequency: No Update Planned

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/10/2008
Date Data Arrived at EDR: 03/12/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 33

Source: Integrated Waste Management Board
Telephone: 916 341 6320
Last EDR Contact: 03/12/2008
Next Scheduled EDR Contact: 06/09/2008
Data Release Frequency: Quarterly

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916 227 4448
Last EDR Contact: 03/03/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: Quarterly

CA WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916 341 5227
Last EDR Contact: 03/17/2008
Next Scheduled EDR Contact: 06/16/2008
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal Sites). This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 05/29/2001
Date Made Active in Reports: 07/26/2001
Number of Days to Update: 58

Source: CAL EPA/Office of Emergency Information
Telephone: 916 323 3400
Last EDR Contact: 04/21/2008
Next Scheduled EDR Contact: 07/21/2008
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 01/07/2008
Date Data Arrived at EDR: 01/09/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 36

Source: Department of Conservation
Telephone: 916 323 3836
Last EDR Contact: 04/09/2008
Next Scheduled EDR Contact: 07/07/2008
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858 637 5595
Last EDR Contact: 04/14/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909 782 4496
Last EDR Contact: 02/05/2008
Next Scheduled EDR Contact: 05/05/2008
Data Release Frequency: Varies

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760 241 7365
Last EDR Contact: 03/31/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530 542 5572
Last EDR Contact: 03/03/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 01/23/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916 464 4834
Last EDR Contact: 04/23/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213 576 6710
Last EDR Contact: 03/24/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805 542 4786
Last EDR Contact: 02/11/2008
Next Scheduled EDR Contact: 05/12/2008
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510 622 2433
Last EDR Contact: 04/07/2008
Next Scheduled EDR Contact: 07/07/2008
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707 570 3769
Last EDR Contact: 02/19/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 01/07/2008
Date Data Arrived at EDR: 01/09/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 36

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 04/09/2008
Next Scheduled EDR Contact: 07/07/2008
Data Release Frequency: Quarterly

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760 776 8943
Last EDR Contact: 02/19/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916 341 5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 01/07/2008
Date Data Arrived at EDR: 01/09/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 36

Source: State Water Resources Control Board
Telephone: 866 480 1028
Last EDR Contact: 01/09/2008
Next Scheduled EDR Contact: 07/07/2008
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707 576 2220
Last EDR Contact: 02/19/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510 286 0457
Last EDR Contact: 04/07/2008
Next Scheduled EDR Contact: 04/07/2008
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805 549 3147
Last EDR Contact: 02/11/2008
Next Scheduled EDR Contact: 05/12/2008
Data Release Frequency: Semi Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213 576 6600
Last EDR Contact: 04/21/2008
Next Scheduled EDR Contact: 07/21/2008
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916 464 3291
Last EDR Contact: 03/31/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Semi Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619 241 6583
Last EDR Contact: 03/31/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Semi Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530 542 5574
Last EDR Contact: 03/03/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760 346 7491
Last EDR Contact: 03/03/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951 782 3298
Last EDR Contact: 03/31/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Semi Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858 467 2980
Last EDR Contact: 02/25/2008
Next Scheduled EDR Contact: 05/26/2008
Data Release Frequency: Annually

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 04/08/2008
Date Data Arrived at EDR: 04/09/2008
Date Made Active in Reports: 05/01/2008
Number of Days to Update: 22

Source: SWRCB
Telephone: 916 480 1028
Last EDR Contact: 04/09/2008
Next Scheduled EDR Contact: 07/07/2008
Data Release Frequency: Semi Annually

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 03/24/2008
Date Data Arrived at EDR: 03/25/2008
Date Made Active in Reports: 04/09/2008
Number of Days to Update: 15

Source: Department of Public Health
Telephone: 707 463 4466
Last EDR Contact: 03/24/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: Varies

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916 341 5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 02/05/2008
Date Data Arrived at EDR: 02/06/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 37

Source: Department of Toxic Substances Control
Telephone: 916 323 3400
Last EDR Contact: 02/05/2008
Next Scheduled EDR Contact: 05/05/2008
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 11/01/2007
Date Data Arrived at EDR: 11/27/2007
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 916 341 5712
Last EDR Contact: 04/28/2008
Next Scheduled EDR Contact: 07/28/2008
Data Release Frequency: Quarterly

SWEEPS UST: SWEEPS UST Listing
Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/23/2007
Date Made Active in Reports: 04/06/2007
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916 845 8400
Last EDR Contact: 05/02/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

NOTIFY 65: Proposition 65 Records

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916 445 3846
Last EDR Contact: 04/14/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: No Update Planned

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 04/02/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 12

Source: Department of Toxic Substances Control
Telephone: 916 323 3400
Last EDR Contact: 04/02/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Semi Annually

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 02/26/2008
Date Data Arrived at EDR: 02/27/2008
Date Made Active in Reports: 03/27/2008
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916 323 3400
Last EDR Contact: 02/27/2008
Next Scheduled EDR Contact: 05/26/2008
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 07/31/2007
Date Data Arrived at EDR: 07/31/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 9

Source: Department of Toxic Substance Control
Telephone: 916 327 4498
Last EDR Contact: 05/02/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 10/25/2007
Date Data Arrived at EDR: 01/23/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 22

Source: Los Angeles Water Quality Control Board
Telephone: 213 576 6726
Last EDR Contact: 04/23/2008
Next Scheduled EDR Contact: 07/21/2008
Data Release Frequency: Varies

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 09/30/2007
Date Data Arrived at EDR: 10/15/2007
Date Made Active in Reports: 11/07/2007
Number of Days to Update: 23

Source: Department of Toxic Substances Control
Telephone: 916 255 6504
Last EDR Contact: 04/21/2008
Next Scheduled EDR Contact: 07/21/2008
Data Release Frequency: Varies

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high priority and high potential risk.

Date of Government Version: 02/26/2008
Date Data Arrived at EDR: 02/27/2008
Date Made Active in Reports: 03/27/2008
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916 323 3400
Last EDR Contact: 02/27/2008
Next Scheduled EDR Contact: 05/26/2008
Data Release Frequency: Quarterly

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 1,000,000 annually, representing approximately 350,000 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 10/04/2007
Date Made Active in Reports: 11/07/2007
Number of Days to Update: 34

Source: California Environmental Protection Agency
Telephone: 916 255 1136
Last EDR Contact: 02/08/2008
Next Scheduled EDR Contact: 05/05/2008
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 04/17/2007
Date Made Active in Reports: 05/10/2007
Number of Days to Update: 23

Source: California Air Resources Board
Telephone: 916 322 2990
Last EDR Contact: 04/18/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Varies

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 02/26/2008
Date Data Arrived at EDR: 02/27/2008
Date Made Active in Reports: 03/27/2008
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916 323 3400
Last EDR Contact: 02/27/2008
Next Scheduled EDR Contact: 05/26/2008
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 02/12/2008
Date Data Arrived at EDR: 02/14/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 29

Source: Integrated Waste Management Board
Telephone: 916 341 6422
Last EDR Contact: 04/28/2008
Next Scheduled EDR Contact: 06/09/2008
Data Release Frequency: Varies

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202 208 3710
Last EDR Contact: 02/08/2008
Next Scheduled EDR Contact: 05/05/2008
Data Release Frequency: Semi Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703 308 8245
Last EDR Contact: 02/25/2008
Next Scheduled EDR Contact: 05/26/2008
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 06/01/2007
Date Data Arrived at EDR: 06/14/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 21

Source: EPA Region 7
Telephone: 913 551 7003
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 02/20/2008
Date Data Arrived at EDR: 03/04/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 13

Source: EPA Region 8
Telephone: 303 312 6271
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 03/12/2008
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 6

Source: EPA Region 1
Telephone: 617 918 1313
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 02/28/2008
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 17

Source: EPA Region 6
Telephone: 214 665 6597
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 02/25/2008
Date Data Arrived at EDR: 02/26/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 20

Source: Environmental Protection Agency
Telephone: 415 972 3372
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/21/2008
Date Data Arrived at EDR: 02/26/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 23

Source: EPA Region 10
Telephone: 206 553 2857
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Quarterly

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 09/05/2007
Date Data Arrived at EDR: 10/02/2007
Date Made Active in Reports: 10/11/2007
Number of Days to Update: 9

Source: EPA Region 4
Telephone: 404 562 8677
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Semi Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land
A listing of underground storage tank locations on Indian Land.

Date of Government Version: 03/12/2008
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 6

Source: EPA, Region 1
Telephone: 617 918 1313
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 02/28/2008
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 17

Source: EPA Region 6
Telephone: 214 665 7591
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Semi Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 06/01/2007
Date Data Arrived at EDR: 06/14/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 21

Source: EPA Region 7
Telephone: 913 551 7003
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 02/25/2008
Date Data Arrived at EDR: 02/26/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 23

Source: EPA Region 9
Telephone: 415 972 3368
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Quarterly

INDIAN UST R4: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 09/05/2007
Date Data Arrived at EDR: 10/02/2007
Date Made Active in Reports: 10/11/2007
Number of Days to Update: 9

Source: EPA Region 4
Telephone: 404 562 9424
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Semi Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 12/21/2007
Date Data Arrived at EDR: 12/21/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 34

Source: EPA Region 5
Telephone: 312 886 6136
Last EDR Contact: 12/21/2007
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 02/21/2008
Date Data Arrived at EDR: 02/26/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 23

Source: EPA Region 10
Telephone: 206 553 2857
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 02/20/2008
Date Data Arrived at EDR: 03/04/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 13

Source: EPA Region 8
Telephone: 303 312 6137
Last EDR Contact: 02/15/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Quarterly

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/28/2008
Date Data Arrived at EDR: 01/29/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 16

Source: Alameda County Environmental Health Services
Telephone: 510 567 6700
Last EDR Contact: 04/21/2008
Next Scheduled EDR Contact: 07/21/2008
Data Release Frequency: Semi Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/28/2008
Date Data Arrived at EDR: 01/29/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 10

Source: Alameda County Environmental Health Services
Telephone: 510 567 6700
Last EDR Contact: 04/21/2008
Next Scheduled EDR Contact: 07/21/2008
Data Release Frequency: Semi Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 03/07/2008
Date Data Arrived at EDR: 03/11/2008
Date Made Active in Reports: 03/27/2008
Number of Days to Update: 16

Source: Contra Costa Health Services Department
Telephone: 925 646 2286
Last EDR Contact: 02/25/2008
Next Scheduled EDR Contact: 05/26/2008
Data Release Frequency: Semi Annually

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/16/2008
Date Data Arrived at EDR: 01/17/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 28

Source: Dept. of Community Health
Telephone: 559 445 3271
Last EDR Contact: 04/18/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Semi Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing

Kern County Sites and Tanks Listing.

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 04/18/2008
Date Made Active in Reports: 05/01/2008
Number of Days to Update: 13

Source: Kern County Environment Health Services Department
Telephone: 661 862 8700
Last EDR Contact: 04/16/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 07/07/1999
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: EPA Region 9
Telephone: 415 972 3178
Last EDR Contact: 04/14/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 11/29/2007
Date Data Arrived at EDR: 01/22/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 23

Source: Department of Public Works
Telephone: 626 458 3517
Last EDR Contact: 02/11/2008
Next Scheduled EDR Contact: 05/12/2008
Data Release Frequency: Semi Annually

List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 02/12/2008
Date Data Arrived at EDR: 02/21/2008
Date Made Active in Reports: 03/27/2008
Number of Days to Update: 35

Source: La County Department of Public Works
Telephone: 818 458 5185
Last EDR Contact: 02/14/2008
Next Scheduled EDR Contact: 05/12/2008
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/01/2008
Date Data Arrived at EDR: 03/20/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 25

Source: Engineering & Construction Division
Telephone: 213 473 7869
Last EDR Contact: 03/12/2008
Next Scheduled EDR Contact: 06/09/2008
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 05/30/2007
Date Data Arrived at EDR: 07/11/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 29

Source: Community Health Services
Telephone: 323 890 7806
Last EDR Contact: 02/11/2008
Next Scheduled EDR Contact: 05/12/2008
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 02/11/2008
Date Data Arrived at EDR: 02/21/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 22

Source: City of El Segundo Fire Department
Telephone: 310 524 2236
Last EDR Contact: 02/11/2008
Next Scheduled EDR Contact: 05/12/2008
Data Release Frequency: Semi Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562 570 2563
Last EDR Contact: 02/19/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 02/26/2008
Date Data Arrived at EDR: 02/27/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 16

Source: City of Torrance Fire Department
Telephone: 310 618 2973
Last EDR Contact: 02/25/2008
Next Scheduled EDR Contact: 05/12/2008
Data Release Frequency: Semi Annually

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 02/04/2008
Date Data Arrived at EDR: 02/21/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 22

Source: Public Works Department Waste Management
Telephone: 415 499 6647
Last EDR Contact: 04/28/2008
Next Scheduled EDR Contact: 07/28/2008
Data Release Frequency: Semi Annually

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 29

Source: Napa County Department of Environmental Management
Telephone: 707 253 4269
Last EDR Contact: 04/07/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: Semi Annually

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707 253 4269
Last EDR Contact: 04/21/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: Annually

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non petroleum spills.

Date of Government Version: 03/03/2008
Date Data Arrived at EDR: 03/20/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 25

Source: Health Care Agency
Telephone: 714 834 3446
Last EDR Contact: 03/06/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 03/03/2008
Date Data Arrived at EDR: 03/25/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 20

Source: Health Care Agency
Telephone: 714 834 3446
Last EDR Contact: 03/06/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 03/03/2008
Date Data Arrived at EDR: 03/18/2008
Date Made Active in Reports: 04/09/2008
Number of Days to Update: 22

Source: Health Care Agency
Telephone: 714 834 3446
Last EDR Contact: 03/06/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 07/23/2007
Date Data Arrived at EDR: 07/23/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 17

Source: Placer County Health and Human Services
Telephone: 530 889 7312
Last EDR Contact: 03/17/2008
Next Scheduled EDR Contact: 06/16/2008
Data Release Frequency: Semi Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 08/06/2007
Date Data Arrived at EDR: 08/07/2007
Date Made Active in Reports: 09/26/2007
Number of Days to Update: 50

Source: Department of Public Health
Telephone: 951 358 5055
Last EDR Contact: 04/14/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Quarterly

Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 08/06/2007
Date Data Arrived at EDR: 08/07/2007
Date Made Active in Reports: 09/24/2007
Number of Days to Update: 48

Source: Health Services Agency
Telephone: 951 358 5055
Last EDR Contact: 04/14/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Contaminated Sites

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/11/2008
Date Data Arrived at EDR: 02/27/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 16

Source: Sacramento County Environmental Management
Telephone: 916 875 8406
Last EDR Contact: 05/02/2008
Next Scheduled EDR Contact: 07/28/2008
Data Release Frequency: Quarterly

ML - Regulatory Compliance Master List

Any business that has hazardous materials on site hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/11/2008
Date Data Arrived at EDR: 02/27/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 16

Source: Sacramento County Environmental Management
Telephone: 916 875 8406
Last EDR Contact: 05/02/2008
Next Scheduled EDR Contact: 07/28/2008
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 03/18/2008
Date Data Arrived at EDR: 03/19/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 26

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909 387 3041
Last EDR Contact: 03/03/2008
Next Scheduled EDR Contact: 12/03/2007
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 05/16/2005
Date Data Arrived at EDR: 05/18/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 29

Source: Hazardous Materials Management Division
Telephone: 619 338 2268
Last EDR Contact: 04/02/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 08/01/2007
Date Data Arrived at EDR: 02/05/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 9

Source: Department of Health Services
Telephone: 619 338 2209
Last EDR Contact: 02/19/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 11/28/2007
Date Data Arrived at EDR: 03/13/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 32

Source: San Diego County Department of Environmental Health
Telephone: 619 338 2371
Last EDR Contact: 04/23/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 03/03/2008
Date Data Arrived at EDR: 03/04/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415 252 3920
Last EDR Contact: 03/03/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 03/03/2008
Date Data Arrived at EDR: 03/04/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 10

Source: Department of Public Health
Telephone: 415 252 3920
Last EDR Contact: 03/03/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 02/01/2008
Date Data Arrived at EDR: 02/26/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 17

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 04/14/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Semi Annually

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 01/31/2008
Date Data Arrived at EDR: 02/01/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 13

Source: San Mateo County Environmental Health Services Division
Telephone: 650 363 1921
Last EDR Contact: 04/07/2008
Next Scheduled EDR Contact: 07/07/2008
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 01/09/2008
Date Data Arrived at EDR: 01/11/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 34

Source: San Mateo County Environmental Health Services Division
Telephone: 650 363 1921
Last EDR Contact: 04/07/2008
Next Scheduled EDR Contact: 07/07/2008
Data Release Frequency: Semi Annually

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408 265 2600
Last EDR Contact: 03/24/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 02/01/2008
Date Data Arrived at EDR: 02/05/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 9

Source: Department of Environmental Health
Telephone: 408 918 3417
Last EDR Contact: 04/28/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: Varies

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 03/04/2008
Date Data Arrived at EDR: 03/04/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 10

Source: City of San Jose Fire Department
Telephone: 408 277 4659
Last EDR Contact: 03/03/2008
Next Scheduled EDR Contact: 06/02/2008
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 09/24/2007
Date Data Arrived at EDR: 10/23/2007
Date Made Active in Reports: 11/07/2007
Number of Days to Update: 15

Source: Solano County Department of Environmental Management
Telephone: 707 784 6770
Last EDR Contact: 03/24/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: Quarterly

Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 04/04/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/01/2008
Number of Days to Update: 9

Source: Solano County Department of Environmental Management
Telephone: 707 784 6770
Last EDR Contact: 03/24/2008
Next Scheduled EDR Contact: 06/23/2008
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/22/2008
Date Data Arrived at EDR: 01/22/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 23

Source: Department of Health Services
Telephone: 707 565 6565
Last EDR Contact: 04/21/2008
Next Scheduled EDR Contact: 07/21/2008
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 05/04/2007
Date Data Arrived at EDR: 05/04/2007
Date Made Active in Reports: 05/24/2007
Number of Days to Update: 20

Source: Sutter County Department of Agriculture
Telephone: 530 822 7500
Last EDR Contact: 03/31/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Semi Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 02/27/2008
Date Data Arrived at EDR: 03/25/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 20

Source: Ventura County Environmental Health Division
Telephone: 805 654 2813
Last EDR Contact: 03/12/2008
Next Scheduled EDR Contact: 06/09/2008
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2007
Date Data Arrived at EDR: 08/29/2007
Date Made Active in Reports: 09/26/2007
Number of Days to Update: 28

Source: Environmental Health Division
Telephone: 805 654 2813
Last EDR Contact: 02/19/2008
Next Scheduled EDR Contact: 05/19/2008
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 02/27/2008
Date Data Arrived at EDR: 03/25/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 20

Source: Environmental Health Division
Telephone: 805 654 2813
Last EDR Contact: 03/12/2008
Next Scheduled EDR Contact: 06/09/2008
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 03/26/2008
Date Data Arrived at EDR: 04/09/2008
Date Made Active in Reports: 05/01/2008
Number of Days to Update: 22

Source: Environmental Health Division
Telephone: 805 654 2813
Last EDR Contact: 04/09/2008
Next Scheduled EDR Contact: 07/07/2008
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 01/29/2008
Date Data Arrived at EDR: 02/20/2008
Date Made Active in Reports: 03/14/2008
Number of Days to Update: 23

Source: Yolo County Department of Health
Telephone: 530 666 8646
Last EDR Contact: 04/28/2008
Next Scheduled EDR Contact: 07/14/2008
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 06/15/2007
Date Made Active in Reports: 08/20/2007
Number of Days to Update: 66

Source: Department of Environmental Protection
Telephone: 860 424 3375
Last EDR Contact: 03/14/2008
Next Scheduled EDR Contact: 06/09/2008
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 09/30/2007
Date Data Arrived at EDR: 12/04/2007
Date Made Active in Reports: 12/31/2007
Number of Days to Update: 27

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/03/2008
Next Scheduled EDR Contact: 06/30/2008
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 02/15/2008
Date Data Arrived at EDR: 02/28/2008
Date Made Active in Reports: 04/09/2008
Number of Days to Update: 41

Source: Department of Environmental Conservation
Telephone: 518 402 8651
Last EDR Contact: 02/28/2008
Next Scheduled EDR Contact: 05/26/2008
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 12/21/2007
Date Made Active in Reports: 01/10/2008
Number of Days to Update: 20

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 03/10/2008
Next Scheduled EDR Contact: 06/09/2008
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 10/01/2007
Date Data Arrived at EDR: 11/09/2007
Date Made Active in Reports: 01/15/2008
Number of Days to Update: 67

Source: Department of Environmental Management
Telephone: 401 222 2797
Last EDR Contact: 03/17/2008
Next Scheduled EDR Contact: 06/16/2008
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 04/27/2007
Date Made Active in Reports: 06/08/2007
Number of Days to Update: 42

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 04/07/2008
Next Scheduled EDR Contact: 07/07/2008
Data Release Frequency: Annually

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities schools, daycares, hospitals, medical centers, and nursing homes where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312 280 5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410 786 3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301 594 6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202 502 7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202 502 7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916 657 4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100 year and 500 year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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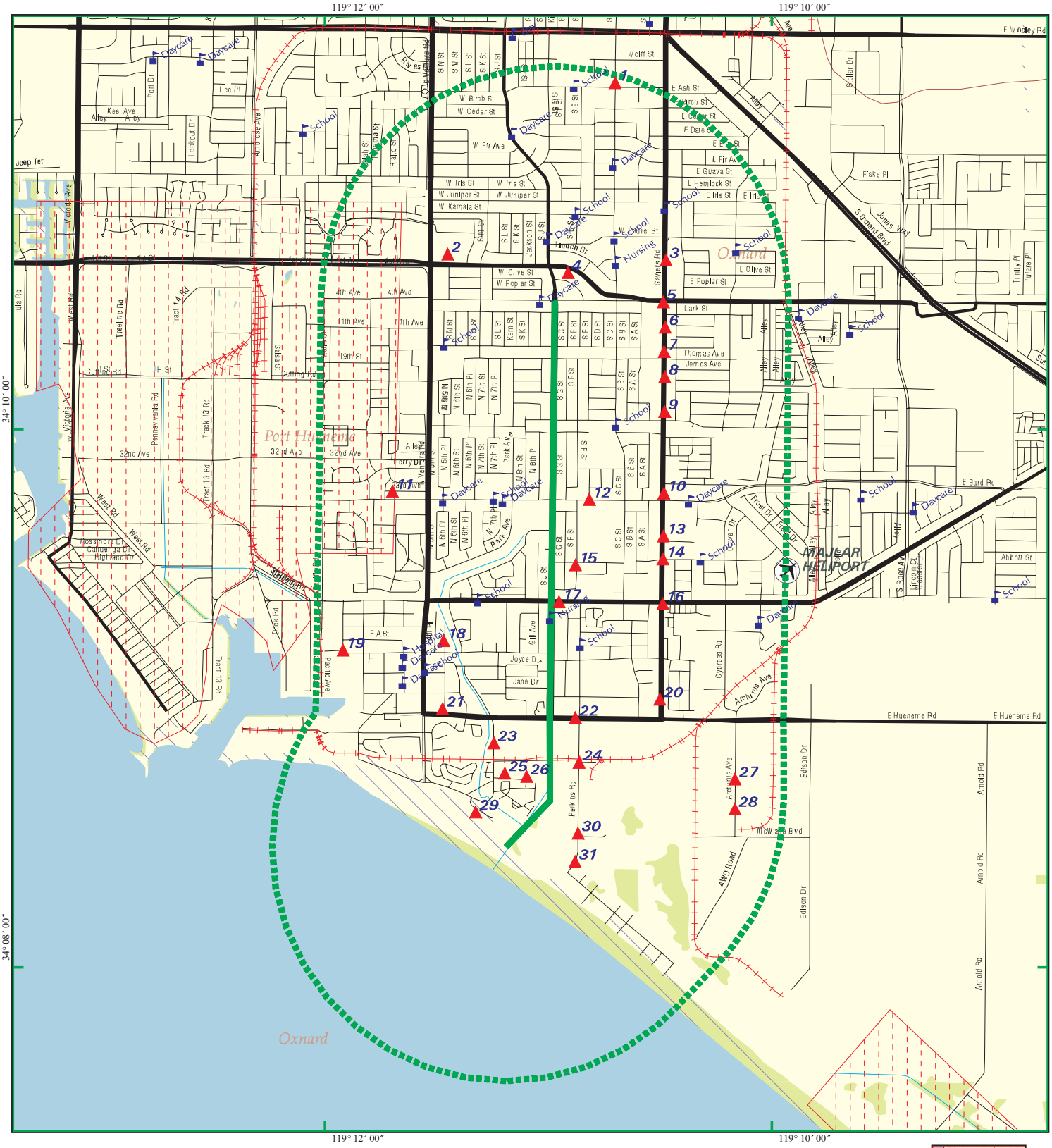

EDR DataMap ® Corridor Study

J Street Drain Project

EDR® Environmental Data Resources Inc

Oxnard, CA

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- 100-Yr Flood Zones
- National Wetland Inventory

N

0 1/4 1/2

Scale in Miles

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02208516.1r - 02 May 08

Global Climate Change Evaluation

for the

J Street Drain Project
Ventura County, California

Submitted To:

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July 30, 2011

Table of Contents

1.0 INTRODUCTION 1

1.1 General Principles and Existing Conditions 2

1.2 Sources and Global Warming Potentials of GHG 4

1.3 Regulatory Framework 6

1.3.1 National and International Efforts 6

1.3.2 State Regulations and Standards 8

2.0 POTENTIAL CLIMATE CHANGE IMPACTS TO PROJECT SITE 13

2.1 Existing Conditions 13

2.2 Typical Adverse Effects 14

3.0 CLIMATE CHANGE SIGNIFICANCE CRITERIA 17

4.0 GREENHOUSE GAS INVENTORY 20

4.1 Construction Greenhouse Gas Emissions 20

4.2 Operational Greenhouse Gas Emissions 21

5.0 CONCLUSIONS 23

6.0 REFERENCES 24

Appendix A Greenhouse Gas Emission Calculations

1.0 INTRODUCTION

This report presents an assessment of potential global climate change impacts associated with the proposed J Street Drain Project proposed by the Ventura County Watershed Protection District (District) in Ventura County, California. The J Street Drain is located within a Ventura County easement which includes the concrete channel, some box culverts under the roadways, and, south of Hueneme Road, an adjacent access road. The drain itself is located near the border between City of Oxnard and City of Port Hueneme. The proposed construction of the J Street Drain could potentially impact the land uses and roadways of both cities during construction activities.

The purpose of the proposed project is to provide flood protection to the 100-year flood level for the area surrounding J Street Drain. Protection from a 100-year flood is the standard set by the Federal Emergency Management Agency (FEMA) under the National Flood Insurance Program (NFIP). The need for such protection is evidenced by the studies that show the existing drain has the capacity to handle only a ten-year flood event without overtopping the channel. Without the increase in flood protection the local area would continue to be susceptible to flooding, as well as federal requirements to purchase flood insurance for properties within the 100-year flood zone defined by FEMA after they update existing flood maps for the project area in the future.

The proposed project involves converting the existing trapezoidal concrete channel into an open rectangular channel with a bottom approximately four feet deeper than the existing channel bottom. The existing trapezoidal channel would be widened and deepened to increase the capacity; the channel walls would be vertical with the top being an open channel. The existing box culverts under the street crossings and railroad crossing would be replaced by larger structures to improve flow conveyance. The existing concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station. Because the concrete lined portion of the channel invert would be lowered about 2.5 feet to create the required capacity, excavation would continue downstream towards the ocean. The finished invert would be daylighted via an earthen ramp to the lagoon at a 10:1 slope over a distance of up to 40 feet from the end of the existing concrete. A six- to eight-foot thick layer of four-ton rock riprap would be placed on the earthen ramp at the end of the concrete drain to dissipate energy flow.

The demolition of the existing drain and construction of the new, higher capacity drain would take place in phases. It is anticipated that the demolition and construction would start at the southern end of the drain, south of Hueneme Road and move northward in phases. The construction phases are anticipated as:

- Phase I Downstream end of the Drain to north side of Hueneme Road (3430 lineal feet);
- Phase II Hueneme Road to Pleasant Valley Road (2620 lineal feet);
- Phase III Pleasant Valley Road to Yucca Street (4100 lineal feet); and
- Phase IV Yucca Street to just north of Redwood Street (2680 lineal feet).

Each of these phases would occur independently rather than concurrently. A detailed description of construction activities required for the project is provided in Section 4.0. It is anticipated that maintenance of the reconstructed drain will be similar to the existing maintenance activities.

This evaluation addresses the potential for greenhouse gas emissions during construction and after full buildout of the project. The analysis provides an evaluation of the potential for adverse environmental impacts that the project may have on global climate change (GCC).

1.1 General Principles and Existing Conditions

Global climate change refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O), which are known as greenhouse gases (GHGs). These gases allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere. Gases that trap heat in the atmosphere are often called greenhouse gases, analogous to a greenhouse. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Without these natural GHGs, the Earth's temperature would be about 61º Fahrenheit cooler (California Environmental Protection Agency 2006). Emissions from human

activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere.

GHGs have been at the center of a widely contested political, economic, and scientific debate surrounding GCC. Although the conceptual existence of GCC is generally accepted, the extent to which GHGs contribute to it remains a source of debate. The State of California has been at the forefront of developing solutions to address GCC. GCC refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. GCC may result from natural factors, natural processes, and/or human activities that change the composition of the atmosphere and alter the surface and features of land.

Global climate change attributable to anthropogenic (human) emissions of GHGs (mainly CO_2, CH_4 and N_2O) is currently one of the most important and widely debated scientific, economic and political issues in the United States. Historical records indicate that global climate changes have occurred in the past due to natural phenomena (such as during previous ice ages). Some data indicate that the current global conditions differ from past climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The Panel concluded that a stabilization of GHGs at 400 to 450 parts per million (ppm) CO_2 equivalent concentration is required to keep global mean warming below 3.6º Fahrenheit (2º Celsius), which is assumed to be necessary to avoid dangerous climate change (Association of Environmental Professionals 2007).

State law defines greenhouse gases as any of the following compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6) (California Health and Safety Code Section 38505(g).) CO_2, followed by CH_4 and N_2O, are the most common GHGs that result from human activity.

1.2 Sources and Global Warming Potentials of GHG

The State of California GHG Inventory performed by the California Air Resources Board (ARB), compiled statewide anthropogenic GHG emissions and sinks. It includes estimates for CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs. The current inventory covers the years 1990 to 2008, and is summarized in Table 1. Data sources used to calculate this GHG inventory include California and federal agencies, international organizations, and industry associations. The calculation methodologies are consistent with guidance from the IPCC. The 1990 emissions level is the sum total of sources and sinks from all sectors and categories. The inventory is divided into seven broad sectors and categories in the inventory. These sectors include: Agriculture; Commercial; Electricity Generation; Forestry; Industrial; Residential; and Transportation.

When accounting for GHGs, all types of GHG emissions are expressed in terms of CO_2 equivalents (CO_2e) and are typically quantified in metric tons (MT) or millions of metric tons (MMT).

Table 1
STATE OF CALIFORNIA GHGS BY SECTOR

Sector	Total 1990 Emissions ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2008 Emissions ($MMTCO_2e$)	Percent of Total 2008 Emissions
Agriculture	23.4	5%	28.06	6%
Commercial	14.4	3%	14.68	3%
Electricity Generation	110.6	26%	116.35	25%
Forestry (excluding sinks)	0.2	<1%	0.19	<1%
Industrial	103.0	24%	92.66	20%
Residential	29.7	7%	28.45	6%
Transportation	150.7	35%	174.99	37%
Recycling and Waste	Not available	Not available	6.71	1%
High GWP Gases	Not available	Not available	15.65	3%
Forestry Sinks	(6.7)		(3.98)	

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the "cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference

gas" (USEPA 2006). The reference gas for GWP is CO_2; therefore, CO_2 has a GWP of 1. The other main greenhouse gases that have been attributed to human activity include CH_4, which has a GWP of 21, and N_2O, which has a GWP of 310. Table 2 presents the GWP and atmospheric lifetimes of common GHGs.

Table 2
GLOBAL WARMING POTENTIAL AND ATMOSPHERIC LIFETIMES OF GHGs

GHG	Formula	100-Year Global Warming Potential	Atmospheric Lifetime (Years)
Carbon Dioxide	CO_2	1	Variable
Methane	CH_4	21	12 ± 3
Nitrous Oxide	N_2O	310	120
Sulfur Hexafluoride	SF_6	23,900	3,200

Human-caused sources of CO_2 include combustion of fossil fuels (coal, oil, natural gas, gasoline and wood). Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. Concentrations of CO_2 have increased in the atmosphere since the industrial revolution.

CH_4 is the main component of natural gas and also arises naturally from anaerobic decay of organic matter. Human-caused sources of natural gas include landfills, fermentation of manure and cattle farming. Human-caused sources of N_2O include combustion of fossil fuels and industrial processes such as nylon production and production of nitric acid.

Other GHGs are present in trace amounts in the atmosphere and are generated from various industrial or other uses.

The sources of GHG emissions, GWP, and atmospheric lifetime of GHGs are all important variables to be considered in the process of calculating CO_2e for discretionary land use projects that require a climate change analysis.

1.3 Regulatory Framework

All levels of government have some responsibility for the protection of air quality, and each level (Federal, State, and regional/local) has specific responsibilities relating to air quality regulation. GHG emissions and the regulation of GHGs is a relatively new component of air quality.

1.3.1 National and International Efforts

International and Federal legislation have been enacted to deal with GCC issues. In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis for human-induced climate change, its potential impacts, and options for adaptation and mitigation. The most recent reports of the IPCC have emphasized the scientific consensus that real and measurable changes to the climate are occurring, that they are caused by human activity, and that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable.

In October 1993, President Clinton announced his Climate Change Action Plan (CCAP), which had a goal of returning GHG emissions to 1990 levels by the year 2000. This was to be accomplished through 50 initiatives that relied on innovative voluntary partnerships between the private sector and government aimed at producing cost-effective reductions in GHG emissions. On March 21, 1994, the United States joined a number of countries around the world in signing the United Nations Framework Convention on Climate Change (UNFCCC). Under the Convention, governments agreed to gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of GCC. Recently, the United States Supreme Court declared in the court case of Massachusetts et al. vs. the Environmental Protection Agency et al., 549 C.S. 497 (2007) that the EPA does have the ability to regulate GHG emissions. In addition to the national and international efforts described above, many local jurisdictions have adopted climate change policies and programs.

Endangerment Finding. On April 17, 2009, EPA issued its proposed endangerment finding for GHG emissions. On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

> **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)--in the atmosphere threaten the public health and welfare of current and future generations.
>
> **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

The endangerment findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA's proposed greenhouse gas emission standards for light-duty vehicles, which were jointly proposed by EPA and the Department of Transportation's National Highway Safety Administration on September 15, 2009.

Mandatory GHG Reporting Rule. On March 10, 2009, in response to the FY2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110 161), EPA proposed a rule that requires mandatory reporting of greenhouse gas (GHG) emissions from large sources in the United States. The proposed rule would collect accurate and comprehensive emissions data to inform future policy decisions.

EPA is proposing that suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHGs submit annual reports to EPA. The gases covered by the proposed rule are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur

hexafluoride (SF_6), and other fluorinated gases including nitrogen trifluoride (NF_3) and hydrofluorinated ethers (HFE).

Corporate Average Fuel Economy Standards. The federal Corporate Average Fuel Economy (CAFE) standard determines the fuel efficiency of certain vehicle classes in the United States. In 2007, as part of the Energy and Security Act of 2007, CAFE standards were increased for new light-duty vehicles to 35 miles per gallon by 2020. In May 2009, President Obama announced plans to increase CAFE standards to require light-duty vehicles to meet an average fuel economy of 35.5 miles per gallon by 2016. On April 1, 2010, the U.S. Department of Transportation and the EPA established historic new federal rules that set the first-ever national greenhouse gas emissions standards and will significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. The standards set a requirement to meet an average fuel economy of 34.1 miles per gallon by 2016.

1.3.2 State Regulations and Standards

The following subsections describe regulations and standards that have been adopted by the State of California to address GCC issues.

Assembly Bill 32, the California Global Warming Solutions Act of 2006. In September 2006, Governor Schwartzenegger signed California AB 32, the global warming bill, into law. AB 32 directs the ARB to do the following:

- Make publicly available a list of discrete early action GHG emission reduction measures that can be implemented prior to the adoption of the statewide GHG limit and the measures required to achieve compliance with the statewide limit.
- Make publicly available a GHG inventory for the year 1990 and determine target levels for 2020.
- On or before January 1, 2010, adopt regulations to implement the early action GHG emission reduction measures.
- On or before January 1, 2011, adopt quantifiable, verifiable, and enforceable emission reduction measures by regulation that will achieve the statewide GHG emissions limit by

2020, to become operative on January 1, 2012, at the latest. The emission reduction measures may include direct emission reduction measures, alternative compliance mechanisms, and potential monetary and non-monetary incentives that reduce GHG emissions from any sources or categories of sources that ARB finds necessary to achieve the statewide GHG emissions limit.

- Monitor compliance with and enforce any emission reduction measure adopted pursuant to AB 32.

AB 32 required that by January 1, 2008, ARB would determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. ARB adopted its Scoping Plan in December 2008, which provided estimates of the 1990 GHG emissions level and identified sectors for the reduction of GHG emissions. The ARB has estimated that the 1990 GHG emissions level was 427 MMT net CO_2e (ARB 2007b). The ARB estimates that a reduction of 173 MMT net CO_2e emissions below business-as-usual would be required by 2020 to meet the 1990 levels (ARB 2007b). This amounts to a 15 percent reduction from today's levels, and a 30 percent reduction from projected business-as-usual levels in 2020 (ARB 2008a).

Senate Bill 97. Senate Bill 97, enacted in 2007, amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directs the Governor's Office of Planning and Research (OPR) to develop draft CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" by July 1, 2009 and directs the Resources Agency to certify and adopt the CEQA guidelines by January 1, 2010.

The OPR published a technical advisory on CEQA and Climate Change on June 19, 2008. The guidance did not include a suggested threshold, but stated that the OPR has asked CARB to, "recommend a method for setting thresholds which will encourage consistency and uniformity in the CEQA analysis of greenhouse gas emissions throughout the state." The OPR does recommend that CEQA analyses include the following components:

- Identify greenhouse gas emissions
- Determine Significance
- Mitigate Impacts

In April, the OPR published its proposed revisions to CEQA to address GHG emissions. The amendments to CEQA indicate the following:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

On July 3, 2009 the California Natural Resources Agency published proposed amendment of regulations based on OPR's proposed revisions to CEQA to address GHG emissions. On that date, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting these amendments pursuant to Public Resources Code section 21083.05. Having reviewed and considered all comments received, on December 30, 2009, the Natural Resources Agency adopted the proposed amendments to the state CEQA guidelines in

the California Code of Regulations. The amendments were formally adopted on March 18, 2010.

Executive Order S-3-05. Executive Order S-3-05, signed by Governor Schwartzenegger on June 1, 2005, calls for a reduction in GHG emissions to 1990 levels by 2020 and for an 80 percent reduction in GHG emissions by 2050. Executive Order S-3-05 also calls for the California EPA (CalEPA) to prepare biennial science reports on the potential impact of continued GCC on certain sectors of the California economy. The first of these reports, "Our Changing Climate: Assessing Risks to California", and its supporting document "Scenarios of Climate Change in California: An Overview" were published by the California Climate Change Center in 2006.

California Code of Regulations Title 24. Although not originally intended to reduce greenhouse gas emissions, California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The GHG emission inventory was based on Title 24 standards as of October 2005; however, Title 24 was updated as of 2008 and standards began to be phased in summer 2009. Energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in greenhouse gas emissions. Therefore, increased energy efficiency results in decreased greenhouse gas emissions.

State Standards Addressing Vehicular Emissions. California Assembly Bill 1493 (Pavley) enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Regulations adopted by ARB would apply to 2009 and later model year vehicles. ARB estimated that the regulation would reduce GHG emissions from light duty passenger vehicle fleet by an estimated 18% in 2020 and by 27% in 2030 (AEP 2007). In 2005, the ARB requested a waiver from EPA to enforce the regulation, as required under the Clean Air Act. The waiver was granted on June

30, 2009, and the state of California is implementing regulations to set forth greenhouse gas emission standards for vehicles. It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs.

Executive Order S-01-07. Executive Order S-01-07 was enacted by the Governor on January 18, 2007. Essentially, the order mandates the following: 1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and 2) that a Low Carbon Fuel Standard ("LCFS") for transportation fuels be established for California. It is assumed that the effects of the LCFS would be a 10% reduction in GHG emissions from fuel use by 2020. On April 23, 2009, ARB adopted regulations to implement the LCFS.

Senate Bill 375. Senate Bill 375 requires that regions within the state which have a metropolitan planning organization must adopt a sustainable communities strategy as part of their regional transportation plans. The strategy must be designed to achieve certain goals for the reduction of GHG emissions. The bill finds that GHG from autos and light trucks can be substantially reduced by new vehicle technology, but even so "it will be necessary to achieve significant additional greenhouse gas reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 provides that new CEQA provisions be enacted to "encourage developers to submit applications and local governments to make land use decisions that will help the state achieve its goals under AB 32," and that "current planning models and analytical techniques used for making transportation infrastructure decisions and for air quality planning should be able to assess the effects of policy choices, such as residential development patterns, expanded transit service and accessibility, the walkability of communities, and the use of economic incentives and disincentives."

2.0 POTENTIAL CLIMATE CHANGE IMPACTS TO PROJECT SITE

2.1 Existing Conditions

The J Street Drain is an existing concrete-lined channel that is designed to accommodate water during storm events. The project is designed to increase capacity of the existing channel to reduce flooding in residential and commercial areas of Oxnard and Port Hueneme, and to improve stormwater flow through the drain.

In addition to the drain capacity, the outlet of the drain is sometimes constrained by a sand berm that can reach over seven feet in height surrounding the Ormond Beach Lagoon. The sand berm hinders the direct flow path of the J Street Drain channel to the Pacific Ocean. The berm currently directs the water to the east, toward the Oxnard Industrial Drain (OID). If the berm does not open during a storm event, then storm water ponds in the Lagoon and can fill the drain to capacity as far as Hueneme Road, posing a flood risk to the Oxnard Wastewater Treatment Plant (OWWTP), residential, and commercial property even during minor storms.

Prior to 1992, the sand berm at the Ormond Beach Lagoon was periodically breached by the District. Bulldozers were used to create a discharge path directly to the ocean and prevent water and silt buildup in the channel. However, this practice ceased in 1992 due to environmental concerns and restrictions. Under existing conditions, natural breaching typically occurs when the surface water in the lagoon reaches an elevation of 7.5 to 8 feet above mean sea level (AMSL). However, the expected maximum water level in the lagoon is regulated by the lowest beach crest elevation (the height of the sand berm). Natural breaching takes place after the lagoon water level exceeds the height of the sand berm. Due to constant wind and wave action, the elevation across the sand berm is not uniform in space or constant in time and its maximum elevation is approximately 11.6 feet National Geodetic Vertical Datum of 1929 (NGVD) (14 feet North American Vertical Datum of 1988 [NAVD]). Due to the dynamic nature of the Lagoon and sand berm elevation, surface water elevation for natural breaching will likely vary. Therefore, natural breaching at the lagoon may not occur during a ten-year flood event (capacity of existing drain) in which case the project area would flood due to backwater effects.

2.2 Typical Adverse Effects

The Climate Scenarios Report (CCCC 2006), uses a range of emissions scenarios developed by the IPCC to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21st century. Three warming ranges were identified: Lower warming range (3.0 to 5.5 degrees Fahrenheit (ºF)); medium warming range (5.5 to 8.0 ºF); and higher warming range (8.0 to 10.5 ºF). The Climate Scenarios report then presents an analysis of the future projected climate changes in California under each warming range scenario.

According to the report, substantial temperature increases would result in a variety of impacts to the people, economy, and environment of California. These impacts would result from a projected increase in extreme conditions, with the severity of the impacts depending upon actual future emissions of GHGs and associated warming. These impacts are described below.

Public Health. Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone (O_3) formation are projected to increase by 25 to 35 percent under the lower warming range and 75 to 85 percent under the medium warming range. In addition, if global background O_3 levels increase as is predicted in some scenarios, it may become impossible to meet local air quality standards. An increase in wildfires could also occur, and the corresponding increase in the release of pollutants including $PM_{2.5}$ could further compromise air quality. The Climate Scenarios report indicates that large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced.

Potential health effects from global climate change may arise from temperature increases, climate-sensitive diseases, extreme events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems (e.g., heat rash and heat stroke). In addition, climate sensitive diseases may increase, such as those spread by mosquitoes and other disease-carrying insects (such as malaria,

dengue fever, yellow fever, and encephalitis). This effect could occur in southern California in general and at the project site specifically.

Water Resources. A vast network of reservoirs and aqueducts capture and transport water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada mountain snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages. In addition, if temperatures continue to rise more precipitation would fall as rain instead of snow, further reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. The State's water resources are also at risk from rising sea levels. An influx of seawater would degrade California's estuaries, wetlands, and groundwater aquifers.

One of the purposes of the J Street Drain project is to improve stormwater flow and reducing potential flooding in the cities of Oxnard and Port Hueneme. The project would therefore alleviate potential flooding impacts in the event that global climate change affects the severity of storms and runoff.

Agriculture. Increased GHG and associated increases in temperature are expected to cause widespread changes to the agricultural industry, reducing the quantity and quality of agricultural products statewide. Significant reductions in available water supply to support agriculture would also impact production. Crop growth and development will change as will the intensity and frequency of pests and diseases. This effect would not impact the project because it is not an agricultural development.

Ecosystems/Habitats. Continued global warming will likely shift the ranges of existing invasive plants and weeds, thus alternating competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Continued global warming is also likely to increase the populations of and types of pests. Continued global warming would also affect natural ecosystems and biological habitats throughout the State. The channel does

provide habitat for fish, including the endangered tidewater goby. Potential changes in global climate may have an effect on the fauna within the channel.

Wildland Fires. Global warming is expected to increase the risk of wildfire and alter the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the State. This effect could increase the potential for wildland fires in areas around the project site.

Rising Sea Levels. Rising sea levels, more intense coastal storms, and warmer water temperatures will increase the threat to the State's coastal regions. Under the high warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. A sea level rise of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten levees and inland water systems, and disrupt wetlands and natural habitats.

One of the objectives of the project is to implement a Beach Elevation Management Plan for the Ormond Beach Lagoon, which would allow for breaching of the sand berm to facilitate drainage from the lagoon out to sea. Should sea levels rise, Ormond Beach Lagoon may be affected by natural breaching of the sand berm, and by infiltration of sea water into the drain. Because of the design of the project to increase the capacity of the J Street Drain, it is anticipated that the project will alleviate impacts to the extent possible.

3.0 CLIMATE CHANGE SIGNIFICANCE CRITERIA

According to the California Natural Resources Agency[1], "due to the global nature of GHG emissions and their potential effects, GHG emissions will typically be addressed in a cumulative impacts analysis." According to Appendix G of the CEQA Guidelines, the following criteria may be considered to establish the significance of GHG emissions:

Would the project:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency, consistent with the provisions in Section 15064. Section 15064.4 further provides that a lead agency should make a good-faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

(1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate, provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

(2) Rely on a qualitative analysis or performance based standards.

Section 15064.4 also advises a lead agency to consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

[1] California Natural Resources Agency, Initial Statement of Reasons for Regulatory Action, Proposed Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gases Pursuant to SB 97. July 2009.

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

The California Air Pollution Control Officers Association (CAPCOA) recommended a threshold of 900 metric tons of CO_2e emissions as a threshold below which no further evaluation would be required, and no significant impact would occur (CAPCOA 2008). Lead agencies have utilized this threshold as an initial screening threshold to determine whether further evaluation is required.

To date, Ventura County has not adopted specific quantitative thresholds of significance for GHGs. The County has reviewed thresholds and approaches for evaluating significance based on guidance issued by the South Coast Air Quality Management District, the Bay Area Air Quality Management District, and the San Joaquin Valley Air Pollution Control District, but has not implemented any of the approaches used by these agencies.

In their evaluation of significance of GHG emissions uncer CEQA, the SCAQMD staff has established a GHG CEQA Significance Threshold Working Group. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that will provide input to the SCAQMD staff on developing GHG CEQA significance thresholds.

On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. On September 28, 2010, the SCAQMD recommended a threshold of 10,000 metric tons of CO_2e emissions annually for industrial projects. Given the nature of the project as a temporary construction

project, for the purpose of this document, the significance of impacts has been evaluated based on the SCAQMD's interim threshold for industrial projects of 10,000 metric tons of CO2e.

In addition to Ventura County guidance, the White House Council on Environmental Quality (CEQ) has also issued draft guidance directing Federal agencies on consideration of the effects of GHG emissions in NEPA documents. The CEQ indicated that the environmental analysis and documents in the NEPA process should provide the decision maker with information on (1) the GHG emissions effects of a proposed action and alternatives; and (2) the relationship of climate change effects to a proposed action or alternatives, including the relationship to proposed design, environmental impacts, mitigation, and adaptation measures. The draft guidance indicated that if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO_2e GHG emissions on an annual basis, agencies should conduct a qualitative and quantitative analysis of GHG impacts. The CEQ does not propose this level as an indicator of a threshold of significant effects, but rather as an indicator of the minimum level of GHG emissions that may warrant some description in the NEPA analysis.

The analysis contained within this Technical Report provides the recommended evaluation under both CEQA and NEPA. Because the SCAQMD's interim threshold of 10,000 metric tons of CO2e per year for industrial projects is more stringent than the CEQ's guideline of 25,000 metric tons of CO2e per year, the SCAQMD's threshold was utilized.

The SCAQMD also recommends that, to evaluate the Project's contribution of GHG emissions over a project lifetime (assumed to be 30 years), the project's construction GHG emissions be amortized over a 30-year period. The amortization approach has been followed in this analysis to assess the potential significance of construction emissions.

4.0 GREENHOUSE GAS INVENTORY

4.1 Construction Greenhouse Gas Emissions

The main source of GHG emissions associated with the proposed J Street Drain Project is generated from combustion of fossil fuels in construction equipment. Construction GHG emissions were calculated using the URBEMIS Model, Version 9.2.4. The URBEMIS Model contains the most recent emission factors from the ARB's EMFAC2007 and OFFROAD models. Model outputs are provided in Appendix A. The URBEMIS Model provides estimates of CO_2 emissions only; to estimate emissions of CH_4 and N_2O, the relative emission rates from combustion of diesel fuel were used to derive conversion factors. The CO_2-equivalent emissions were calculated by multiplying the emissions of GHG by their global warming potential, and then summing the emissions.

Table 3
ESTIMATED CONSTRUCTION GHG EMISSIONS
J STREET DRAIN PROJECT

Construction Phase	Total Emissions per Phase, metric tons[1]			
	CO_2	CH_4	N_2O	CO_2e
Phase I	6,206	0.35	0.16	6,262
Phase II	5,968	0.34	0.15	6,022
Phase III	5,866	0.34	0.15	5,920
Phase IV	5,864	0.34	0.15	5,918
Total CO_2e Emissions, metric tons				**24,122**
Amortized CO_2e Emissions, metric tons				**804**

[1]Metric tons are calculated by dividing the total short tons by a factor of 1.1023

As shown in Table 3, amortized construction emissions would contribute 804 metric tons annually to the lifetime of the project (30 years). The emissions would be below the SCAQMD's annual threshold for industrial projects of 10,000 metric tons of CO_2e, and, when amortized, would be below the CAPCOA recommended threshold of 900 metric tons of CO_2e emissions.

4.2 Operational Greenhouse Gas Emissions

Operational impacts associated with the Project would be associated with ongoing maintenance activities. It is anticipated that maintenance of the reconstructed drain will be similar to the existing maintenance activities.

In order to programmatically address District maintenance activities, a Final Program Environmental Impact Report (EIR) for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program was certified in May 2008. The Environmental Projection Measures for the Ongoing Routine Operations and Maintenance Program proposed by the District aim to reduce the current administrative process to comply with agreements and permits necessary for the maintenance activities at the District's facilities. Currently, many of the District's facility maintenance activities occur in drainages, watercourses, creeks, basins, and water bodies where such activities are regulated by several state and federal agencies. Typical maintenance activities include sediment removal and vegetation control to maintain capacity within the facility. The modification to the bed, bank, and/or vegetation in a natural drainage (and certain man-made drainages) is regulated by the California Department of Fish and Game (CDFG) under Section 1600 et seq. of the Fish and Game Code, by the US Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act, and by the Regional Water Quality Control Board (RWQCB) under Section 401 of the Clean Water Act.

In the EIR, GHG emissions attributable to operation and maintenance activities were evaluated. The main source of emissions associated with operation and maintenance activities was attributable to mobile combustion sources (vehicles). It was estimated that operation and maintenance activities would contribute 23.04 metric tons per year of CO2e from light-duty vehicles and 44.30 metric tons per year of CO2e from heavy duty vehicles, for a total of 67.34 metric tons per year. Operation and maintenance activities for the J Street Drain project would be included in this estimate. Maintenance activities associated with the proposed J Street Drain would be similar to the activities currently taking place for the existing drain maintenance. Beach grooming would be a new task associated with maintenance activities and would likely occur twice per year. Because beach grooming is performed infrequently and does not involve

substantial vehicles or equipment, it is not anticipated that additional vehicles or activities associated with beach grooming would increase GHG emissions substantially. Therefore, no new GHG impacts would result from the proposed drain maintenance activities during project operation.

The EIR identified climate action strategies that will reduce GHG emissions to the extent possible. These measures include discrete early action measures proposed by the ARB to reduce GHG emissions in their Scoping Plan (ARB 2008), as well as measures identified in the AEP White Paper (AEP 2007). The ARB discrete early action measures and AEP climate action strategies that are relevant to operational emissions associated with operation and maintenance activities for the J Street Drain, as identified in the EIR, include the following:

- Implementation of the Low Carbon Fuel Standard. This standard will be implemented state-wide through fuels programs regulated by the ARB.
- Reduction of HFC-134a emissions from non-professional servicing of motor vehicle air conditioning systems. Vehicle maintenance is conducted by County automotive professionals, and employees are prohibited from servicing District vehicles.
- Diesel anti-idling provisions that limit motor vehicle idling to 5 minutes or less from commercial vehicles. The ARB has promulgated a rule that applies to commercial vehicles.
- Alternative fuels: the ARB is evaluating requirements to require the use of 1 to 4 percent biodiesel in California fuels, and evaluating increasing the use of ethanol in fuels.
- Achieve a statewide goal of 50 percent recycling. Recycling of construction waste is currently mandated by the County's Integrated Waste Management Division (Ordinance 4357) and is a requirement of all contracts for operation and maintenance work within Ventura County.

The J Street Drain project will continue the existing implementation with these climate action measures and will reduce GHGs to the extent feasible.

5.0 CONCLUSIONS

Emissions of GHGs were evaluated for both construction and operation of the J Street Drain Project. The main source of emissions associated with the project would be construction activities. The BEMP would increase operational emissions slightly over existing conditions, but the increase would remain below 900 metric tons of CO2e. Emissions from construction would be below the SCAQMD's interim threshold of 10,000 metric tons of CO_2e annually for industrial projects, and, when amortized, would be below the CAPCOA recommended threshold of 900 metric tons of CO_2e emissions. Global climate change impacts would be less than significant.

6.0 REFERENCES

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Appendix A

Greenhouse Gas Emission Calculations

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Urbem s 2007 Vers on 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Urbemis\Urbemis 9.2.2\Projects\J Street Drain.urb924

Project Name: J Street Drain

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year unm t gated)	3.22	25.88	12.85	0.00	6.27	1.27	7.55	1.31	1.17	2.48	3,383.23
2012 TOTALS (tons/year m t gated)	3.22	25.88	12.85	0.00	2.46	1.27	3.73	0.51	1.17	1.69	3,383.23
Percent Reduct on	0.00	0.00	0.00	0.00	60.86	0.00	50.59	60.77	0.00	32.10	0.00
2013 TOTALS (tons/year unm t gated)	3.16	24.65	12.99	0.00	6.27	1.25	7.53	1.31	1.15	2.47	3,457.21
2013 TOTALS (tons/year m t gated)	3.16	24.65	12.99	0.00	2.46	1.25	3.71	0.51	1.15	1.67	3,457.21
Percent Reduct on	0.00	0.00	0.00	0.00	60.86	0.00	50.72	60.77	0.00	32.34	0.00
2014 TOTALS (tons/year unm t gated)	2.75	20.71	11.39	0.00	4.71	1.01	5.72	0.99	0.93	1.92	3,251.94
2014 TOTALS (tons/year m t gated)	2.75	20.71	11.39	0.00	1.85	1.01	2.86	0.39	0.93	1.32	3,251.94
Percent Reduct on	0.00	0.00	0.00	0.00	60.81	0.00	50.04	60.70	0.00	31.19	0.00
2015 TOTALS (tons/year unm t gated)	2.62	19.24	11.61	0.00	4.71	0.95	5.66	0.99	0.87	1.86	3,326.10

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2015 TOTALS (tons/year m t gated)	2.62	19.24	11.61	0.00	1.85	0.95	2.80	0.39	0.87	1.26	3,326.10
Percent Reduct on	0.00	0.00	0.00	0.00	60.81	0.00	50.61	60.69	0.00	32.18	0.00
2016 TOTALS (tons/year unm t gated)	2.35	16.26	10.91	0.00	7.86	0.79	8.66	1.64	0.73	2.37	3,206.49
2016 TOTALS (tons/year m t gated)	2.35	16.26	10.91	0.00	3.08	0.79	3.87	0.64	0.73	1.37	3,206.49
Percent Reduct on	0.00	0.00	0.00	0.00	60.89	0.00	55.32	60.82	0.00	42.15	0.00
2017 TOTALS (tons/year unm t gated)	2.28	14.95	11.18	0.00	7.81	0.76	8.58	1.63	0.70	2.33	3,259.63
2017 TOTALS (tons/year m t gated)	2.28	14.95	11.18	0.00	3.06	0.76	3.82	0.64	0.70	1.34	3,259.63
Percent Reduct on	0.00	0.00	0.00	0.00	60.89	0.00	55.48	60.81	0.00	42.57	0.00
2018 TOTALS (tons/year unm t gated)	2.06	12.98	10.58	0.00	4.83	0.63	5.47	1.01	0.58	1.59	3,194.86
2018 TOTALS (tons/year m t gated)	2.06	12.98	10.58	0.00	1.89	0.63	2.53	0.40	0.58	0.98	3,194.86
Percent Reduct on	0.00	0.00	0.00	0.00	60.82	0.00	53.78	60.70	0.00	38.53	0.00
2019 TOTALS (tons/year unm t gated)	2.00	12.05	10.98	0.00	4.83	0.61	5.45	1.01	0.56	1.57	3,269.01
2019 TOTALS (tons/year m t gated)	2.00	12.05	10.98	0.00	1.89	0.61	2.51	0.40	0.56	0.96	3,269.01
Percent Reduct on	0.00	0.00	0.00	0.00	60.81	0.00	53.99	60.70	0.00	39.01	0.00

Construct on Unm t gated Deta Report:

CONSTRUCTION EMISSION ESTIMATES Annua Tons Per Year, Unm t gated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2 5 Exhaust	PM2.5	CO2

2/2/2011 5:14:05 PM

2012	3.22	25.88	12.85	0.00	6.27	1.27	7.55	1.31	1.17	2.48	3,383.23
Mass Grad ng 01/01/2012-12/31/2013	2.57	21.66	10.03	0.00	6.27	0.95	7.22	1.31	0.87	2.18	2,959.33
Mass Grad ng Dust	0.00	0.00	0.00	0.00	6.26	0.00	6.26	1.31	0.00	1.31	0.00
Mass Grad ng Off Road D ese	2.45	20.18	8.97	0.00	0.00	0.89	0.89	0.00	0.82	0.82	2,603.78
Mass Grad ng On Road D ese	0.11	1.45	0.52	0.00	0.01	0.05	0.06	0.00	0.05	0.05	283.38
Mass Grad ng Worker Tr ps	0.02	0.03	0.53	0.00	0.00	0.00	0.01	0.00	0.00	0.00	72.16
Trench ng 02/01/2012-12/31/2013	0.09	0.67	0.49	0.00	0.00	0.04	0.04	0.00	0.04	0.04	82.18
Trench ng Off Road D ese	0.09	0.67	0.47	0.00	0.00	0.04	0.04	0.00	0.04	0.04	78.51
Trench ng Worker Tr ps	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.68
Aspha t 03/01/2012-12/31/2013	0.56	3.55	2.33	0.00	0.00	0.29	0.29	0.00	0.27	0.27	341.72
Pav ng Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.55	3.53	2.17	0.00	0.00	0.29	0.29	0.00	0.27	0.27	319.44
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.15
Pav ng Worker Tr ps	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.13

2/2/2011 5:14:05 PM

2013	3.16	24.65	12.99	0.00	6.27	1.25	7.53	1.31	1.15	2.47	3,457.21
Aspha t 03/01/2012-12/31/2013	0.63	3.99	2.75	0.00	0.00	0.32	0.32	0.00	0.29	0.29	408.24
Pav ng Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.61	3.97	2.58	0.00	0.00	0.32	0.32	0.00	0.29	0.29	381.62
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.57
Pav ng Worker Tr ps	0.00	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.06
Mass Grad ng 01/01/2012-12/31/2013	2.44	19.97	9.71	0.00	6.27	0.89	7.17	1.31	0.82	2.13	2,959.33
Mass Grad ng Dust	0.00	0.00	0.00	0.00	6.26	0.00	6.26	1.31	0.00	1.31	0.00
Mass Grad ng Off Road D ese	2.33	18.67	8.75	0.00	0.00	0.85	0.85	0.00	0.78	0.78	2,603.78
Mass Grad ng On Road D ese	0.10	1.28	0.47	0.00	0.01	0.05	0.06	0.00	0.04	0.05	283.38
Mass Grad ng Worker Tr ps	0.01	0.03	0.50	0.00	0.00	0.00	0.01	0.00	0.00	0.00	72.17
Trench ng 02/01/2012-12/31/2013	0.09	0.68	0.54	0.00	0.00	0.04	0.04	0.00	0.04	0.04	89.63
Trench ng Off Road D ese	0.09	0.68	0.51	0.00	0.00	0.04	0.04	0.00	0.04	0.04	85.62
Trench ng Worker Tr ps	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.01

2/2/2011 5:14:05 PM

2014	2.75	20.71	11.39	0.00	4.71	1.01	5.72	0.99	0.93	1.92	3,251.94
Mass Grad ng 01/01/2014-12/31/2015	2.18	16.98	8.63	0.00	4.71	0.74	5.44	0.98	0.68	1.66	2,828.83
Mass Grad ng Dust	0.00	0.00	0.00	0.00	4.70	0.00	4.70	0.98	0.00	0.98	0.00
Mass Grad ng Off Road D ese	2.08	15.83	7.78	0.00	0.00	0.69	0.69	0.00	0.64	0.64	2,476.84
Mass Grad ng On Road D ese	0.09	1.12	0.42	0.00	0.01	0.04	0.05	0.00	0.04	0.04	283.83
Mass Grad ng Worker Tr ps	0.01	0.02	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.16
Trench ng 02/01/2014-12/31/2015	0.08	0.58	0.49	0.00	0.00	0.03	0.03	0.00	0.03	0.03	81.90
Trench ng Off Road D ese	0.08	0.58	0.46	0.00	0.00	0.03	0.03	0.00	0.03	0.03	78.23
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.66
Aspha t 03/01/2014-12/31/2015	0.49	3.15	2.27	0.00	0.00	0.25	0.25	0.00	0.23	0.23	341.21
Pav ng Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.48	3.14	2.14	0.00	0.00	0.25	0.25	0.00	0.23	0.23	319.44
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63
Pav ng Worker Tr ps	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.14

2/2/2011 5:14:05 PM

2015	2.62	19.24	11.61	0.00	4.71	0.95	5.66	0.99	0.87	1.86	3,326.10
Aspha t 03/01/2014-12/31/2015	0.54	3.48	2.69	0.00	0.00	0.27	0.27	0.00	0.25	0.25	407.63
Pav ng Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.53	3.47	2.54	0.00	0.00	0.27	0.27	0.00	0.25	0.25	381.62
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95
Pav ng Worker Tr ps	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.06
Mass Grad ng 01/01/2014-12/31/2015	2.00	15.19	8.39	0.00	4.71	0.65	5.36	0.98	0.60	1.58	2,828.84
Mass Grad ng Dust	0.00	0.00	0.00	0.00	4.70	0.00	4.70	0.98	0.00	0.98	0.00
Mass Grad ng Off Road D ese	1.91	14.19	7.62	0.00	0.00	0.61	0.61	0.00	0.56	0.56	2,476.84
Mass Grad ng On Road D ese	0.08	0.98	0.38	0.00	0.01	0.04	0.05	0.00	0.03	0.04	283.83
Mass Grad ng Worker Tr ps	0.01	0.02	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.17
Trench ng 02/01/2014-12/31/2015	0.08	0.57	0.53	0.00	0.00	0.03	0.03	0.00	0.03	0.03	89.63
Trench ng Off Road D ese	0.08	0.57	0.51	0.00	0.00	0.03	0.03	0.00	0.03	0.03	85.62
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.01

2/2/2011 5:14:05 PM

2016	2.35	16.26	10.91	0.00	7.86	0.79	8.66	1.64	0.73	2.37	3,206.49
Mass Grad ng 01/01/2016-12/31/2017	1.85	13.09	8.19	0.00	7.86	0.57	8.43	1.64	0.52	2.16	2,780.57
Mass Grad ng Dust	0.00	0.00	0.00	0.00	7.85	0.00	7.85	1.64	0.00	1.64	0.00
Mass Grad ng Off Road D ese	1.77	12.19	7.47	0.00	0.00	0.53	0.53	0.00	0.49	0.49	2,427.45
Mass Grad ng On Road D ese	0.07	0.88	0.34	0.00	0.01	0.03	0.04	0.00	0.03	0.03	284.74
Mass Grad ng Worker Tr ps	0.01	0.02	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.38
Trench ng 02/01/2016-12/31/2017	0.07	0.46	0.49	0.00	0.00	0.02	0.02	0.00	0.02	0.02	82.47
Trench ng Off Road D ese	0.07	0.46	0.47	0.00	0.00	0.02	0.02	0.00	0.02	0.02	78.78
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.69
Aspha t 03/01/2016-12/31/2017	0.42	2.71	2.24	0.00	0.00	0.20	0.20	0.00	0.19	0.19	343.44
Pav ng Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.42	2.69	2.12	0.00	0.00	0.20	0.20	0.00	0.19	0.19	320.66
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.57
Pav ng Worker Tr ps	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.21

2/2/2011 5:14:05 PM

2017	2.28	14.95	11.18	0.00	7.81	0.76	8.58	1.63	0.70	2.33	3,259.63
Aspha t 03/01/2016-12/31/2017	0.47	2.97	2.63	0.00	0.00	0.22	0.22	0.00	0.20	0.20	407.43
Pav ng Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.46	2.96	2.50	0.00	0.00	0.22	0.22	0.00	0.20	0.20	380.40
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.05
Pav ng Worker Tr ps	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.98
Mass Grad ng 01/01/2016-12/31/2017	1.73	11.54	8.03	0.00	7.81	0.52	8.33	1.63	0.48	2.11	2,762.86
Mass Grad ng Dust	0.00	0.00	0.00	0.00	7.80	0.00	7.80	1.63	0.00	1.63	0.00
Mass Grad ng Off Road D ese	1.65	10.74	7.37	0.00	0.00	0.49	0.49	0.00	0.45	0.45	2,411.99
Mass Grad ng On Road D ese	0.07	0.78	0.31	0.00	0.01	0.03	0.04	0.00	0.03	0.03	282.93
Mass Grad ng Worker Tr ps	0.01	0.02	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.94
Trench ng 02/01/2016-12/31/2017	0.07	0.44	0.53	0.00	0.00	0.02	0.02	0.00	0.02	0.02	89.34
Trench ng Off Road D ese	0.07	0.44	0.51	0.00	0.00	0.02	0.02	0.00	0.02	0.02	85.35
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00

2/2/2011 5:14:05 PM

2018	2.06	12.98	10.58	0.00	4.83	0.63	5.47	1.01	0.58	1.59	3,194.86
Mass Grad ng 01/01/2018-12/31/2019	1.63	10.32	7.90	0.00	4.83	0.45	5.28	1.01	0.41	1.42	2,771.71
Mass Grad ng Dust	0.00	0.00	0.00	0.00	4.82	0.00	4.82	1.01	0.00	1.01	0.00
Mass Grad ng Off Road D ese	1.56	9.59	7.29	0.00	0.00	0.42	0.42	0.00	0.39	0.39	2,419.72
Mass Grad ng On Road D ese	0.06	0.72	0.29	0.00	0.01	0.03	0.04	0.00	0.02	0.03	283.83
Mass Grad ng Worker Tr ps	0.01	0.02	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.16
Trench ng 02/01/2018-12/31/2019	0.06	0.35	0.48	0.00	0.00	0.02	0.02	0.00	0.02	0.02	81.90
Trench ng Off Road D ese	0.06	0.35	0.46	0.00	0.00	0.02	0.02	0.00	0.02	0.02	78.23
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.66
Aspha t 03/01/2018-12/31/2019	0.37	2.30	2.19	0.00	0.00	0.17	0.17	0.00	0.15	0.15	341.25
Pav ng Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.36	2.29	2.10	0.00	0.00	0.17	0.17	0.00	0.15	0.15	319.44
Pav ng On Road D ese	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67
Pav ng Worker Tr ps	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.14

2/2/2011 5:14:05 PM

2019	2.00	12.05	10.98	0.00	4.83	0.61	5.45	1.01	0.56	1.57	3,269.01
Aspha t 03/01/2018-12/31/2019	0.41	2.54	2.60	0.00	0.00	0.18	0.18	0.00	0.17	0.17	407.67
Pav ng Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.40	2.53	2.49	0.00	0.00	0.18	0.18	0.00	0.17	0.17	381.62
Pav ng On Road D ese	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
Pav ng Worker Tr ps	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.05
Mass Grad ng 01/01/2018-12/31/2019	1.53	9.17	7.85	0.00	4.83	0.41	5.25	1.01	0.38	1.39	2,771.71
Mass Grad ng Dust	0.00	0.00	0.00	0.00	4.82	0.00	4.82	1.01	0.00	1.01	0.00
Mass Grad ng Off Road D ese	1.46	8.50	7.28	0.00	0.00	0.39	0.39	0.00	0.36	0.36	2,419.72
Mass Grad ng On Road D ese	0.06	0.66	0.27	0.00	0.01	0.02	0.03	0.00	0.02	0.02	283.83
Mass Grad ng Worker Tr ps	0.01	0.01	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.16
Trench ng 02/01/2018-12/31/2019	0.06	0.34	0.52	0.00	0.00	0.02	0.02	0.00	0.02	0.02	89.63
Trench ng Off Road D ese	0.06	0.34	0.51	0.00	0.00	0.02	0.02	0.00	0.02	0.02	85.62
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.01

Phase Assumpt ons

Phase: Mass Grad ng 1/1/2012 - 12/31/2013 - Phase 1 Grad ng

Tota Acres D sturbed: 7.8

Max mum Da y Acreage D sturbed: 2

Fug t ve Dust Leve of Deta : Defau t

20 bs per acre-day

On Road Truck Trave (VMT): 449.76

Off-Road Equ pment:

1 Bore/Dr R gs (291 hp) operat ng at a 0.75 oad factor for 8 hours per day

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

2 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

2/2/2011 5:14:05 PM

1 Off H ghway Tractors (267 hp) operat ng at a 0.65 oad factor for 8 hours per day

6 Off H ghway Trucks (479 hp) operat ng at a 0.57 oad factor for 8 hours per day

4 Pumps (53 hp) operat ng at a 0.74 oad factor for 8 hours per day

2 Rubber T red Loaders (164 hp) operat ng at a 0.54 oad factor for 8 hours per day

1 Water Trucks (189 hp) operat ng at a 0.5 oad factor for 8 hours per day

Phase: Mass Grad ng 1/1/2014 - 12/31/2015 - Phase II Grad ng

Tota Acres D sturbed: 6

Max mum Da y Acreage D sturbed: 1.5

Fug t ve Dust Leve of Deta : Defau t

20 bs per acre-day

On Road Truck Trave (VMT): 450.48

Off-Road Equ pment:

1 Bore/Dr R gs (291 hp) operat ng at a 0.75 oad factor for 8 hours per day

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

1 Graders (174 hp) operat ng at a 0.61 oad factor for 6 hours per day

1 Off H ghway Tractors (267 hp) operat ng at a 0.65 oad factor for 8 hours per day

6 Off H ghway Trucks (479 hp) operat ng at a 0.57 oad factor for 8 hours per day

4 Pumps (53 hp) operat ng at a 0.74 oad factor for 8 hours per day

2 Rubber T red Loaders (164 hp) operat ng at a 0.54 oad factor for 8 hours per day

1 Water Trucks (189 hp) operat ng at a 0.5 oad factor for 8 hours per day

Phase: Mass Grad ng 1/1/2016 - 12/31/2017 - Phase III Grad ng

Tota Acres D sturbed: 9.41

Max mum Da y Acreage D sturbed: 2.5

Fug t ve Dust Leve of Deta : Defau t

20 bs per acre-day

On Road Truck Trave (VMT): 450.48

Off-Road Equ pment:

1 Bore/Dr R gs (291 hp) operat ng at a 0.75 oad factor for 8 hours per day

2/2/2011 5:14:05 PM

1 Craw er Tractors (147 hp) operat ng at a 0.64 oad factor for 8 hours per day

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

6 Off H ghway Trucks (479 hp) operat ng at a 0.57 oad factor for 8 hours per day

4 Pumps (53 hp) operat ng at a 0.74 oad factor for 8 hours per day

2 Rubber T red Loaders (164 hp) operat ng at a 0.54 oad factor for 8 hours per day

1 Water Trucks (189 hp) operat ng at a 0.5 oad factor for 8 hours per day

Phase: Mass Grad ng 1/1/2018 - 12/31/2019 - Phase IV Grad ng

Tota Acres D sturbed: 6.15

Max mum Da y Acreage D sturbed: 1.54

Fug t ve Dust Leve of Deta : Defau t

20 bs per acre-day

On Road Truck Trave (VMT): 450.48

Off-Road Equ pment:

1 Bore/Dr R gs (291 hp) operat ng at a 0.75 oad factor for 8 hours per day

1 Craw er Tractors (147 hp) operat ng at a 0.64 oad factor for 8 hours per day

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

6 Off H ghway Trucks (479 hp) operat ng at a 0.57 oad factor for 8 hours per day

4 Pumps (53 hp) operat ng at a 0.74 oad factor for 8 hours per day

2 Rubber T red Loaders (164 hp) operat ng at a 0.54 oad factor for 8 hours per day

1 Water Trucks (189 hp) operat ng at a 0.5 oad factor for 8 hours per day

Phase: Trench ng 2/1/2012 - 12/31/2013 - Phase 1 Trench ng

Off-Road Equ pment:

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

Phase: Trench ng 2/1/2014 - 12/31/2015 - Phase II Trench ng

Off-Road Equ pment:

2/2/2011 5:14:05 PM

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

Phase: Trench ng 2/1/2016 - 12/31/2017 - Phase III Trench ng

Off-Road Equ pment:

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

Phase: Trench ng 2/1/2018 - 12/31/2019 - Phase IV Trench ng

Off-Road Equ pment:

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

Phase: Pav ng 3/1/2012 - 12/31/2013 - Phase 1 Pav ng

Acres to be Paved: 7.9

Off-Road Equ pment:

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

2 Pavers (100 hp) operat ng at a 0.62 oad factor for 8 hours per day

2 Ro ers (95 hp) operat ng at a 0.56 oad factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operat ng at a 0.68 oad factor for 8 hours per day

Phase: Pav ng 3/1/2014 - 12/31/2015 - Phase II Pav ng
Phase II Pav ng
Acres to be Paved: 6

Off-Road Equ pment:

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

2 Pavers (100 hp) operat ng at a 0.62 oad factor for 8 hours per day

2 Ro ers (95 hp) operat ng at a 0.56 oad factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operat ng at a 0.68 oad factor for 8 hours per day

Phase: Pav ng 3/1/2016 - 12/31/2017 - Phase III Pav ng

Acres to be Paved: 9.41

Off-Road Equ pment:

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1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

2 Pavers (100 hp) operat ng at a 0.62 oad factor for 8 hours per day

2 Ro ers (95 hp) operat ng at a 0.56 oad factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operat ng at a 0.68 oad factor for 8 hours per day

Phase: Pav ng 3/1/2018 - 12/31/2019 - Phase IV Pav ng

Acres to be Paved: 6.15

Off-Road Equ pment:

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

2 Pavers (100 hp) operat ng at a 0.62 oad factor for 8 hours per day

2 Ro ers (95 hp) operat ng at a 0.56 oad factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operat ng at a 0.68 oad factor for 8 hours per day

Construct on M t gated Deta Report:

CONSTRUCTION EMISSION ESTIMATES Annua Tons Per Year, M t gated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2 5 Exhaust	PM2.5	CO2

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2012	3.22	25.88	12.85	0.00	2.46	1.27	3.73	0.51	1.17	1.69	3,383.23
Mass Grad ng 01/01/2012-12/31/2013	2.57	21.66	10.03	0.00	2.45	0.95	3.40	0.51	0.87	1.38	2,959.33
Mass Grad ng Dust	0.00	0.00	0.00	0.00	2.44	0.00	2.44	0.51	0.00	0.51	0.00
Mass Grad ng Off Road D ese	2.45	20.18	8.97	0.00	0.00	0.89	0.89	0.00	0.82	0.82	2,603.78
Mass Grad ng On Road D ese	0.11	1.45	0.52	0.00	0.01	0.05	0.06	0.00	0.05	0.05	283.38
Mass Grad ng Worker Tr ps	0.02	0.03	0.53	0.00	0.00	0.00	0.01	0.00	0.00	0.00	72.16
Trench ng 02/01/2012-12/31/2013	0.09	0.67	0.49	0.00	0.00	0.04	0.04	0.00	0.04	0.04	82.18
Trench ng Off Road D ese	0.09	0.67	0.47	0.00	0.00	0.04	0.04	0.00	0.04	0.04	78.51
Trench ng Worker Tr ps	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.68
Aspha t 03/01/2012-12/31/2013	0.56	3.55	2.33	0.00	0.00	0.29	0.29	0.00	0.27	0.27	341.72
Pav ng Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.55	3.53	2.17	0.00	0.00	0.29	0.29	0.00	0.27	0.27	319.44
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.15
Pav ng Worker Tr ps	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.13

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2013	3.16	24.65	12.99	0.00	2.46	1.25	3.71	0.51	1.15	1.67	3,457.21
Aspha t 03/01/2012-12/31/2013	0.63	3.99	2.75	0.00	0.00	0.32	0.32	0.00	0.29	0.29	408.24
Pav ng Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.61	3.97	2.58	0.00	0.00	0.32	0.32	0.00	0.29	0.29	381.62
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.57
Pav ng Worker Tr ps	0.00	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.06
Mass Grad ng 01/01/2012-12/31/2013	2.44	19.97	9.71	0.00	2.45	0.89	3.35	0.51	0.82	1.34	2,959.33
Mass Grad ng Dust	0.00	0.00	0.00	0.00	2.44	0.00	2.44	0.51	0.00	0.51	0.00
Mass Grad ng Off Road D ese	2.33	18.67	8.75	0.00	0.00	0.85	0.85	0.00	0.78	0.78	2,603.78
Mass Grad ng On Road D ese	0.10	1.28	0.47	0.00	0.01	0.05	0.06	0.00	0.04	0.05	283.38
Mass Grad ng Worker Tr ps	0.01	0.03	0.50	0.00	0.00	0.00	0.01	0.00	0.00	0.00	72.17
Trench ng 02/01/2012-12/31/2013	0.09	0.68	0.54	0.00	0.00	0.04	0.04	0.00	0.04	0.04	89.63
Trench ng Off Road D ese	0.09	0.68	0.51	0.00	0.00	0.04	0.04	0.00	0.04	0.04	85.62
Trench ng Worker Tr ps	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.01

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2014	2.75	20.71	11.39	0.00	1.85	1.01	2.86	0.39	0.93	1.32	3,251.94
Mass Grad ng 01/01/2014-12/31/2015	2.18	16.98	8.63	0.00	1.84	0.74	2.58	0.39	0.68	1.06	2,828.83
Mass Grad ng Dust	0.00	0.00	0.00	0.00	1.83	0.00	1.83	0.38	0.00	0.38	0.00
Mass Grad ng Off Road D ese	2.08	15.83	7.78	0.00	0.00	0.69	0.69	0.00	0.64	0.64	2,476.84
Mass Grad ng On Road D ese	0.09	1.12	0.42	0.00	0.01	0.04	0.05	0.00	0.04	0.04	283.83
Mass Grad ng Worker Tr ps	0.01	0.02	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.16
Trench ng 02/01/2014-12/31/2015	0.08	0.58	0.49	0.00	0.00	0.03	0.03	0.00	0.03	0.03	81.90
Trench ng Off Road D ese	0.08	0.58	0.46	0.00	0.00	0.03	0.03	0.00	0.03	0.03	78.23
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.66
Aspha t 03/01/2014-12/31/2015	0.49	3.15	2.27	0.00	0.00	0.25	0.25	0.00	0.23	0.23	341.21
Pav ng Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.48	3.14	2.14	0.00	0.00	0.25	0.25	0.00	0.23	0.23	319.44
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63
Pav ng Worker Tr ps	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.14

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2015	2.62	19.24	11.61	0.00	1.85	0.95	2.80	0.39	0.87	1.26	3,326.10
Aspha t 03/01/2014-12/31/2015	0.54	3.48	2.69	0.00	0.00	0.27	0.27	0.00	0.25	0.25	407.63
Pav ng Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.53	3.47	2.54	0.00	0.00	0.27	0.27	0.00	0.25	0.25	381.62
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95
Pav ng Worker Tr ps	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.06
Mass Grad ng 01/01/2014-12/31/2015	2.00	15.19	8.39	0.00	1.84	0.65	2.49	0.39	0.60	0.98	2,828.84
Mass Grad ng Dust	0.00	0.00	0.00	0.00	1.83	0.00	1.83	0.38	0.00	0.38	0.00
Mass Grad ng Off Road D ese	1.91	14.19	7.62	0.00	0.00	0.61	0.61	0.00	0.56	0.56	2,476.84
Mass Grad ng On Road D ese	0.08	0.98	0.38	0.00	0.01	0.04	0.05	0.00	0.03	0.04	283.83
Mass Grad ng Worker Tr ps	0.01	0.02	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.17
Trench ng 02/01/2014-12/31/2015	0.08	0.57	0.53	0.00	0.00	0.03	0.03	0.00	0.03	0.03	89.63
Trench ng Off Road D ese	0.08	0.57	0.51	0.00	0.00	0.03	0.03	0.00	0.03	0.03	85.62
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.01

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2016	2.35	16.26	10.91	0.00	3.08	0.79	3.87	0.64	0.73	1.37	3,206.49
Mass Grad ng 01/01/2016-12/31/2017	1.85	13.09	8.19	0.00	3.07	0.57	3.64	0.64	0.52	1.16	2,780.57
Mass Grad ng Dust	0.00	0.00	0.00	0.00	3.06	0.00	3.06	0.64	0.00	0.64	0.00
Mass Grad ng Off Road D ese	1.77	12.19	7.47	0.00	0.00	0.53	0.53	0.00	0.49	0.49	2,427.45
Mass Grad ng On Road D ese	0.07	0.88	0.34	0.00	0.01	0.03	0.04	0.00	0.03	0.03	284.74
Mass Grad ng Worker Tr ps	0.01	0.02	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.38
Trench ng 02/01/2016-12/31/2017	0.07	0.46	0.49	0.00	0.00	0.02	0.02	0.00	0.02	0.02	82.47
Trench ng Off Road D ese	0.07	0.46	0.47	0.00	0.00	0.02	0.02	0.00	0.02	0.02	78.78
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.69
Aspha t 03/01/2016-12/31/2017	0.42	2.71	2.24	0.00	0.00	0.20	0.20	0.00	0.19	0.19	343.44
Pav ng Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.42	2.69	2.12	0.00	0.00	0.20	0.20	0.00	0.19	0.19	320.66
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.57
Pav ng Worker Tr ps	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.21

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2017	2.28	14.95	11.18	0.00	3.06	0.76	3.82	0.64	0.70	1.34	3,259.63
Aspha t 03/01/2016-12/31/2017	0.47	2.97	2.63	0.00	0.00	0.22	0.22	0.00	0.20	0.20	407.43
Pav ng Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.46	2.96	2.50	0.00	0.00	0.22	0.22	0.00	0.20	0.20	380.40
Pav ng On Road D ese	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.05
Pav ng Worker Tr ps	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.98
Mass Grad ng 01/01/2016-12/31/2017	1.73	11.54	8.03	0.00	3.06	0.52	3.57	0.64	0.48	1.12	2,762.86
Mass Grad ng Dust	0.00	0.00	0.00	0.00	3.04	0.00	3.04	0.64	0.00	0.64	0.00
Mass Grad ng Off Road D ese	1.65	10.74	7.37	0.00	0.00	0.49	0.49	0.00	0.45	0.45	2,411.99
Mass Grad ng On Road D ese	0.07	0.78	0.31	0.00	0.01	0.03	0.04	0.00	0.03	0.03	282.93
Mass Grad ng Worker Tr ps	0.01	0.02	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.94
Trench ng 02/01/2016-12/31/2017	0.07	0.44	0.53	0.00	0.00	0.02	0.02	0.00	0.02	0.02	89.34
Trench ng Off Road D ese	0.07	0.44	0.51	0.00	0.00	0.02	0.02	0.00	0.02	0.02	85.35
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00

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2018	2.06	12.98	10.58	0.00	1.89	0.63	2.53	0.40	0.58	0.98	3,194.86
Mass Grad ng 01/01/2018-12/31/2019	1.63	10.32	7.90	0.00	1.89	0.45	2.34	0.40	0.41	0.81	2,771.71
Mass Grad ng Dust	0.00	0.00	0.00	0.00	1.88	0.00	1.88	0.39	0.00	0.39	0.00
Mass Grad ng Off Road D ese	1.56	9.59	7.29	0.00	0.00	0.42	0.42	0.00	0.39	0.39	2,419.72
Mass Grad ng On Road D ese	0.06	0.72	0.29	0.00	0.01	0.03	0.04	0.00	0.02	0.03	283.83
Mass Grad ng Worker Tr ps	0.01	0.02	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.16
Trench ng 02/01/2018-12/31/2019	0.06	0.35	0.48	0.00	0.00	0.02	0.02	0.00	0.02	0.02	81.90
Trench ng Off Road D ese	0.06	0.35	0.46	0.00	0.00	0.02	0.02	0.00	0.02	0.02	78.23
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.66
Aspha t 03/01/2018-12/31/2019	0.37	2.30	2.19	0.00	0.00	0.17	0.17	0.00	0.15	0.15	341.25
Pav ng Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.36	2.29	2.10	0.00	0.00	0.17	0.17	0.00	0.15	0.15	319.44
Pav ng On Road D ese	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67
Pav ng Worker Tr ps	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.14

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2019	2.00	12.05	10.98	0.00	1.89	0.61	2.51	0.40	0.56	0.96	3,269.01
Aspha t 03/01/2018-12/31/2019	0.41	2.54	2.60	0.00	0.00	0.18	0.18	0.00	0.17	0.17	407.67
Pav ng Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	0.40	2.53	2.49	0.00	0.00	0.18	0.18	0.00	0.17	0.17	381.62
Pav ng On Road D ese	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
Pav ng Worker Tr ps	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.05
Mass Grad ng 01/01/2018-12/31/2019	1.53	9.17	7.85	0.00	1.89	0.41	2.30	0.40	0.38	0.78	2,771.71
Mass Grad ng Dust	0.00	0.00	0.00	0.00	1.88	0.00	1.88	0.39	0.00	0.39	0.00
Mass Grad ng Off Road D ese	1.46	8.50	7.28	0.00	0.00	0.39	0.39	0.00	0.36	0.36	2,419.72
Mass Grad ng On Road D ese	0.06	0.66	0.27	0.00	0.01	0.02	0.03	0.00	0.02	0.02	283.83
Mass Grad ng Worker Tr ps	0.01	0.01	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.16
Trench ng 02/01/2018-12/31/2019	0.06	0.34	0.52	0.00	0.00	0.02	0.02	0.00	0.02	0.02	89.63
Trench ng Off Road D ese	0.06	0.34	0.51	0.00	0.00	0.02	0.02	0.00	0.02	0.02	85.62
Trench ng Worker Tr ps	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.01

Construct on Re ated M t gat on Measures

The fo ow ng m t gat on measures app y to Phase: Mass Grad ng 1/1/2012 - 12/31/2013 - Phase 1 Grad ng

For So Stab z ng Measures, the Water exposed surfaces 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

For Unpaved Roads Measures, the Manage hau road dust 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

The fo ow ng m t gat on measures app y to Phase: Mass Grad ng 1/1/2014 - 12/31/2015 - Phase II Grad ng

For So Stab z ng Measures, the Water exposed surfaces 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

For Unpaved Roads Measures, the Manage hau road dust 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

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The fo ow ng m t gat on measures app y to Phase: Mass Grad ng 1/1/2016 - 12/31/2017 - Phase III Grad ng

For So Stab z ng Measures, the Water exposed surfaces 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

For Unpaved Roads Measures, the Manage hau road dust 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

The fo ow ng m t gat on measures app y to Phase: Mass Grad ng 1/1/2018 - 12/31/2019 - Phase IV Grad ng

For So Stab z ng Measures, the Water exposed surfaces 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

For Unpaved Roads Measures, the Manage hau road dust 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

JANUARY 24, 2011

VENTURA COUNTY WATERSHED PROTECTION DISTRICT

J Street Drain Project
Mosquito Technical Study

FINAL

Prepared by:

LARRY WALKER ASSOCIATES

In collaboration with:

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH
VECTOR-BORNE DISEASE SECTION

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Table of Contents

List of Acronyms ..... **iv**

Executive Summary **ES-1**

1 Introduction **1**

1.1 Background and Purpose 1

1.2 Environmental Setting 2

2 Introduction to Mosquitoes **4**

2.1 Mosquitoes as a Nuisance and a Vector for Disease 4

2.2 Mosquito Life Cycle 4

2.3 Mosquito Breeding 5

2.4 Local Mosquito Species 6

2.5 Mosquito Treatment Overview 6

2.6 Midges 8

3 Vector Control Program Data Analysis **9**

3.1 Adult Mosquito Surveillance 9

3.2 Data Analysis: Ormond Beach Lagoon Area 10

3.3 Data Analysis: Undeveloped Floodplain of the Oxnard Industrial Drain 12

3.4 Data Analysis: Greater J Street Drain Area 13

4 Evaluation of Channel Design with Respect to Mosquitoes and Public Health **18**

4.1 Current J Street Drain 18

4.2 Proposed J Street Drain Project 19

4.3 J Street Drain Channel Alternatives 20

4.3.1 Alternative A: Buried Box Culverts 20

4.3.2 Alternative C: Open Rectangular Channel with Step 21

4.3.3 Alternative D: Two Separated Buried Box Culverts 21

4.3.4 Alternative E: Natural Channel 21

4.3.5 Additional Alternatives 22

4.3.6 Summary of Alternatives 22

5 Narrative Review of Potential Mosquito Sources **24**

5.1 Ormond Beach Lagoon 24

5.2 Oxnard WasteWater Treatment Plant 24

5.3 Hueneme Drain/Bubbling Springs 25

5.4 Hueneme Drain Pump Station 25
5.5 Other Urban Sources 26
5.6 Other Open Space Sources 26
6 Overall Evaluation and Conclusions 27
7 References 28

List of Figures

Figure 1. J Street Drain and Area Features 3
Figure 2. Mosquito Life Cycle Stages 5
Figure 3. Adult Female Midge 8
Figure 4. Adult Mosquito versus Adult Midge 8
Figure 5. Map of Adult Mosquito Trap Locations in the greater J Street Drain Area 10
Figure 6. Adult Mosquito Trap Data, South End of Perkins Road 11
Figure 7. Adult Mosquito Trap Data, Hueneme Drain at J Street Drain 12
Figure 8. Adult Mosquito Trap Data, West End of McWane Blvd 13
Figure 9. Greater J Street Drain Area 2005 Adult Mosquito Trap Data 15
Figure 10. Greater J Street Drain Area July 8, 2008 Adult Mosquito Trap Data 15
Figure 11. Greater J Street Drain Area August 28, 2008 Adult Mosquito Trap Data 16
Figure 12. Greater J Street Drain Area September 17, 2009 Adult Mosquito Trap Data 16
Figure 13. Greater J Street Drain Area 2010 Adult Mosquito Trap Data 17

List of Tables

Table 1. Impact of Alternative on Mosquito Production Compared with Proposed Project 23

List of Acronyms

CDPH	California Department of Public Health
CO_2	Carbon Dioxide
EIR	Environmental Impact Report
District	Ventura County Watershed Protection District
FEMA	Federal Emergency Management Agency
MVCAC	Mosquito and Vector Control Association of California
OID	Oxnard Industrial Drain
OWWTP	Oxnard Wastewater Treatment Plant
SSIII	Surfside III Condominium Complex
VCVCP	Ventura County Vector Control Program

Executive Summary

This Technical Report provides an analysis of the mosquito production potential of the proposed J Street Drain Project compared with the current J Street Drain and the proposed project alternatives.

ES.1 PROJECT AND SETTING

The J Street Drain is a concrete-lined, trapezoidal, flood control channel located in Ventura County, operated by the Ventura County Watershed Protection District (District). An analysis of flood potential found that the J Street Drain provides capacity only up to a 10-year storm event, rather than a 100-year storm event; therefore, the District is proposing to expand the current channel in both width and depth into a rectangular channel with capacity for the runoff associated with a 100-year storm event. The J Street Drain is part of a flood control network that includes Hueneme Drain, the Hueneme Drain Pump Station, Perkins Drain, and the Oxnard Industrial Drain. The J Street Drain terminates in Ormond Beach Lagoon, which does not have a surface outlet to the Pacific Ocean. The District is prohibited from creating an outlet due to the Endangered Species Act, except during emergencies. The lack of outlet causes standing water to back up into the J Street Drain. The J Street Drain is adjacent to or near residential properties (including the Surfside III Condominium Complex), the Oxnard Wastewater Treatment Plant (OWWTP), the Halaco Superfund Site, and additional developed and undeveloped land.

During the Environmental Impact Report (EIR) process for the proposed J Street Drain Project, residents raised concerns regarding the potential for standing water contained within the channel to produce unreasonable numbers of mosquitoes capable of transmitting disease and causing a public nuisance.

ES.2 MOSQUITOES

Mosquitoes are vectors of disease worldwide. Only adult female mosquitoes bite, though a single individual may bite the same or multiple hosts many times. Generally, mosquitoes require calm, stagnant water for breeding. Flowing waters or open, exposed waters with surface disturbance from wind, waves, or animals are not suitable habitat for mosquito breeding. Similarly, waters deep enough to sustain populations of fish and other predatory aquatic organisms greatly limit suitable habitat. Wetlands and salt marshes, especially those with unmanaged, dense, emergent vegetation, are notorious mosquito breeding habitats.

Three main species of biting mosquitoes are commonly found in the J Street Dain area: *Culex tarsalis, Culex quinquefasciatus*[1], and *Culex erythrothorax*. *Culex tarsalis* and *Culex quinquefasciatus* are considered primary vectors of disease, while the role of *Culex erythrothorax* in disease transmission is believed to be minor. Because of their significance to public health and as nuisance species, the biology and ecology of these mosquitoes have been well studied. Relevant species-specific habitat preferences are described here.

- *Culex tarsalis* are opportunistic and will breed in a variety of freshwater habitats including wetlands, birdbaths, neglected swimming pools, and artificial containers.

[1] Synonymous with *Culex pipiens* in some locations.

- *Culex quinquefasciatus* are also opportunistic and will share many of the freshwater habitats used by *Culex tarsalis*, especially urban sources. This species prefers nutrient-rich water and also has a strong affinity for underground habitats such as storm drains.
- *Culex erythrothorax* are closely tied to freshwater wetlands, preferring shallow swamps and marshes or the margins of deeper water bodies that contain dense, emergent vegetation such as cattails. This species is almost never found outside these habitats.

ES.3 VECTOR CONTROL PROGRAM TRAP DATA

The Ventura County Vector Control Program (VCVCP) uses adult mosquito traps as part of their comprehensive mosquito surveillance and control plan. Traps are deployed overnight in areas of greatest concern, usually triggered by evidence of local disease transmission in birds, humans, or other animals, but also in response to local nuisance complaints. In total, VCVCP deployed adult mosquito traps in nine locations in the greater J Street Drain area in 2005, 2008, 2009, and 2010.

The trap data provide evidence that Ormond Beach Lagoon is producing the majority of mosquitoes in the adjacent area, while the undeveloped floodplain of the Oxnard Industrial Drain is the most mosquito-productive in the greater J Street Drain area. These data support the case that the J Street Drain, Hueneme Drain Pump Station, and Hueneme Drain in their current configuration do not provide ideal habitat for mosquitoes nor are major sources of mosquito production.

Overall, these data suggest that mosquito production is widespread within the developed areas surrounding the J Street Drain, with no evidence of sharp rises in mosquito numbers in traps located near the J Street Drain that would implicate this conveyance channel as a major source of mosquitoes.

ES.4 EVALUATION OF CHANNEL DESIGNS

Studies of various stormwater structures have been conducted in California to determine the design characteristics found to best decrease the potential for attraction, harborage, or development of mosquitoes. The most effective design characteristics are those that decrease or eliminate standing water. Shallow, sheltered, standing water (especially with vegetative cover) is one of the most conducive mosquito breeding habitats, while deep or flowing unprotected water is unlikely mosquito breeding habitat. Belowground sources of standing water are almost always suitable. Desirable design characteristics include:

- Steep sides to inhibit emergent vegetation growth;
- Flowing water;
- Deep-water areas where natural predators can live;
- Open-water areas exposed to wind, which results in surface disturbances (i.e., waves) that reduce the effectiveness of mosquito breathing siphons; and
- Proper access for mosquito treatment and vegetation management.

ES.4.1 Current J Street Drain

The current J Street Drain's concrete substrate and relatively steep sides inhibit emergent vegetation growth and associated mosquito production. The current J Street Drain has a wide, open surface exposed to substantial wind and wave action. Wind and wave action on the surface of the water prevent the breathing siphons of mosquito larvae from maintaining a connection to

the air, thereby effectively drowning the larvae. In addition, water held in the J Street Drain downstream of Hueneme Road supports several fish species that opportunistically prey on mosquito larvae. Recent inspections of the J Street Drain by California Department of Health, Vector-Borne Disease Section staff confirmed that the J Street Drain does not currently provide suitable habitat to support large mosquito populations. Additionally, the open channel facilitates maintenance, monitoring, and treatment.

ES.4.2 Proposed J Street Drain Project

The proposed changes to the channel are projected to maintain or possibly amplify the aforementioned negative effects on mosquito breeding. The greater overall water volume would provide additional habitat for predator fish downstream of Hueneme Road, while the increased width would increase exposure to wind and wave action throughout the submerged reach. Vertical channel walls are considered the most desirable design choice to minimize vegetative or other cover along the channel margins and present the best scenario for preventing refuge for immature mosquitoes. The proposed channel geometry would not change ease or safety of access for mosquito monitoring and treatment or for channel maintenance.

In the event of a breach of the Ormond Beach Lagoon, the increased depth of the proposed channel is not expected to increase the probability of mosquito production for the following reasons: 1) vertical walls, lack of vegetation, and wind action in the channel would maintain poor mosquito habitat similar to pre-breach conditions, 2) mosquito predator fish living in coastal lagoons, such as the tidewater goby, are adapted to tolerate fluctuations in water level and should remain in the channel, and 3) breach events usually take place during the colder winter months, and in the event that a breach resulted in the temporary formation of isolated pools, mosquito production would be unlikely.

ES.4.3 Channel Design Alternatives

The Draft EIR presented project alternatives to the proposed J Street Drain Project and determined the environmental impacts of the alternatives. The alternative projects were:

- Alternative A: Buried box culverts
- Alternative B (the Proposed Project): Open rectangular channel
- Alternative C: Open rectangular channel with step
- Alternative D: Two separated buried box culverts
- Alternative E: Natural channel

Additionally, this study evaluated an additional alternative suggested by residents. The additional alternative would consist of pumping water out of the J Street Drain into Ormond Beach Lagoon. The evaluation does not determine whether this option would be feasible under the Endangered Species Act.

The impacts on mosquito production of each alternative as compared to the proposed project are presented in Table ES.1.

Table ES.1. Impacts of Alternatives on Mosquito Production Compared with Proposed Project

Alternative	Effect on Habitat	Effect on Maintenance & Chemical Applications	Overall Impact
A: Buried box culverts	• Reduced disturbance to water surface • Reduced fish habitat • Altered mosquito species	• Difficult to access	Negative
C: Open rectangular channel with step	• Similar surface water disturbance and fish habitat	• Increased maintenance required	Similar
D: Two separated buried box culverts	• Reduced disturbance to water surface • Reduced fish habitat • Altered mosquito species	• Difficult to access	Negative
E: Natural Channel	• Increased disturbance to water surface • Increased fish habitat • Creation of mosquito habitat at margins	• Increased maintenance required • Reduced accessibility • Reduced effectiveness of treatment	Negative
Additional Alternative	• Creation of stagnant puddles • Creation of habitat in sump	• Increased maintenance required • Increased treatment required	Negative

ES.5. EVALUATION OF ADDITIONAL SOURCES

In addition to the J Street Drain, there are other potential mosquito breeding sites in the surrounding area. The following sources were identified and evaluated for their potential to produce large numbers of mosquitoes.

- **Ormond Beach Lagoon**: Locations of optimal habitat and substantial potential to produce large numbers of mosquitoes.
- **OWWTP**: Multiple locations of suitable habitat. Actively monitored and treated by VCVCP to keep OWWTP from producing substantial mosquitoes.
- **Hueneme Drain**: While containing some shoreline vegetation, overall poor mosquito habitat similar to current J Street Drain.
- **Hueneme Drain Pump Station**: Poor potential breeding source, similar to Hueneme Drain.
- **Other Urban Sources**: Many potential sources, with some that may be substantial. Common struggle for vector control agencies statewide.
- **Other Open-Space Sources**: Wetlands in undeveloped areas may provide optimal habitat and become substantial sources.

ES.6. CONCLUSIONS

This analysis found no evidence to suggest that the current configurations of the J Street Drain, Hueneme Drain Pump Station, or Hueneme Drain provide high-quality habitat for, or produce large numbers of mosquitoes. However, the evaluation of the greater J Street Drain area revealed that the OWWTP, the undeveloped floodplain of the Oxnard Industrial Drain, and urban areas may produce substantial numbers of mosquitoes. The evaluation of the proposed J Street Drain Project found the proposed channel configuration to have similar or less mosquito breeding potential than the current J Street Drain channel. The proposed changes would likely amplify the channel's negative effects on mosquito breeding and, therefore, should have no change to public health with regard to mosquito production. The alternatives presented in the Draft EIR, as well as the additional proposed alternative, would be expected to have similar or greater mosquito breeding potential, as compared to the proposed project.

1 Introduction

The J Street Drain is a concrete-lined, trapezoidal, flood control channel located in Ventura County in the City of Oxnard adjacent to the City of Port Hueneme. The J Street Drain extends approximately north-south from Redwood Street to the coast and discharges into the Ormond Beach Lagoon. The Ventura County Watershed Protection District (District) operates the drain as part of a flood control network that includes Hueneme Drain, the Hueneme Drain Pump Station, Perkins Drain, and the Oxnard Industrial Drain (Figure 1) (HDR, 2009).

1.1 BACKGROUND AND PURPOSE

The mission of the District is, in part, to control and conserve flood and storm waters and to protect watercourses, watersheds, public highways, human life and property from damage or destruction from these waters. In pursuit of this mission, engineering studies are completed by and for the District regarding the flooding potential within its jurisdiction. An analysis of the flood potential within the City of Oxnard (Tetra Tech, 2005; URS, 2005) found that the J Street Drain provides capacity only up to the 10-year storm event, and thus is susceptible to flooding during any greater storm event. Precipitation in an exceeding storm event could overtop the channel and cause flooding in the adjacent residences, businesses, and public infrastructure, including an International Paper recycling facility and the Oxnard Wastewater Treatment Plant (OWWTP). The Federal Emergency Management Agency (FEMA) requires properties located within areas susceptible to a 100-year flood event to buy flood insurance (FEMA, 2007). FEMA Flood Insurance Rate Maps (FIRMs) for the J Street Drain area are based on outdated analyses conducted in 1984 and 1985, which conclude that J Street Drain conveys the 100-year storm and adjacent properties do not require flood insurance.

In light of the 2005 study findings and to fulfill its mission, the District has proposed that the capacity of the J Street Drain be increased to handle the runoff associated with a 100-year storm event. The J Street Drain Project is a proactive solution by the District for protecting the residential, commercial, and industrial areas around the J Street Drain as well as preventing residents from being required to purchase flood insurance following a future FIRM update. Furthermore, protecting the OWWTP from flood damage is a matter of public safety, not least because a release of untreated sewage would affect adjacent properties including the Surfside III condominium community, the paper recycling facility, Ormond Beach, Ormond Beach Lagoon, and the Pacific Ocean. Additionally, the nearby Halaco Superfund Site, which is contaminated with heavy metals and radioactive slag, also may be susceptible to untreated sewage releases.

The District released a Draft Environmental Impact Report (Draft EIR) for the proposed J Street Drain Project in 2009 that provided details of the project and an analysis of potential environmental impacts resulting from the project (HDR, 2009). The proposed J Street Drain Project would change the channel cross-section from trapezoidal to rectangular, deepen it by four feet, and widen it by ten feet. The changes in channel geometry, depth, and width would increase the volume and surface area of standing water within the J Street Drain (HDR, 2009). During the Draft EIR public review and comment process, several residents from the Surfside III condominium community commented that the Draft EIR did not fully analyze the potential impacts to public health from the proposed J Street Drain Project (Loewenthal, Hillshafer & Rosen LLP, 2010). Specifically, residents raised concerns regarding the potential for any

increase in the area of standing water contained within the channel to produce unreasonable numbers of mosquitoes capable of transmitting disease and causing a public nuisance.

This report provides an analysis of current mosquito production potential in and around the current J Street Drain and any possible changes to this potential as a result of construction of the proposed J Street Drain Project. This report will also evaluate alternative channel designs detailed in the Draft EIR and additional alternatives for their mosquito production potential.

1.2 ENVIRONMENTAL SETTING

An important feature of the J Street Drain is that it discharges into Ormond Beach Lagoon, a coastal wetland which does not have a surface outlet to the ocean due to a large, natural sand berm at its terminus. During the wet season, the berm that impounds the lagoon occasionally breaches naturally when stormwater runoff is sufficient, but ocean wave and wind action repair the breach relatively quickly, again disconnecting the lagoon from the ocean. Depending on the water level within the lagoon, water backs up in the J Street Drain as far as Hueneme Road. Prior to 1992, the District regularly breached the berm in order to prevent water and silt buildup in the J Street Drain. However, in 1992 the United States Fish and Wildlife Service stopped this practice by issuing a cease-and-desist order under the Endangered Species Act, citing the presence of endangered and threatened species found around and within Ormond Beach Lagoon, specifically the California brown pelican, California least tern, western snowy plover, and tidewater goby. The tidewater goby is an endangered fish found in abundance within Ormond Beach Lagoon and in J Street Drain up to 100 meters upstream of the Hueneme Drain Pump Station (Entrix, Inc., 2007). Therefore, as legally bound, the District has ceased all manual breaching of the berm except for emergency situations. Furthermore, all management activities in and around Ormond Beach Lagoon, including mosquito and vector control, must take into consideration the presence of endangered and threatened species.

Ormond Beach Lagoon and J Street Drain support several fish species that consume mosquito larvae as juveniles, adults, or both. These mosquito predators include the tidewater goby, California killifish, carp, goldfish, green sunfish, mosquito fish, rainwater killifish, staghorn sculpin, and topsmelt. The above fish species were observed in J Street Drain over the course of 13 biological surveys conducted between April 4, 2005 and December 15, 2006 (Entrix, Inc., 2007).

Another important hydrological feature within the local flood control network is the Hueneme Drain Pump Station, which transfers water from the Hueneme Drain to the J Street Drain. The Hueneme Drain Pump Station was created in the 1960s because the Hueneme Drain, fed by the naturally occurring Bubbling Springs, was bisected by the J Street Drain, which effectively cut off the Hueneme Drain from its outlet (HDR, 2009). A forebay is included as part of the Hueneme Drain Pump Station that acts as the sump for the pumps. The Hueneme Drain Pump Station was reconstructed in 2005-2007 to provide pumping capacity for the 100-year storm event and to replace all aging pumps, including the jockey pump. During the reconstruction, an agitator and a floatable oil skimmer were added to the forebay; these were not original components. The purpose of the agitator is to create enough turbulence to diffuse sediment into the water and prevent it from collecting. The oil skimmer was added to improve water quality by collecting any oil and grease floating on the water surface. Sediment, oil, and grease are sent to an appropriate disposal facility, in compliance with applicable local, state, and federal laws. The jockey pump and agitator operate automatically approximately four hours every day. The oil

skimmer is operated manually when oil and grease are observed. The larger pumps are activated only during high storm flows and maintenance testing, at which times the jockey pump and sediment tank are bypassed. There was no hydrologic change (e.g., additional standing water) to the Hueneme Drain, Hueneme Drain Pump Station, or J Street Drain after the reconstruction as daily flow volumes passing through the pump station are similar to pre-project conditions, and the pump forebay was not enlarged. Flow volumes are based on the natural output of Bubbling Springs and urban runoff generated by City of Port Hueneme residents and businesses.

Figure 1. J Street Drain and Area Features (From Draft EIR, HDR, 2009)

2 Introduction to Mosquitoes

This section provides information on mosquitoes relevant to the J Street Drain Project.

2.1 MOSQUITOES AS A NUISANCE AND A VECTOR FOR DISEASE

Worldwide, mosquitoes are the most important insect vectors of diseases. A vector is any insect or other animal capable of harboring and transmitting human diseases to humans. In the United States, diseases that can be transmitted to humans via mosquitoes include West Nile virus, western equine encephalitis, St. Louis encephalitis, and malaria. Disease-causing viruses and blood parasites are transmitted via the bite of infected female mosquitoes when they are attempting to take a blood meal (i.e., biting); however, relatively few female mosquitoes in the environment are infected at any given time (Herrington, 2003). In California, a variety of publicly-funded local agencies control mosquito populations in developed areas to reduce the potential for disease transmission and to alleviate the public nuisance of mosquito bites. It has been speculated that California has studied mosquitoes more thoroughly than any comparably sized area of the world, as evidenced by the resources expended for control and research by local and state agencies (Bohart and Washino, 1978). However, the mosquito's rapid development, ability to fly long distances as adults, and opportunistic use of standing water in urban areas guarantees that *eradication of all mosquitoes is not possible*.

2.2 MOSQUITO LIFE CYCLE

The mosquito life cycle is characterized by four distinct stages: egg, larva, pupa, and adult (Figure 2). In those species of greatest public health concern in California, a raft of eggs is laid on the surface of standing water where they float for approximately 48 hours and then hatch into the water as larvae. The larvae do not have gills and instead rely on a special siphon tube used to break the surface tension of the water to breathe atmospheric air. Larvae feed on microorganisms and organic matter in the water column, and grow in size until they metamorphose into the pupal stage. The pupal stage is a resting, non-feeding stage during which the adult mosquito develops. After a few days in the pupal stage, the winged adult emerges from the water and flies away. The time from eggs being laid to adults emerging is typically 7-10 days. Adult mosquitoes must feed to survive, but only female mosquitoes take blood. They use the protein in the blood to develop eggs for the next generation (CDPH and MVCAC, 2010). A single female mosquito may bite the same or multiple hosts many times.

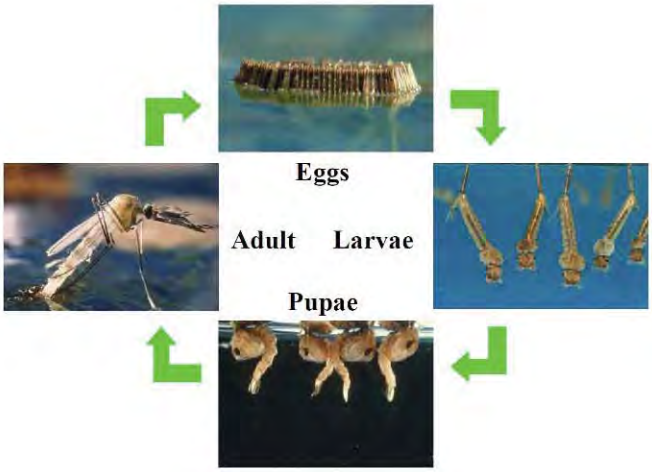

Figure 2. Mosquito Life Cycle Stages (Eldridge, 2008)

Adult mosquitoes may be lured by a number of different attractants. After mating, newly emerged females are attracted to air-borne cues such as carbon dioxide (CO_2), heat, and body odors in order to find a host and take a blood meal for egg development. After several days of rest in a protected location, their attraction shifts to air-borne odors emanating from waters that are potential larval habitats. Artificial lights can be somewhat attractive to certain species, but usually only in less developed areas with few competing light sources.

Nearly all species of mosquitoes have a definite seasonality that varies depending on the geographic region (Eldridge, 2008). Temperature is important in mosquito production and the development of larvae. Many mosquitoes experience a hibernation-like period during the winter at which time mosquito production ceases (Eldridge, 2008). In Ventura County and other parts of southern California, mosquito production decreases substantially beginning in the cooler late fall or winter months and then increases from spring into summer (personal communication, Marco Metzger, November 29, 2010).

2.3 MOSQUITO BREEDING

Mosquitoes are inherently linked to water since all the immature life stages are aquatic. However, not all sources of water are conducive to mosquito breeding. Generally, mosquitoes require calm, stagnant water for breeding as opposed to open, exposed water. Flowing waters or waters with surface disturbance from wind, waves, or animals are not suitable habitat for mosquito breeding because they prevent egg, larval, and pupal stages of mosquitoes from maintaining a surface connection to the air. Even small surface disturbances create inhospitable conditions. Similarly, waters deep enough to sustain populations of fish and other predatory aquatic organism greatly limit suitable habitat (Metzger, 2004). As an example, large lakes only produce mosquitoes along shorelines protected from wind and predators by vegetation. Waters that contain substantial emergent (e.g., cattails, bulrush) or floating vegetation (e.g., duckweed, hyacinth) provide refuge for developing mosquito larvae by creating calm, predator-free habitats (Bohart and Washino, 1978). Wetlands and salt marshes, especially those with unmanaged, dense, emergent vegetation, are notorious mosquito breeding habitats.

2.4 LOCAL MOSQUITO SPECIES

Three main species of biting mosquitoes are commonly found in the J Street Dain area: *Culex tarsalis, Culex quinquefasciatus*[2], and *Culex erythrothorax*. *Culex quinquefasciatus* and *Culex tarsalis* are considered primary vectors of encephalitis viruses (e.g., West Nile virus) while the role of *Culex erythrothorax* in virus transmission is believed to be minor (Goddard et al., 2002). All three species readily bite humans and can become a nuisance, thus they are primary targets of control efforts in Ventura County and throughout the state. Each species has habitat preferences for larval development. Because of their significance to public health and as nuisance species, the biology and ecology of these species have been well studied. Relevant species-specific habitat preferences are described here.

- *Culex tarsalis* are opportunistic and will breed in a variety of freshwater habitats including wetlands, birdbaths, neglected swimming pools, and almost any artificial container (Bohart and Washino, 1978). *Culex tarsalis* larvae are known to occur in brackish marshes as long as the salt content does not exceed one percent. However, *Culex tarsalis* larvae are not tolerant of polluted waters (e.g., nutrient rich waters). Adult *Culex tarsalis* are known to disperse from their origins up to several kilometers (Reisen and Lothrop, 1995).
- *Culex quinquefasciatus* prefer nutrient-rich freshwaters containing high concentrations of organic matter and also have a strong affinity for underground areas such as storm drains. However, they are also opportunistic and will share many of the habitats used by *Culex tarsalis*, especially urban sources and nutrient-rich treatment wetlands. Adult *Culex quinquefasciatus* can travel up to 1.5 kilometers from their origin, but generally travel less than 1 kilometer (Schreiber et al., 1988).
- *Culex erythrothorax* are closely tied to freshwater wetlands, preferring swamps and marshes or the margins of water bodies that contain dense, emergent vegetation such as cattails (Walton et al., 1999). This species is almost never found outside these habitats. Adult *Culex erythrothorax* are known to disperse from their origins up to approximately 1 kilometer (Bohart and Washino, 1978), but the majority of adults appear to remain relatively close to their preferred wetland habitats.

2.5 MOSQUITO TREATMENT OVERVIEW

The state of California has over 60 publicly-funded local vector control agencies that serve to protect the public from vectors and vector-borne diseases. Like most programs in the state, the Ventura County Vector Control Program (VCVCP) focuses the bulk of its efforts on mosquito control on minimizing populations of vector and nuisance mosquitoes to protect public health and quality of life throughout Ventura County. Creation of the VCVCP was approved in 1993. The Mosquito Abatement and Vector Control District Law[3] provides authority to the VCVCP to address any altered property that supports the development, attraction, or harborage of vectors; any water that is a breeding place for vectors; and any activity that supports the development, attraction, or harborage of vectors. Mosquito control is not intended to eliminate all mosquitoes.

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[2] Synonymous with called *Culex pipiens* in some locations.

[3] California Health and Safety Code, Division 3, Chapter 1.

Rather, the goal is to reduce adult mosquito populations to a level that minimizes the probability of people and animals becoming infected with mosquito-transmitted diseases (CDPH, 2008b).

Mosquito control usually occurs through an integrated pest management strategy that utilizes a variety of measures to control mosquitoes. Because adult mosquitoes are widespread in the environment, larval control in aquatic habitats is the most effective means for reducing mosquito populations and therefore is the foundation of most mosquito control programs in California. Minimizing the number of adults that emerge is crucial to reducing the incidence and risk of disease. The measures most often utilized to control larvae include habitat modification, biological controls, and chemical application. For example, habitat modification might include creating ditches through swamps and marshes and/or thinning or removing emergent vegetation within and along the margins of water bodies to promote water circulation, reduce cover, and encourage natural predators. Biological controls include the use of fish and aquatic invertebrates to prey on mosquito larvae. Chemical application is a more target-direct and, therefore, more often utilized way to abate mosquitoes than habitat modification or biological controls. Mosquito control formulations that specifically target larvae (i.e., larvicides) are the most effective materials for controlling mosquitoes (CDPH, 2008a).

The application of larvicides to control mosquitoes is done only after establishing the need to do so by the presence of mosquito larvae detected during mosquito monitoring and surveillance. Larval mosquito monitoring includes identifying and checking likely larval developmental sites for the presence of mosquito larvae and then treating the water to kill the mosquito larvae before they emerge as flying, biting adults. Personnel working for vector control agencies who apply pesticides in California are certified by California Department of Public Health (CDPH) (CDPH and MVCAC, 2010). The VCVCP uses a focused approach for larvicide application to target known mosquito breeding grounds and does not use a "blanket approach" to treat all waterbodies. The VCVCP applies larvicides in this manner as part of its objective to minimize the volume of chemicals in the environment. Furthermore, it is not efficient or effective to target all waterbodies as many waterbodies have habitat characteristics which make them unlikely breeding grounds for mosquitoes, as discussed previously. The VCVCP uses two categories of larvicides, both of which are considered relatively non-toxic to non-target organisms and have no documented ecological side-effects when applied according to the label:

- VectoLex (*Bacillus sphaericus*) and VectoBac (*Bacillus thuringiensis israelensis*) are microbial larvicides. These products work by exploiting insecticidal toxins found in natural bacteria that only have significant effects on the target insects (CDPH and MVCAC, 2010).
- Methoprene is an insect growth regulator that comes in several formulations including extended release pellets, briquettes, and ingots, water-soluble packets, and liquid. Methoprene disrupts the physiological development of larvae, which prevents adults from emerging from the water body. Methoprene has minimal non-target effects and has no use restrictions in California (CDPH and MVCAC, 2010).

It is often difficult to pinpoint "hot spots" of mosquito breeding due to the vast number of potential sources in developed areas. An important tool used by vector control agencies, including the VCVCP, is an adult mosquito trap. Traps are deployed in areas suspected of producing large numbers of mosquitoes based on historical data, disease surveillance data, and public complaints. Trap captures allow the VCVCP to count and identify mosquitoes to determine the potential public health risk and the need for control. Adult mosquito surveillance

can also be used as a feedback or quality control mechanism to determine how effectively an overall program reduces mosquito populations (CDPH and MVCAC, 2010). With limited resources, vector control programs prioritize adult mosquito surveillance for use in tracking diseases such as West Nile virus and evaluating the efficacy of control measures. Public complaints are addressed through field visits to assess if additional treatment is needed, though may not result in the deployment of adult traps.

2.6 MIDGES

Midges are a diverse group of small, non-biting flies closely related to mosquitoes. Many species have a strong resemblance to mosquitoes in size and appearance (Figure 3 and Figure 4), and they often share the same aquatic habitats. Midges cannot bite and are not vectors for disease. Midge larvae are usually found in wetlands and marshes, as well as wastewaters including wastewater treatment plant lagoons and urban runoff channels (Grodhaus, 1975); however, unlike mosquitoes, midge larvae do not breathe atmospheric air and often live attached to surfaces or in sediments. As a result, midges do not have the same restrictions as mosquito larvae and are often very abundant in the bottom sediments of open bodies of water. Midges often hatch simultaneously in blooms during the spring or summer, resulting in large masses of midges grouped together near wetlands and marshes. Many species are strongly attracted to artificial light sources and also use structures as resting sites. Thus, they can become extreme nuisances seasonally by massing in and around residences and other structures. Midges have a shorter life span than mosquitoes that entails finding a mate in order to lay eggs before they die (Grodhaus, 1975).

Figure 3. Adult Female Midge (©Bruce Marlin http://www.cirrusimage.com/fly_midge.htm)

Figure 4. Adult Mosquito (left) versus Adult Midge (right) (http://www.glacvcd.org/Contents/Vector-Services-Info/Midges.aspx)

3 Vector Control Program Data Analysis

This section analyses available adult mosquito trap data from the VCVCP. The data were used in this analysis to recognize mosquito sources and compare relative abundance in areas surrounding the J Street Drain.

3.1 ADULT MOSQUITO SURVEILLANCE

The VCVCP uses adult mosquito traps as part of their comprehensive mosquito surveillance and control plan. The traps use CO_2 as an attractant and capture only female mosquitoes. However, it should be noted that traps, because they are deployed overnight, represent only a "snap shot" in time of the mosquito population in an area. Attempts are made to deploy traps during representative weather conditions.

Traps provide the VCVCP with quantitative data vital to decision-making in regards to mosquito control for the protection of public health. Mosquitoes captured in the traps can serve some or all of the following uses: 1) to monitor mosquito abundance and species composition in a local area, 2) to collect specimens for laboratory testing to determine if disease pathogens (e.g., encephalitis viruses) are circulating within the local mosquito population, 3) to provide early detection of exotic (i.e., non-native species), and 4) to evaluate the effectiveness of local mosquito control efforts. Although trap data may help pinpoint local areas where mosquito populations require additional control, the VCVCP typically only treats bodies of water against mosquito larvae based on direct evidence of immature mosquitoes in the waterbody rather than due to the presence of adults in the area.

The VCVCP has limited resources available that must be used to protect the entire County. Adult mosquito traps are deployed in areas of greatest concern, usually triggered by evidence of local disease transmission in birds, humans, or other animals, but also in response to local nuisance complaints. For this reason, the number and location of traps deployed often varies seasonally and yearly. During 2008-2010, citizen complaints from the Surfside III Condominium Complex, located in the area near the terminal end of the J Street Drain, led the VCVCP to increase their surveillance efforts in the immediate vicinity in an attempt to identify both the species present and their potential points of origin. As a result, more data were generated for this area during this two-year period than in previous years. It should also be noted that trap data are collected during the late spring through early fall. Mosquito production is generally low during the late fall and winter months, thus traps are typically not deployed at those times. This section discusses the relevant trap data collected in the J Street Drain area between 1999 and 2010. A map of the locations for which trap data were collected in the J Street Drain area is presented in Figure 5. SSIII indicated on the map shows the origin of citizen complaints about mosquitoes.

Figure 5. Map of Adult Mosquito Trap Locations in the greater J Street Drain Area

3.2 DATA ANALYSIS: ORMOND BEACH LAGOON AREA

Adult mosquito traps were deployed at two sites in the Ormond Beach Lagoon area: one at the south end of Perkins Road and the other at Hueneme Drain at J Street Drain, which is at the terminus of the J Street Drain. The Perkins Rd. site had been sampled periodically since 2002, whereas the J Street Drain site was a new site added in 2010, specifically in response to the citizen complaints from the Surfside III Condominium Complex. Data collected from these sites are summarized in Figure 6 and Figure 7, respectively.

At both locations, *Culex erythothorax* was the dominant species captured, with the bulk of captures in the Perkins Rd. trap site. As discussed in Section 2, this species is closely tied to densely vegetated wetlands and would not be expected to breed outside this habitat, nor to travel long distances from its point of origin (Walton et al., 1999; Bohart and Washino, 1978). This strongly suggests that the primary source of these mosquitoes is the Ormond Beach Lagoon, which provides this type of habitat. Less frequent breaching of the lagoon berm over the past two decades (see section 1.2 above) has likely improved mosquito breeding habitat by maintaining more standing freshwater for longer periods of time and allowing stands of emergent vegetation to increase in size and density. There are comparatively low numbers of all mosquito species captured at the Hueneme Drain site at the terminus of J Street Drain. This provides additional evidence that the lagoon is producing the majority of mosquitoes in this immediate area and

supports the case that the J Street Drain, Hueneme Drain Pump Station, and Hueneme Drain in their current configuration do not provide ideal habitat for mosquitoes nor are major sources of mosquito production.

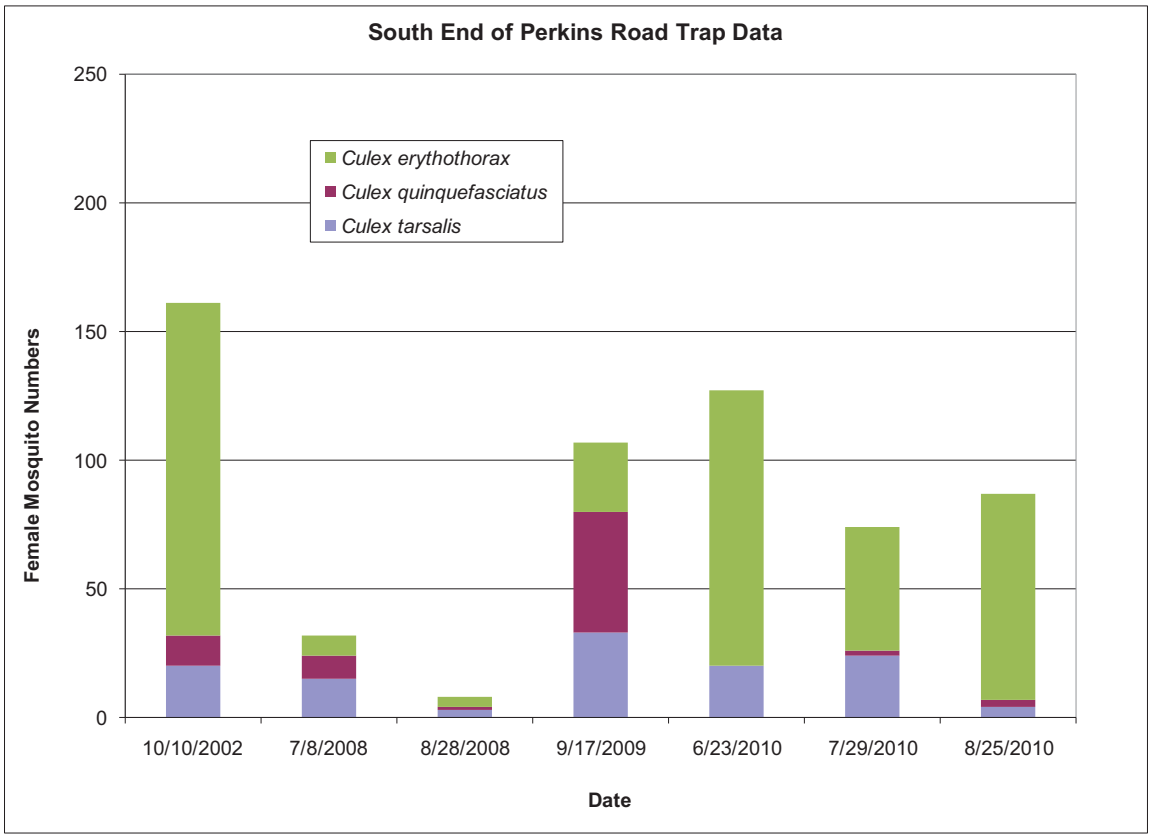

Figure 6. Adult Mosquito Trap Data, South End of Perkins Road

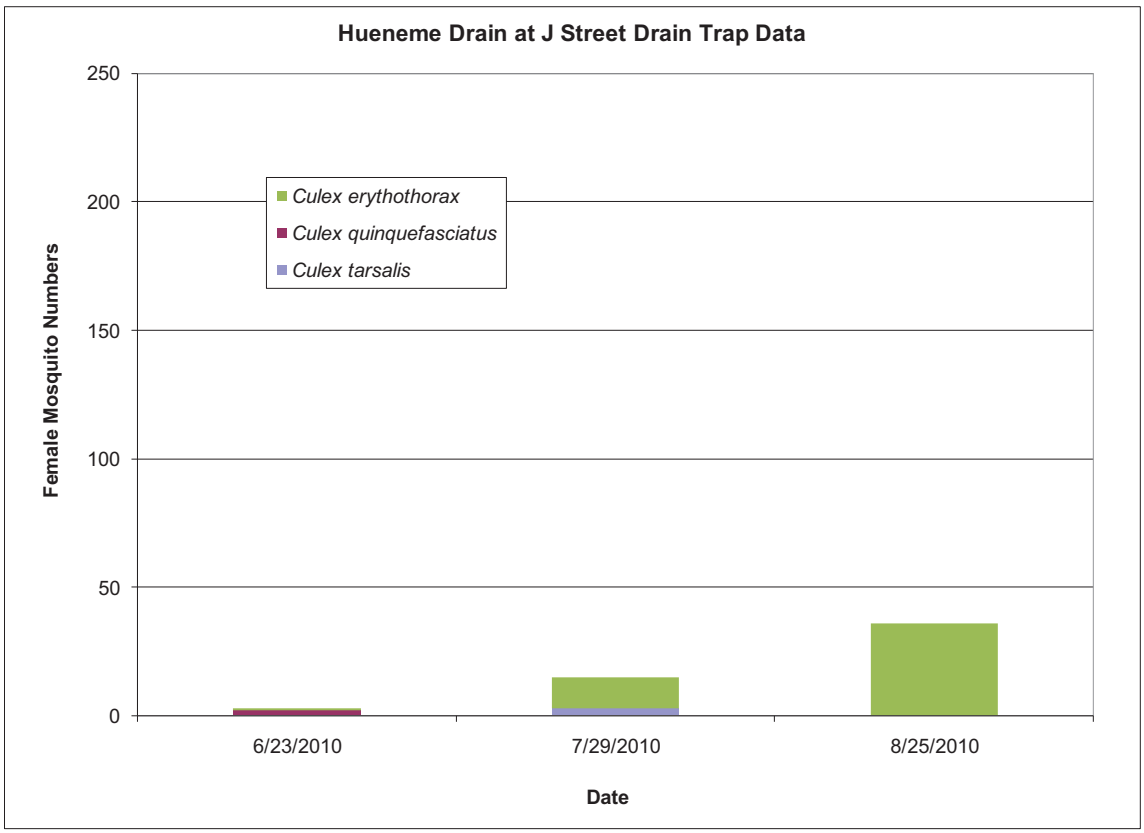

Figure 7. Adult Mosquito Trap Data, Hueneme Drain at J Street Drain (Terminus of J Street Drain)

3.3 DATA ANALYSIS: UNDEVELOPED FLOODPLAIN OF THE OXNARD INDUSTRIAL DRAIN

The VCVCP has periodically deployed an adult mosquito trap at the west end of McWane Blvd. since 1999. This large undeveloped area is subject to seasonal flooding that, under the right conditions, may produce large numbers of mosquitoes. The trap routinely captures large numbers of mosquitoes, most of which are *Culex tarsalis*, making this site the most mosquito-productive in the greater J Street Drain area (Figure 8). *Culex tarsalis* will breed in a variety of non-polluted waters, but have a strong affinity for wetland habitats (Bohart and Washino, 1978). Although *Culex tarsalis* may share some habitats with *Culex erythrothorax*, it has a preference for less densely vegetated habitats. The undeveloped floodplain of the Oxnard Industrial Drain provides such habitat, and the trap data show the difference in species composition between this location and the two sites in the Ormond Beach Lagoon area. Although *Culex tarsalis* often migrate relatively long distances from their point-of-origin, the trap data from Hueneme Drain at J Street Drain (Figure 7, above) provide little support to suggest that mosquitoes originating in the undeveloped floodplain were moving in any great numbers to the terminus of J Street Drain area during 2010. The mosquito trap data indicate that, compared to the undeveloped floodplain of the Oxnard Industrial Drain, the developed area surrounding the J Street Drain produces low numbers of mosquitoes.

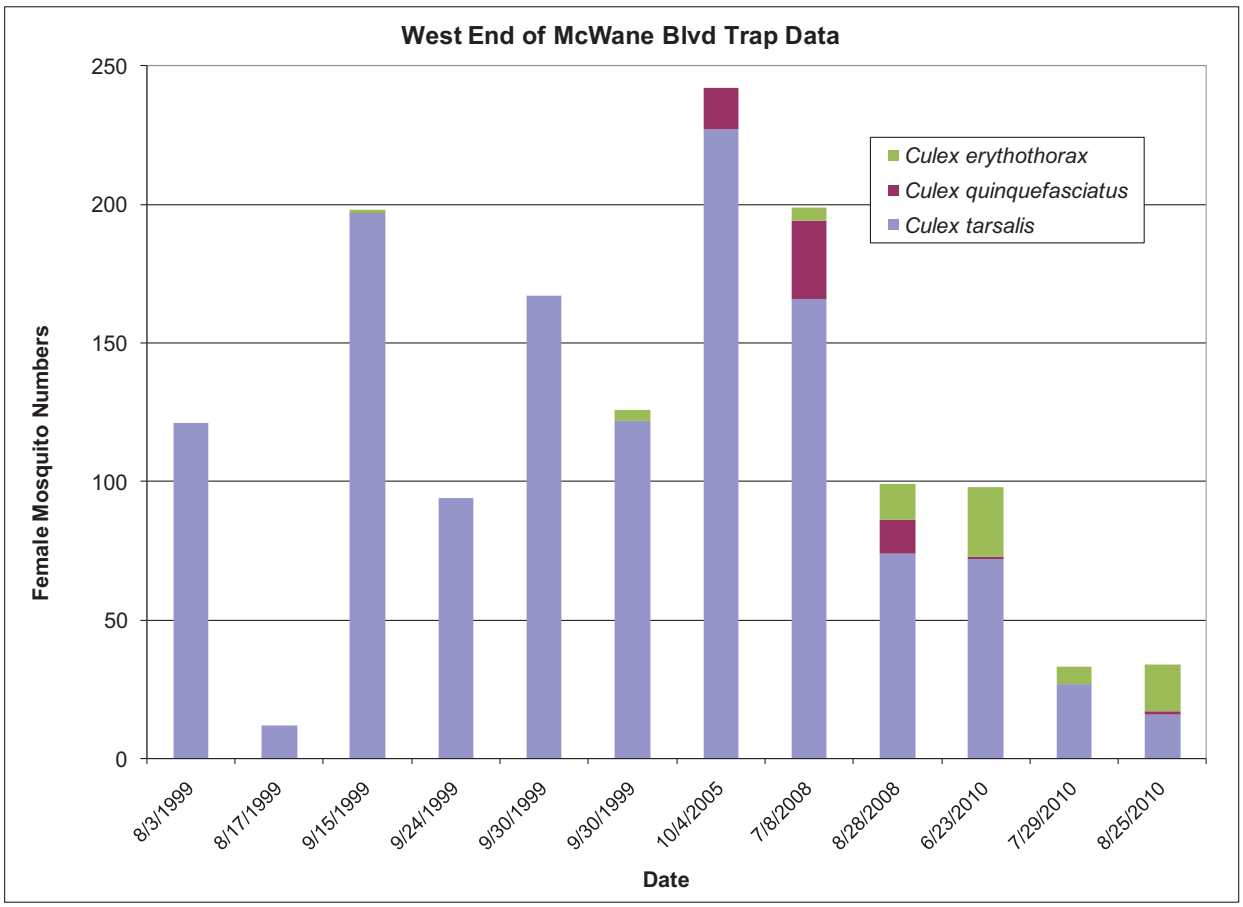

Figure 8. Adult Mosquito Trap Data, West End of McWane Blvd

3.4 DATA ANALYSIS: GREATER J STREET DRAIN AREA

In total, VCVCP deployed adult mosquito traps in nine locations in the greater J Street Drain area in 2005, 2008, 2009, and 2010 (Figure 5, above). For reasons explained in Section 3.1, traps were not necessarily deployed at the same locations on each available date; therefore, not all of the data are directly comparable. However, the following data summary does provide some insight into past and present mosquito production in the greater J Street Drain area, as well as providing evidence of where certain species are most plentiful and which areas have the greatest mosquito-producing potential (Figure 9 through Figure 13). As shown in the graphs, all deployed traps captured mosquitoes. It is rare for CO_2-baited traps not to capture at least some mosquitoes in developed areas. As previously discussed, it is impossible to eradicate mosquitoes completely in the urban environment due to the ability of mosquitoes to exploit a multitude of urban water sources for reproduction, many of which are difficult to identify or locate.

In locations where traps were placed more than once, data vary widely from one deployment to the next. For example, the trap site at J Street Drain near Hueneme Rd. captured numbers ranging from less than 25 to greater than 200 with equally variable species composition. A multitude of factors can influence the flight of adult mosquitoes and associated overnight trap captures including natural factors (e.g., temperature, wind, and rain) and artificial factors (e.g., street lights and vehicle traffic). However, adult populations also fluctuate in response to seasons, habitat availability, and control efforts. As expected, the more urban trap sites located to

the north and west of Ormond Beach Lagoon, and even the trap site located in the undeveloped floodplain of the Oxnard Industrial Drain, captured a substantial percentage of *Culex quinquefasciatus*. This species thrives in disturbed and nutrient-rich habitats, including belowground stormwater infrastructure (Schreiber et al., 1988). Its opportunistic use of nearly any small source of urban water (e.g., neglected pools, ornamental ponds, clogged rain gutters, flower pots) as well as belowground sources for breeding make it challenging to control. These same traps also captured a large percentage of *Culex tarsalis*, which also thrives in urban areas, but almost never breeds belowground.

The relatively high number of adult mosquitoes captured in traps in September 2009 (Figure 12), combined with numerous complaints from residents of the Surfside III Condominium Complex, prompted the VCVCP to investigate the OWWTP as a possible source of increased mosquito production. The VCVCP routinely monitors several areas within the OWWTP, including the pond and inactive treatment cells, which would be likely mosquito breeding sources. In response to the resident complaints and increase in *Culex quinquefasciatus* mosquitoes captured in traps, the VCVCP requested authorization to more broadly examine the OWWTP for new mosquito breeding sources and OWWTRP staff cooperated with this request. The investigation led to the detection of a large belowground flooded basement that was actively producing *Culex quinquefasciatus* mosquitoes. The flooded basement was considered a new mosquito source in the area. The VCVCP has since routinely addressed this source and other newly added smaller potential sources on the OWWTP property, in addition to the sites within the OWWTP previously monitored and treated. Trap data collected in 2010 (Figure 13) show far fewer mosquitoes in the greater J Street Drain area, reflecting the increased control efforts at new source locations by the VCVCP. Overall, these data suggest that mosquito production is widespread within the developed areas surrounding the J Street Drain, with no evidence of sharp rises in mosquito numbers in traps located near the J Street Drain that would implicate this conveyance channel as a major source of mosquitoes.

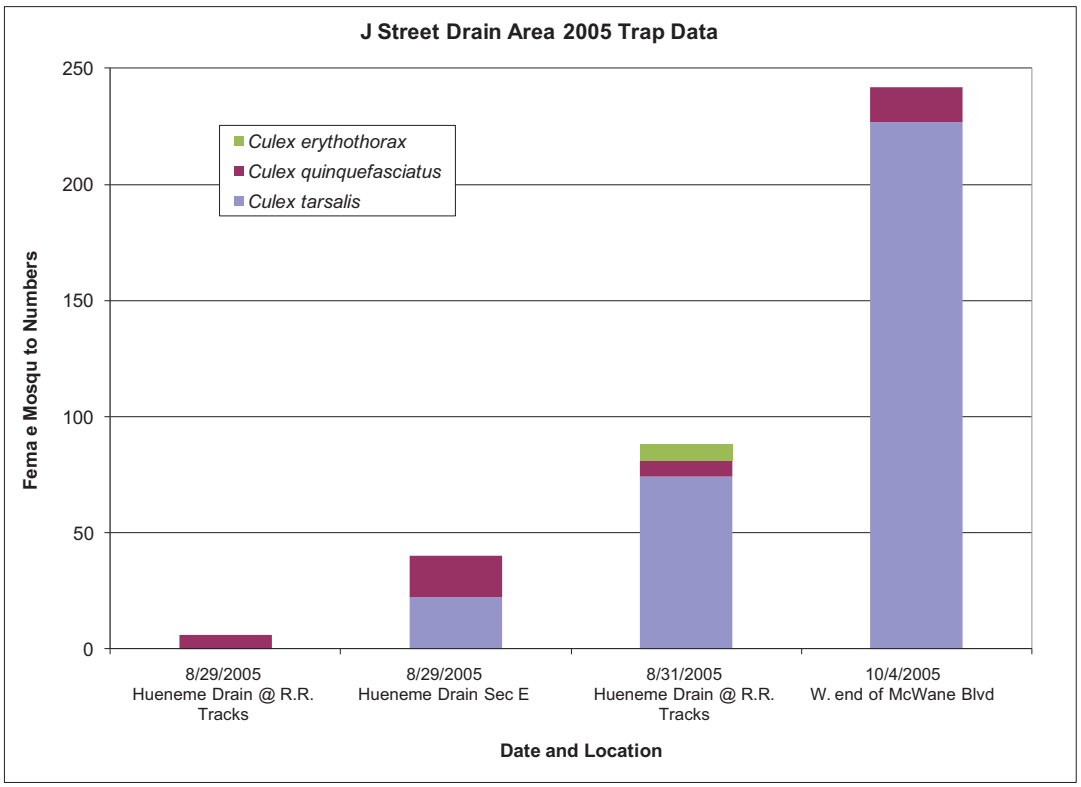

Figure 9. Greater J Street Drain Area 2005 Adult Mosquito Trap Data

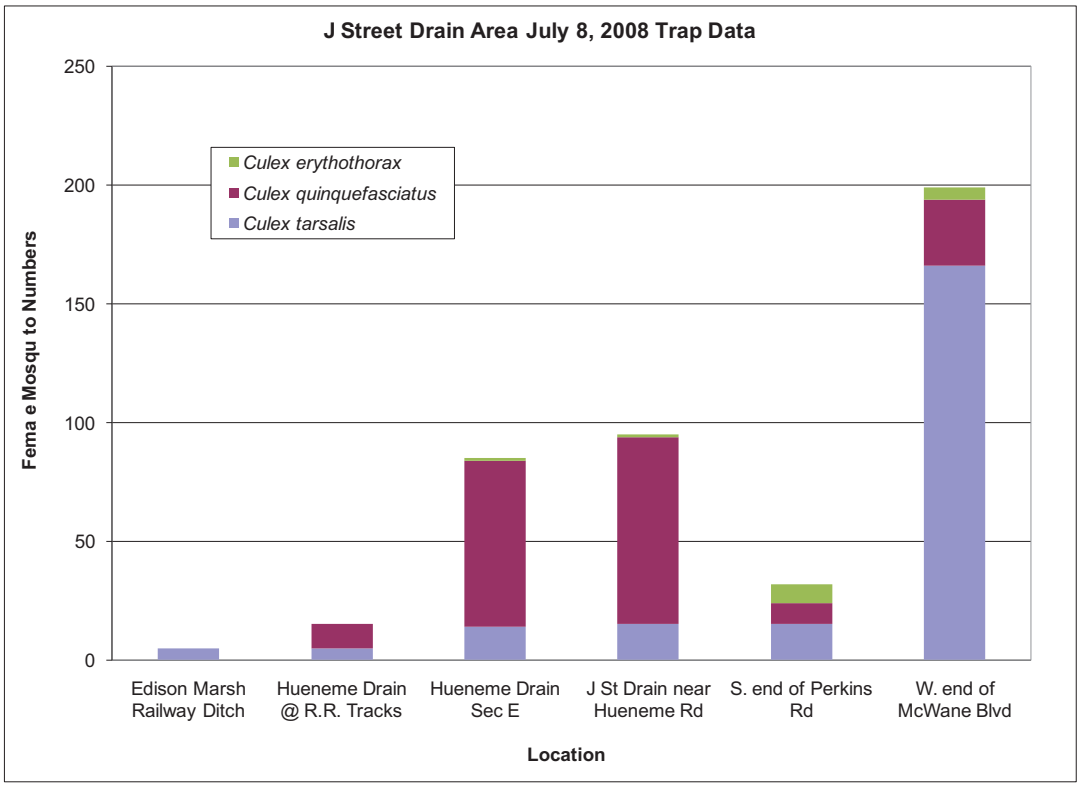

Figure 10. Greater J Street Drain Area July 8, 2008 Adult Mosquito Trap Data

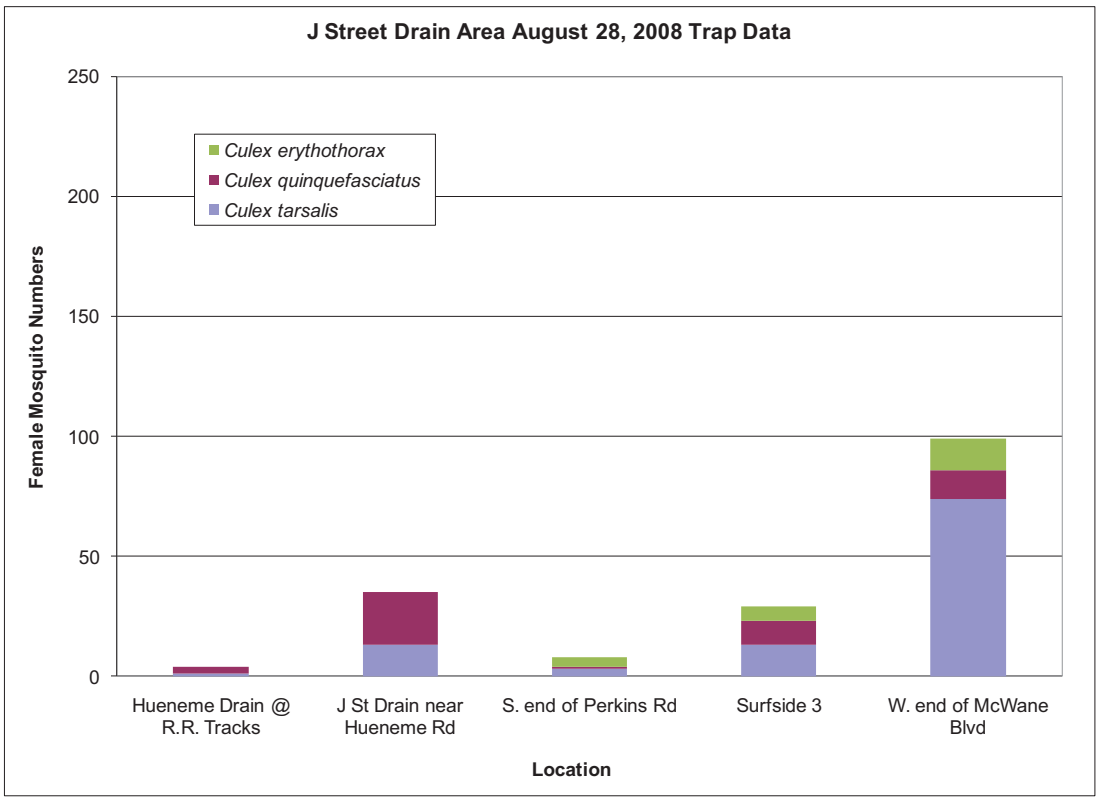

Figure 11. Greater J Street Drain Area August 28, 2008 Adult Mosquito Trap Data

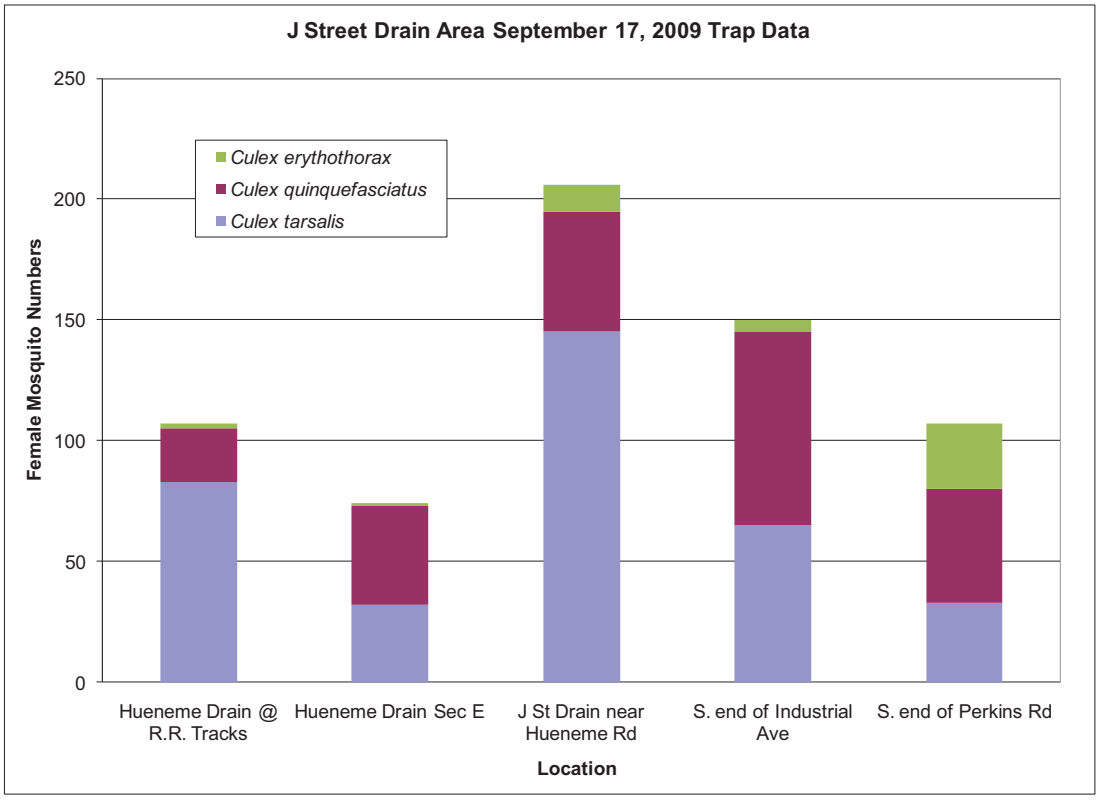

Figure 12. Greater J Street Drain Area September 17, 2009 Adult Mosquito Trap Data

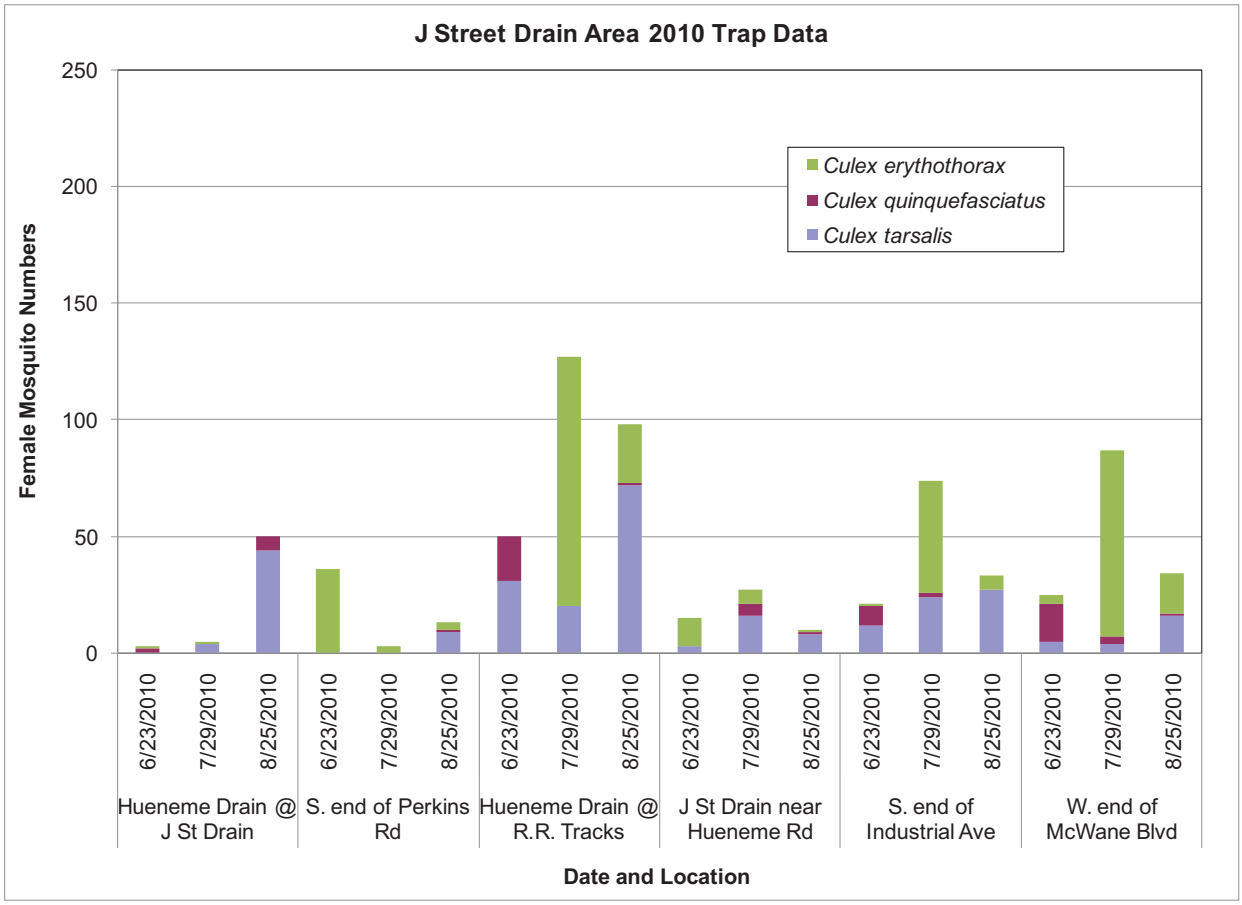

Figure 13. Greater J Street Drain Area 2010 Adult Mosquito Trap Data

4 Evaluation of Channel Design with Respect to Mosquitoes and Public Health

To achieve their intended goals, stormwater management structures can be built into a variety of shapes and sizes depending on local conditions such as slope, soil makeup, flow rates, geographic setting, and existing infrastructure. A consideration that is often overlooked by planners and developers is the potential for such structures to facilitate the attraction, harborage, or development of mosquitoes and options for abating these outcomes. To this end, studies of various structures have been conducted in California in order to determine the design characteristics found to best decrease mosquito production potential for use by the stormwater community (Harbison and Metzger, 2010; Metzger et al., 2008; Metzger, 2004; CDPH and MVCAC, 2010; CDPH, 2010; NCSU Cooperative Extension, 2005; CDHS, 2001). The most effective design characteristics are those that decrease or eliminate the amount of sheltered, stagnant water as discussed in Section 2. Shallow, sheltered standing water with vegetative cover is one of the most conducive mosquito breeding habitats, while deep or flowing unprotected water is unlikely mosquito breeding habitat. Belowground sources of standing water are almost always suitable mosquito breeding habitat. Additional effective design characteristics include:

- Steep sides to inhibit emergent vegetation growth;
- Flowing water;
- Deep-water areas where natural predators can live;
- Open-water areas exposed to wind, which results in surface disturbances (i.e., waves) that reduce the effectiveness of mosquito breathing siphons; and
- Proper access for mosquito treatment and vegetation management.

Additionally, the manual of Best Management Practices for Mosquito Control in California (CDPH and MVCAC, 2010) recommends that drains have a minimum four-foot wide bottom that is well maintained and receives periodic removal of accumulated sediment, trash, and debris. In stormwater structures with permanent standing water, the manual recommends that deep zones of four feet or more be maintained to limit the spread of vegetation such as cattails, and that edges below the water surface be steep and uniform to discourage plant growth that may provide mosquitoes with protection from predators. Use of a concrete bottom in shallow areas is also recommended to discourage plant growth. Finally, all stormwater structures should be easily and safely accessible for monitoring and potential treatment of mosquitoes. This includes minimizing confined-space entry and providing access roads close to shorelines for maintenance.

4.1 CURRENT J STREET DRAIN

The current J Street Drain is a trapezoidal, concrete flood control channel approximately 20-30 feet wide with 1.5:1 sloped walls and an average depth below grade near 4 feet (HDR, 2009). The J Street Drain discharges into Ormond Beach Lagoon, which usually does not have an outlet draining to the ocean (as described in Section 1). The effect of Ormond Beach Lagoon having no outlet is that water backs up into the J Street Drain nearly to Hueneme Road (HDR, 2009). While mosquito control best management practices (BMPs) largely advocate reducing or eliminating standing water in channels and drains as the primary strategy for mosquito control, the endangered species requirements in Ormond Beach Lagoon (discussed in Section 1) prevent such

practices. Therefore, the current J Street Drain is evaluated as a standing water body rather than as a channel.

The simplest and most straightforward approach to mosquito control in stormwater structures is to create either flowing water or dry ground; however, as discussed in Section 2 and above, there are other factors that influence whether habitat is suitable for mosquito development. The current J Street Drain has a concrete substrate and relatively steep sides, both of which inhibit emergent vegetation growth along the bottom and margins of the channel. Lack of vegetation can prevent mosquito production as no sheltered areas for mosquito larvae to use as refuge are provided. As described above, the current J Street Drain is 20-30 feet wide. Because of this wide, open surface, the lack of vegetative cover, and the location near the Pacific Ocean, the water surface in the drain experiences substantial wind and wave action, especially near the beach. Wind and wave action on the surface of the water prevent the breathing siphons of mosquito larvae from maintaining a connection to the air, therefore effectively drowning the larvae. This makes the current J Street drain unlikely habitat for mosquito breeding. In addition, the greater water depth of the J Street Drain downstream of Hueneme Road allows it to support numerous fish species that will opportunistically prey on mosquito larvae.

Recent inspections of the J Street Drain by California Department of Health, Vector-Borne Disease Section staff confirmed that the J Street Drain does not currently provide suitable habitat to support large mosquito populations (personal communication Marco Metzger, September 22, 2010). Additionally, the open channel facilitates maintenance, monitoring, and treatment activities. As a note, the current J Street Drain does, however, provide suitable habitat for midges, which resemble mosquitoes (although they do not bite or transmit disease) and can seasonally be a nuisance.

4.2 PROPOSED J STREET DRAIN PROJECT

The proposed J Street Drain project entails changing the existing open trapezoidal channel into an open rectangular channel with vertical rather than sloped walls. It also entails deepening the channel by four feet and widening it by approximately ten feet (HDR, 2009). The wider, deeper channel will increase the overall capacity of the channel and convey greater volumes of floodwater to prevent the channel from over-topping and causing damage to property and vital facilities. The change in channel geometry would increase the depth, surface area, and length of backed up water. When the water surface elevation in Ormond Beach Lagoon is at 6.5 feet, the additional surface water acreage of the J Street Drain would be one additional acre at the completion of Phase I and 2.6 additional acres at the completion of Phase II (HDR, 2009). However, neither the changes in channel configuration nor the resulting additional standing water volume is expected to increase the suitability of the drain habitat for mosquito breeding. The proposed changes to the channel are projected to maintain or possibly amplify the aforementioned negative effects on mosquito breeding. The greater volume of water would provide additional habitat for predator fish downstream of Hueneme Road, while the increased width would increase exposure to wind and wave action throughout the submerged reach. Vertical channel walls are considered the most desirable design choice to minimize vegetative or other cover along the channel margins and present the best scenario for preventing refuge for immature mosquitoes. The proposed channel geometry will not reduce the ease or safety of access for mosquito monitoring and treatment or channel maintenance.

Due to endangered species constraints, the deepening of the J Street Drain as part of the proposed project would not extend into Ormond Beach Lagoon. Following a breach event, this could result in a situation where the majority of the J Street Drain empties, while a section of standing water remains at the terminus of the drain where the elevation is lower than the lagoon. This scenario is not expected to increase the probability of mosquito production for the following reasons:

1) Vertical walls, lack of vegetation, and wind action would maintain poor mosquito habitat similar to pre-breach conditions
2) Fish living in coastal lagoons, such as the tidewater goby, are adapted to tolerate fluctuations in water level and should remain in the channel providing predation.
3) Breach events usually take place during the colder winter months. In the event that a breach resulted in the temporary formation of isolated pools, mosquito production would be unlikely.

The transition area between flowing water and backed-up water would be expected to have the most potential for mosquito production. However, this area would be accessible to VCVCP staff for monitoring and treatment. The transition area would not be expected to be a substantial source of mosquitoes when treated. It should also be noted that breaches close relatively quickly, and the continuous flow in the channel would refill the drain, preventing this condition from persisting. Furthermore, it is expected that the depth of the drain and the lagoon would equalize over time such that standing water may not remain in the drain during future breaches.

4.3 J STREET DRAIN CHANNEL ALTERNATIVES

The Draft EIR presented project alternatives to the proposed J Street Drain Project and determined the environmental impacts of the alternatives. The alternative projects were:

- Alternative A: Buried box culverts
- Alternative B (the Proposed Project): Open rectangular channel
- Alternative C: Open rectangular channel with step
- Alternative D: Two separated buried box culverts
- Alternative E: Natural channel

Analyses of all four of the project alternatives with regard to mosquito breeding potential are presented below. It should be noted that only Alternative A and B are feasible options for the project between the beach and Hueneme Rd due to the size of the right-of-way and existing structures.

4.3.1 Alternative A: Buried Box Culverts

This project alternative involves the construction of buried box culverts rather than an open channel from Hueneme Road north to Pleasant Valley Road. The J Street Drain channel would remain open from Hueneme Road south to Ormond Beach Lagoon to avoid impacts to endangered species in the lagoon (HDR, 2009). The use of buried box culverts for the channel would most likely have a negative impact on mosquito control because of four main factors. First, buried box culverts would be closed at the surface, providing cover and decreasing/eliminating wind disturbance of the water that prevents mosquito larvae from surviving. Second, dark, belowground habitats are unsuitable for fish that may otherwise be predators. Third, the use of buried box culverts would shift the dominant mosquito species

expected to occupy this area of the channel from *Culex tarsalis*, which tend to stay out of underground habitats (Reisen and Lothrop, 1995; Walton et al., 1990), to *Culex quinquefasciatus,* which are strongly attracted to underground habitats (Schreiber et al., 1988). While this change in species composition does not inherently cause a greater risk to public health (both are vectors of West Nile virus), the buried box culvert design provides a protected breeding habitat for *Culex quinquefasciatus,* increasing its mosquito production potential. Lastly, the buried box culvert design would reduce the accessibility of the channel for mosquito monitoring and treatment by the VCVCP and maintenance by the District, both of which are important factors in mosquito control.

4.3.2 Alternative C: Open Rectangular Channel with Step

This project alternative consists of a main concrete channel with vertical walls and a landscaped step on either side of the main channel. The main channel would be wider and shallower than the proposed project and have suitable capacity for most stormwater flows, but as flow increased above the main channel's capacity it would spread out onto the step (HDR, 2009). Under this alternative, the main channel would be wider than the current J Street Drain. This alternative would likely have similar mosquito breeding potential to the current and proposed J Street Drain, with a similar amount of wind disturbance and fish predation compared to the existing J Street Drain. The change to vertical walls in the main channel is considered a more desirable design choice to reduce potential for vegetative or other cover along the channel margins, as for the proposed project. This alternative would also provide adequate access for mosquito treatment and emergent vegetation management, similar to both the current and proposed J Street Drain, though may require additional maintenance for the vegetated step.

4.3.3 Alternative D: Two Separated Buried Box Culverts

This project alternative is very similar to Alternative A, except that the buried box culvert would be separated by a vegetated swale that could be used to treat stormwater before it enters the culverts (HDR, 2009). The same applies here as discussed for Alternative A: reduced wind disturbance, reduced or eliminated fish presence, change in mosquito species composition, and reduced access for monitoring, treatment, and maintenance.

4.3.4 Alternative E: Natural Channel

This project alternative consists of a natural channel with no concrete sides or bottoms. This alternative would require a much wider channel than currently exists and might increase the area of water backed up compared to the proposed project (HDR, 2009). This project alternative would greatly increase the potential for mosquito production within the J Street Drain as compared to the current or proposed configuration and provide habitat suitable for additional species. The natural channel would have gently sloping sides that would be vegetated to control erosion. This vegetation would provide shallow, protected mosquito habitat along the margins of the channel. Dense vegetation along channel margins also makes monitoring and treatment by the VCVCP more difficult and dense vegetation can make treatment less effective. Without substantial maintenance, the natural channel would also likely develop side channels with intermittent flow that could similarly provide for mosquito habitat (Williams and Swanson, 1989). Conversely, the additional width of the natural channel will increase wind action on the surface of the water where vegetation is not present and the use of a natural channel may

increase habitat for mosquito predators. However, these benefits are unlikely to compensate for the factors that would increase mosquito populations.

4.3.5 Additional Alternatives

The Surfside III Condominium Owner's Association suggested an additional alternative for the J Street Drain (Loewenthal, Hillshafer & Rosen LLP, 2010). The additional alternative is to pump out the standing water in the J Street Drain, the reasoning being that without standing water no mosquito breeding would occur within the J Street Drain. This additional alternative, however, would not solve the original problem and impetus of the J Street Drain Project, which is the need for 100-year storm flow capacity. The dimensions of the current J Street Drain are not sufficient to convey the flow volume of a 100-year storm, with no relationship to the volume of water present in the channel. In other words, the current J Street Drain would flood during a 100-year storm even if the outlet to the Pacific Ocean was open at the time and the channel was initially empty.

This additional alternative assumes that (1) it is feasible to pump the water out of the J Street Drain and (2) such pumping would not violate the Endangered Species Act. It should be noted that it is unlikely either of these assumptions are correct. Pumping water out of J Street Drain would reduce the size of Ormond Beach Lagoon, resulting in a reduction of foraging habitat for endangered California least terns and critical habitat for the endangered tidewater goby.

While generally it is considered good to reduce or eliminate standing water to minimize mosquito production, it is unlikely that a pump would be capable of removing all water in the drain, especially the small volumes of non-storm urban runoff. Remaining wet areas in depressions and debris would provide excellent mosquito breeding habitat. Additionally, pumps may require a sump, which would hold water in a sheltered space that is good mosquito habitat. This option would require substantial additional maintenance to keep the channel and sump free of trash and debris. Also, additional monitoring and treatment would be necessary by the VCVCP. This condition contrasts with the current J Street Drain, where, as discussed above, though standing water is present, the standing water is not good mosquito breeding habitat. Therefore, implementing a pump would essentially remove water that is not good mosquito habitat (current water in J Street Drain) and replace it with water that is good mosquito habitat (small pools of water that remain in the channel or in a sump).

4.3.6 Summary of Alternatives

The impacts on mosquito production of each alternative as compared to the proposed project are presented in Table 1.

Table 1. Impacts of Alternatives on Mosquito Production Compared with Proposed Project

Alternative	Effect on Habitat	Effect on Maintenance & Chemical Applications	Overall Impact
A: Buried box culverts	• Reduced disturbance to water surface • Reduced fish habitat • Altered mosquito species	• Difficult to access	Negative
C: Open rectangular channel with step	• Similar surface water disturbance and fish habitat	• Increased maintenance required	Similar
D: Two separated buried box culverts	• Reduced disturbance to water surface • Reduced fish habitat • Altered mosquito species	• Difficult to access	Negative
E: Natural Channel	• Increased disturbance to water surface • Increased fish habitat • Creation of mosquito habitat at margins	• Increased maintenance required • Reduced accessibility • Reduced effectiveness of treatment	Negative
Additional Alternative	• Creation of stagnant puddles • Creation of habitat in sump	• Increased maintenance required • Increased treatment required	Negative

5 Narrative Review of Potential Mosquito Sources

In addition to the J Street Drain there are other potential mosquito breeding sites in the surrounding area. This section evaluates the potential of additional sites as mosquito breeding habitat.

5.1 ORMOND BEACH LAGOON

According to the manual of Best Management Practices for Mosquito Control in California (CDPH and MVCAC, 2010), wetlands can be an important source of mosquito production. This is also supported by the VCVCP trap data presented in Section 3 (Figure 6 and Figure 7, above). Ormond Beach Lagoon has grown in area since the District ceased breaching the lagoon's berm to maintain an ocean outlet. When the lagoon had an outlet, the wetland area was fairly small compared to the current condition. Ormond Beach Lagoon is an open, natural substrate waterbody with vegetated margins and also vegetated interior in some portions. Water depth varies. The open, interior portions of the lagoon are not good habitat for mosquito breeding due to wind action and fish predation, as discussed above. However, the many densely vegetated areas of the lagoon, some with merely inches of water, provide optimal habitat for mosquito breeding. Emergent vegetation such as cattails, which are plentiful and dense in the lagoon, protects immature mosquitoes from wind and predators.

Many regions of the lagoon are difficult to access by VCVCP staff for monitoring and treatment. Furthermore, the dense vegetation makes treatment difficult and less effective the presence of emergent vegetation can prevent applied substances from reaching the water in adequate quantities to control mosquitoes. Additionally, many wetlands, and/or the species that live in them, are protected by state and federal laws, which may limit the management strategies permitted. For these many reasons, Ormond Beach Lagoon is considered to be a potential and substantial source of mosquito breeding. Given the close proximity of portions of the lagoon to residential areas, it may be a source of mosquitoes experienced by the public. This is also supported by the VCVCP trap data discussed in Section 3.

5.2 OXNARD WASTEWATER TREATMENT PLANT

The OWWTP borders the J Street Drain across from the Surfside III Condominiums and occupies the majority of the space between the J Street Drain to the west, Perkins Rd. to the east, the railroad tracks to the north, and approximately McWane Blvd. to the south. This facility collects and treats approximately 31 million gallons of wastewater per day from the City of Oxnard, the City of Port Hueneme, the US Naval Base, and some unincorporated areas of Ventura County. Treated wastewater is discharged to the Pacific Ocean. The OWWTP contains a large pond, may contain inactive treatment cells, and many sumps for pumping wastewater throughout various stages of the treatment process as well as on-site ditches and other locations that contain standing water. These sources of standing water do not contain natural predators and can become suitable mosquito breeding habitat under certain conditions. The VCVCP currently treats many locations within the OWWTP and the OWWTP cooperates in the monitoring and treatment of mosquito sources. Several new sources within the OWWTP were identified during 2009, including a flooded basement actively breeding mosquitoes. This suggests that these locations may have been producing mosquitoes prior to their identification and treatment. Monitoring and treatment of identified sources should keep mosquito production from the

OWWTP to a minimum; therefore, certain areas within the OWWTP are considered potential sources for substantial mosquito production without treatment (as was the case prior to identification of new sources) but a minor source with regular monitoring and treatment hereafter.

5.3 HUENEME DRAIN/BUBBLING SPRINGS

Hueneme Drain, also known as Bubbling Springs, runs south along Surfside Drive toward the ocean and then southeast parallel to the beach to end at the Hueneme Drain Pump Station at J Street Drain. Hueneme Drain has many similarities to J Street Drain: it is wide with wind action on the surface, many fish live in the channel, and has very little protected habitat along the margins. Hueneme Drain has some shoreline vegetation along the margins in contrast to the vegetation-free J Street Drain, but it is limited to small clusters. Therefore, Hueneme Drain is considered to be at worst a minor source of mosquitoes. Hueneme Drain does, however, provide suitable habitat for midges, which resemble mosquitoes (although they do not bite or transmit disease) and can seasonally be a nuisance.

5.4 HUENEME DRAIN PUMP STATION

As discussed in the Introduction, the Hueneme Drain Pump Station transfers water from the Hueneme Drain to the J Street Drain. The Hueneme Drain Pump Station was created in the 1960s because the Hueneme Drain, fed by the naturally occurring Bubbling Springs, was bisected by the J Street Drain, which effectively cut off the Hueneme Drain from its outlet (HDR, 2009). A forebay is included as part of the Hueneme Drain Pump Station that acts as the sump for the pumps. The Hueneme Drain Pump Station was reconstructed in 2005-2007 to provide pumping capacity for the 100-year storm event. There was no hydrologic change (e.g., additional standing water) to the Hueneme Drain, Hueneme Drain Pump Station, or J Street Drain after the reconstruction as daily flow volumes passing through the pump station are similar to pre-project conditions, and the pump forebay continues to exist in its original condition. Flow volumes are based on the natural output of Bubbling Springs and urban runoff generated by City of Port Hueneme residents and businesses. Residents of the area have commented (Kelemen, 2009) that an increase in the mosquito population coincided with the reconstruction of the pump station; therefore, this section includes an evaluation of the previous and current pump station for mosquito breeding potential.

Because Hueneme Drain ends at the J Street Drain with no outlet, there is standing water in the channel. Water is removed from the channel via the Hueneme Drain Pump Station. The potential of the Hueneme Drain Pump Station to produce mosquitoes prior to the reconstruction was not considered to be different than the potential of the channel itself, which, as described above, is considered a minor or non-source. There was no change in the hydrologic conditions found in the Hueneme Drain or the Hueneme Drain Pump Station, including the forebay that continues to exist in its original size, following the reconstruction (i.e., no additional standing water). The additions to the pump station following the reconstruction would not have increased the suitability for mosquito production. Therefore, the current Hueneme Drain Pump Station is also considered to be at worst a minor source of mosquitoes.

5.5 OTHER URBAN SOURCES

Many potential sources of mosquito production can exist in the urban environment, including residential properties, industrial properties, parks and recreational areas, and urban infrastructure. Some examples of potential sources include unmaintained swimming pools where debris and algae provide refuge, over-watered lawns, garbage cans or other containers filled with water by sprinklers, ditches or ruts, rain gutters or down spouts, and bird baths (CDPH, 2008a). Mosquitoes arising from private property are the legal responsibility of the landowner in California, according to the California Health and Safety Code Sections 2001 - 4(d), 2002, and 2060 (b) (CDPH and MVCAC, 2010); however, it is difficult to assess the amount of actual mosquito production that may be taking place given the variety of potential sources that could exist in the area. This variety is a common struggle for vector control agencies throughout the state, as it is impossible for any program to identify or quantify all urban sources, especially as the sources are constantly changing. In particular, the sources arising from unmaintained swimming pools and properties due to home foreclosures may be substantial.

5.6 OTHER OPEN SPACE SOURCES

Besides Ormond Beach Lagoon discussed above, there are other wetlands and ponds in the vicinity of the J Street Drain. Areas within undeveloped floodplains may be seasonally flooded, which varies from year to year. Depending on the size, amount of vegetation, and access, these additional waterbodies may also be sources of mosquito production. As discussed above, wetlands can be an important source of mosquito production (CDPH and MVCAC, 2010). Additionally, many wetlands, and/or the species that live in them, are protected by state and federal laws, which may limit the management strategies permitted. The VCVCP currently monitors and treats several marshes, wetlands, and ponds in the area, indicating the potential for these waterbodies to be mosquito sources. Additionally, wetlands and seasonally flooded areas may be very difficult to access. However, identified waterbodies are monitored and treated by the VCVCP to control mosquito production. Additional waterbodies that may not have been identified as sources may be substantial sources of mosquito production. This is supported by the VCVCP trap data from McWane Blvd. that captures mosquitoes from the undeveloped floodplains and marshes adjacent to the Oxnard Industrial Drain. The data indicate that this undeveloped area is the most mosquito-productive in the greater J Street Drain area.

6 Overall Evaluation and Conclusions

The purpose of this report is to provide an analysis of the mosquito production potential of the proposed J Street Drain Project compared with the current J Street Drain and the proposed project alternatives. The assessment took into account the known biology and ecology of mosquito species present in the greater J Street Drain area, adult mosquito trap data provided by the VCVCP from the surrounding developed and undeveloped environments, design and maintenance considerations known to affect mosquito breeding, local environmental concerns and limitations, and empirical observations. The underlying objective was to determine if construction of the proposed J Street Drain Project would result in the creation of additional habitat conducive to mosquito production that could have negative public health consequences (i.e., transmission of disease and/or nuisance) to local residents.

The analysis found no evidence to suggest that the current configurations of the J Street Drain, Hueneme Drain Pump Station, or Hueneme Drain provide high-quality habitat for or produce large numbers of mosquitoes. Adult mosquito trap data from this area implicate Ormond Beach Lagoon as the primary source of mosquitoes in the immediate area (i.e., in the area adjacent to Ormond Beach Lagoon). However, the evaluation of the greater J Street Drain area revealed that the OWWTP, the undeveloped floodplain of the Oxnard Industrial Drain, and urban areas may also produce substantial numbers of mosquitoes. In fact, trap data indicate that the undeveloped floodplains of the Oxnard Industrial Drain are the most mosquito-productive habitat in the greater J Street Drain area. Overall, the trap data suggest that mosquito production is widespread within the developed areas surrounding the J Street Drain, with no evidence of sharp rises in mosquito numbers in traps located near the J Street Drain that would implicate this conveyance channel as a major source of mosquitoes. The current J Street Drain, Hueneme Drain Pump Station, and Hueneme Drain do, however, provide suitable habitat for midges, which resemble mosquitoes (although they do not bite or transmit disease) and can seasonally be a nuisance by massing in and around human-occupied structures.

The evaluation of the proposed J Street Drain Project found the proposed channel configuration to have similar or less mosquito breeding potential than the current J Street Drain channel. The proposed changes would likely amplify the channel's negative effects on mosquito breeding and is not expected to have significant impact on public health due to mosquito production. The alternatives presented in the Draft EIR, as well as the additional proposed alternative, would be expected to have similar or greater mosquito breeding potential, as compared to the proposed project.

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Air Quality Technical Report

for the

J Street Drain Project
Ventura County, California

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Table of Contents

1.0 Introduction **1**
2.0 Existing Conditions **2**
2.1 Regulatory Requirements 2
2.2 Regional Climate 7
2.3 Existing Air Quality 7
2.4 Toxic Air Contaminants 8
3.0 Thresholds of Significance **9**
4.0 Impacts **11**
4.1 Consistency with Air Quality Management Plan 11
4.2 Air Quality Standard Violation 12
4.2.1 Construction 12
4.2.2 Operational Impacts 20
4.3 Cumulatively Considerable Impacts 23
4.4 Exposure of Sensitive Receptors 23
4.5 Odor Impacts 24
5.0 Summary and Conclusions **25**
6.0 References **26**

1.0 Introduction

This report presents an assessment of potential air quality impacts associated with the J Street Drain Project proposed by the Ventura County Watershed Protection District (District) in Ventura County, California. The J Street Drain is located within a Ventura County easement which includes the concrete channel, some box culverts under the roadways, and access road. The drain itself is located near the border between City of Oxnard and City of Port Hueneme. The proposed construction of the J Street Drain could potentially impact the land uses and roadways of both cities during construction activities.

The purpose of the proposed project is to provide flood protection to the 100-year flood level for the area surrounding J Street Drain. Protection from a 100-year flood is the standard set by the Federal Emergency Management Agency (FEMA) under the National Flood Insurance Program (NFIP). The need for such protection is evidenced by the studies that show the existing drain has the capacity to handle only a ten-year flood event without overtopping the channel. Without the increase in flood protection the local area would continue to be susceptible to flooding, as well as federal requirements to purchase flood insurance for properties within the 100-year flood zone defined by FEMA after they update existing flood maps for the project area in the future.

The proposed project involves converting the existing trapezoidal concrete channel into an open rectangular channel with a bottom approximately four feet deeper than the existing channel bottom. The existing trapezoidal channel would be widened and deepened to increase the capacity; the channel walls would be vertical with the top being an open channel. The existing box culverts under the street crossings and railroad crossing would be replaced by larger structures to improve flow conveyance. The existing concrete lining ends approximately 50 feet south of the Hueneme Drain Pump Station. Because the concrete lined portion of the channel invert would be lowered about 2.5 feet to create the required capacity, excavation would continue downstream towards the ocean. The finished invert would be daylighted via an earthen ramp to the lagoon at a 10:1 slope over a distance of up to 40 feet from the end of the existing concrete. A six- to eight-foot thick layer of four-ton rock riprap would be placed on the earthen ramp at the end of the concrete drain to dissipate energy flow.

The demolition of the existing drain and construction of the new, higher capacity drain would take place in phases. It is anticipated that the demolition and construction would start at the southern end of the drain, south of Hueneme Road and move northward in phases. The construction phases are anticipated as:

- Phase I Downstream end of the Drain to north side of Hueneme Road (3430 lineal feet);
- Phase II Hueneme Road to Pleasant Valley Road (2620 lineal feet);
- Phase III Pleasant Valley Road to Yucca Street (4100 lineal feet); and
- Phase IV Yucca Street to just north of Redwood Street (2680 lineal feet).

Each of these phases would occur independently rather than concurrently. A detailed description of construction activities required for the project is provided in Section 4.0. It is anticipated that maintenance of the reconstructed drain will be similar to the existing maintenance activities.

This evaluation addresses the potential for air emissions during construction and after full buildout of the project.

2.0 Existing Conditions

2.1 Regulatory Requirements

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called "criteria" pollutants). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

States that are designated nonattainment for the NAAQS are required to develop a State Implementation Plan (SIP), which outlines federally-enforceable rules, regulations, and programs designed to reduce emissions and bring the area into attainment of the NAAQS. In California, the California Air Resources Board (ARB) is the agency responsible for developing the SIP. The responsibility for developing plans and programs for each air basin has been delegated to the local agency responsible for attaining and maintaining air quality standards in that air basin.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The ARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant.

The ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The ARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The ARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. It is the responsibility of the Ventura County Air Pollution Control District (VCAPCD) to ensure that state and federal ambient air quality standards are achieved and maintained in Ventura County. Ventura County is part of the South Central Coast Air Basin (SCCAB), which includes the counties of Ventura, Santa Barbara, and San Luis Obispo.

Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone (O_3), CO, NO_2, particulate matter with

a diameter of 10 microns or less (PM_{10}), particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). These standards were established to protect sensitive receptors from adverse health impacts due to exposure to air pollution. The California Ambient Air Quality Standards (CAAQS) are more stringent than the federal standards. California has also established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. Hydrogen sulfide and vinyl chloride are currently not monitored in the Basin because these contaminants are not seen as a significant air quality problem. CAAQS and National Ambient Air Quality Standards (NAAQS) for each of these pollutants are shown in Table 1. The SCAB is currently considered a nonattainment area for the CAAQS and NAAQS for O_3, PM_{10}, $PM_{2.5}$, and CO. A brief description of the criteria pollutants follows.

Ozone. Ozone is considered a photochemical oxidant, which is a chemical that is formed when reactive organic gases (ROG) and nitrogen oxides, both byproducts of combustion, react in the presence of ultraviolet light. Ozone is present in relatively high concentrations in the Basin. Ozone is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to ozone.

Carbon monoxide. Carbon monoxide is a product of combustion, and the main source of carbon monoxide in the Basin is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and can also affect mental alertness and vision.

Nitrogen dioxide. NO_2 is also a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of NO with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Fine particulate matter. Fine particulate matter, or PM_{10}, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Particulate matter in this size range has been

determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} arises from a variety of sources, including road dust, diesel exhaust, combustion, tire and break wear, construction operations, and windblown dust. PM_{10} can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. In 1997, the U.S. EPA proposed a new standard for $PM_{2.5}$, which is particulate matter with an aerodynamic diameter of 2.5 microns or less. These finer particulates are considered to have the potential to lodge deeper in the lungs.

Sulfur dioxide. SO_2 is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Lead in the atmosphere occurs as particulate matter. Lead has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Lead has the potential to cause gastrointestinal, central nervous system, kidney, and blood diseases upon prolonged exposure. Lead is also classified as a probable human carcinogen.

The attainment status of Ventura County for each of the criteria pollutants described above is presented below in Table 2.

Table 1 Ambient Air Quality Standards						
POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS		NATIONAL STANDARDS		
		Concentration	Measurement Method	Primary	Secondary	Measurement Method
Ozone (O_3)	1 hour	0.09 ppm (180 μg/m^3)	Ultraviolet Photometry	--	--	Ethylene Chemiluminescence
	8 hour	0.070 ppm (137 μg/m^3)		0.075 ppm (147 μg/m^3)	0.075 ppm (147 μg/m^3)	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm (56 μg/m^3	Gas Phase Chemiluminescence	0.053 ppm (100 μg/m^3)	0.053 ppm (100 μg/m^3)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 μg/m^3)		0.100 ppm (188 μg/m^3)	--	
Sulfur Dioxide (SO_2)	24 hours	0.04 ppm (105 μg/m^3)	Ultraviolet Fluorescence	--	--	Pararosaniline
	3 hours	--		--	0.5 ppm (1300 μg/m^3)	
	1 hour	0.25 ppm (655 μg/m^3)		75 ppb (189 μg/m^3)	--	
Respirable Particulate Matter (PM_{10})	24 hours	50 μg/m^3	Gravimetric or Beta Attenuation	150 μg/m^3	150 μg/m^3	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m^3		--	--	
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 μg/m^3	Gravimetric or Beta Attenuation	15 μg/m^3	--	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 μg/m^3	--	
Sulfates	24 hours	25 μg/m^3	Ion Chromatography	--	--	--
Lead (Pb)	30-day Average	1.5 μg/m^3	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 μg/m^3	1.5 μg/m^3	
	Rolling 3-month Average	--		0.15 μg/m^3	0.15 μg/m^3	
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 μg/m^3)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 μg/m^3)	Gas Chromatography	--	--	--

ppm= parts per million; μg/m^3 = micrograms per cubic meter; mg/m^3= milligrams per cubic meter
Source: California Air Resources Board 2011, www.arb.ca.gov.

Table 2 Ventura County Attainment Classification for Criteria Pollutants		
Pollutant	**CAAQS Attainment Classification**	**NAAQS Attainment Classification**
1-hr Ozone	Nonattainment	Rescinded
8-hr Ozone	Nonattainment	Moderate Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
PM_{10}	Nonattainment	Unclassified/Attainment
$PM_{2.5}$	Nonattainment	Unclassified/Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	N/A
Hydrogen Sulfide	Unclassified	N/A
Vinyl Chloride	Unclassified	N/A

2.2 Regional Climate

Regional climate data in the area are collected at the Oxnard climate station (WRCC 2011). Annual average temperatures in the area range from an average minimum temperature of 50.0ºF to an average maximum temperature of 70.1ºF. January is the coolest month, with average minimum temperatures of 43.5°F. August is the warmest months in the area, with average maximum temperatures reaching 74.8°F. The climate of the project area is characterized as Mediterranean Dry-Summer Climate. The Mediterranean Dry-Summer Climate is known to be located in mid-latitude regions, with cool, wet winters and warm, dry summers.

2.3 Existing Air Quality

The closest ambient air quality monitoring station to the project is the El Rio monitoring station located at Rio Mesa School in Oxnard, which measures O_3, NO_2, PM_{10} and $PM_{2.5}$. Ambient concentrations of criteria pollutants measured at these monitoring stations during the period 2007-2009 are presented in Table 3. Ambient air concentrations were compared with the CAAQS and NAAQS. The data indicate that the area is in compliance with both CAAQS and NAAQS for NO_2. The maximum measured concentrations of NO_2 each year were less than the

0.18-ppm one-hour CAAQS, the annual average 0.030-ppm CAAQS, the 0.100-ppm one-hour NAAQS, and the annual average 0.053-ppm NAAQS.

One exceedance each of the federal 24-hour $PM_{2.5}$ and PM_{10} standards were recorded in 2007; however, those exceedances occurred during the southern California fire events of 2007. One exceedance of the federal 8-hour ozone standard was recorded at the El Rio monitoring station in 2009. The station regularly measures exceedances of the state PM_{10} standard.

Table 3
Ambient Background Concentrations
(ppm unless otherwise indicated)

Pollutant	Averaging Time	2007	2008	2009	2010	Most Stringent Ambient Air Quality Standard	Monitoring Station
Ozone	8 hour	0.072	0.074	0.077	0.072	0.075	El Rio
	1 hour	0.089	0.086	0.099	0.083	0.09	El Rio
PM_{10}	Annual	29.7 $\mu g/m^3$	26.2 $\mu g/m^3$	25.6 $\mu g/m^3$	21.7 $\mu g/m^3$	20 $\mu g/m^3$	El Rio
	24 hour	248 $\mu g/m^3$	79.8 $\mu g/m^3$	99.9 $\mu g/m^3$	59.9 $\mu g/m^3$	50 $\mu g/m^3$	El Rio
$PM_{2.5}$	Annual	10.6 $\mu g/m^3$	10.0 $\mu g/m^3$	10.2 $\mu g/m^3$	8.52 $\mu g/m^3$	12 $\mu g/m^3$	El Rio
	24 hour	39.9 $\mu g/m^3$	23.4 $\mu g/m^3$	19.7 $\mu g/m^3$	21.4 $\mu g/m^3$	35 $\mu g/m^3$	El Rio
NO_2	Annual	0.010	0.008	0.008	0.007	0.030	El Rio
	1 hour	0.053	0.052	0.051	0.060	0.100	El Rio

NA Data not available
Source: http://www.arb.ca.gov/adam/topfour/topfourdisplay.php

2.4 Toxic Air Contaminants

Cancer Risk. One of the primary health risks of concern due to exposure to toxic air contaminants (TACs) is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no "safe" level of exposure to carcinogens; that is, any exposure to a carcinogen poses some risk of causing cancer. Health statistics show that one in four people will contract cancer over their

lifetime, or 250,000 in a million, from all causes, including diet, genetic factors, and lifestyle choices.

Noncancer Health Risks. Unlike carcinogens, for most noncarcinogens it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. The California Environmental Protection Agency (CalEPA) and California Office of Environmental Health Hazard Assessment (OEHHA) have developed reference exposure levels (RELs) for noncarcinogenic TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The noncancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the hazard index (HI).

3.0 Thresholds of Significance

The State of California has developed guidelines to address the significance of air quality impacts based on Appendix G of the State CEQA Guidelines which provides guidance that a project would have a significant environmental impact if it would:

1. Conflict or obstruct the implementation of the applicable air quality plan (in this case, the VCAPCD's 2007 Air Quality Management Plan);
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
4. Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations; or
5. Create objectionable odors affecting a substantial number of people.

The significance of impacts was evaluated based on the guidance in the *Ventura County Air Quality Assessment Guidelines* (VCAPCD 2003). The *Ventura County Air Quality Assessment Guidelines* is an advisory document that provides lead agencies, consultants, and project applicants with a framework and uniform methods for preparing air quality evaluations for environmental documents. The Guidelines recommend specific criteria and threshold levels for determining whether a proposed project may have a significant adverse air quality impact. The Guidelines also provide mitigation measures that may be useful for mitigating the air quality impacts of proposed projects. As stated in the document, it should be noted that these are guidelines only, and their use is not required or mandated by the VCAPCD.

According to the Guidelines, the following would result in a significant adverse impact on air quality within Ventura County:

- A project with emissions greater than 25 pounds per day of ROG or NOx.
- A project that would result in an exceedance of an air quality standard (state or federal).
- A project that would emit more than 2 pounds per day of ROG or NOx and is inconsistent with the AQMP.
- A project that may be reasonably expected to generate fugitive dust emissions in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property (see California Health and Safety Code, Division 26, §41700) will have a significant adverse air quality impact.
- A project with a toxic air contaminant impact of greater than 10 in a million cancer risk or a hazard index greater than 1.0.
- A project that exposes a considerable number of persons to objectionable odors.

The impacts associated with construction and operation of the J Street Drain Project were evaluated for significance based on these significance criteria.

4.0 Impacts

The proposed project includes both construction and operational impacts. Construction impacts include emissions associated with the construction of the project. Operational impacts include emissions associated with maintenance activities for the J Street Drain. The significance thresholds identified in Section 3.0 are discussed below.

4.1 Consistency with Air Quality Management Plan

The most recently adopted air quality plan is the 2007 Air Quality Management Plan developed by the VCAPCD. This plan is Ventura County's portion of the SIP, which outlines the VCAPCD's plans for attainment of the federal 8-hour ozone standard. The AQMP accommodates population growth and transportation projections based on the projections made by the Southern California Association of Governments (SCAG) for growth in the region. Projects that are consistent with employment and population forecasts made by SCAG are consistent with the emissions budgets contained within the AQMP. Also, projects that are consistent with the SIP rules (i.e., the federally-approved rules and regulations adopted by the VCAPCD) are consistent with the SIP. Thus projects would be required to conform with measures adopted in the AQMP, including undergoing New Source Review for sources subject to permitting with the VCAPCD.

The main source of emissions associated with the J Street Drain Project occur during construction and, as such, are temporary emissions. The AQMP requires construction equipment and on-road mobile sources such as trucks and worker vehicles to comply with state emission standards promulgated by the ARB. Equipment and vehicles operating within the state of California are required to comply with applicable emission standards and, as such, will comply with the AQMP. There are no other AQMP measures that are applicable to construction projects.

Because the project will comply with AQMP measures to reduce construction emissions, and because the project's impacts are temporary, the project will not conflict with or obstruct implementation of the AQMP. Impacts are less than significant.

4.2 Air Quality Standard Violation

4.2.1 Construction

The demolition of the existing drain and construction of the new, higher capacity drain would take place in phases. It is anticipated that the demolition and construction would start at the southern end of the drain, south of Hueneme Road and move northward in phases. The construction phases are anticipated as: Phase I Downstream end of the Drain to north side of Hueneme Road (3430 lineal feet); Phase II Hueneme Road to Pleasant Valley Road (2620 lineal feet); Phase III Pleasant Valley Road to Yucca Street (4100 lineal feet); and Phase IV Yucca Street to just north of Redwood Street (2680 lineal feet). Each of these phases would occur independently rather than concurrently. Additionally, during each of these phases, culverts under existing facilities will be replaced. The culverts to be replaced include: the Ventura County Railroad (VCRR) crossing, Hueneme Road, Clara Street, Pleasant Valley Road, Bard Road, Yucca Street, Teakwood Street, and Redwood Street. During the work on these culvert crossings vehicle access would be maintained for Hueneme Road and Pleasant Valley Road. The other crossings would be closed during construction and local traffic detoured around the construction area. Local access for residents would be maintained throughout the project, even if the nearest channel crossing is closed for construction.

It should be noted that construction will take place from within the District's easement with the potential of the work area extending beyond the easement in the southern area near the lagoon. Construction staging areas, which are located northeast of Perkins Road and west of the downstream terminus of J Street Drain, are currently vacant, and were previously disturbed. Trench shoring must occur along Building 7 of the Surfside III Condominiums, but is not required for the remainder of this residential community. If trench shoring is not used along the remainder of the condominium complex, the excavation area would need to be wider,

necessitating temporary removal of some private landscaping. In addition, the current fence, which does not coincide with the property boundary, will be removed during construction and relocated to the property line at the end of the project. Incursions into private property would allow the project to proceed without the need for extensive shoring of the excavations, therefore reducing the potential for vibration impacts to the adjacent areas. Any disruptions to private property are required to be repaired and/or replaced at the end of the project under agreement between the District and the property owner.

The initial construction activities include installation of groundwater dewatering wells, a coffer dam, and channel flow bypass. The groundwater dewatering wells will be approximately 15 to 20 feet deep, and placed along the work area of the J Street Drain. These wells will be installed and removed as construction moves upstream. Once installed, these wells will be attached to temporary pumps to extract groundwater for discharge into the Perkins Drain. The groundwater will be tested in accordance with the requirements of the Regional Water Quality Control Board (RWQCB) prior to placement into Perkins Drain. If the pumped groundwater is determined to be acceptable, it would then be allowed to be discharged. This will ensure that no surface water contamination would result from dewatering.

The electric power to run these pumps will be supplied from the existing Hueneme Drain Pump Station. The rate of groundwater pumping would be at the discretion of the project contractor, though it is recommended that the groundwater level should be two feet below the construction work area.

A coffer dam will be placed across the channel at the south end of the construction area. The coffer dam will block tidal flow into the work area. The exact location of the dam will be dependant on the project contractor but anticipated to be within 200 feet of the end of the concrete. Fish seining will take place to capture and relocate the endangered tidewater goby, as well as any additional native fish, first outside the proposed coffer dam work area and later, after the coffer dam is in place, to areas directly downstream of the coffer dam. Block nets would be installed immediately upstream and downstream of the proposed coffer dam site to isolate it, and all native fish relocated beyond the downstream net before coffer dam installation begins. This

work will be conducted by approved, qualified biologists who will verify that all fish have been removed from the work area prior to the start of further construction.

A diversion will be installed to allow for any channel flow to bypass the construction area and enter the Perkins Drain. In addition, the Hueneme Drain Pump Station will pump water from the Hueneme Drain across the J Street Drain to the Perkins Drain during construction at the south end of Phase I.

Once the initial construction activities of installation of groundwater wells, coffer dam, and channel bypass are completed, fish remaining within the channel section upstream of the coffer dam can be relocated and demolition can begin. Demolition will initially start with adjacent fencing removal and landscape removal if necessary. After the permanent fencing is removed, temporary fencing will be installed along adjacent properties to limit access to the work area and ensure public safety. Demolition will consist of utilizing heavy equipment to break up and remove the concrete from the existing drain. Access to the area south of Hueneme Road will be from Hueneme Road via the District maintenance road on the east side of the drain. The contractor may decide to use the drain itself as an access way after entering the District right-of-way at Hueneme Road. The concrete will be broken on site for transport but the contractor will be required to find an appropriate location to grind the concrete further for appropriate recycling (as required by Ventura County ordinances).

After the concrete is removed, existing soil will be excavated to the appropriate dimensions for safe shoring (if necessary) and proper installation of subdrains and forms for the new drain. The excavated material will be removed by the contractor and hauled away from the site via a City-approved haul route (which is dependant on the ultimate location secured by the contractor). Some soils may remain on site for backfilling once the new drain is installed. Materials, including subdrain materials, reinforcing bar, and the concrete for the new drain will be delivered to the site via the approved access route from Hueneme Road. The work will only occur during hours approved by the City of Oxnard, which are anticipated to be from 7 am to 7 pm on weekdays.

Once each phase of the new drain is complete, the permanent perimeter fencing will be reinstalled. Any landscaping damaged outside of District easement on private property, will be replaced. Where the adjacent property is owned by the City, the landscaping will be replaced by the City under agreement with the District. Maintenance of the adjacent landscaping is the responsibility of the local jurisdiction once the materials are installed.

Emissions from the construction phase of the project were estimated based on the project description and construction equipment requirements and schedule. Construction of the project would commence in the spring of 2013. Construction is anticipated to proceed as follows:

- Phase I (Ocean to Hueneme Road) Spring 2013
- Phase II (Hueneme Rd. to Pleasant Valley Rd.) Spring 2015 estimate
- Phase III (Pleasant Valley Rd. to Yucca St.) Spring 2017 estimate
- Phase IV (Yucca St. to Redwood St.) Spring 2019 estimate

Heavy construction equipment requirements for each phase of construction include the following: Excavator, Hydraulic breaker, De-watering pumps, Dump/Haul trucks, Sweeper, Motor grader, Compaction equipment, Crawler dozer, Wheel loader, Concrete trucks, Asphalt paver.

Construction emissions were estimated using the URBEMIS Model, Version 9.2.4 (Rimpo and Associates 2007), based on the assumed construction schedule. The table presents the maximum daily emissions. It was assumed that the initial site preparation would include installation of dewatering wells, construction of the coffer dam and channel bypass, demolition of the existing concrete lining/asphalt pavement and drain, excavation of the channel, and hauling away of broken concrete and excess earth; the trenching activities would involve excavation to prepare for installation of the new drain, and the paving would involve backfilling and replacement of concrete lining and asphalt paving. Because of the linear nature of the project, it was assumed that construction would start at one end and continue to the end of the phase. As stated in the project description, each phase would occur independently and would not be concurrent. It was assumed that the site would be watered three times daily to control fugitive dust emissions.

Tables 4a through 4d present the estimated emissions for each phase of construction for the J Street Drain. Refer to Appendix A for URBEMIS outputs.

Table 4a – Phase I
Estimated Construction Emissions – J Street Drain Project

Emission Source	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Total Construction Emissions, lbs/day						
Site Preparation						
Fugitive Dust Excavation					15.60	3.26
Offroad Diesel	15.63	128.97	57.32		5.69	5.23
Onroad Diesel (Haul truck trips)	0.67	9.26	3.33	0.02	0.41	0.34
Worker Trips	0.10	0.18	3.41	0.00	0.03	0.02
TOTAL	**16.40**	**138.41**	**64.06**	**0.02**	**21.73**	**8.85**
Regional Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*Yes*	*No*	*No*	*No*	*No*
Excavation						
Trenching Offroad Diesel	0.62	4.69	3.26		0.27	0.25
Trenching Worker Trips	0.01	0.01	0.19	0.00	0.00	0.00
TOTAL	**0.63**	**4.70**	**3.45**	**0.00**	**0.27**	**0.25**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Paving						
Asphalt Offgassing	0.04					
Asphalt Offroad Diesel	4.22	26.93	16.60	0.00	2.20	2.03
Asphalt Onroad Diesel (Haul truck trips)	0.01	0.08	0.03	0.00	0.00	0.00
Asphalt Worker Trips	0.03	0.06	1.14	0.00	0.01	0.01
TOTAL	**4.30**	**27.07**	**17.77**	**0.00**	**2.21**	**2.04**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*Yes*	*No*	*No*	*No*	*No*
Total Simultaneous Emissions	**21.33**	**170.18**	**85.28**	**0.02**	**24.21**	**11.14**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*Yes*	*No*	*No*	*No*	*No*

Table 4b – Phase II Estimated Construction Emissions – J Street Drain Project						
Emission Source	**ROG**	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Total Construction Emissions, lbs/day						
Site Preparation						
Fugitive Dust Excavation					11.70	2.44
Offroad Diesel	13.27	101.18	49.71		4.43	4.07
Onroad Diesel (Haul truck trips)	0.58	7.16	2.68	0.02	0.33	0.26
Worker Trips	0.08	0.14	2.77	0.00	0.03	0.02
TOTAL	**13.93**	**108.48**	**55.16**	**0.02**	**16.49**	**6.79**
Regional Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*Yes*	*No*	*No*	*No*	*No*
Excavation						
Trenching Offroad Diesel	0.56	4.05	3.24		0.22	0.20
Trenching Worker Trips	0.00	0.01	0.16	0.00	0.00	0.00
TOTAL	**0.56**	**4.06**	**3.40**	**0.00**	**0.22**	**0.20**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Paving						
Asphalt Offgassing	0.03					
Asphalt Offroad Diesel	3.68	23.94	16.35	0.00	1.88	1.73
Asphalt Onroad Diesel (Haul truck trips)	0.00	0.05	0.02	0.00	0.00	0.00
Asphalt Worker Trips	0.03	0.06	0.98	0.00	0.01	0.01
TOTAL	**3.74**	**24.05**	**17.35**	**0**	**1.89**	**1.74**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Total Simultaneous Emissions	**18.23**	**136.59**	**75.91**	**0.02**	**18.6**	**8.73**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*Yes*	*No*	*No*	*No*	*No*

Table 4c – Phase III Estimated Construction Emissions – J Street Drain Project						
Emission Source	**ROG**	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Total Construction Emissions, lbs/day						
Site Preparation						
Fugitive Dust Excavation					19.50	4.07
Offroad Diesel	11.27	77.65	47.59		3.39	3.12
Onroad Diesel (Haul truck trips)	0.47	5.57	2.18	0.02	0.27	0.21
Worker Trips	0.07	0.12	2.39	0.00	0.03	0.02
TOTAL	**11.81**	**83.34**	**52.16**	**0.02**	**23.19**	**7.42**
Regional Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*Yes*	*No*	*No*	*No*	*No*
Excavation						
Trenching Offroad Diesel	0.47	3.21	3.24		0.17	0.16
Trenching Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00
TOTAL	**0.47**	**3.22**	**3.38**	**0.00**	**0.17**	**0.16**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Paving						
Asphalt Offgassing	0.04					
Asphalt Offroad Diesel	3.18	20.49	16.14	0.00	1.53	1.41
Asphalt Onroad Diesel (Haul truck trips)	0.01	0.06	0.02	0.00	0.00	0.00
Asphalt Worker Trips	0.02	0.04	0.85	0.00	0.01	0.01
TOTAL	**3.25**	**20.59**	**17.01**	**0.00**	**1.54**	**1.42**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Total Simultaneous Emissions	**15.53**	**107.15**	**72.55**	**0.02**	**24.9**	**9.00**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*Yes*	*No*	*No*	*No*	*No*

Table 4d – Phase IV Estimated Construction Emissions – J Street Drain Project						
Emission Source	**ROG**	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Total Construction Emissions, lbs/day						
Site Preparation						
Fugitive Dust Excavation					12.01	2.51
Offroad Diesel	9.97	61.27	46.57		2.68	2.46
Onroad Diesel (Haul truck trips)	0.41	4.57	1.86	0.02	0.23	0.17
Worker Trips	0.06	0.10	2.08	0.00	0.03	0.02
TOTAL	**10.44**	**65.94**	**50.51**	**0.02**	**14.95**	**5.16**
Regional Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*Yes*	*No*	*No*	*No*	*No*
Excavation						
Trenching Offroad Diesel	0.40	2.46	3.24		0.13	0.12
Trenching Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00
TOTAL	**0.40**	**2.47**	**3.36**	**0.00**	**0.13**	**0.12**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Paving						
Asphalt Offgassing	0.03					
Asphalt Offroad Diesel	2.77	17.51	16.00	0.00	1.27	1.17
Asphalt Onroad Diesel (Haul truck trips)	0.00	0.03	0.01	0.00	0.00	0.00
Asphalt Worker Trips	0.02	0.04	0.73	0.00	0.01	0.01
TOTAL	**2.82**	**17.58**	**16.74**	**0**	**1.28**	**1.18**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Total Simultaneous Emissions	**13.66**	**85.99**	**70.61**	**0.02**	**16.36**	**6.46**
Significance Criteria	25	25	N/A	N/A	N/A	N/A
Significant?	*No*	*Yes*	*No*	*No*	*No*	*No*

As shown in Tables 4a through 4d, emissions of all criteria pollutants during all four phases would be below the VCAPCD's significance thresholds for ROGs, but above the threshold for NOx. Because of the low level of the emissions threshold, any project that is required to utilize heavy construction equipment would exceed the 25 lb/day threshold. The 2 lb/day threshold does not apply because the project is consistent with the AQMP.

To reduce construction emissions to the extent feasible, project construction would implement the following fugitive dust best available control measures to reduce emissions:

- The Project applicant shall water exposed surfaces three times daily on active areas.
- The Project applicant shall ensure that all trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard.

- The Project applicant shall ensure that a reduced speed on unpaved roads shall be limited to 15 miles per hour or less.
- The Project applicant shall manage haul road dust through the use of watering at least three times daily.

With implementation of dust control measures, the project would not generate fugitive dust emissions in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property. Fugitive dust impacts will therefore be less than significant.

Emissions of NOx would be above the 25 lb/day threshold; however, as stated in the VCAPCD Guidelines on pages 5-3 & 5-4, "construction-related emissions (including portable engines and portable engine-driven equipment subject to the ARB's Statewide Portable Equipment Registration Program, and used for construction operations or repair and maintenance activities) of ROC and NOx are not counted towards the two significance thresholds, since these emissions are temporary. However, construction-related emissions should be mitigated if estimates of ROC and NOx emissions from the heavy-duty construction equipment anticipated to be used for a particular project exceed the 5 pounds per day threshold in the Ojai Planning Area, or the 25 pounds per day threshold in the remainder of the county." Because the emissions are associated with construction, they are not counted toward the significance thresholds, and impacts are less than significant.

4.2.2 Operational Impacts

Operational impacts associated with the Project would be associated with ongoing maintenance activities. It is anticipated that maintenance of the reconstructed drain will be similar to the existing maintenance activities. In order to programmatically address District maintenance activities, a Final Program Environmental Impact Report (EIR) for Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program was certified in May

2008. The Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program proposed by the District aim to reduce the current administrative process to comply with agreements and permits necessary for the maintenance activities at the District's facilities. Currently, many of the District's facility maintenance activities occur in drainages, watercourses, creeks, basins, and water bodies where such activities are regulated by several state and federal agencies. Typical maintenance activities include sediment removal and vegetation control to maintain capacity within the facility. The modification to the bed, bank, and/or vegetation in a natural drainage (and certain man-made drainages) is regulated by the California Department of Fish and Game (CDFG) under Section 1600 et seq. of the Fish and Game Code.

Such modifications require a Streambed Alteration Agreement. Activities that result in the discharge of dredged or fill material in watercourses (such as bank stabilization and excavation) are also regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). Issuance of a 404 permit also requires a 401 Water Quality Certification by the RWQCB.

Prior to this EIR and the subsequent permits that will be required for this project, the District acquired the above agreements and permits on an as-needed basis for individual maintenance activities and facilities. With the proposed program, the District seeks authorization for the entire maintenance program, reducing District and permitting agency administrative efforts, and providing a more comprehensive and effective basis for protecting environmental resources. Consequently, utilizing the results of the environmental analyses in that Program EIR, the District requested long-term permits and approvals with durations of five years or more that would include all regulated activities, include a streamlined administrative approval process, and provide predictability and certainty on environmental protection measures.

In order to acquire long-term permits, the District has committed to incorporating various environmental protection measures into its ongoing maintenance program that would reduce incidental effects of the maintenance program on the environment and meet the requirements of the state and federal permitting agencies. The environmental protection measures are called

environmental Best Management Practices (BMPs). These BMPs have been carried forward in to this EIR. The BMPs that apply to air quality impacts include the following measures, which are part of the VCAPCD's Model Fugitive Dust Mitigation Plan:

- The areas disturbed at any one time by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
- Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during earthmoving, grading, and excavation activities.
- All trucks shall be required to cover their loads as required by California Vehicle Code §23114.
- All graded and excavated material, exposed soil areas, including unpaved parking and staging areas, and other active portions of the construction site, including unpaved on site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.
- Graded and/or excavated inactive areas of the construction site shall be monitored by the District's operation and maintenance staff at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be periodically treated with environmentally-safe dust suppressants.
- During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on site activities and operations from being a nuisance or hazard, either on site or off site. The District staff shall use his/her discretion in conjunction with the APCD in determining when winds are excessive.
- Rumble strips or track out devices shall be installed where vehicles enter and exit unpaved roads onto paved road, or wash off trucks and any other equipment leaving the site.
- All on site construction roads that have a daily traffic volume of more than 50 daily trips shall be stabilized as to minimize transport of earthen material from the site.
- Open material stockpiles shall be roller compacted, periodically watered, or treated with appropriate dust suppressants.
- There shall be at least one qualified District staff on site each work day to monitor the provisions of the Fugitive Dust Mitigation Plan and any other applicable fugitive dust rules, ordinances, or conditions.
- Personnel involved in grading operations shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health Regulations.

- All project construction operations shall be conducted in compliance with all applicable APCD Rules and Regulations with emphasis on Rule 50 (Opacity) and Rule 51 (Nuisance).

Maintenance activities associated with the proposed J Street Drain would be similar to the activities currently taking place for the existing drain maintenance. There would be a slight increase in maintenance trips due to the implementation of the BEMP, but these emissions would not be above the significance thresholds on a daily basis. Therefore, no new impacts would result from the proposed drain maintenance activities during project operation. As the Program EIR BMPs would apply to the existing District maintenance activities, the same BMPs would apply to the operation/ maintenance activities of the proposed project. Nevertheless, the environmental discussion of this EIR will include operational maintenance discussion and associated BMPs per the District's Ongoing Routine Operations and Maintenance Program for informational purposes.

4.3 Cumulatively Considerable Impacts

As discussed above, Ventura County is a nonattainment area for the state and federal ozone standards, and for the state PM_{10} and $PM_{2.5}$ standards. The adopted strategies and methods for improving and maintaining the County's air quality are presented in the AQMP.

The J Street Drain Project will result in emissions of nonattainment pollutants during construction activities. These activities will be temporary in nature, and will therefore not have a long-term cumulative impact on the air quality in Ventura County. The project will be consistent with the measures in the AQMP that are designed to reduce air emissions, and will also implement the BMPs that have been identified by the District in the Program EIR. Accordingly, the project will not result in a cumulatively considerable net increase of nonattainment pollutants.

4.4 Exposure of Sensitive Receptors

The main toxic air contaminant that would be emitted during construction of the J Street Drain would be diesel exhaust particulate matter. Diesel exhaust particulate matter is known to the

state of California as carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the California Air Pollution Control Officers' Association (CAPCOA) Air Toxics "Hot Spots" Program Risk Assessment Guidelines (CAPCOA 1993) as 24 hours per day, 7 days per week, 365 days per year, for 70 years. Diesel exhaust particulate matter would be emitted during the construction period assumed for the Project from heavy equipment used in the construction process. Because of the short-term nature of project construction, and because of the transient nature of the construction for the J Street Drain, diesel exhaust emissions will be not concentrated in any one location for a substantial period of time, and sensitive receptors would not be exposed to chronic emissions from the project. Impacts to sensitive receptors would therefore not result in a toxic air contaminant impact of greater than 10 in a million cancer risk or a hazard index greater than 1.0. The J Street Drain Project will therefore not expose sensitive receptors to substantial pollutant concentrations. This impact is less than significant.

4.5 Odor Impacts

The *Ventura County Air Quality Assessment Guidelines* identify certain land uses as sources of odors. These land uses include the following:

- Wastewater Treatment Facilities
- Sanitary Landfills
- Transfer Stations
- Composting Facilities
- Asphalt Batch Plants
- Paint and Coating Operations
- Fiberglass Operations
- Food Processing Facilities
- Feed Lots/Dairies
- Petroleum Extraction, Transfer, Processing, and Refining Operations and Facilities
- Chemical Manufacturing Operations and Facilities
- Rendering Plants

The Project does not propose any of these stationary sources. Construction may involve paving of areas with asphalt, which could result in some temporary odor sources. It is anticipated, however, that any such operations would be temporary and would not affect a substantial number of people. Odor impacts are less than significant.

5.0 Summary and Conclusions

In summary, the proposed project would result in emissions of air pollutants for both the construction phase and operational phase of the project. The air quality impact analysis evaluated the following air quality issues, and made the following conclusions:

1. The project will not conflict or obstruct the implementation of the Air Quality Management Plan.
2. The project's construction emissions exceed the daily emission threshold of 25 lbs/day for NOx; however, as stated in the VCAPCD Guidelines on pages 5-3 & 5-4, "construction-related emissions (including portable engines and portable engine-driven equipment subject to the ARB's Statewide Portable Equipment Registration Program, and used for construction operations or repair and maintenance activities) of ROC and NOx are not counted towards the two significance thresholds, since these emissions are temporary. However, construction-related emissions should be mitigated if estimates of ROC and NOx emissions from the heavy-duty construction equipment anticipated to be used for a particular project exceed the 5 pounds per day threshold in the Ojai Planning Area, or the 25 pounds per day threshold in the remainder of the county." Because the emissions are associated with construction, they are not counted toward the significance thresholds, and impacts are less than significant.
3. The project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
4. The project will not expose sensitive receptors to substantial pollutant concentrations.
5. The project will not create objectionable odors affecting a substantial number of people.

6.0 References

California Air Resources Board. 2007. EMFAC2007 Model.

Rimpo and Associates. 2007. URBEMIS Model, Version 9.2.4.

University of California Davis. 1998. *Transportation Project-Level Carbon Monoxide Protocol*.

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Appendix A

URBEMIS Model Outputs

2/2/2011 5:13:45 PM

Urbem s 2007 Vers on 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Urbemis\Urbemis 9.2.2\Projects\J Street Drain.urb924

Project Name: J Street Drain

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (bs/day unm t gated)	21.34	170.18	85.28	0.02	40.10	8.52	48.62	8.39	7.84	16.23	22,090.71
2012 TOTALS (bs/day m t gated)	21.34	170.18	85.28	0.02	15.70	8.52	24.22	3.29	7.84	11.13	22,090.71
2013 TOTALS (bs/day unm t gated)	20.20	157.48	83.03	0.02	40.10	8.01	48.11	8.39	7.37	15.75	22,090.77
2013 TOTALS (bs/day m t gated)	20.20	157.48	83.03	0.02	15.70	8.01	23.71	3.29	7.37	10.66	22,090.77
2014 TOTALS (bs/day unm t gated)	18.21	136.58	75.91	0.02	30.09	6.80	36.90	6.30	6.26	12.55	21,252.98
2014 TOTALS (bs/day m t gated)	18.21	136.58	75.91	0.02	11.79	6.80	18.60	2.48	6.26	8.73	21,252.98
2015 TOTALS (bs/day unm t gated)	16.76	122.95	74.19	0.02	30.09	6.07	36.16	6.30	5.58	11.88	21,253.02
2015 TOTALS (bs/day m t gated)	16.76	122.95	74.19	0.02	11.79	6.07	17.86	2.48	5.58	8.06	21,253.02
2016 TOTALS (bs/day unm t gated)	15.52	107.15	72.56	0.02	50.09	5.31	55.40	10.47	4.88	15.35	20,895.09

2/2/2011 5:13:45 PM

2016 TOTALS (bs/day m t gated)	15.52	107.15	72.56	0.02	19.59	5.31	24.90	4.10	4.88	8.98	20,895.09
2017 TOTALS (bs/day unm t gated)	14.59	95.84	71.68	0.02	50.09	4.88	54.98	10.47	4.49	14.96	20,895.06
2017 TOTALS (bs/day m t gated)	14.59	95.84	71.68	0.02	19.59	4.88	24.48	4.10	4.49	8.59	20,895.06
2018 TOTALS (bs/day unm t gated)	13.67	85.99	70.61	0.02	30.89	4.27	35.16	6.46	3.92	10.39	20,888.27
2018 TOTALS (bs/day m t gated)	13.67	85.99	70.61	0.02	12.11	4.27	16.37	2.54	3.92	6.46	20,888.27
2019 TOTALS (bs/day unm t gated)	12.79	77.00	70.13	0.02	30.89	3.91	34.80	6.46	3.59	10.06	20,888.26
2019 TOTALS (bs/day m t gated)	12.79	77.00	70.13	0.02	12.11	3.91	16.01	2.54	3.59	6.13	20,888.26

Construct on Unm t gated Deta Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unm t gated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2 5 Exhaust	PM2.5	CO2
T me S ce 1/2/2012-1/31/2012 Act ve Days: 26	16.41	138.41	64.06	0.02	40.09	6.04	46.13	8.38	5.56	13.94	18,909.43
Mass Grad ng 01/01/2012-12/31/2013	16.41	138.41	64.06	0.02	40.09	6.04	46.13	8.38	5.56	13.94	18,909.43
Mass Grad ng Dust	0.00	0.00	0.00	0.00	40.00	0.00	40.00	8.35	0.00	8.35	0.00
Mass Grad ng Off Road D ese	15.63	128.97	57.32	0.00	0.00	5.69	5.69	0.00	5.23	5.23	16,637.60
Mass Grad ng On Road D ese	0.67	9.26	3.33	0.02	0.06	0.35	0.41	0.02	0.32	0.34	1,810.74
Mass Grad ng Worker Tr ps	0.10	0.18	3.41	0.00	0.02	0.01	0.03	0.01	0.01	0.02	461.09

2/2/2011 5:13:45 PM

T me S ce 2/1/2012-2/29/2012 Act ve Days: 25	17.04	143.11	67.51	0.02	40.09	6.31	46.40	8.38	5.81	14.19	19,482.14
Mass Grad ng 01/01/2012-12/31/2013	16.41	138.41	64.06	0.02	40.09	6.04	46.13	8.38	5.56	13.94	18,909.43
Mass Grad ng Dust	0.00	0.00	0.00	0.00	40.00	0.00	40.00	8.35	0.00	8.35	0.00
Mass Grad ng Off Road D ese	15.63	128.97	57.32	0.00	0.00	5.69	5.69	0.00	5.23	5.23	16,637.60
Mass Grad ng On Road D ese	0.67	9.26	3.33	0.02	0.06	0.35	0.41	0.02	0.32	0.34	1,810.74
Mass Grad ng Worker Tr ps	0.10	0.18	3.41	0.00	0.02	0.01	0.03	0.01	0.01	0.02	461.09
Trench ng 02/01/2012-12/31/2013	0.63	4.70	3.45	0.00	0.00	0.27	0.27	0.00	0.25	0.25	572.71
Trench ng Off Road D ese	0.62	4.69	3.26	0.00	0.00	0.27	0.27	0.00	0.25	0.25	547.09
Trench ng Worker Tr ps	0.01	0.01	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 3/1/2012-12/31/2012 Act ve Days: 262	**21.34**	**170.18**	**85.28**	**0.02**	40.10	**8.52**	48.62	8.39	**7.84**	**16.23**	22,090.71
Aspha t 03/01/2012-12/31/2013	4.29	27.07	17.77	0.00	0.01	2.21	2.22	0.00	2.03	2.04	2,608.57
Pav ng Off-Gas	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	4.22	26.93	16.60	0.00	0.00	2.20	2.20	0.00	2.03	2.03	2,438.47
Pav ng On Road D ese	0.01	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.40
Pav ng Worker Tr ps	0.03	0.06	1.14	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.70
Mass Grad ng 01/01/2012-12/31/2013	16.41	138.41	64.06	0.02	40.09	6.04	46.13	8.38	5.56	13.94	18,909.43
Mass Grad ng Dust	0.00	0.00	0.00	0.00	40.00	0.00	40.00	8.35	0.00	8.35	0.00
Mass Grad ng Off Road D ese	15.63	128.97	57.32	0.00	0.00	5.69	5.69	0.00	5.23	5.23	16,637.60
Mass Grad ng On Road D ese	0.67	9.26	3.33	0.02	0.06	0.35	0.41	0.02	0.32	0.34	1,810.74
Mass Grad ng Worker Tr ps	0.10	0.18	3.41	0.00	0.02	0.01	0.03	0.01	0.01	0.02	461.09
Trench ng 02/01/2012-12/31/2013	0.63	4.70	3.45	0.00	0.00	0.27	0.27	0.00	0.25	0.25	572.71
Trench ng Off Road D ese	0.62	4.69	3.26	0.00	0.00	0.27	0.27	0.00	0.25	0.25	547.09
Trench ng Worker Tr ps	0.01	0.01	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62

2/2/2011 5:13:45 PM

T me S ce 1/1/2013-12/31/2013 Act ve Days: 313	20.20	157.48	83.03	**0.02**	40.10	8.01	48.11	8.39	7.37	15.75	**22,090.77**
Aspha t 03/01/2012-12/31/2013	4.00	25.52	17.57	0.00	0.01	2.04	2.05	0.00	1.88	1.88	2,608.58
Pav ng Off-Gas	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	3.92	25.39	16.49	0.00	0.00	2.04	2.04	0.00	1.87	1.87	2,438.47
Pav ng On Road D ese	0.01	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.40
Pav ng Worker Tr ps	0.03	0.05	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.71
Mass Grad ng 01/01/2012-12/31/2013	15.61	127.60	62.03	0.02	40.09	5.71	45.80	8.38	5.26	13.64	18,909.48
Mass Grad ng Dust	0.00	0.00	0.00	0.00	40.00	0.00	40.00	8.35	0.00	8.35	0.00
Mass Grad ng Off Road D ese	14.90	119.28	55.88	0.00	0.00	5.40	5.40	0.00	4.97	4.97	16,637.60
Mass Grad ng On Road D ese	0.62	8.15	2.98	0.02	0.06	0.30	0.37	0.02	0.28	0.30	1,810.74
Mass Grad ng Worker Tr ps	0.09	0.16	3.16	0.00	0.02	0.01	0.03	0.01	0.01	0.02	461.14
Trench ng 02/01/2012-12/31/2013	0.60	4.36	3.43	0.00	0.00	0.25	0.25	0.00	0.23	0.23	572.71
Trench ng Off Road D ese	0.59	4.35	3.26	0.00	0.00	0.25	0.25	0.00	0.23	0.23	547.09
Trench ng Worker Tr ps	0.01	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 1/1/2014-1/31/2014 Act ve Days: 27	13.91	108.48	55.16	0.02	30.08	4.70	34.79	6.29	4.33	10.62	18,075.62
Mass Grad ng 01/01/2014-12/31/2015	13.91	108.48	55.16	0.02	30.08	4.70	34.79	6.29	4.33	10.62	18,075.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	30.00	0.00	30.00	6.27	0.00	6.27	0.00
Mass Grad ng Off Road D ese	13.27	101.18	49.71	0.00	0.00	4.43	4.43	0.00	4.07	4.07	15,826.43
Mass Grad ng On Road D ese	0.56	7.16	2.68	0.02	0.06	0.26	0.33	0.02	0.24	0.26	1,813.63
Mass Grad ng Worker Tr ps	0.08	0.14	2.77	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.56

2/2/2011 5:13:45 PM

T me S ce 2/1/2014-2/28/2014 Act ve Days: 24	14.48	112.54	58.56	0.02	30.09	4.92	35.01	6.29	4.53	10.82	18,648.33
Mass Grad ng 01/01/2014-12/31/2015	13.91	108.48	55.16	0.02	30.08	4.70	34.79	6.29	4.33	10.62	18,075.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	30.00	0.00	30.00	6.27	0.00	6.27	0.00
Mass Grad ng Off Road D ese	13.27	101.18	49.71	0.00	0.00	4.43	4.43	0.00	4.07	4.07	15,826.43
Mass Grad ng On Road D ese	0.56	7.16	2.68	0.02	0.06	0.26	0.33	0.02	0.24	0.26	1,813.63
Mass Grad ng Worker Tr ps	0.08	0.14	2.77	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.56
Trench ng 02/01/2014-12/31/2015	0.56	4.06	3.40	0.00	0.00	0.22	0.22	0.00	0.20	0.20	572.71
Trench ng Off Road D ese	0.56	4.05	3.24	0.00	0.00	0.22	0.22	0.00	0.20	0.20	547.09
Trench ng Worker Tr ps	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 3/1/2014-12/31/2014 Act ve Days: 262	18.21	136.58	75.91	0.02	30.09	6.80	36.90	6.30	6.26	12.55	21,252.98
Aspha t 03/01/2014-12/31/2015	3.74	24.04	17.35	0.00	0.01	1.88	1.89	0.00	1.73	1.73	2,604.65
Pav ng Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	3.68	23.94	16.35	0.00	0.00	1.88	1.88	0.00	1.73	1.73	2,438.47
Pav ng On Road D ese	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.45
Pav ng Worker Tr ps	0.03	0.05	0.98	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.73
Mass Grad ng 01/01/2014-12/31/2015	13.91	108.48	55.16	0.02	30.08	4.70	34.79	6.29	4.33	10.62	18,075.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	30.00	0.00	30.00	6.27	0.00	6.27	0.00
Mass Grad ng Off Road D ese	13.27	101.18	49.71	0.00	0.00	4.43	4.43	0.00	4.07	4.07	15,826.43
Mass Grad ng On Road D ese	0.56	7.16	2.68	0.02	0.06	0.26	0.33	0.02	0.24	0.26	1,813.63
Mass Grad ng Worker Tr ps	0.08	0.14	2.77	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.56
Trench ng 02/01/2014-12/31/2015	0.56	4.06	3.40	0.00	0.00	0.22	0.22	0.00	0.20	0.20	572.71
Trench ng Off Road D ese	0.56	4.05	3.24	0.00	0.00	0.22	0.22	0.00	0.20	0.20	547.09
Trench ng Worker Tr ps	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62

2/2/2011 5:13:45 PM

T me S ce 1/1/2015-12/31/2015 Act ve Days: 313	16.76	122.95	74.19	0.02	30.09	6.07	36.16	6.30	5.58	11.88	21,253.02
Aspha t 03/01/2014-12/31/2015	3.46	22.26	17.17	0.00	0.01	1.72	1.72	0.00	1.58	1.58	2,604.66
Pav ng Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	3.40	22.17	16.25	0.00	0.00	1.71	1.71	0.00	1.57	1.57	2,438.47
Pav ng On Road D ese	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.45
Pav ng Worker Tr ps	0.03	0.05	0.91	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.73
Mass Grad ng 01/01/2014-12/31/2015	12.79	97.08	53.63	0.02	30.08	4.15	34.23	6.29	3.82	10.11	18,075.64
Mass Grad ng Dust	0.00	0.00	0.00	0.00	30.00	0.00	30.00	6.27	0.00	6.27	0.00
Mass Grad ng Off Road D ese	12.20	90.68	48.67	0.00	0.00	3.91	3.91	0.00	3.60	3.60	15,826.43
Mass Grad ng On Road D ese	0.51	6.27	2.40	0.02	0.06	0.23	0.29	0.02	0.21	0.23	1,813.63
Mass Grad ng Worker Tr ps	0.07	0.13	2.57	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.58
Trench ng 02/01/2014-12/31/2015	0.51	3.62	3.39	0.00	0.00	0.20	0.20	0.00	0.19	0.19	572.71
Trench ng Off Road D ese	0.51	3.61	3.24	0.00	0.00	0.20	0.20	0.00	0.19	0.19	547.09
Trench ng Worker Tr ps	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 1/1/2016-1/30/2016 Act ve Days: 26	11.81	83.34	52.17	0.02	50.08	3.60	53.69	10.47	3.31	13.78	17,710.66
Mass Grad ng 01/01/2016-12/31/2017	11.81	83.34	52.17	0.02	50.08	3.60	53.69	10.47	3.31	13.78	17,710.66
Mass Grad ng Dust	0.00	0.00	0.00	0.00	50.00	0.00	50.00	10.44	0.00	10.44	0.00
Mass Grad ng Off Road D ese	11.27	77.65	47.59	0.00	0.00	3.39	3.39	0.00	3.12	3.12	15,461.48
Mass Grad ng On Road D ese	0.47	5.57	2.18	0.02	0.06	0.20	0.27	0.02	0.19	0.21	1,813.63
Mass Grad ng Worker Tr ps	0.07	0.12	2.39	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.54

2/2/2011 5:13:45 PM

T me S ce 2/1/2016-2/29/2016 Act ve Days: 25	12.29	86.56	55.55	0.02	50.09	3.77	53.86	10.47	3.47	13.94	18,283.36
Mass Grad ng 01/01/2016-12/31/2017	11.81	83.34	52.17	0.02	50.08	3.60	53.69	10.47	3.31	13.78	17,710.66
Mass Grad ng Dust	0.00	0.00	0.00	0.00	50.00	0.00	50.00	10.44	0.00	10.44	0.00
Mass Grad ng Off Road D ese	11.27	77.65	47.59	0.00	0.00	3.39	3.39	0.00	3.12	3.12	15,461.48
Mass Grad ng On Road D ese	0.47	5.57	2.18	0.02	0.06	0.20	0.27	0.02	0.19	0.21	1,813.63
Mass Grad ng Worker Tr ps	0.07	0.12	2.39	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.54
Trench ng 02/01/2016-12/31/2017	0.48	3.21	3.38	0.00	0.00	0.17	0.17	0.00	0.16	0.16	572.71
Trench ng Off Road D ese	0.47	3.21	3.24	0.00	0.00	0.17	0.17	0.00	0.16	0.16	547.09
Trench ng Worker Tr ps	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 3/1/2016-12/31/2016 Act ve Days: 263	15.52	107.15	72.56	0.02	**50.09**	5.31	**55.40**	**10.47**	4.88	15.35	20,895.09
Aspha t 03/01/2016-12/31/2017	3.23	20.59	17.01	0.00	0.01	1.53	1.54	0.00	1.41	1.41	2,611.73
Pav ng Off-Gas	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	3.16	20.49	16.14	0.00	0.00	1.53	1.53	0.00	1.41	1.41	2,438.47
Pav ng On Road D ese	0.01	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.53
Pav ng Worker Tr ps	0.02	0.04	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.72
Mass Grad ng 01/01/2016-12/31/2017	11.81	83.34	52.17	0.02	50.08	3.60	53.69	10.47	3.31	13.78	17,710.66
Mass Grad ng Dust	0.00	0.00	0.00	0.00	50.00	0.00	50.00	10.44	0.00	10.44	0.00
Mass Grad ng Off Road D ese	11.27	77.65	47.59	0.00	0.00	3.39	3.39	0.00	3.12	3.12	15,461.48
Mass Grad ng On Road D ese	0.47	5.57	2.18	0.02	0.06	0.20	0.27	0.02	0.19	0.21	1,813.63
Mass Grad ng Worker Tr ps	0.07	0.12	2.39	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.54
Trench ng 02/01/2016-12/31/2017	0.48	3.21	3.38	0.00	0.00	0.17	0.17	0.00	0.16	0.16	572.71
Trench ng Off Road D ese	0.47	3.21	3.24	0.00	0.00	0.17	0.17	0.00	0.16	0.16	547.09
Trench ng Worker Tr ps	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62

2/2/2011 5:13:45 PM

T me S ce 1/2/2017-12/30/2017 Act ve Days: 312	14.59	95.84	71.68	0.02	**50.09**	4.88	54.98	**10.47**	4.49	14.96	20,895.06
Aspha t 03/01/2016-12/31/2017	3.03	19.04	16.86	0.00	0.01	1.40	1.41	0.00	1.29	1.29	2,611.72
Pav ng Off-Gas	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	2.96	18.94	16.05	0.00	0.00	1.40	1.40	0.00	1.28	1.28	2,438.47
Pav ng On Road D ese	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.53
Pav ng Worker Tr ps	0.02	0.04	0.79	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.71
Mass Grad ng 01/01/2016-12/31/2017	11.11	73.98	51.45	0.02	50.08	3.33	53.41	10.47	3.06	13.53	17,710.63
Mass Grad ng Dust	0.00	0.00	0.00	0.00	50.00	0.00	50.00	10.44	0.00	10.44	0.00
Mass Grad ng Off Road D ese	10.61	68.84	47.21	0.00	0.00	3.14	3.14	0.00	2.89	2.89	15,461.48
Mass Grad ng On Road D ese	0.44	5.03	2.01	0.02	0.06	0.18	0.24	0.02	0.17	0.19	1,813.63
Mass Grad ng Worker Tr ps	0.06	0.11	2.23	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.52
Trench ng 02/01/2016-12/31/2017	0.44	2.82	3.37	0.00	0.00	0.15	0.15	0.00	0.14	0.14	572.71
Trench ng Off Road D ese	0.44	2.82	3.24	0.00	0.00	0.15	0.15	0.00	0.14	0.14	547.09
Trench ng Worker Tr ps	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 1/1/2018-1/31/2018 Act ve Days: 27	10.44	65.95	50.50	0.02	30.88	2.85	33.74	6.46	2.62	9.08	17,710.62
Mass Grad ng 01/01/2018-12/31/2019	10.44	65.95	50.50	0.02	30.88	2.85	33.74	6.46	2.62	9.08	17,710.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	30.80	0.00	30.80	6.43	0.00	6.43	0.00
Mass Grad ng Off Road D ese	9.97	61.27	46.57	0.00	0.00	2.68	2.68	0.00	2.46	2.46	15,461.48
Mass Grad ng On Road D ese	0.41	4.57	1.86	0.02	0.06	0.16	0.23	0.02	0.15	0.17	1,813.63
Mass Grad ng Worker Tr ps	0.06	0.10	2.08	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.50

2/2/2011 5:13:45 PM

T me S ce 2/1/2018-2/28/2018 Act ve Days: 24	10.85	68.42	53.87	0.02	30.89	2.99	33.87	6.46	2.75	9.21	18,283.32
Mass Grad ng 01/01/2018-12/31/2019	10.44	65.95	50.50	0.02	30.88	2.85	33.74	6.46	2.62	9.08	17,710.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	30.80	0.00	30.80	6.43	0.00	6.43	0.00
Mass Grad ng Off Road D ese	9.97	61.27	46.57	0.00	0.00	2.68	2.68	0.00	2.46	2.46	15,461.48
Mass Grad ng On Road D ese	0.41	4.57	1.86	0.02	0.06	0.16	0.23	0.02	0.15	0.17	1,813.63
Mass Grad ng Worker Tr ps	0.06	0.10	2.08	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.50
Trench ng 02/01/2018-12/31/2019	0.41	2.47	3.36	0.00	0.00	0.14	0.14	0.00	0.12	0.13	572.71
Trench ng Off Road D ese	0.40	2.46	3.24	0.00	0.00	0.13	0.13	0.00	0.12	0.12	547.09
Trench ng Worker Tr ps	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 3/1/2018-12/31/2018 Act ve Days: 262	13.67	85.99	70.61	0.02	30.89	4.27	35.16	6.46	3.92	10.39	20,888.27
Aspha t 03/01/2018-12/31/2019	2.82	17.58	16.75	0.00	0.01	1.28	1.29	0.00	1.18	1.18	2,604.95
Pav ng Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	2.77	17.51	16.00	0.00	0.00	1.27	1.27	0.00	1.17	1.17	2,438.47
Pav ng On Road D ese	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.77
Pav ng Worker Tr ps	0.02	0.04	0.73	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.71
Mass Grad ng 01/01/2018-12/31/2019	10.44	65.95	50.50	0.02	30.88	2.85	33.74	6.46	2.62	9.08	17,710.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	30.80	0.00	30.80	6.43	0.00	6.43	0.00
Mass Grad ng Off Road D ese	9.97	61.27	46.57	0.00	0.00	2.68	2.68	0.00	2.46	2.46	15,461.48
Mass Grad ng On Road D ese	0.41	4.57	1.86	0.02	0.06	0.16	0.23	0.02	0.15	0.17	1,813.63
Mass Grad ng Worker Tr ps	0.06	0.10	2.08	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.50
Trench ng 02/01/2018-12/31/2019	0.41	2.47	3.36	0.00	0.00	0.14	0.14	0.00	0.12	0.13	572.71
Trench ng Off Road D ese	0.40	2.46	3.24	0.00	0.00	0.13	0.13	0.00	0.12	0.12	547.09
Trench ng Worker Tr ps	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62

2/2/2011 5:13:45 PM

T me S ce 1/1/2019-12/31/2019 Act ve Days: 313	12.79	77.00	70.13	0.02	30.89	3.91	34.80	6.46	3.59	10.06	20,888.26
Aspha t 03/01/2018-12/31/2019	2.62	16.26	16.61	0.00	0.01	1.16	1.17	0.00	1.06	1.07	2,604.94
Pav ng Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	2.57	16.19	15.92	0.00	0.00	1.15	1.15	0.00	1.06	1.06	2,438.47
Pav ng On Road D ese	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.77
Pav ng Worker Tr ps	0.02	0.03	0.68	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.70
Mass Grad ng 01/01/2018-12/31/2019	9.79	58.58	50.16	0.02	30.88	2.63	33.52	6.46	2.42	8.88	17,710.61
Mass Grad ng Dust	0.00	0.00	0.00	0.00	30.80	0.00	30.80	6.43	0.00	6.43	0.00
Mass Grad ng Off Road D ese	9.35	54.30	46.49	0.00	0.00	2.47	2.47	0.00	2.27	2.27	15,461.48
Mass Grad ng On Road D ese	0.39	4.19	1.74	0.02	0.06	0.15	0.21	0.02	0.14	0.16	1,813.63
Mass Grad ng Worker Tr ps	0.05	0.09	1.93	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.50
Trench ng 02/01/2018-12/31/2019	0.37	2.17	3.35	0.00	0.00	0.12	0.12	0.00	0.11	0.11	572.71
Trench ng Off Road D ese	0.37	2.16	3.24	0.00	0.00	0.12	0.12	0.00	0.11	0.11	547.09
Trench ng Worker Tr ps	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62

Phase Assumpt ons

Phase: Mass Grad ng 1/1/2012 - 12/31/2013 - Phase 1 Grad ng

Tota Acres D sturbed: 7.8

Max mum Da y Acreage D sturbed: 2

Fug t ve Dust Leve of Deta : Defau t

20 bs per acre-day

On Road Truck Trave (VMT): 449.76

Off-Road Equ pment:

1 Bore/Dr R gs (291 hp) operat ng at a 0.75 oad factor for 8 hours per day

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

2 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

2/2/2011 5:13:45 PM

1 Off H ghway Tractors (267 hp) operat ng at a 0.65 oad factor for 8 hours per day

6 Off H ghway Trucks (479 hp) operat ng at a 0.57 oad factor for 8 hours per day

4 Pumps (53 hp) operat ng at a 0.74 oad factor for 8 hours per day

2 Rubber T red Loaders (164 hp) operat ng at a 0.54 oad factor for 8 hours per day

1 Water Trucks (189 hp) operat ng at a 0.5 oad factor for 8 hours per day

Phase: Mass Grad ng 1/1/2014 - 12/31/2015 - Phase II Grad ng

Tota Acres D sturbed: 6

Max mum Da y Acreage D sturbed: 1.5

Fug t ve Dust Leve of Deta : Defau t

20 bs per acre-day

On Road Truck Trave (VMT): 450.48

Off-Road Equ pment:

1 Bore/Dr R gs (291 hp) operat ng at a 0.75 oad factor for 8 hours per day

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

1 Graders (174 hp) operat ng at a 0.61 oad factor for 6 hours per day

1 Off H ghway Tractors (267 hp) operat ng at a 0.65 oad factor for 8 hours per day

6 Off H ghway Trucks (479 hp) operat ng at a 0.57 oad factor for 8 hours per day

4 Pumps (53 hp) operat ng at a 0.74 oad factor for 8 hours per day

2 Rubber T red Loaders (164 hp) operat ng at a 0.54 oad factor for 8 hours per day

1 Water Trucks (189 hp) operat ng at a 0.5 oad factor for 8 hours per day

Phase: Mass Grad ng 1/1/2016 - 12/31/2017 - Phase III Grad ng

Tota Acres D sturbed: 9.41

Max mum Da y Acreage D sturbed: 2.5

Fug t ve Dust Leve of Deta : Defau t

20 bs per acre-day

On Road Truck Trave (VMT): 450.48

Off-Road Equ pment:

1 Bore/Dr R gs (291 hp) operat ng at a 0.75 oad factor for 8 hours per day

2/2/2011 5:13:45 PM

1 Craw er Tractors (147 hp) operat ng at a 0.64 oad factor for 8 hours per day

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

6 Off H ghway Trucks (479 hp) operat ng at a 0.57 oad factor for 8 hours per day

4 Pumps (53 hp) operat ng at a 0.74 oad factor for 8 hours per day

2 Rubber T red Loaders (164 hp) operat ng at a 0.54 oad factor for 8 hours per day

1 Water Trucks (189 hp) operat ng at a 0.5 oad factor for 8 hours per day

Phase: Mass Grad ng 1/1/2018 - 12/31/2019 - Phase IV Grad ng

Tota Acres D sturbed: 6.15

Max mum Da y Acreage D sturbed: 1.54

Fug t ve Dust Leve of Deta : Defau t

20 bs per acre-day

On Road Truck Trave (VMT): 450.48

Off-Road Equ pment:

1 Bore/Dr R gs (291 hp) operat ng at a 0.75 oad factor for 8 hours per day

1 Craw er Tractors (147 hp) operat ng at a 0.64 oad factor for 8 hours per day

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

6 Off H ghway Trucks (479 hp) operat ng at a 0.57 oad factor for 8 hours per day

4 Pumps (53 hp) operat ng at a 0.74 oad factor for 8 hours per day

2 Rubber T red Loaders (164 hp) operat ng at a 0.54 oad factor for 8 hours per day

1 Water Trucks (189 hp) operat ng at a 0.5 oad factor for 8 hours per day

Phase: Trench ng 2/1/2012 - 12/31/2013 - Phase 1 Trench ng

Off-Road Equ pment:

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

Phase: Trench ng 2/1/2014 - 12/31/2015 - Phase II Trench ng

Off-Road Equ pment:

2/2/2011 5:13:45 PM

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

Phase: Trench ng 2/1/2016 - 12/31/2017 - Phase III Trench ng

Off-Road Equ pment:

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

Phase: Trench ng 2/1/2018 - 12/31/2019 - Phase IV Trench ng

Off-Road Equ pment:

1 Excavators (168 hp) operat ng at a 0.57 oad factor for 8 hours per day

Phase: Pav ng 3/1/2012 - 12/31/2013 - Phase 1 Pav ng

Acres to be Paved: 7.9

Off-Road Equ pment:

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

2 Pavers (100 hp) operat ng at a 0.62 oad factor for 8 hours per day

2 Ro ers (95 hp) operat ng at a 0.56 oad factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operat ng at a 0.68 oad factor for 8 hours per day

Phase: Pav ng 3/1/2014 - 12/31/2015 - Phase II Pav ng
Phase II Pav ng
Acres to be Paved: 6

Off-Road Equ pment:

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

2 Pavers (100 hp) operat ng at a 0.62 oad factor for 8 hours per day

2 Ro ers (95 hp) operat ng at a 0.56 oad factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operat ng at a 0.68 oad factor for 8 hours per day

Phase: Pav ng 3/1/2016 - 12/31/2017 - Phase III Pav ng

Acres to be Paved: 9.41

Off-Road Equ pment:

2/2/2011 5:13:45 PM

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

2 Pavers (100 hp) operat ng at a 0.62 oad factor for 8 hours per day

2 Ro ers (95 hp) operat ng at a 0.56 oad factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operat ng at a 0.68 oad factor for 8 hours per day

Phase: Pav ng 3/1/2018 - 12/31/2019 - Phase IV Pav ng

Acres to be Paved: 6.15

Off-Road Equ pment:

1 Graders (174 hp) operat ng at a 0.61 oad factor for 8 hours per day

2 Pavers (100 hp) operat ng at a 0.62 oad factor for 8 hours per day

2 Ro ers (95 hp) operat ng at a 0.56 oad factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operat ng at a 0.68 oad factor for 8 hours per day

Construct on M t gated Deta Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, M t gated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2 5 Exhaust	PM2.5	CO2
T me S ce 1/2/2012-1/31/2012 Act ve Days: 26	16.41	138.41	64.06	0.02	15.69	6.04	21.73	3.29	5.56	8.85	18,909.43
Mass Grad ng 01/01/2012-12/31/2013	16.41	138.41	64.06	0.02	15.69	6.04	21.73	3.29	5.56	8.85	18,909.43
Mass Grad ng Dust	0.00	0.00	0.00	0.00	15.60	0.00	15.60	3.26	0.00	3.26	0.00
Mass Grad ng Off Road D ese	15.63	128.97	57.32	0.00	0.00	5.69	5.69	0.00	5.23	5.23	16,637.60
Mass Grad ng On Road D ese	0.67	9.26	3.33	0.02	0.06	0.35	0.41	0.02	0.32	0.34	1,810.74
Mass Grad ng Worker Tr ps	0.10	0.18	3.41	0.00	0.02	0.01	0.03	0.01	0.01	0.02	461.09

2/2/2011 5:13:45 PM

T me S ce 2/1/2012-2/29/2012 Act ve Days: 25	17.04	143.11	67.51	0.02	15.69	6.31	22.00	3.29	5.81	9.09	19,482.14
Mass Grad ng 01/01/2012-12/31/2013	16.41	138.41	64.06	0.02	15.69	6.04	21.73	3.29	5.56	8.85	18,909.43
Mass Grad ng Dust	0.00	0.00	0.00	0.00	15.60	0.00	15.60	3.26	0.00	3.26	0.00
Mass Grad ng Off Road D ese	15.63	128.97	57.32	0.00	0.00	5.69	5.69	0.00	5.23	5.23	16,637.60
Mass Grad ng On Road D ese	0.67	9.26	3.33	0.02	0.06	0.35	0.41	0.02	0.32	0.34	1,810.74
Mass Grad ng Worker Tr ps	0.10	0.18	3.41	0.00	0.02	0.01	0.03	0.01	0.01	0.02	461.09
Trench ng 02/01/2012-12/31/2013	0.63	4.70	3.45	0.00	0.00	0.27	0.27	0.00	0.25	0.25	572.71
Trench ng Off Road D ese	0.62	4.69	3.26	0.00	0.00	0.27	0.27	0.00	0.25	0.25	547.09
Trench ng Worker Tr ps	0.01	0.01	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 3/1/2012-12/31/2012 Act ve Days: 262	**21.34**	**170.18**	**85.28**	**0.02**	15.70	**8.52**	24.22	3.29	**7.84**	11.13	22,090.71
Aspha t 03/01/2012-12/31/2013	4.29	27.07	17.77	0.00	0.01	2.21	2.22	0.00	2.03	2.04	2,608.57
Pav ng Off-Gas	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	4.22	26.93	16.60	0.00	0.00	2.20	2.20	0.00	2.03	2.03	2,438.47
Pav ng On Road D ese	0.01	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.40
Pav ng Worker Tr ps	0.03	0.06	1.14	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.70
Mass Grad ng 01/01/2012-12/31/2013	16.41	138.41	64.06	0.02	15.69	6.04	21.73	3.29	5.56	8.85	18,909.43
Mass Grad ng Dust	0.00	0.00	0.00	0.00	15.60	0.00	15.60	3.26	0.00	3.26	0.00
Mass Grad ng Off Road D ese	15.63	128.97	57.32	0.00	0.00	5.69	5.69	0.00	5.23	5.23	16,637.60
Mass Grad ng On Road D ese	0.67	9.26	3.33	0.02	0.06	0.35	0.41	0.02	0.32	0.34	1,810.74
Mass Grad ng Worker Tr ps	0.10	0.18	3.41	0.00	0.02	0.01	0.03	0.01	0.01	0.02	461.09
Trench ng 02/01/2012-12/31/2013	0.63	4.70	3.45	0.00	0.00	0.27	0.27	0.00	0.25	0.25	572.71
Trench ng Off Road D ese	0.62	4.69	3.26	0.00	0.00	0.27	0.27	0.00	0.25	0.25	547.09
Trench ng Worker Tr ps	0.01	0.01	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62

2/2/2011 5:13:45 PM

T me S ce 1/1/2013-12/31/2013 Act ve Days: 313	20.20	157.48	83.03	**0.02**	15.70	8.01	23.71	3.29	7.37	10.66	**22,090.77**
Aspha t 03/01/2012-12/31/2013	4.00	25.52	17.57	0.00	0.01	2.04	2.05	0.00	1.88	1.88	2,608.58
Pav ng Off-Gas	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	3.92	25.39	16.49	0.00	0.00	2.04	2.04	0.00	1.87	1.87	2,438.47
Pav ng On Road D ese	0.01	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.40
Pav ng Worker Tr ps	0.03	0.05	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.71
Mass Grad ng 01/01/2012-12/31/2013	15.61	127.60	62.03	0.02	15.69	5.71	21.40	3.29	5.26	8.54	18,909.48
Mass Grad ng Dust	0.00	0.00	0.00	0.00	15.60	0.00	15.60	3.26	0.00	3.26	0.00
Mass Grad ng Off Road D ese	14.90	119.28	55.88	0.00	0.00	5.40	5.40	0.00	4.97	4.97	16,637.60
Mass Grad ng On Road D ese	0.62	8.15	2.98	0.02	0.06	0.30	0.37	0.02	0.28	0.30	1,810.74
Mass Grad ng Worker Tr ps	0.09	0.16	3.16	0.00	0.02	0.01	0.03	0.01	0.01	0.02	461.14
Trench ng 02/01/2012-12/31/2013	0.60	4.36	3.43	0.00	0.00	0.25	0.25	0.00	0.23	0.23	572.71
Trench ng Off Road D ese	0.59	4.35	3.26	0.00	0.00	0.25	0.25	0.00	0.23	0.23	547.09
Trench ng Worker Tr ps	0.01	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 1/1/2014-1/31/2014 Act ve Days: 27	13.91	108.48	55.16	0.02	11.78	4.70	16.49	2.47	4.33	6.80	18,075.62
Mass Grad ng 01/01/2014-12/31/2015	13.91	108.48	55.16	0.02	11.78	4.70	16.49	2.47	4.33	6.80	18,075.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	11.70	0.00	11.70	2.44	0.00	2.44	0.00
Mass Grad ng Off Road D ese	13.27	101.18	49.71	0.00	0.00	4.43	4.43	0.00	4.07	4.07	15,826.43
Mass Grad ng On Road D ese	0.56	7.16	2.68	0.02	0.06	0.26	0.33	0.02	0.24	0.26	1,813.63
Mass Grad ng Worker Tr ps	0.08	0.14	2.77	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.56

2/2/2011 5:13:45 PM

T me S ce 2/1/2014-2/28/2014 Act ve Days: 24	14.48	112.54	58.56	0.02	11.79	4.92	16.71	2.47	4.53	7.00	18,648.33
Mass Grad ng 01/01/2014-12/31/2015	13.91	108.48	55.16	0.02	11.78	4.70	16.49	2.47	4.33	6.80	18,075.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	11.70	0.00	11.70	2.44	0.00	2.44	0.00
Mass Grad ng Off Road D ese	13.27	101.18	49.71	0.00	0.00	4.43	4.43	0.00	4.07	4.07	15,826.43
Mass Grad ng On Road D ese	0.56	7.16	2.68	0.02	0.06	0.26	0.33	0.02	0.24	0.26	1,813.63
Mass Grad ng Worker Tr ps	0.08	0.14	2.77	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.56
Trench ng 02/01/2014-12/31/2015	0.56	4.06	3.40	0.00	0.00	0.22	0.22	0.00	0.20	0.20	572.71
Trench ng Off Road D ese	0.56	4.05	3.24	0.00	0.00	0.22	0.22	0.00	0.20	0.20	547.09
Trench ng Worker Tr ps	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 3/1/2014-12/31/2014 Act ve Days: 262	18.21	136.58	75.91	0.02	11.79	6.80	18.60	2.48	6.26	8.73	21,252.98
Aspha t 03/01/2014-12/31/2015	3.74	24.04	17.35	0.00	0.01	1.88	1.89	0.00	1.73	1.73	2,604.65
Pav ng Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	3.68	23.94	16.35	0.00	0.00	1.88	1.88	0.00	1.73	1.73	2,438.47
Pav ng On Road D ese	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.45
Pav ng Worker Tr ps	0.03	0.05	0.98	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.73
Mass Grad ng 01/01/2014-12/31/2015	13.91	108.48	55.16	0.02	11.78	4.70	16.49	2.47	4.33	6.80	18,075.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	11.70	0.00	11.70	2.44	0.00	2.44	0.00
Mass Grad ng Off Road D ese	13.27	101.18	49.71	0.00	0.00	4.43	4.43	0.00	4.07	4.07	15,826.43
Mass Grad ng On Road D ese	0.56	7.16	2.68	0.02	0.06	0.26	0.33	0.02	0.24	0.26	1,813.63
Mass Grad ng Worker Tr ps	0.08	0.14	2.77	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.56
Trench ng 02/01/2014-12/31/2015	0.56	4.06	3.40	0.00	0.00	0.22	0.22	0.00	0.20	0.20	572.71
Trench ng Off Road D ese	0.56	4.05	3.24	0.00	0.00	0.22	0.22	0.00	0.20	0.20	547.09
Trench ng Worker Tr ps	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62

2/2/2011 5:13:45 PM

T me S ce 1/1/2015-12/31/2015 Act ve Days: 313	16.76	122.95	74.19	0.02	11.79	6.07	17.86	2.48	5.58	8.06	21,253.02
Aspha t 03/01/2014-12/31/2015	3.46	22.26	17.17	0.00	0.01	1.72	1.72	0.00	1.58	1.58	2,604.66
Pav ng Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	3.40	22.17	16.25	0.00	0.00	1.71	1.71	0.00	1.57	1.57	2,438.47
Pav ng On Road D ese	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.45
Pav ng Worker Tr ps	0.03	0.05	0.91	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.73
Mass Grad ng 01/01/2014-12/31/2015	12.79	97.08	53.63	0.02	11.78	4.15	15.93	2.47	3.82	6.29	18,075.64
Mass Grad ng Dust	0.00	0.00	0.00	0.00	11.70	0.00	11.70	2.44	0.00	2.44	0.00
Mass Grad ng Off Road D ese	12.20	90.68	48.67	0.00	0.00	3.91	3.91	0.00	3.60	3.60	15,826.43
Mass Grad ng On Road D ese	0.51	6.27	2.40	0.02	0.06	0.23	0.29	0.02	0.21	0.23	1,813.63
Mass Grad ng Worker Tr ps	0.07	0.13	2.57	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.58
Trench ng 02/01/2014-12/31/2015	0.51	3.62	3.39	0.00	0.00	0.20	0.20	0.00	0.19	0.19	572.71
Trench ng Off Road D ese	0.51	3.61	3.24	0.00	0.00	0.20	0.20	0.00	0.19	0.19	547.09
Trench ng Worker Tr ps	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 1/1/2016-1/30/2016 Act ve Days: 26	11.81	83.34	52.17	0.02	19.58	3.60	23.19	4.10	3.31	7.41	17,710.66
Mass Grad ng 01/01/2016-12/31/2017	11.81	83.34	52.17	0.02	19.58	3.60	23.19	4.10	3.31	7.41	17,710.66
Mass Grad ng Dust	0.00	0.00	0.00	0.00	19.50	0.00	19.50	4.07	0.00	4.07	0.00
Mass Grad ng Off Road D ese	11.27	77.65	47.59	0.00	0.00	3.39	3.39	0.00	3.12	3.12	15,461.48
Mass Grad ng On Road D ese	0.47	5.57	2.18	0.02	0.06	0.20	0.27	0.02	0.19	0.21	1,813.63
Mass Grad ng Worker Tr ps	0.07	0.12	2.39	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.54

2/2/2011 5:13:45 PM

T me S ce 2/1/2016-2/29/2016 Act ve Days: 25	12.29	86.56	55.55	0.02	19.59	3.77	23.36	4.10	3.47	7.57	18,283.36
Mass Grad ng 01/01/2016-12/31/2017	11.81	83.34	52.17	0.02	19.58	3.60	23.19	4.10	3.31	7.41	17,710.66
Mass Grad ng Dust	0.00	0.00	0.00	0.00	19.50	0.00	19.50	4.07	0.00	4.07	0.00
Mass Grad ng Off Road D ese	11.27	77.65	47.59	0.00	0.00	3.39	3.39	0.00	3.12	3.12	15,461.48
Mass Grad ng On Road D ese	0.47	5.57	2.18	0.02	0.06	0.20	0.27	0.02	0.19	0.21	1,813.63
Mass Grad ng Worker Tr ps	0.07	0.12	2.39	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.54
Trench ng 02/01/2016-12/31/2017	0.48	3.21	3.38	0.00	0.00	0.17	0.17	0.00	0.16	0.16	572.71
Trench ng Off Road D ese	0.47	3.21	3.24	0.00	0.00	0.17	0.17	0.00	0.16	0.16	547.09
Trench ng Worker Tr ps	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 3/1/2016-12/31/2016 Act ve Days: 263	15.52	107.15	72.56	0.02	19.59	5.31	24.90	4.10	4.88	8.98	20,895.09
Aspha t 03/01/2016-12/31/2017	3.23	20.59	17.01	0.00	0.01	1.53	1.54	0.00	1.41	1.41	2,611.73
Pav ng Off-Gas	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	3.16	20.49	16.14	0.00	0.00	1.53	1.53	0.00	1.41	1.41	2,438.47
Pav ng On Road D ese	0.01	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.53
Pav ng Worker Tr ps	0.02	0.04	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.72
Mass Grad ng 01/01/2016-12/31/2017	11.81	83.34	52.17	0.02	19.58	3.60	23.19	4.10	3.31	7.41	17,710.66
Mass Grad ng Dust	0.00	0.00	0.00	0.00	19.50	0.00	19.50	4.07	0.00	4.07	0.00
Mass Grad ng Off Road D ese	11.27	77.65	47.59	0.00	0.00	3.39	3.39	0.00	3.12	3.12	15,461.48
Mass Grad ng On Road D ese	0.47	5.57	2.18	0.02	0.06	0.20	0.27	0.02	0.19	0.21	1,813.63
Mass Grad ng Worker Tr ps	0.07	0.12	2.39	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.54
Trench ng 02/01/2016-12/31/2017	0.48	3.21	3.38	0.00	0.00	0.17	0.17	0.00	0.16	0.16	572.71
Trench ng Off Road D ese	0.47	3.21	3.24	0.00	0.00	0.17	0.17	0.00	0.16	0.16	547.09
Trench ng Worker Tr ps	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62

2/2/2011 5:13:45 PM

T me S ce 1/2/2017-12/30/2017 Act ve Days: 312	14.59	95.84	71.68	0.02	19.59	4.88	24.48	4.10	4.49	8.59	20,895.06
Aspha t 03/01/2016-12/31/2017	3.03	19.04	16.86	0.00	0.01	1.40	1.41	0.00	1.29	1.29	2,611.72
Pav ng Off-Gas	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	2.96	18.94	16.05	0.00	0.00	1.40	1.40	0.00	1.28	1.28	2,438.47
Pav ng On Road D ese	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.53
Pav ng Worker Tr ps	0.02	0.04	0.79	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.71
Mass Grad ng 01/01/2016-12/31/2017	11.11	73.98	51.45	0.02	19.58	3.33	22.91	4.10	3.06	7.16	17,710.63
Mass Grad ng Dust	0.00	0.00	0.00	0.00	19.50	0.00	19.50	4.07	0.00	4.07	0.00
Mass Grad ng Off Road D ese	10.61	68.84	47.21	0.00	0.00	3.14	3.14	0.00	2.89	2.89	15,461.48
Mass Grad ng On Road D ese	0.44	5.03	2.01	0.02	0.06	0.18	0.24	0.02	0.17	0.19	1,813.63
Mass Grad ng Worker Tr ps	0.06	0.11	2.23	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.52
Trench ng 02/01/2016-12/31/2017	0.44	2.82	3.37	0.00	0.00	0.15	0.15	0.00	0.14	0.14	572.71
Trench ng Off Road D ese	0.44	2.82	3.24	0.00	0.00	0.15	0.15	0.00	0.14	0.14	547.09
Trench ng Worker Tr ps	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 1/1/2018-1/31/2018 Act ve Days: 27	10.44	65.95	50.50	0.02	12.10	2.85	14.95	2.54	2.62	5.16	17,710.62
Mass Grad ng 01/01/2018-12/31/2019	10.44	65.95	50.50	0.02	12.10	2.85	14.95	2.54	2.62	5.16	17,710.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	12.01	0.00	12.01	2.51	0.00	2.51	0.00
Mass Grad ng Off Road D ese	9.97	61.27	46.57	0.00	0.00	2.68	2.68	0.00	2.46	2.46	15,461.48
Mass Grad ng On Road D ese	0.41	4.57	1.86	0.02	0.06	0.16	0.23	0.02	0.15	0.17	1,813.63
Mass Grad ng Worker Tr ps	0.06	0.10	2.08	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.50

2/2/2011 5:13:45 PM

T me S ce 2/1/2018-2/28/2018 Act ve Days: 24	10.85	68.42	53.87	0.02	12.10	2.99	15.08	2.54	2.75	5.28	18,283.32
Mass Grad ng 01/01/2018-12/31/2019	10.44	65.95	50.50	0.02	12.10	2.85	14.95	2.54	2.62	5.16	17,710.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	12.01	0.00	12.01	2.51	0.00	2.51	0.00
Mass Grad ng Off Road D ese	9.97	61.27	46.57	0.00	0.00	2.68	2.68	0.00	2.46	2.46	15,461.48
Mass Grad ng On Road D ese	0.41	4.57	1.86	0.02	0.06	0.16	0.23	0.02	0.15	0.17	1,813.63
Mass Grad ng Worker Tr ps	0.06	0.10	2.08	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.50
Trench ng 02/01/2018-12/31/2019	0.41	2.47	3.36	0.00	0.00	0.14	0.14	0.00	0.12	0.13	572.71
Trench ng Off Road D ese	0.40	2.46	3.24	0.00	0.00	0.13	0.13	0.00	0.12	0.12	547.09
Trench ng Worker Tr ps	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62
T me S ce 3/1/2018-12/31/2018 Act ve Days: 262	13.67	85.99	70.61	0.02	12.11	4.27	16.37	2.54	3.92	6.46	20,888.27
Aspha t 03/01/2018-12/31/2019	2.82	17.58	16.75	0.00	0.01	1.28	1.29	0.00	1.18	1.18	2,604.95
Pav ng Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	2.77	17.51	16.00	0.00	0.00	1.27	1.27	0.00	1.17	1.17	2,438.47
Pav ng On Road D ese	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.77
Pav ng Worker Tr ps	0.02	0.04	0.73	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.71
Mass Grad ng 01/01/2018-12/31/2019	10.44	65.95	50.50	0.02	12.10	2.85	14.95	2.54	2.62	5.16	17,710.62
Mass Grad ng Dust	0.00	0.00	0.00	0.00	12.01	0.00	12.01	2.51	0.00	2.51	0.00
Mass Grad ng Off Road D ese	9.97	61.27	46.57	0.00	0.00	2.68	2.68	0.00	2.46	2.46	15,461.48
Mass Grad ng On Road D ese	0.41	4.57	1.86	0.02	0.06	0.16	0.23	0.02	0.15	0.17	1,813.63
Mass Grad ng Worker Tr ps	0.06	0.10	2.08	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.50
Trench ng 02/01/2018-12/31/2019	0.41	2.47	3.36	0.00	0.00	0.14	0.14	0.00	0.12	0.13	572.71
Trench ng Off Road D ese	0.40	2.46	3.24	0.00	0.00	0.13	0.13	0.00	0.12	0.12	547.09
Trench ng Worker Tr ps	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62

2/2/2011 5:13:45 PM

T me S ce 1/1/2019-12/31/2019 Act ve Days: 313	12.79	77.00	70.13	0.02	12.11	3.91	16.01	2.54	3.59	6.13	20,888.26
Aspha t 03/01/2018-12/31/2019	2.62	16.26	16.61	0.00	0.01	1.16	1.17	0.00	1.06	1.07	2,604.94
Pav ng Off-Gas	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pav ng Off Road D ese	2.57	16.19	15.92	0.00	0.00	1.15	1.15	0.00	1.06	1.06	2,438.47
Pav ng On Road D ese	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.77
Pav ng Worker Tr ps	0.02	0.03	0.68	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.70
Mass Grad ng 01/01/2018-12/31/2019	9.79	58.58	50.16	0.02	12.10	2.63	14.73	2.54	2.42	4.96	17,710.61
Mass Grad ng Dust	0.00	0.00	0.00	0.00	12.01	0.00	12.01	2.51	0.00	2.51	0.00
Mass Grad ng Off Road D ese	9.35	54.30	46.49	0.00	0.00	2.47	2.47	0.00	2.27	2.27	15,461.48
Mass Grad ng On Road D ese	0.39	4.19	1.74	0.02	0.06	0.15	0.21	0.02	0.14	0.16	1,813.63
Mass Grad ng Worker Tr ps	0.05	0.09	1.93	0.00	0.02	0.01	0.03	0.01	0.01	0.02	435.50
Trench ng 02/01/2018-12/31/2019	0.37	2.17	3.35	0.00	0.00	0.12	0.12	0.00	0.11	0.11	572.71
Trench ng Off Road D ese	0.37	2.16	3.24	0.00	0.00	0.12	0.12	0.00	0.11	0.11	547.09
Trench ng Worker Tr ps	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62

Construct on Re ated M t gat on Measures

The fo ow ng m t gat on measures app y to Phase: Mass Grad ng 1/1/2012 - 12/31/2013 - Phase 1 Grad ng

For So Stab z ng Measures, the Water exposed surfaces 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

For Unpaved Roads Measures, the Manage hau road dust 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

The fo ow ng m t gat on measures app y to Phase: Mass Grad ng 1/1/2014 - 12/31/2015 - Phase II Grad ng

For So Stab z ng Measures, the Water exposed surfaces 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

For Unpaved Roads Measures, the Manage hau road dust 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

2/2/2011 5:13:45 PM

The fo ow ng m t gat on measures app y to Phase: Mass Grad ng 1/1/2016 - 12/31/2017 - Phase III Grad ng

For So Stab z ng Measures, the Water exposed surfaces 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

For Unpaved Roads Measures, the Manage hau road dust 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

The fo ow ng m t gat on measures app y to Phase: Mass Grad ng 1/1/2018 - 12/31/2019 - Phase IV Grad ng

For So Stab z ng Measures, the Water exposed surfaces 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

For Unpaved Roads Measures, the Manage hau road dust 3x da y water ng m t gat on reduces em ss ons by:

PM10: 61% PM25: 61%

Hydrogeology Study Summary
J Street Drainage Improvement Project
Oxnard, California

Background
The planned improvements to the J Street Drain channel in Oxnard, California will stretch along nearly a 2200-ft length of the drain. A geotechnical study (Fugro, 2009) identified the subsurface conditions for the drain, and it recommends that dewatering be performed to maintain the water table at least three feet below the bottom of the concrete channel during construction. With portions of the channel located close to the Pacific shoreline, the dewatering will require pumping to lower the water table to approximately mean sea level and below in order to accommodate construction of the improvements to the channel. Based on timetables established for the project, it is anticipated that dewatering along the lower reach of the channel would endure from two-to-four months.

The nearby Halaco Superfund Site, located approximately 1500 feet east of the southern portion of the J Street Drain, contains plumes of groundwater impacted primarily by metals. A hydrogeological study was undertaken to evaluate the potential migration of groundwater from beneath the Halaco Site in response to dewatering along the J Street Drain.

Objective of Groundwater Model
The primary objective of the hydrogeologic study is to evaluate the potential for the dewatering effort to draw impacts from the Halaco Superfund Site toward the J Street Drain Improvement Project. A secondary objective is to evaluate prospective mitigation measures that may be needed for potential future conditions beneath the J Street Drain and Halaco Site areas that may result from construction dewatering. Collection of information from the Halaco Site, aquifer testing, and groundwater modeling were performed to address the objectives of this study.

Approach
The approach for this study was to construct a numerical model of the J Street Drainage area using information of the regional hydrogeology and site specific information provided in the Fugro study (2009), Halaco Site investigations by US EPA, and aquifer testing provided as part of this study. The model was used to evaluate groundwater migration from the Halaco Site in response to dewatering during the channel construction. The anticipated period of pumping / dewatering is projected to be up to four months in the southern section of the channel.

Hydrogeology
The Oxnard Plain is located within the Transverse Ranges geologic province of California which is characterized by generally east-west trending mountain ranges composed of sedimentary and volcanic rocks ranging in age from Cretaceous to Recent. Sediments comprising the Oxnard Plain originate from the Santa Clara River system that drains the surrounding mountains (i.e., the Topatopa Mountains, to the north, and the Santa Monica Mountains and Santa Susana Mountains to the east). The accumulation of

sediments beneath the Oxnard Plain is characterized by fine-to-coarse grained alluvial fan deposits. From data in the vicinity of the study area, the upper 100 ft of sediments are predominantly fine-to-coarse sands with discontinuous layers of clay and silt. Beneath the 100 ft sandy interval is a thick clayey layer that serves as a confining layer for groundwater flow.

Groundwater under unconfined conditions is found beneath the Site with groundwater elevations ranging from less than 2 ft mean sea level (msl referencing the NAVD 88 datum) to approximately 17.5 ft msl at the northern extent of the channel. Groundwater flows generally from north and east (i.e., inland and upland areas) toward the southwest and west (i.e., toward the coast). However, two factors contribute to influence the flow of groundwater in the focus area of this study. One is elevated surface water conditions in the Ormond Beach Lagoon and the Oxnard Industrial Drain (OID). The second is the presence of sewer lines in the vicinity of the southern reach of J Street Drain and the Halaco Site; these sewer lines draw in groundwater as drains.

There are few streams in the Oxnard Plain, and most flow only during wet periods and after storms. The Santa Clara River lies to the north of the study area, and its presence does not affect the modeling efforts described herein. However, the buildup of surface water within the Ormond Beach Lagoon and the OID influences the flow of groundwater in the study area. These two surface water features accumulate surface water to more than 8 ft msl due to the sediment buildup along the shoreline. During significant winter storms, the flood waters within the OID and the J Street Drain breach the buildup of sediments to drain these surface water features into the Pacific Ocean.

Annual precipitation over the Oxnard area is approximately 15.6 inches with most of this (nearly 13 inches annually, on average) falling during the four-month period between December and March.

Numerical Model

The groundwater system beneath the Site and adjacent properties was simulated using the U.S. Geological Survey model MODFLOW (McDonald and Harbaugh, 1986). Groundwater VISTAS software was used to construct the model mesh and served as a graphical processor that interfaced with MODFLOW as well as the post-processing program MODPATH. MODPATH identified pathways of flow within the groundwater system which aided in evaluation of potential impacts to groundwater flow into the channel project area.

Geographic boundaries utilized in the model cover the entire J-Street channel. However, the focus for the model is the southern portion of the channel which lies closest to the mouth of the J Street Drain at Ormond Beach Lagoon and the Halaco Superfund Site approximately 1500 ft toward the east. An overlay of the project area was utilized as the base map to construct the model. Thus, the model domain was a rectangular area 20,000 ft north-south by 10,000 ft east-west covering an area of 7.2 square miles (or approximately 4,600 acres). There were ten horizontal layers used with each layer five-

feet thick. The model grid was refined in the vicinity of the J-Street Channel and the Halaco Site in order to produce greater numerical stability and more accurate results.

Subsurface Properties

The primary groundwater bearing unit, or aquifer, is composed of fine-to-coarse sandy alluvium extending to a depth of approximately -90 ft msl where a prevalent and relatively thick clayey unit serves as a confining layer. The primary material/soil characteristic that affects groundwater flow within the numerical model is hydraulic conductivity, which is a measure of resistance to flow within the porous medium with higher values showing less resistance to flow. A test pumping well was installed, and aquifer tests were conducted from this well with observations monitored in two closely spaced and adjacent observation wells. The results of the aquifer testing and analysis provided an estimated value for hydraulic conductivity beneath the Site at 100 ft/day. Also, based on the aquifer testing and the aggregate of geotechnical information, fine grained material of relatively low permeability within the upper 50-to-100 ft from the land surface is present in discontinuous layers that do not appear to serve as confining layers.

Recharge

Recharge was provided in the first layer of the model uniformly across all of the active model area. The value for recharge was based on an estimated 25% of the annual precipitation rate of 15.6 inches infiltrating uniformly across all active areas of the model, thus at a constant rate of 0.0009 ft/d. Since the recharge rate is viewed as conservative and reasonable, and a parameter that does not significantly affect model outcome, it was fixed uniformly throughout the year and not varied throughout the duration of the simulations.

Model Simulations

Simulated dewatering was undertaken only for the southern reach of the channel between Port Hueneme Road (i.e., north of the Oxnard Waste Water Treatment Plant) and the planned location of the coffer dam at the Ormond Beach Lagoon, located approximately 1700 ft south of Port Hueneme Road. A line of 35 pumping wells was emplaced at depths of -5 to -10 ft msl along the channel with one well approximately each 50 ft and one cell per well. Pumping rates for the sixteen pumping wells closest to shoreline were approximately double those further inland due to the elevated surface water boundary conditions in the model representing the Ormond Beach Lagoon and the OID.

There were three phases of groundwater modeling conducted in order to meet the objectives of this project, and the results of each phase are described briefly as follows:

1. **Calibrate to boundary conditions**. The model was calibrated by adjusting boundary conditions within the model domain in order to closely match observed groundwater elevations within monitoring wells in the area. Since hydraulic conductivity was established during the aquifer testing and the water levels within the Ormond Beach Lagoon and OID were established from relatively long-term gauging records collected by US EPA, the primary changes that were necessary in order to calibrate to observed groundwater elevations were associated with the

sewer line running east-west beneath McWane Boulevard and north-south beneath Perkins Road beginning at McWane. From monitoring well data associated with the Halaco Site, the sewer line acts as a drain that lowers groundwater elevation to between -2 and 0 ft msl (NAVD 88) adjacent to the sewer line north of the Halaco Site as well as along the J Street Drain near the wastewater treatment plant. The elevation of water within the sewer line (i.e., simulated as a drain) that best matched the observed monitoring well data was -2 ft.

2. **Identify the potential influence on groundwater beneath the Halaco Site in response to dewatering**. During dewatering of the southern reach of the Drain, the cumulative dewatering rate to maintain groundwater at elevations necessary for construction was approximately 400 gallons per minute over the approximate 1700 ft length of the southern reach of the Drain with greater pumping rate required nearer the shoreline. Due to the strong influence of the sewer line, groundwater migration beneath the Halaco Site is not affected by dewatering under current conditions, and there is likely to be no migration of groundwater toward the dewatering wells.
3. **Identify prospective mitigation measures.** Under current conditions, there does not appear to be the need for mitigation measures. Monitoring of selected monitoring wells (e.g., MW-15, MW-21, and MW-22 located on the Halaco Site, and MW-23 located in the beach parking area off Perkins Road) can be performed during dewatering to evaluate the need for mitigation. Under conditions where the sewer is amended to cease acting as a drain, migration of groundwater offsite from the Halaco Site is possible in response to dewatering. In this case, the migration of groundwater from beneath the Halaco Site can be mitigated using a set of approximately five injection wells placed in the beach parking area between the J Street Drain and the Halaco Site. An aggregate total injection pumping rate of between 50 and 70 gallons per minute (or between 10 and 14 gallons per minute per injection well) would prevent migration of groundwater offsite from the Halaco Site.

In the latter two phases of groundwater modeling, pumping rates were iteratively adjusted to maintain groundwater levels at approximately -3 ft msl in the lower (i.e., southwestern) reach of the pumping channel. This elevation is considered the approximate elevation that will need to be maintained in the southwesternmost reach of the drain in order to construct the bottom of the channel. The elevation of the channel rises along the northward trend reflecting the natural rise in topography toward the north. Thus, the target groundwater elevation for the northernmost pumping well was approximately 0 ft msl.

Conclusions

The numerical model of the groundwater system beneath the J Street Channel area demonstrates that the sewer line beneath McWane Blvd and Perkins Road in combination with elevated surface water in the Ormond Beach Lagoon and the OID have significant effects on groundwater elevations and migration in the area with groundwater flow identified in the direction of the sewer lines. The simulations demonstrate that it is

unlikely for dewatering to draw groundwater from beneath the Halaco Site toward the J Street Drain under current conditions. However, should the sewer line become amended or upgraded to cease acting as a drain for groundwater, the dewatering effort may cause migration of potentially impacted groundwater from beneath the Halaco Site toward the J Street Drain. In this case, injection of water into the shallow aquifer through several wells located in the beach parking area between the J Street Drain and the Halaco Site can be utilized to mitigate potential migration of groundwater from beneath the Halaco Site. The monitoring of water levels within selected monitoring wells in the vicinity of the Halaco Site can be utilized to identify if migration of groundwater from the Halaco Site is occurring.