APPENDIX B-2. WISCONSIN AVENUE PUMP STATION MITIGATED NEGATIVE DECLARATION

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PUBLIC REVIEW DRAFT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

FOR

WISCONSIN AVENUE PUMP STATION PROJECT

Wisconsin Avenue and River Drive
Stockton, California

January 11, 2013

Prepared for:
Reclamation District No. 1614
c/o Kjeldsen, Sinnock & Associates
711 North Pershing Avenue
Stockton, CA 95203

ADMINISTRATIVE DRAFT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

FOR

WISCONSIN AVENUE PUMP STATION PROJECT

Wisconsin Avenue and River Drive
Stockton, California

January 11, 2013

Prepared for:

RECLAMATION DISTRICT No. 1614
c/o Kjeldsen, Sinnock & Associates
711 North Pershing Avenue
Stockton, CA 95203

Prepared by:

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RECLAMATION DISTRICT NO. 1614
c/o Kjeldsen, Sinnock & Neudeck, Inc.
711 N. Pershing Avenue
Stockton, CA 95203
(209) 946-0268

NOTICE OF INTENT TO ADOPT MITIGATED NEGATIVE DECLARATION AND NOTICE OF PUBLIC MEETING

WISCONSIN AVENUE PUMP STATION

Notice is hereby given that Reclamation District No. 1614 has prepared an Initial Study of environmental effects and intends to adopt a Mitigated Negative Declaration for the proposed improvement of an existing storm drain pump station. The proposed project site is located in the City of Stockton, adjacent to and northwest of the intersection of Wisconsin Avenue and River Drive. The project would demolish the existing pump station and remove portions of existing storm drain pipelines entering the station, as well as remove existing discharge pipelines from the station to a backwater slough of the Calaveras River. A new pump station would be constructed on the existing station site, which would include three main pumps and one smaller "low flow" pump. Each pump would have an attached discharge pipeline that would go over an existing levee to a concrete dissipater box to be constructed in the backwater slough. Two new sections of storm drain pipelines, along with new manholes, would be installed. The location and details of the proposed project are described in the text and figures contained in the Initial Study.

Copies of the proposed Initial Study and Mitigated Negative Declaration are available for public review at the offices of Kjeldsen, Sinnock & Neudeck, Inc., 711 N. Pershing Avenue, Stockton, CA 95203; the San Joaquin County Library and the Cesar Chavez Central Library, 605 N. El Dorado St., Stockton, CA.

Reclamation District No. 1614 will accept public and agency comments on the document during the review period that will begin on Friday January 11, 2013 and end on Monday, February 11, 2013. Comments may be sent to Reclamation District No. 1614, c/o Kjeldsen, Sinnock & Neudeck, Inc., 711 N. Pershing Avenue, Stockton, CA 95203, Attention: Erik Almaas.

In addition, notice is hereby given that the Board of Trustees of Reclamation District No. 1614 will consider adoption of the Mitigated Negative Declaration and approval of the project at a public meeting scheduled *for Monday, March 4, 2013 at 2:00 PM at the offices of Neumiller & Beardslee, 509 W. Weber Avenue, Stockton, CA 95201.*

s/ Christopher H. Neudeck

Dated: January 8, 2013

Christopher H. Neudeck, District Engineer
Reclamation District No. 1614

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NEGATIVE DECLARATION

LEAD AGENCY:

RECLAMATION DISTRICT NO. 1614
c/o Kjeldsen, Sinnock & Neudeck, Inc.
711 N. Pershing Ave.
Stockton, CA 95203

PROJECT NAME:	Wisconsin Avenue Pump Station Project
PROJECT PROPONENT:	Reclamation District No. 1614 c/o Kjeldsen, Sinnock & Neudeck, Inc. 711 N. Pershing Ave. Stockton, CA 95203
PROJECT LOCATION:	The proposed project is located at the intersection of Wisconsin Avenue and River Drive, in the City of Stockton, California. The proposed project is located in an unsectionalized portion of Township 1 North, Range 6 East, MDBM, as shown on the USGS Stockton West 7.5-minute quadrangle map. Latitude is 37° 58' 10'' N; longitude is 121° 21' 04'' W.
PROJECT DESCRIPTION:	The proposed project involves the improvement of an existing storm drain pump station operated by RD 1614. The project would demolish the existing pump station on the project site and remove portions of existing storm drain pipelines entering the existing station, as well as remove existing discharge pipelines from the station to a backwater slough of the Calaveras River. A new pump station would be constructed on the existing station site, consisting of new station housing, an underground concrete sump where storm drainage would be collected, and three main pumps and one smaller "low flow" pump. The three main pumps would have a minimum driver horsepower of 100 and a flow rate of 15,000 gallons per minute (gpm). The "low flow" pump would have a minimum driver horsepower of 50, and a flow rate of 7,000 gpm. Each pump would have an attached discharge pipeline that would go over an existing levee to a concrete dissipator box to be constructed in a backwater slough of the Calaveras River, where the collected storm drainage would be discharged. Two new sections of storm drain pipelines entering

the pump station totaling 100 linear feet, along with new manholes, would be installed.

DETERMINATION:

The Lead Agency has prepared an Initial Study, attached, which considers the potential environmental effects of the proposed project. The Initial Study identifies potentially significant effects, but:

1. Mitigation measures agreed to by Reclamation District 1614 before the proposed Mitigated Negative Declaration and Initial Study were released for public review would avoid the effects or mitigate the effects to a point where no significant effects would occur, and

2. There is no substantial evidence, in light of the whole record before Reclamation District 1614, that the project as revised may have a significant effect on the environment.

The project revisions, proposals or mitigation measures agreed to by the Lead Agency are listed below.

AIR QUALITY MITIGATION MEASURES

3-1. All project demolition and construction activities shall comply with the dust control measures set forth in San Joaquin Valley Air Pollution Control District (Air District) Regulation VIII – Fugitive PM10 Prohibitions. Regulation VIII measures include the following:

- Visible dust emissions shall be limited to 20% opacity or less during all phases of demolition and construction.

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.

- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.

- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.

- When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.

- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.

- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.

3-2. The contractor shall reduce internal combustion engine emissions from construction equipment and vehicles by implementing the following:

- Tune and maintain all construction equipment to manufacturer's specifications.

- Use low-sulfur fuels or alternative fuels for construction equipment whenever feasible.

- Limit idling of construction equipment and trucks to no longer than 10 minutes.

- Locate construction parking areas to minimize traffic interference.

- Minimize obstruction of through traffic lanes.

- Provide adequate ingress and egress at work sites and staging areas to minimize vehicle idling.

BIOLOGICAL RESOURCE MITIGATION MEASURES

4-1. Any vegetation removal that occurs during the avian nesting season (February 1 through August 31) shall be immediately preceded by a field survey by a qualified biologist. If active nests are found, adequate marking of the nest site shall be provided, as specified by the biologist and vegetation removal in the vicinity of the nest shall be delayed until the young fledge, as determined by the biologist.

4-2. Wetland permits and/or other required certifications shall be obtained from the agencies with jurisdiction over the slough prior to placement of any fill in the slough, including the U.S. Army Corps of Engineers, the California Department of Fish and Game, the State Lands Commission and the Central Valley Regional Water Quality Control Board. Permits and/or certifications may include, but are not limited to, Clean Water Act Section 404 permit and Section 401 certification, Streambed Alteration Agreement, and discharge permits from the Central Valley RWQCB.

4-3. If wetland mitigation is required by the U.S. Army Corps of Engineers or other agencies, RD 1614 shall provide off-site mitigation at an agency-approved wetland mitigation bank.

4-4. Pre-construction surveys for nesting Swainson's hawks within 0.25 miles of the site shall be conducted by a qualified biologist prior to any construction activities between March 1 and September 15. The surveys shall incorporate methodologies from CDFG's 1994 Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California and the Swainson's Hawk Technical Advisory Committee (SHTAC) survey guidelines (SHTAC, 2000). If active nests are found, a qualified biologist shall determine the need (if any) for temporal restrictions on construction, which shall be implemented by RD 1614 and its contractors. Alternatively, the project may choose to participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), and implement the measures required by the SJMSCP to protect Swainson's hawk.

CULTURAL RESOURCE MITIGATION MEASURES

5-1. If any subsurface cultural resources are encountered during construction of the project, all construction activities in the vicinity of the encounter shall be halted until a qualified archaeologist can examine these materials and make a determination of their significance and recommend mitigation measures. The RD 1614 Project Engineer shall be notified and shall be responsible for implementing mitigation measures recommended by the archaeologist for any identified significant cultural resources, pursuant to the requirements of the CEQA Guidelines.

5-2. If human remains are encountered at any time during the development of the project, all work in the vicinity of the find shall halt and the RD 1614 Project Engineer and the County Coroner shall be notified immediately. The Coroner must contact the Native American Heritage Commission if the remains have been identified as being of Native American descent. At the same time, the Project Engineer shall retain a qualified archaeologist to evaluate the archaeological implications of the find and recommend any mitigation measures that may be required under CEQA; the engineer will be responsible for implementing those recommendations. The CEQA Guidelines detail steps to be taken when human remains are found to be of Native American origin.

GEOLOGY AND SOILS MITIGATION MEASURES

6-1. All improvements associated with the project shall conform to the applicable specifications of the soils or geotechnical report to be prepared for the project, which will evaluate soil limitations on the project site and provide recommendations to address any identified limitations.

HAZARDS AND HAZARDOUS MATERIALS MITIGATION MEASURES

8-1. Prior to demolition activities, the Lead Agency shall conduct an asbestos inspection of the pump station, in accordance with San Joaquin Valley Air Pollution Control District regulations. SJVAPCD regulations require the inspection to be conducted by or under the direction of a consultant certified by the California Occupational Safety and Health Administration (Cal-OSHA). The inspection report shall be submitted to the SJVAPCD along with the asbestos notification form, which must be submitted to the SJVAPCD ten (10) working days before demolition activity begins. In accordance with SJVAPCD Rule 3050, applicable fees must be submitted along with the notification form.

If asbestos-containing materials are discovered which would be disturbed during demolition activities, these materials must be removed prior to demolition. Removal work shall be conducted by a contractor whose employees are properly trained and equipped for such work in accordance with Cal-OSHA regulations. The handling, transport and disposal of the asbestos-containing materials shall be conducted in accordance with California Environmental Protection Agency and NESHAP regulations.

HYDROLOGY AND WATER QUALITY MITIGATION MEASURES

9-1. RD 1614 and its contractors shall comply with all applicable provisions of the City of Stockton's Storm Water Management Plan. These provisions shall include the installation of perimeter erosion and sediment controls such as fiber rolls and gravel drives, placing sediment barriers around any stockpiles, and re-vegetating affected portions of the construction area.

NOISE MITIGATION MEASURES

12-1. Temporary noise impacts resulting from project construction shall be minimized by restricting hours of operation of noise-generating equipment in the immediate vicinity of existing residences to 6:00 AM to 7:00 PM Monday through Friday and to 7:00 AM to 6:00 PM on Saturday and Sunday.

12-2. The contractor shall ensure that all construction equipment used on the project site is properly muffled at all times, with mufflers installed in accordance with manufacturers' specifications.

Christopher H. Neudeck, District Engineer
Reclamation District No. 1614

1/8/13
Date

Chapter 1.0
Introduction to Initial Study

Project Brief

This Initial Study/Mitigated Negative Declaration (IS/MND) evaluates the potential environmental impacts of the Wisconsin Avenue Pump Station project. The proposed project involves the improvement of an existing storm drain pump station. The proposed improvement is located at the intersection of Wisconsin Avenue and River Drive in the City of Stockton, south of the Calaveras River, California. Reclamation District No. 1614 (RD 1614), the project proponent, is the California Environmental Quality Act (CEQA) Lead Agency.

The project would demolish the existing pump station and remove portions of storm drain pipelines entering the existing station, as well as remove existing discharge pipelines from the station to a backwater slough of the Calaveras River. A new pump station would be constructed on the existing station site. The new station would include three main pumps and one smaller "low flow" pump. Each pump would have an attached discharge pipeline that would go over an existing levee to a concrete dissipator box to be constructed in the backwater slough. Two new sections of storm drain pipelines, along with new manholes, would be installed. New chain link fencing would surround the new station, with a chain link double gate allowing entry.

Purpose of Initial Study

This IS/MND has been prepared in accordance with the requirements of the California Environmental Quality Act (CEQA – Public Resources Code Section 21000 *et seq.*). CEQA requires that public agencies document and consider the potential environmental effects of any agency actions that meet CEQA's definition of a "project." Briefly summarized, a "project" is an action that has the potential to result in direct or indirect physical changes in the environment. A project includes the agency's direct activities, as well as activities that involve public agency approvals or funding. Guidelines for an agency's implementation of CEQA are found in the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3). The proposed Wisconsin Avenue Pump Station project is a "project" as defined by CEQA.

CEQA Guidelines Section 15050 states that the Lead Agency shall prepare the appropriate CEQA document for a project. According to CEQA Guidelines Section 15367, the "Lead Agency" is the public agency that carries out a project or that has the greatest responsibility for supervising or approving a project. Based on the CEQA Guidelines, RD 1614 is the Lead Agency for the proposed project, as it would make the decision on implementing the project and would implement the project if approved.

Provided that a project is not found to be exempt from CEQA, the first step in the agency's evaluation of the potential environmental effects of a project is the preparation of an Initial Study. The proposed Wisconsin Avenue Pump Station project is not CEQA-exempt. The purpose of an Initial Study is to determine whether the project would involve "significant" environmental effects as defined by CEQA and to describe feasible mitigation measures that would avoid the significant effects or reduce them to a less than significant level. In the event that the Initial Study does not identify significant

effects, or identifies mitigation measures that would reduce all of the significant effects of the project to a less than significant level, the agency may prepare a Negative Declaration. If this is not the case, the agency must prepare an Environmental Impact Report (EIR); the agency may also decide to proceed directly with the preparation of an EIR without preparation of an Initial Study. RD 1614 has determined that the project involves the potential for significant environmental effects, and that a IS/MND shall be prepared.

The purpose of this Initial Study is to describe the proposed project and its environmental setting, discuss the potential environmental effects of the project, and identify feasible mitigation measures that would reduce the potentially significant environmental effects of the project to a less than significant level. The Initial Study concludes that, with recommended mitigation measures, the project would not result in significant environmental effects.

Regulatory agencies and members of the public have the opportunity to comment on the adequacy of the environmental review during a 30-day review period following the release of the Public Review Draft IS/MND. The IS/MND, and public review comments received on the document, must be considered by County decision-makers, who must adopt the IS/MND before a decision can be made on the project. The IS/MND must also be considered by responsible agencies with discretionary approval authority. According to CEQA Guidelines Section 15382, a "responsible agency" is an agency that has discretionary approval power over a project, other than the Lead Agency. Chapter 2.0, Project Description, describes agencies other than the Lead Agency with potential discretionary approval authority over the proposed project.

Scope of Initial Study

This Initial Study evaluates the project's potential to result in "significant" environmental effects, as defined by CEQA, in the following issue areas. This analysis is contained in Chapter 3.0 of this document. Where feasible mitigation measures would avoid or reduce significant effects, they are identified; the resulting level of significance of the environmental effect, considering the application of the mitigation measure(s), is identified.

Aesthetics
Agricultural Resources
Air Quality
Biological Resources
Cultural Resources
Geology and Soils
Greenhouse Gas Emissions
Hazards and Hazardous Materials
Hydrology and Water Quality
Land Use and Planning
Mineral Resources
Noise
Population and Housing
Public Services

Recreation
Transportation/Traffic
Utilities and Service Systems
Mandatory Findings of Significance

Environmental Evaluation Checklist Terminology

The potential environmental effects of the proposed project are evaluated in the Environmental Evaluation Checklist and accompanying narrative discussion, which are in Chapter 3.0 of this Initial Study. The checklist portion of Chapter 3.0 includes a list of environmental considerations against which the project is evaluated in the narrative discussion; the source of this checklist is Appendix G in the CEQA Guidelines. For each question, the Lead Agency determines whether the project would involve 1) a Potentially Significant Impact, 2) a Less Than Significant Impact, 3) a Less Than Significant Impact With Mitigation Incorporated, or 4) No Impact.

- A Potentially Significant Impact occurs where the Lead Agency has determined, based on substantial evidence, that the project will cause a substantial adverse change to the physical environment (i.e., that the environmental effect will be significant). Such an impact is considered Significant and Unavoidable if the Lead Agency determines that there are no feasible mitigation measures available that will reduce the potential effect to a less than significant level.

- A Less Than Significant Impact is identified when the project will involve some effect on the resource under consideration, but the Lead Agency has determined that the project will not involve a substantial adverse change to the physical environment. In this case, no mitigation measures are proposed or required.

- An environmental effect that is identified as Less Than Significant With Mitigation Incorporated is a Potentially Significant Impact that can be avoided or reduced to a less than significant level with the application of proposed mitigation measures. Where the project may involve significant environmental effects, the IS/MND describes potentially feasible mitigation measures for consideration by the Lead Agency.

- A determination of No Impact is self-explanatory.

Summary of Environmental Effects and Mitigation Measures

Table 1-1, Summary of Impacts and Mitigation Measures, summarizes the potential environmental effects of the project and the mitigation measures that would reduce those potential effects to a less than significant level. The content of the table is drawn from the Environmental Checklist Form and discussion in Chapter 3.0 of this document. The potential environmental impacts of the proposed project are summarized in the left-most column of Table 1-1. The level of significance of the impact is indicated in the second column. Mitigation measures proposed to minimize the impacts, if necessary, are shown in the third column. The fourth column shows the significance of the impact after mitigation measures are applied.

TABLE 1-1
SUMMARY TABLE OF MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures		Mitigation Measures	Significance After Mitigation Measures
1. AESTHETICS				
Aesthetic Impacts of Project Construction	LS		None required	
Aesthetic Impacts of Proposed Improvements	LS		None required	
2. AGRICULTURE AND FOREST RESOURCES				
Impacts on Agriculture and Forest Resources	NI		None required	
3. AIR QUALITY				
Project Construction Emission Impacts	PS	3-1	All project demolition and construction activities shall comply with the dust control measures set forth in SJVAPCD Regulation VIII – Fugitive PM10 Prohibitions. Regulation VIII measures include the following: • Visible dust emissions shall be limited to 20% opacity or less during all phases of demolition and construction. • All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover. • All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant. • All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking. • When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained. • All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.	LS

TABLE 1-1
SUMMARY TABLE OF MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures		Mitigation Measures	Significance After Mitigation Measures
			• Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.	
		3-2	The contractor shall reduce internal combustion engine emissions from construction equipment and vehicles by implementing the following: • Tune and maintain all construction equipment to manufacturer's specifications. • Use low-sulfur fuels or alternative fuels for construction equipment whenever feasible. • Limit idling of construction equipment and trucks to no longer than 10 minutes. • Locate construction parking areas to minimize traffic interference. • Minimize obstruction of through traffic lanes. • Provide adequate ingress and egress at work sites and staging areas to minimize vehicle idling.	
Project Operational Emission Impacts	LS		None required	
Toxic Air Contaminants and Odors	LS		None required.	
4. BIOLOGICAL RESOURCES				
Project Impacts on Plant and Wildlife Species	PS	4-1	Any vegetation removal that occurs during the avian nesting season (February 1 through August 31) shall be immediately preceded by a field survey by a qualified biologist. If active nests are found, adequate marking of the nest site shall be provided as specified by the biologist and vegetation removal in the vicinity of the nest shall be delayed until the young fledge as determined by the biologist.	LS
Impacts on Waters of the U.S. and Wetlands	PS	4-2	Wetland permits and/or other required certifications shall be obtained from the agencies with jurisdiction over the slough prior to placement of any fill in the slough, including the U.S. Army Corps of Engineers, the California Department of Fish and Game, the State Lands Commission and the Central Valley Regional Water Quality Control Board. Permits and/or certifications may include, but are not limited to, Clean Water Act Section 404 permit and Section 401 certification, Streambed Alteration Agreement, and discharge permits from the Central Valley RWQCB.	LS

TABLE 1-1
SUMMARY TABLE OF MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures		Mitigation Measures	Significance After Mitigation Measures
		4-3	If wetland mitigation is required by the U.S. Army Corps of Engineers or other agencies, RD 1614 shall provide off-site mitigation at an agency-approved wetland mitigation bank.	
Impacts on Special-Status Plant Species	LS		None required.	
Impacts on Special-Status Wildlife Species	PS	4-4	Pre-construction surveys for nesting Swainson's hawks within 0.25 miles of the site shall be conducted by a qualified biologist prior to any construction activities between March 1 and September 15. The surveys shall incorporate methodologies from CDFG's 1994 Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California and the Swainson's Hawk Technical Advisory Committee (SHTAC) survey guidelines (SHTAC, 2000). If active nests are found, a qualified biologist shall determine the need (if any) for temporal restrictions on construction, which shall be implemented by RD 1614 and its contractors. Alternatively, the project may choose to participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), and implement the measures required by the SJMSCP to protect Swainson's hawk.	LS
5. CULTURAL RESOURCES				
Project Impacts on Cultural Resources	PS	5-1	If any subsurface cultural resources are encountered during construction of the project, all construction activities in the vicinity of the encounter shall be halted until a qualified archaeologist can examine these materials and make a determination of their significance and recommend mitigation measures. The RD 1614 Project Engineer shall be notified and shall be responsible for implementing mitigation measures recommended by the archaeologist for any identified significant cultural resources, pursuant to the requirements of the CEQA Guidelines.	LS

TABLE 1-1
SUMMARY TABLE OF MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures		Mitigation Measures	Significance After Mitigation Measures
		5-2	If human remains are encountered at any time during the development of the project, all work in the vicinity of the find shall halt and the RD 1614 Project Engineer and the County Coroner shall be notified immediately. The Coroner must contact the Native American Heritage Commission if the remains have been identified as being of Native American descent. At the same time, the Project Engineer shall retain a qualified archaeologist to evaluate the archaeological implications of the find and recommend any mitigation measures that may be required under CEQA; the engineer will be responsible for implementing those recommendations. The CEQA Guidelines detail steps to be taken when human remains are found to be of Native American origin.	
6. GEOLOGY AND SOILS				
Project Impacts on Geology and Soils	PS	6-1	All improvements associated with the project shall conform to the applicable specifications of the soils or geotechnical report to be prepared for the project, which will evaluate soil limitations on the project site and provide recommendations to address any identified limitations.	LS
7. GREENHOUSE GAS EMISSIONS				
Project GHG Emissions	LS		None required	
Consistency with Applicable Plans	LS		None required	
8. HAZARDS AND HAZARDOUS MATERIALS				
Potential Exposure to Hazardous Materials or Wastes	PS	8-1	Prior to demolition activities, the Lead Agency shall conduct an asbestos inspection of the pump station, in accordance with San Joaquin Valley Air Pollution Control District regulations. SJVAPCD regulations require the inspection to be conducted by or under the direction of a consultant certified by the California Occupational Safety and Health Administration (Cal-OSHA). The inspection report shall be submitted to the SJVAPCD along with the asbestos notification form, which must be submitted to the SJVAPCD ten (10) working days before demolition activity begins. In accordance with SJVAPCD Rule 3050, applicable fees must be submitted along with the notification form.	LS

TABLE 1-1
SUMMARY TABLE OF MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures		Mitigation Measures	Significance After Mitigation Measures
			If asbestos-containing materials are discovered which would be disturbed during demolition activities, these materials must be removed prior to demolition. Removal work shall be conducted by a contractor whose employees are properly trained and equipped for such work in accordance with Cal-OSHA regulations. The handling, transport and disposal of the asbestos-containing materials shall be conducted in accordance with California Environmental Protection Agency and National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations.	
Potential Exposure to Other Hazards	LS		None required	
9. HYDROLOGY AND WATER QUALITY				
Project Impacts on Surface and Groundwater Resources	LS		None required	
Project Impacts on Water Quality	PS	9-1	RD 1614 and its contractors shall comply with all applicable provisions of the City of Stockton's Storm Water Management Plan. These provisions shall include the installation of perimeter erosion and sediment controls such as fiber rolls and gravel drives, placing sediment barriers around any stockpiles, and re-vegetating affected portions of the construction area.	LS
Flooding Hazards Associated with Project	LS		None required	
10. LAND USE AND PLANNING				
Project Consistency with Applicable Land Use Plans	NI		None required	
Land Use Conflicts Related to the Project	NI		None required	
11. MINERAL RESOURCES				
Impacts on Mineral Resources	NI		None required	
12. NOISE				
Project Noise Impacts	PS	12-1	Temporary noise impacts resulting from project construction shall be minimized by restricting hours of operation of noise-generating equipment in the immediate vicinity of existing residences to 6:00 AM to 7:00 PM Monday through Friday and to 7:00 AM to 6:00 PM on Saturday and Sunday.	LS

TABLE 1-1
SUMMARY TABLE OF MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		12-2 The contractor shall ensure that all construction equipment used on the project site is properly muffled at all times, with mufflers installed in accordance with manufacturers' specifications.	
13. POPULATION AND HOUSING			
Project Impacts on Population and Housing	NI	None required	
14. PUBLIC SERVICES/FACILITIES			
Impacts on Public Services and Facilities	NI	None required	
15. RECREATION	NI	None required	
Project Impacts on Recreation	NI	None required	
16. TRANSPORTATION/CIRCULATION			
Project Impacts on Transportation	NI	None required	
17. UTILITIES/SERVICES SYSTEMS			
Project Impacts on Storm Drainage System	LS	None required	LS
Project Impacts on Other Utilities	LS	None required	

Notes:
PS – Potentially Significant

LS – Less than Significant

NI – No Impact

Project Brief

The proposed project involves the improvement of a storm drain pump station. The proposed project site is located in the City of Stockton, adjacent to and northwest of the intersection of Wisconsin Avenue and River Drive. Reclamation District No. 1614 (RD 1614) is the project proponent, as well as the California Environmental Quality Act (CEQA) defined Lead Agency.

The project would demolish the existing pump station and remove portions of storm drain pipelines entering the existing station, as well as remove existing discharge pipelines from the station to a backwater slough of the Calaveras River. A new pump station would be constructed on the existing station site, which would include three main pumps and one smaller “low flow” pump. Each pump would have an attached discharge pipeline that would go over an existing levee to a concrete dissipator box to be constructed in a backwater slough of the Calaveras River. Two new sections of storm drain pipelines, along with new manholes, would be installed. The location and details of the proposed project are described in the text and figures contained in this chapter.

Project Location

The project is located on a parcel approximately 0.41 acres in size. The project site is located in the City of Stockton, south of the Calaveras River, Calirfornia. The site is adjacent to and northwest of the intersection of Wisconsin Avenue and River Drive. The proposed project site is located adjacent to a largely residential area within unincorporated San Joaquin County, approximately 0.75 miles west of Interstate 5 (I-5).

The project is located within an unsectionalized portion of Township 1 North, Range 6 East, MDBM. The project site is shown on the Stockton West 7.5-minute USGS Quadrangle. The location of the proposed project is illustrated on Figures 2-1 through 2-5 at the end of this chapter.

Project Background

RD 1614 is responsible for the maintenance and improvements of the eleven storm drainage terminal discharge facilities and more than half of the levee system for Smith Tract, an area located in the far eastern portion of the Sacramento-San Joaquin River Delta. The Delta consists of a complex of interconnected river channels and sloughs that define dozens of largely agricultural islands. The land area of the Delta islands is often located below sea level and exists by virtue of the levee systems that protect them from flooding.

The replacement of the Wisconsin Pump Station is necessitated by two key factors. First, the current pumping capacity is not sufficient to provide protection against runoff from a 100-year storm event. Second, the existing pump station structure is severely antiquated and in danger of detrimental collapse.

Ten of the eleven Reclamation District storm drain pump stations currently provide sufficient protection against the runoff from a 24-hour, 100-year storm event. The Wisconsin Pump Station is the one exception. This facility provides storm drainage pumping for runoff from a drainage shed of nearly 700 acres – the largest drainage shed within RD 1614. It is currently sized with two pumps with a combined pumping capacity of approximately 10,000 gallons per minute (gpm) that discharge stormwater runoff into the Calaveras River. However, this current pumping capacity is not sufficient, and runoff from a 24-hour, 100-year storm event would likely cause areas of residual flooding within RD 1614. As a result, these areas are expected to be mapped as a Special Flood Hazard Area (SFHA) by the Federal Emergency Management Agency (FEMA), and flood insurance requirements for property owners will be affected. To continue protecting nearly 1,700 parcels from future storm and flood runoff events, this facility requires replacement and upgrading of its pumping capacity to approximately 30,000 gpm in order to meet current 100-year flood standards.

The Wisconsin Pump Station is an antiquated structure that is comprised of a steel sheet pile stormwater collection sump with a concrete slab and pump house on top. The sump does not have a solid bottom and therefore is subject to groundwater infiltration. Although the pump house on top is in fair condition, the sheet pile sump itself is woefully inadequate and in a state of impending failure. The sheet pile sump is reinforced with wood timber whalers that have rotted. The steel sheet piles themselves have rotted and are collapsing inward. After assessing the condition of the pump station and consulting with a structural engineer, RD 1614 has determined that the structural integrity of the facility's sump has diminished to a point where there is now great concern that the pump house is in danger of collapsing into the sump. Therefore, any improvements and/or upsizing of the pumping capacity of the pump station would be detrimental to the structural integrity of the sump, and the entire structure should be removed and replaced with a new sump structure.

Project Description

The proposed project would replace the existing pump station with a new station at the same location. The project proposes to demolish the existing station housing and to remove the existing two pumps and discharge pipes connected to the pumps, along with the pipe supports. It also proposes to remove sections of three storm drainage pipes entering the existing pump station, the removed sections totaling approximately 100 linear feet. Existing chain link fencing that surrounds the existing pump station would also be removed. An existing utility pole next to the existing pump station would be relocated. Figure 2-6 depicts the demolition plan.

Figure 2-7 depicts the site plan for the new pump station. The project proposes the construction of new station housing, surrounded by a six-inch thick aggregate base. The station would contain an underground concrete sump where storm drainage would be collected. The drainage would then be removed from the sump using pumps installed at the station. The pumps would direct the drainage into discharge pipes, which would be routed to a concrete dissipator box to be constructed in the nearby backwater slough. Figure 2-8 shows a profile of the proposed discharge pipes, along with the dimensions of the dissipator box. From the slough, the discharge would enter the Calaveras River.

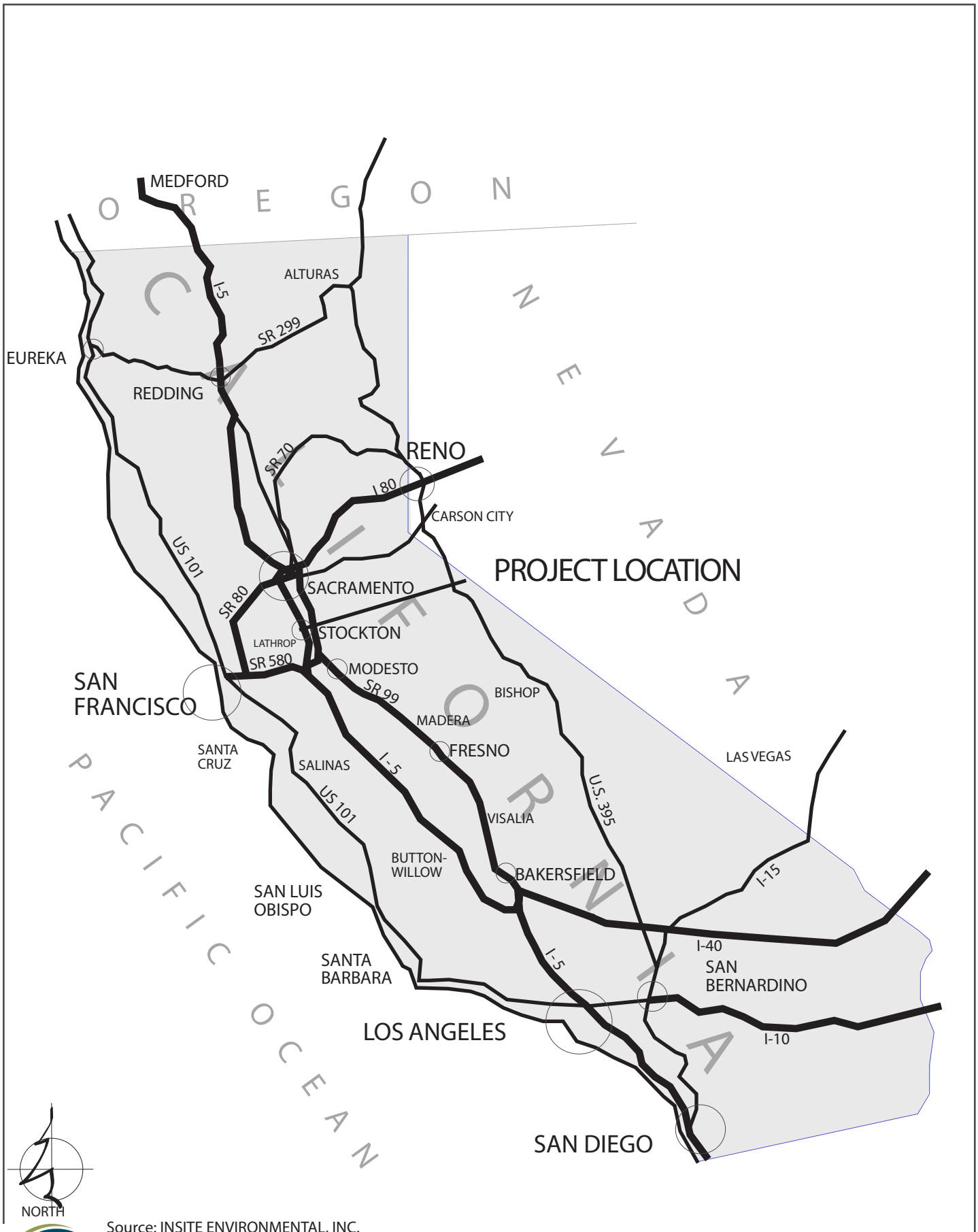
Four pumps would be installed at the new station. Three of these pumps would be available to remove collected drainage during and immediately after storm events, although it is anticipated that only two at most would be used at any given time, with one reserved as a backup. The three pumps would each have a minimum driver horsepower of 100 and a flow rate of 15,000 gallons per minute (gpm). The fourth is designated as a "low flow" pump that would be used during periods of low drainage flow to the station. This pump would have a minimum driver horsepower of 50, and a flow rate of 7,000 gpm.

The three larger pumps would be connected to 30-inch diameter welded steel discharge pipes. The low-flow pump would be connected to an 18-inch diameter welded steel discharge pipe. The discharge pipes would be located aboveground on the side of a levee adjacent to the station, would pass through the levee near its top, and then aboveground down the water side into a dissipator box to be constructed in the backwater slough. The purpose of the dissipator box would be to reduce the amount of flow energy from the discharged drainage, thereby reducing potential erosion problems in the slough. The dissipator box would be a concrete structure approximately 30 feet long by 9 feet wide by 4 feet high. The box would be constructed on a gravel base 6-12 inches deep. From the dissipator box, the drainage would be discharged into the slough, and enter the Calaveras River to the northwest.

The project proposes the construction of two new storm drainage pipes entering the pump station. From the west, approximately 43 linear feet of a 36-inch diameter pipe would connect the station to a new Type 1 manhole. A Type 1 manhole is a reinforced concrete structure that would allow access to the storm drainage pipe. From the east, approximately 18 linear feet of a 36-inch diameter pipe would be installed between a new Type 1 manhole and a new Type 2 manhole. A Type 2 manhole is similar to a Type 1 manhole, but accommodates a transition between two pipes of different diameters. From this new Type 2 manhole, approximately nine linear feet of a 60-inch diameter storm drainage pipe would connect the manhole to the station.

The project proposes the installation of approximately 317 linear feet of new chain link fencing around the station. A chain link double link approximately 12 feet wide would be installed along the eastern portion of the fence to provide access. The project also proposes water service to the station through 83 linear feet of a two-inch diameter galvanized steel pipe that ends at a hose bib adjacent to the station. Cal-Water would provide water service to the site.

Project construction is anticipated to occur in one phase. The proposed project would require the approval of the Lead Agency, RD 1614. In addition, the project would require approval from other agencies having jurisdiction over the adjacent Federal Project Levee along the south bank of the Calaveras River, including the Central Valley Flood Protection Board, the U.S. Army Corps of Engineers, and the San Joaquin County Flood Control and Water Conservation District. The project would involve work in Waters of the U.S. or wetlands; therefore, the project will require permit approvals from the agencies with jurisdiction over these resources. The analysis of biological resources in Section 4 of Chapter 3.0 includes a requirement that such permits be obtained.



Source: INSITE ENVIRONMENTAL, INC.

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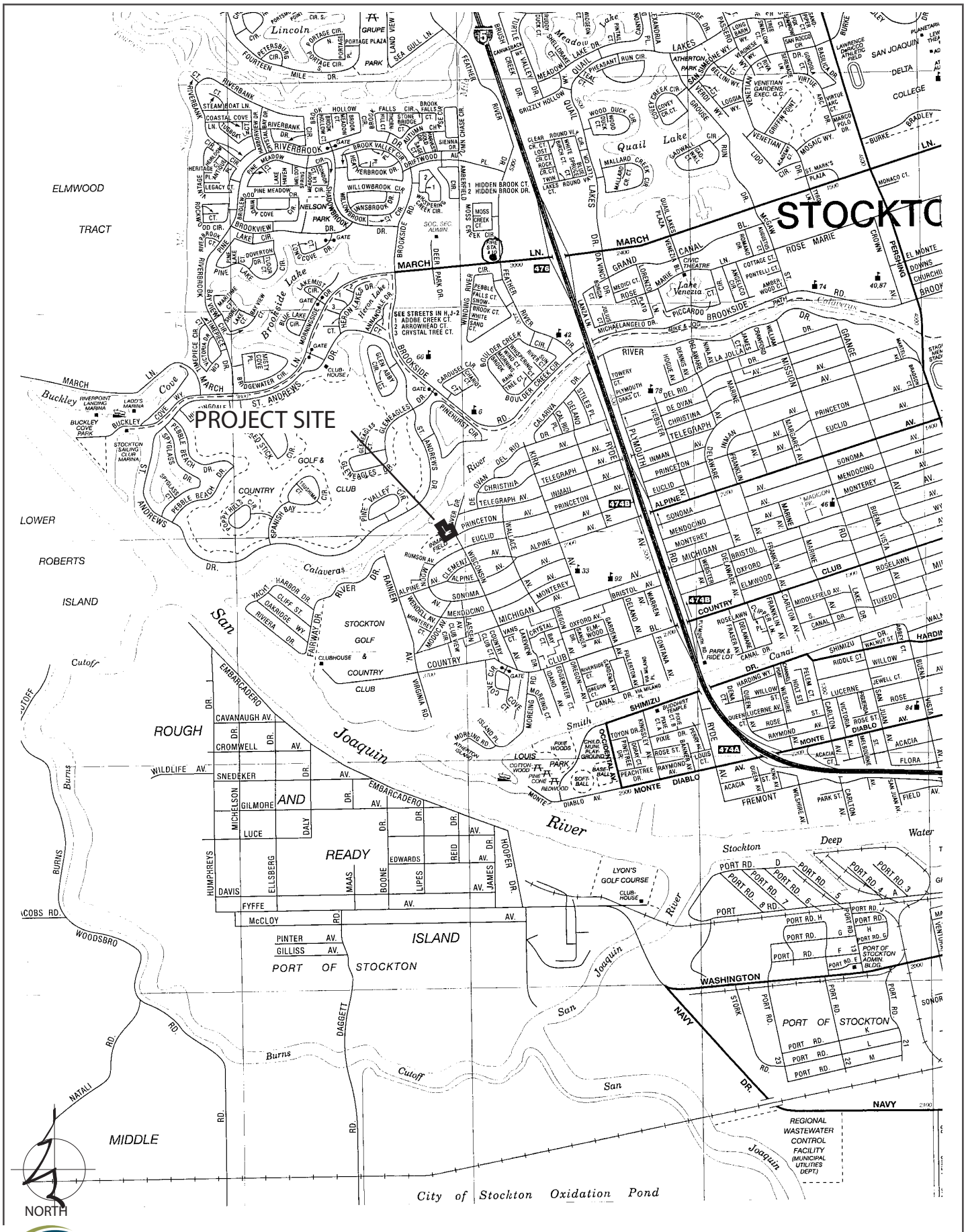
Figure 2-1
REGIONAL MAP



SOURCE: CSAA, CITY OF STOCKTON

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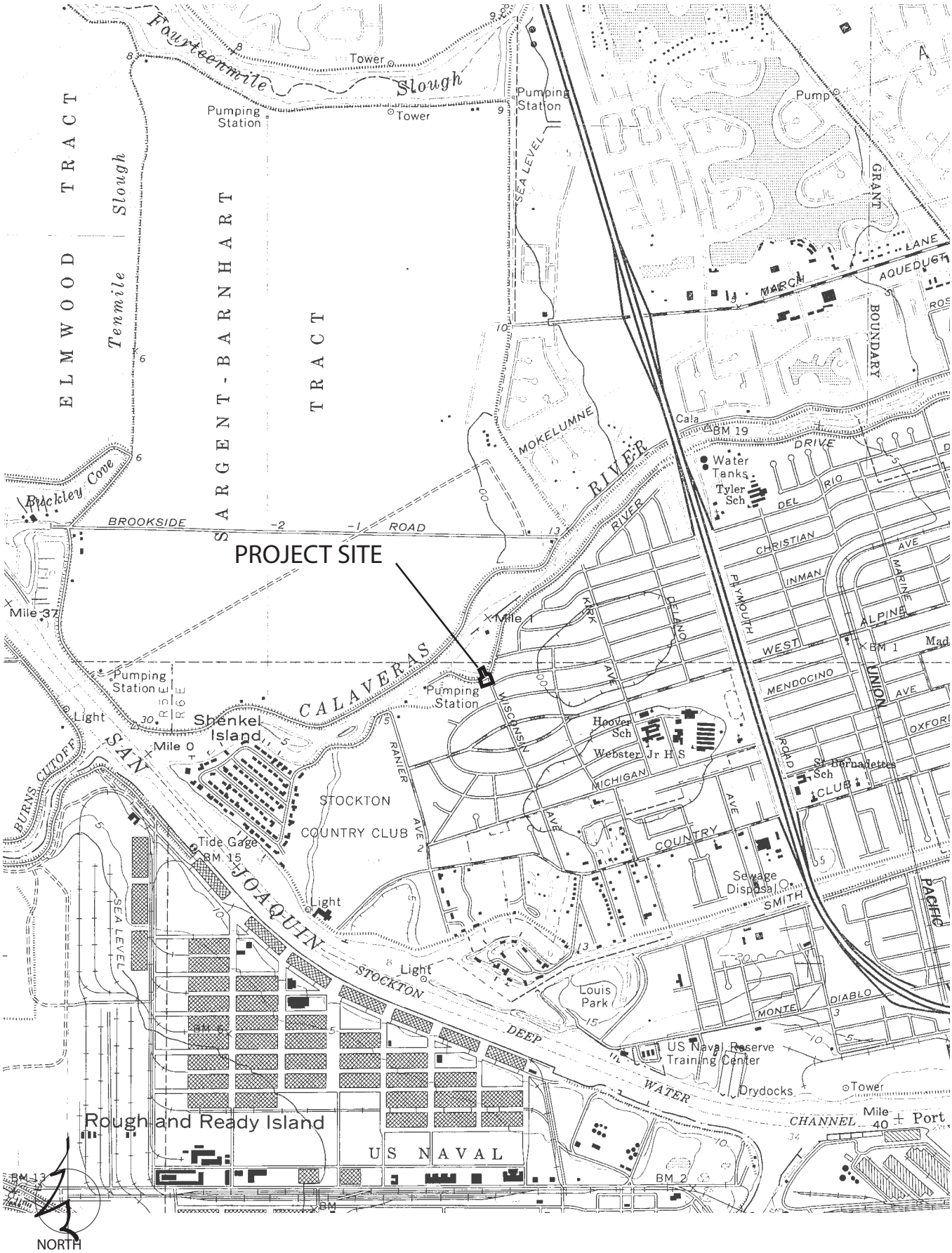
Figure 2-2
VICINITY MAP



SOURCE: US GEOLOGICAL SURVEY, EAST STOCKTON QUADRANGLE

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Figure 2-3
USGS MAP

SOURCE: GOOGLE EARTH

NORTH

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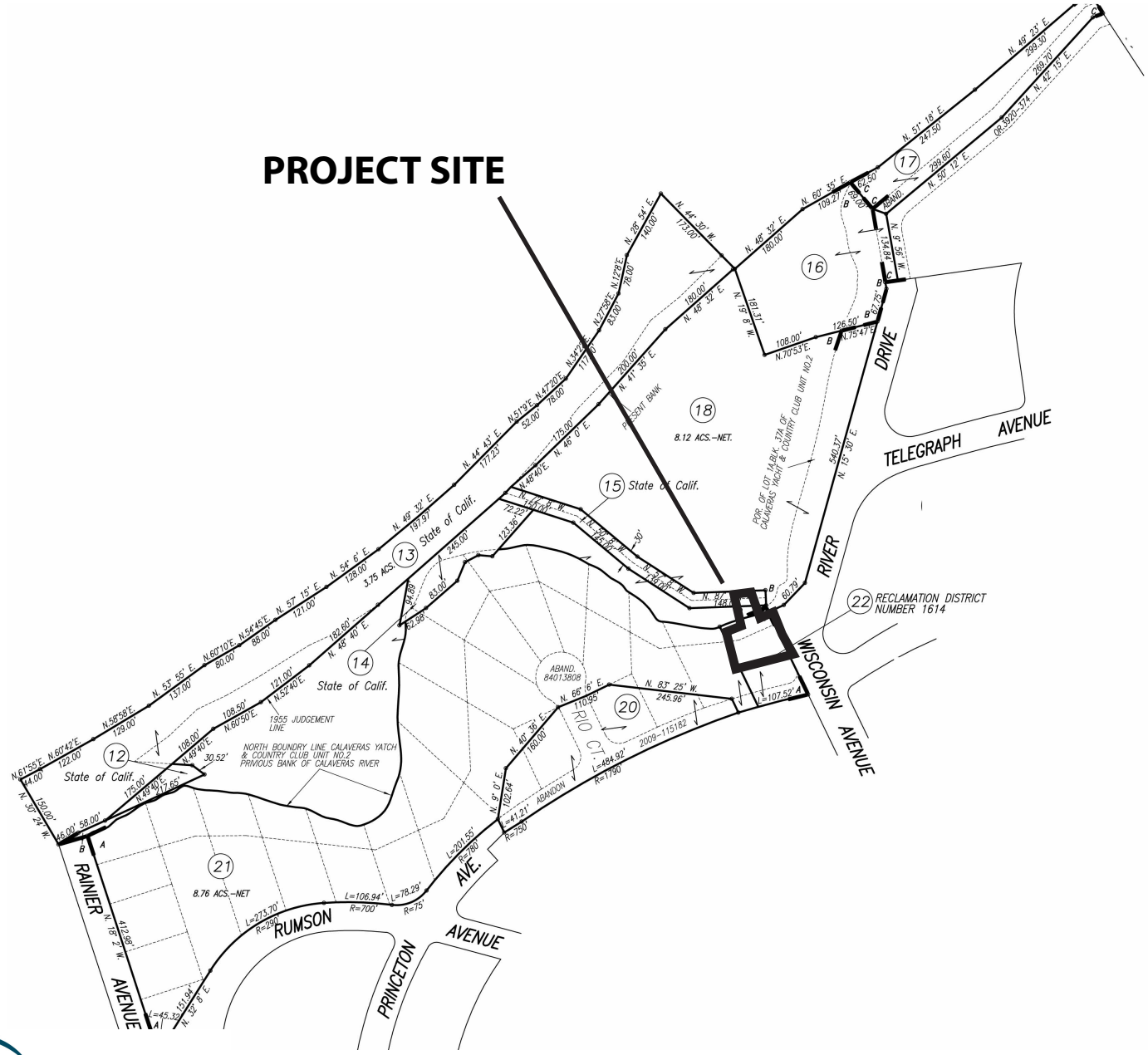
Figure 2-4
AERIAL PHOTO



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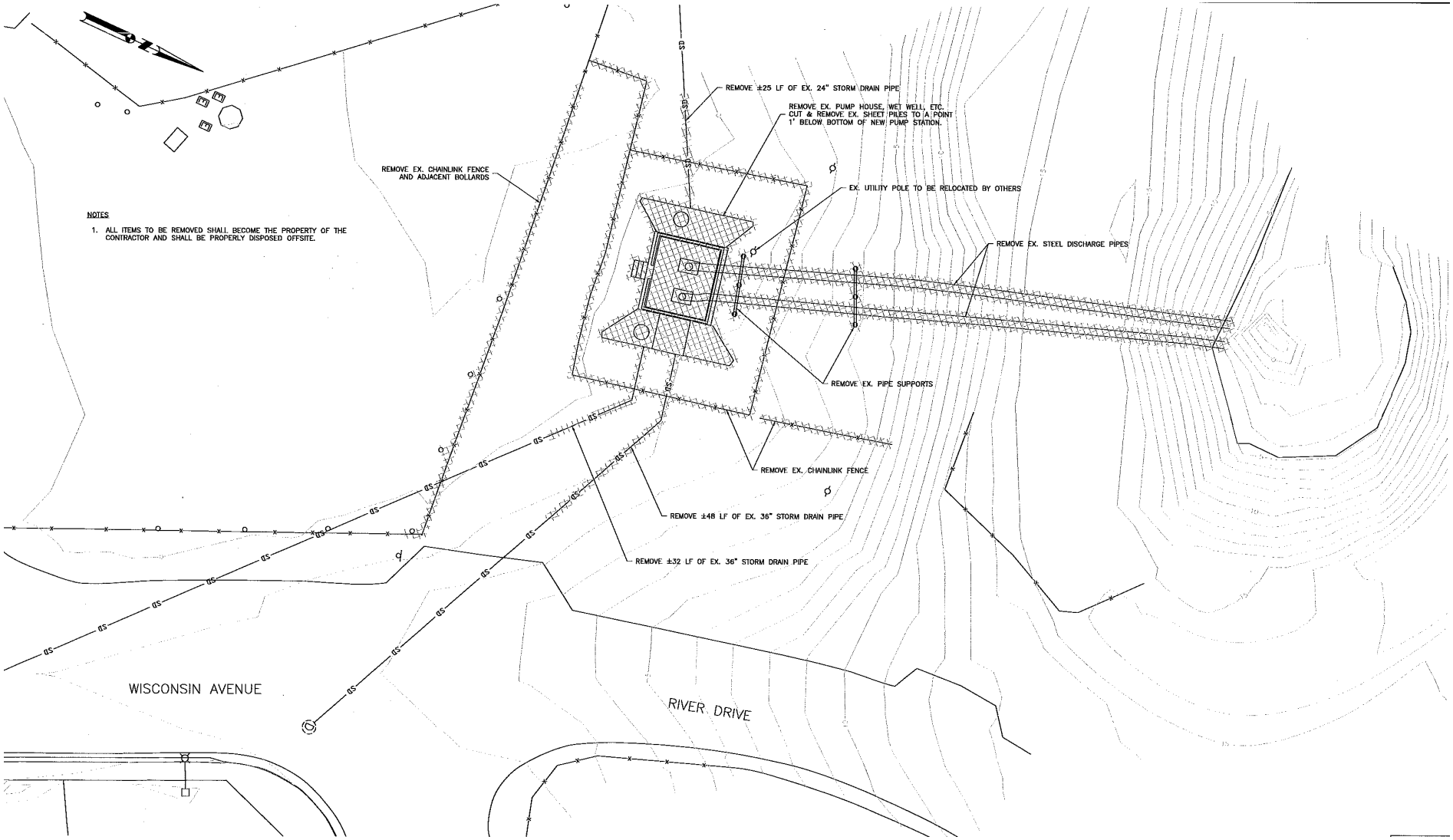
SOURCE: SAN JOAQUIN COUNTY
ASSESSOR'S PARCEL MAP BOOK 109, Page 11

Figure 2-5
ASSESSOR'S PARCEL MAP



SOURCE: KJELDSEN SINNOCK & NEUDECK

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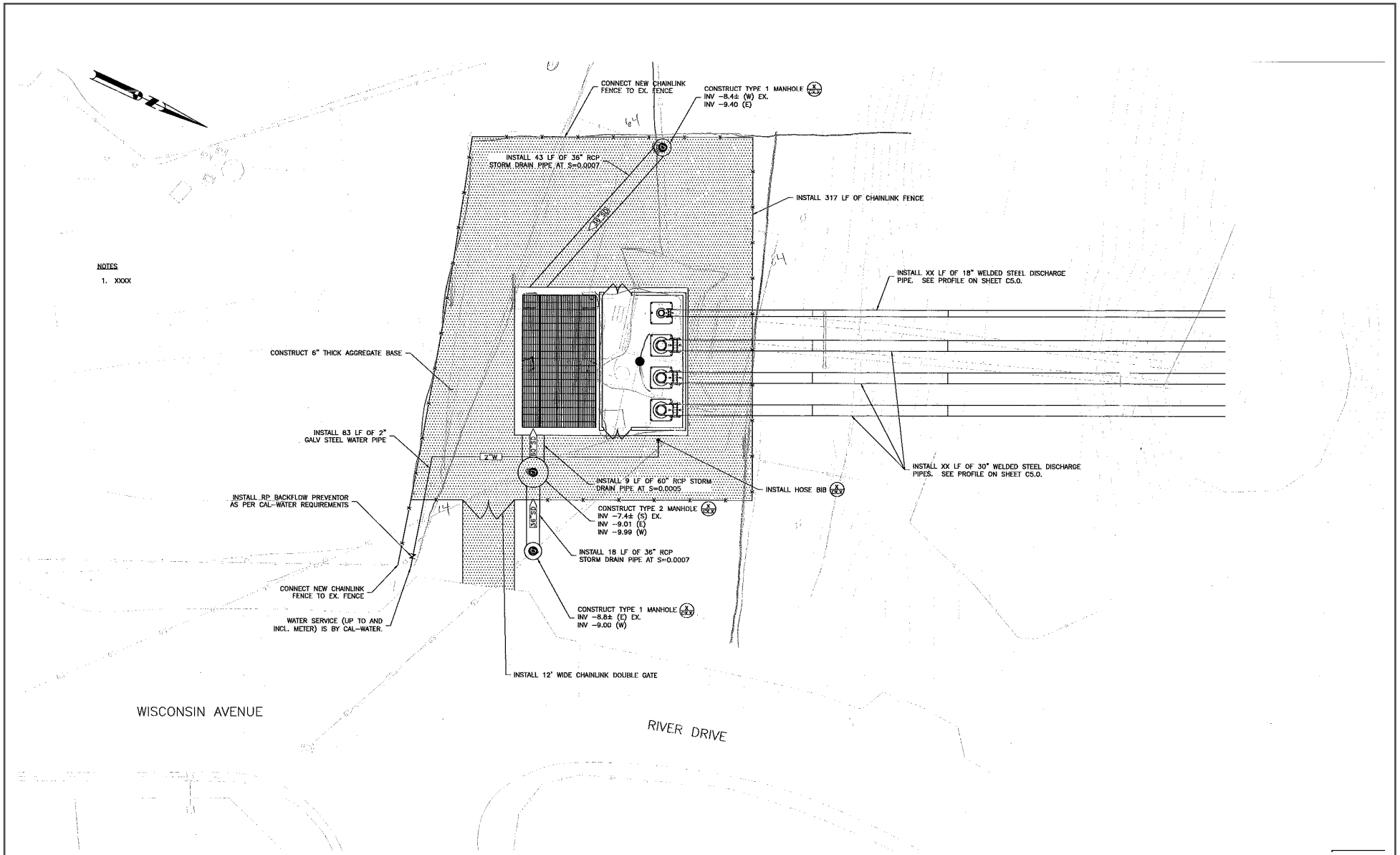
Figure 2-6
DEMOLITION PLAN



SOURCE: KJELDSEN SINNOCK & NEUDECK

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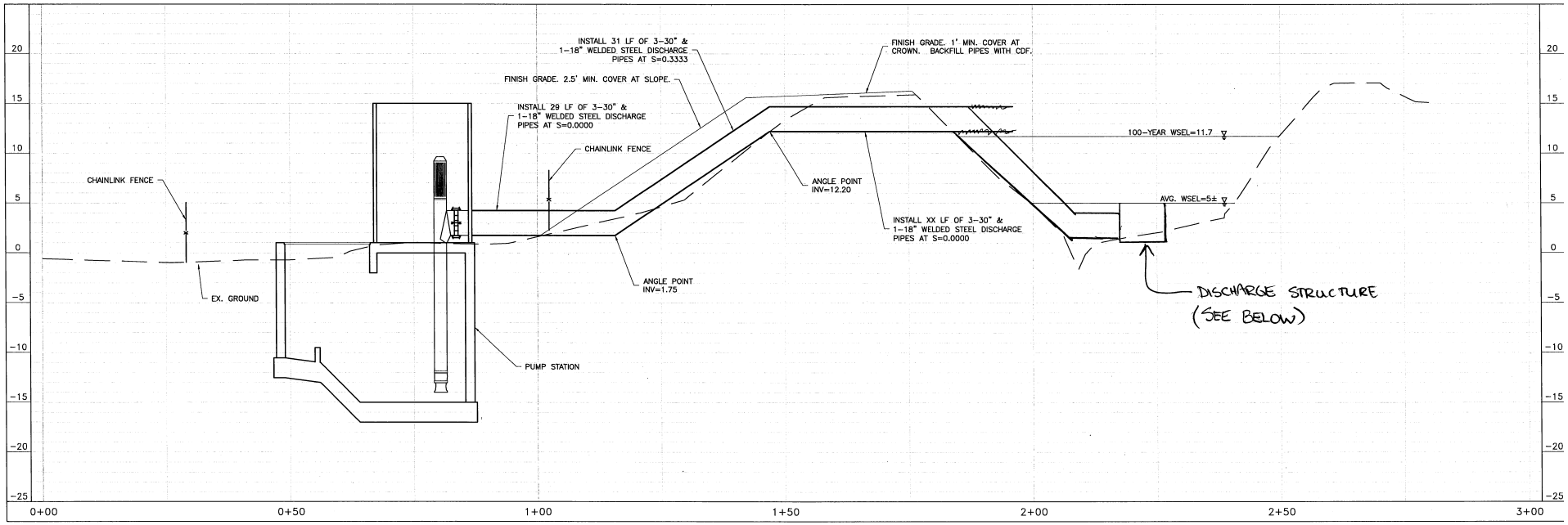
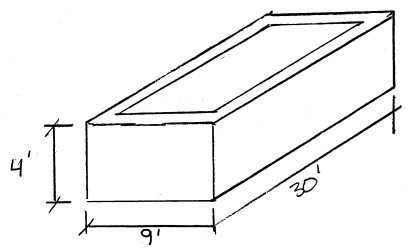
Figure 2-7
SITE PLAN





C4.0

SOURCE: KJELDSEN SINNOCK & NEUDECK

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Figure 2-8
DISCHARGE PIPE PROFILE

GENERAL PROJECT DESCRIPTION:

1. Project Title:	Wisconsin Avenue Pump Station
2. Project Entitlements:	RD 1614 Board of Directors, approval for construction
3. Lead Agency Name and Address:	Reclamation District No. 1614 c/o Kjeldsen, Sinnock & Neudeck, Inc. 711 N. Pershing Avenue Stockton, CA 95203
4. Contact Person and Phone Number:	Erik Almaas, Kjeldsen, Sinnock & Neudeck, Inc. 209-946-0268
5. Project Location:	The proposed project is located at the intersection of Wisconsin Avenue and River Drive, in the City of Stockton, California. The proposed project is located in an unsectionalized portion of Township 1 North, Range 6 East, MDBM, as shown on the USGS Stockton West 7.5-minute quadrangle map. Latitude is 37° 58’ 10’’ N; longitude is 121° 21’ 04’’ W.
6. Project Sponsor's Name and Address:	Reclamation District No. 1614 c/o Kjeldsen, Sinnock & Neudeck, Inc. 711 N. Pershing Avenue Stockton, CA 95203
7. General Plan Designation and Zoning:	General Plan: Low Density Residential (City of Stockton) Zoning: RL – Residential, Low-Density (City of Stockton)
8. Surrounding Land Uses and Setting:	The Calaveras River and its banks, along with an unnamed slough, are located north and west of the project site. Little League baseball fields are located to the southwest. Single-family residential development is located to the south and east.
9. Other public agencies whose approval is required:	Agencies having jurisdiction over the adjacent Federal Project Levee along the left bank of the Calaveras River, including the Central Valley Flood Protection Board, the U.S. Army Corps of Engineers, and the San Joaquin County Flood Control and Water Conservation District.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture/Forest Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Greenhouse Gas Emissions	☐ Hazards/Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Utilities/Service Systems	☐ Mandatory Findings of Significance

LEAD AGENCY DETERMINATION:

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will 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 revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project 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 pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Christopher H. Neudeck — 1/7/13

Christopher H. Neudeck, District Engineer
Reclamation District No. 1614

Date

EVALUATION OF ENVIRONMENTAL IMPACTS

The foregoing environmental determination is based on the evaluation of the potential environmental effects of the proposed project, as documented in the following checklist and supporting documentation. The checklist has been prepared in accordance with the following requirements:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose) sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced.

5) Earlier analyses may be used where, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or Negative Declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where the analysis(es) are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of, and adequately analyzed in, an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporated", describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance

ENVIRONMENTAL CHECKLIST AND NARRATIVE EXPLANATION

1. AESTHETICS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	■	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

The project site currently contains an existing pump station adjacent to a levee. This site has been highly disturbed by past grading and construction of the pump station and levee. Gravel and other aggregate material cover the area surrounding the pump station. The levee is comprised of dirt and is mostly covered with grasses and weeds. Some bare spots, possibly due to erosion, are found on the surface of the levee facing the pump station.

The area served by the pump station is a predominantly residential area adjacent to the city of Stockton. Inman Field, which contains fields for Little League baseball, is located west of the project site. The Calaveras River is north of the project site, and a backwater slough of that river is adjacent to the discharge area of the existing pump station. The slough contains trees and other riparian vegetation. However, the levee separates the slough from the pump station. Most trees in the area are street trees and ornamental trees. There are no designated scenic highways, other scenic features or other known designated aesthetic resources of importance located in the immediate project vicinity.

Environmental Impacts

Aesthetic Impacts of Project Construction

During the construction period, potential effects on aesthetics would result from ground disturbance and the presence of construction equipment and activity. Construction disturbance would be confined to the immediate area of the work site, which would include the area where pipes would be installed. The area of active disturbance is estimated at a conservative maximum of about 0.14 acres.

Disturbance of land resulting from construction activities would be visible from Wisconsin Avenue and River Drive. The most significant disturbance would be the result of construction in and near the slough, where the discharge pipes and the dissipator box would be installed. It is estimated that an area of 10 feet surrounding the proposed

dissipator box area would be disturbed. The demolition of the existing station may leave piles of demolished material on the site temporarily. In addition, on-site construction equipment would be visible from the adjacent roads and residential areas.

Aesthetic impacts related to construction would be temporary, and would cease once construction work is completed. Construction equipment would be removed as the tasks for which they are used are completed, and all construction equipment would be removed upon project completion. Demolition debris piles would be removed by the contractor as part of the construction work. Ground disturbance in the area would either be covered by aggregate base or revegetated. As a result, this potential impact would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Aesthetic Impacts of Proposed Improvements

The proposed project would replace an existing pump station with a new station. As described in Chapter 2.0, Project Description, the existing station is in poor condition, which contributes to poor visual quality of the site. The project would substantially upgrade the pump station and surrounding area, thereby improving the visual quality of the built portion of the site. In addition, the new fencing would make the housing more secure and less prone to vandalism and other damage.

The greatest potential for aesthetic impacts would be in the slough. A dissipator box and pipeline would be installed in the slough area, which presently contains riparian vegetation. The construction of the box and pipes would disturb some of this riparian vegetation. However, even with the new project facilities, the slough would retain most of its existing visual character, as the disturbance would be limited to one small portion of the slough. In addition, it is expected that the new facilities would be at least partially screened by vegetation that would grow back adjacent to them; consequently, the box and pipes would not be as visible. The dissipator box would reduce the force of pump station discharge flow into the slough, thereby reducing potential erosion that may otherwise occur along the slough banks, which would help preserve the existing riparian area. This would be a beneficial aesthetic impact. Overall, the aesthetic impacts of project operations are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
2. AGRICULTURE AND FOREST RESOURCES -- In determining whether impacts forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon				

measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	■
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	■
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

The proposed project is located in a predominantly residential area, adjacent to the Calaveras River. There are no existing agricultural operations in the vicinity. The project site and vicinity are classified as Urban and Built-Up Land by the California Department of Conservation Important Farmland Maps for San Joaquin County (California Department of Conservation, 2009). Although there are trees along the slough, there are no commercially harvested forests in the area.

Environmental Impacts

Impacts on Agriculture and Forest Resources

The proposed project would not involve any impacts on agricultural or forest lands, as there are no such classified lands in the vicinity. The area is predominantly developed for urban uses, and the project would not change this general condition. No agricultural or forest operations would be affected, as there are none in the area. Since there are no agricultural lands in the area, there are no lands under Williamson Act contract and no lands zoned for agricultural use. Since no forest lands are in the area, there are no lands zoned for forest use. The project would have no impact on agricultural or forest resources.

Level of Significance: No impact

Mitigation Measures: None required

3. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable Air Quality Attainment Plan?	☐	☐	■	☐
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☐	■	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	■	☐
e) Expose sensitive receptors to substantial pollutant concentrations?	☐	■	☐	☐
f) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

The project site is located in the city of Stockton in the northern portion of the San Joaquin Valley. The site and Stockton are located within the San Joaquin Valley Air Basin (Air Basin). The San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over most air quality matters in the Air Basin. The Air Basin and the jurisdiction of the SJVAPCD are both comprised of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings and Tulare Counties, and the portion of Kern County in the San Joaquin Valley.

The SJVAPCD is tasked with implementing programs and regulations required by the federal and state Clean Air Acts. Both the State of California and the federal government have established ambient air quality standards for six criteria air pollutants – ozone, particulate matter (PM), carbon monoxide, nitrogen oxide, sulfur dioxide and lead. The ambient air quality standards set primary and secondary standards. The primary standards are established to protect the health of even the most sensitive individuals in communities; the secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. In addition to the criteria pollutants, the California Air Resources Board also identifies other air pollutants as toxic air contaminants (TACs) - pollutants that may cause serious, long-term effects, such as cancer, even at low levels.

The Air Basin is designated a nonattainment area for ozone. Ozone is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. Ozone precursors, which include reactive organic gases (ROG) and nitrogen oxides (NOx), react in the atmosphere in the presence of sunlight to form ozone. Because

photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials.

The Air Basin is also designated a nonattainment area for respirable particulate matter, because concentrations of these pollutants sometimes exceed the ambient air quality standards. Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled. Few particles larger than 10 microns in diameter reach the lungs. Consequently, both the federal and state air quality standards for particulate matter apply to particulate matter 10 microns or less in diameter (PM10) as well as to particles less than 2.5 microns in diameter (PM2.5), which are carried deeper into the lungs. PM conditions in San Joaquin County are a result of a mix of rural and urban sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere. The Air Basin is in attainment or unclassified status for all other criteria pollutants.

As previously noted, the SJVAPCD has jurisdiction over most air quality matters in the Air Basin and implements the federal and California Clean Air Acts through local regulations. The SJVAPCD regulations that would be applicable to the project are summarized below.

Regulation VIII (Fugitive Dust PM10 Prohibitions)
Rules 8011-8081 are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

Rule 4101 (Visible Emissions)
This rule prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.

For many development projects, SJVAPCD Rule 9510, also known as Indirect Source Review, may apply. The purpose of the Indirect Source Review is to reduce emissions of NOx and PM10 from new development in San Joaquin County, including both construction and operational emissions. This rule requires specific percentage reductions in estimated project emissions for both construction and operation, or the payment of off-site mitigation fees if the required reductions cannot be met on the project site. The rule applies to development projects that include 9,000 square feet of uncategorized space, among other criteria. Since the proposed project involves less than 9,000 square feet, the Indirect Source Review would not apply to the project.

In 2002, the SJVAPCD adopted its *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI). GAMAQI defines analysis methodology, thresholds of significance, and mitigation measures for the assessment of air quality impacts. The methodology defined in GAMAQI was used in the analysis of this project. Under GAMAQI, project emissions for reactive organic gases (ROG) and nitrogen oxides (NOx) – the main ingredients in ozone - are significant if they exceed 10 tons per year. For PM10, the threshold is 15 tons per year. The SJVAPCD is currently in the process of updating GAMAQI, but the significance thresholds are expected to remain the same.

Environmental Impacts

Project Construction Emission Impacts

The project would involve the demolition of the existing pump station and installation of the new station, with pipelines and a dissipator box to be installed at the slough. Installation would involve grading, trenching and other earth moving activities. These activities would generate fugitive dust emissions, as well as exhaust from construction equipment and vehicles. Nearby residences could potentially be exposed to such emissions.

Construction emissions are temporary and would cease once construction work is completed. Given the size of the project, construction emissions are not expected to be large. However, since there are residences in the vicinity of the project area, the mitigation measures described below shall be implemented. One of these mitigation measures would require compliance with SJVAPCD Regulation VIII – Fugitive PM10 Prohibitions. According to GAMAQI, the SJVAPCD has determined that implementation and enforcement of dust control measures specified in Regulation VIII would reduce construction dust impacts to a less than significant level.

Level of Significance: Significant (dust and oxides of nitrogen)

Mitigation Measures:

3-1. All project demolition and construction activities shall comply with the dust control measures set forth in San Joaquin Valley Air Pollution Control District Regulation VIII – Fugitive PM10 Prohibitions. Regulation VIII measures include the following:

- Visible dust emissions shall be limited to 20% opacity or less during all phases of demolition and construction.
- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.

- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.

- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.

3-2. The contractor shall reduce internal combustion engine emissions from construction equipment and vehicles by implementing the following:

- Tune and maintain all construction equipment to manufacturer's specifications.

- Use low-sulfur fuels or alternative fuels for construction equipment whenever feasible.

- Limit idling of construction equipment and trucks to no longer than 10 minutes.

- Locate construction parking areas to minimize traffic interference.

- Minimize obstruction of through traffic lanes.

- Provide adequate ingress and egress at work sites and staging areas to minimize vehicle idling.

Significance After Mitigation: Less than significant

Implementation: RD 1614 and its contractors will be responsible for compliance with dust control standards and equipment emission reduction measures.

Monitoring: RD 1614, in coordination with the SJVAPCD, will verify compliance with SJVAPCD rules during project design, construction and operation, as applicable.

Project Operational Emission Impacts

Project operation would involve no new direct air emissions. The improved pump station would continue to function as does the existing station; as with the existing pumps, the new pumps would be operated by electricity. Therefore, no pollutant emissions from pumps would occur. Air emissions associated with the levee would be limited to small amounts of dust generation and occasional vehicle emissions associated with inspection and maintenance visits. As these visits would occur infrequently, emissions from these

visits would be minimal, and would not exceed established GAMAQI significance thresholds.

GAMAQI provides a three-tier framework for analysis of impacts regarding ozone precursor emissions. GAMAQI Table 5-2 indicates that the project would qualify for the Small Project Analysis Level, and therefore would need no quantification of ozone precursor emissions, as the SJVAPCD considers that small projects would not exceed its thresholds of significance for such emissions.

Level of Significance: Less than significant

Mitigation Measures: None required

Toxic Air Contaminants and Odors

The proposed project would involve the emission of substantial amounts of diesel particulate matter during the construction period. There are, however, no downwind receptors that would be subject to significant and extended periods of exposure to these emissions. This would not be considered a significant effect.

The project is not expected to result in any other emissions of hazardous materials, other than the possible release of asbestos fibers as a result of project demolition activities. Section 8, Hazards and Hazardous Materials, contains a discussion about potential asbestos releases.

There are no odor sources located on or in the immediate vicinity of the site, nor would the project generate any substantial new sources of odors.

Level of Significance: Less than significant

Mitigation Measures: None required

4. BIOLOGICAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Adversely impact, either directly or through habitat modifications, any endangered, rare, or threatened species, as listed in Title 14 of the California Code of Regulations (sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (sections 17.11 or 17.12)?	☐	■	☐	☐
b) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	■	☐	☐
c) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	■

d) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	■	☐	☐
e) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	■
f) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	■
g) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

A biological resource study for the project site was conducted, and a study report is available in Appendix A of this document. The study consisted of a search of the California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDB) and a field survey by a qualified biologist that included walking throughout the site, making observations of current habitat conditions and noting surrounding land use, general habitat types, and plant and wildlife species.

The project site is along a tributary slough to the Calaveras River just west of the City of Stockton. The existing pump house is at an elevation of approximately mean sea level; the top of the levee is at an elevation of approximately 15 feet above mean sea level. Surrounding land uses in this portion of San Joaquin County are primarily residential. There is a baseball park southwest of the project site and residential subdivisions beyond the baseball park. Residential subdivisions are also located to the east of the site. Lands to the north and northwest of the site are part of an undeveloped in-fill parcel along the Calaveras River.

Table 1 in Appendix A contains a list of plant species observed on the site. California annual grassland series best describes the vegetation in the upland portions of the project site. Dominant grass species include oats, ripgut brome, Bermuda grass and foxtail barley. Other grassland species are intermixed with these grasses, such as black mustard, wild radish, prickly lettuce, bull thistle, yellow star-thistle, common mallow and filaree. Valley oak series best describes the variably wide band of trees, vines, and shrubs along the shoreline of the backwater slough adjacent to the pump station. Oregon ash and black walnut are the only native trees in the vicinity of the outfall; most of the trees and shrubs along the slough are ornamentals or non-native species such as almond and Himalayan blackberry.

There is no emergent wetland vegetation in the shaded dead-end of the slough where the proposed energy dissipater box will be installed; off-site and closer to the Calaveras

River, the slough is more open and supports both cattails and tules. No blue elderberry shrubs - habitat for the listed Valley elderberry longhorn beetle - were observed in or near the project site.

A limited variety of bird species were observed during the site survey - turkey vulture, northern mockingbird, mourning dove, western kingbird, American crow, western scrub jay and house finch. A few stick nests were observed within some of the trees near the site. A sign of raccoon was observed in the site, but no mammals were observed during the survey. No California ground squirrel or their burrows were observed in the site. A limited number of amphibians and reptiles may use habitats in the site; however, no reptiles or amphibians were observed in the project site during the recent survey.

Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations 328 to include navigable waterways, their tributaries, and adjacent wetlands. Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. The Calaveras River is a navigable water of the U.S. subject to Section 10 of the River and Harbor Act as well as Section 404 of the Clean Water Act. The tributary slough is also jurisdictional, as it drains directly into the Calaveras River. Aside from the tributary slough to the Calaveras River, no other potentially jurisdictional wetlands or Waters of the U.S. were observed in or near the project site. Specifically, there are no vernal pools, seasonal wetlands, marshes, ponds, or lakes of any type within or immediately adjacent to the project site.

Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. Special-status species also include other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Special-status plants are those which are designated rare, threatened, or endangered and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS). Special-status plants also include species considered rare or endangered under the conditions of CEQA Guidelines Section 15380, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS). Finally, special-status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

Table 2 in Appendix A provides a summary of the listing status and habitat requirements of special-status species that have been documented in the greater project vicinity, or for which there is potentially suitable habitat in the greater project vicinity. Both the CNDDB and the species lists of USFWS were searched.

San Joaquin County, the City of Stockton, the San Joaquin Council of Governments (SJCOG), and other municipalities and agencies adopted the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) in 2001. The SJMSCP includes an overall inventory of the sensitive biological resources of the County, and analysis of the potential biological impacts of land development and other anticipated conversion of habitats and a plan for habitat acquisition and enhancement that is

expected to reduce the potential biological effects of various habitat conversion activities to a less than significant level. The SJMSCP applies to sensitive species that are treated in the plan. Losses of habitat values associated with conversion of habitats to developed uses are compensated by payment of habitat conservation plan fees that are used for habitat acquisition and improvement. Participation in the SJMSCP is voluntary; however, projects declining to participate in the SJMSCP must ensure compliance with all applicable regulations of agencies with jurisdiction over the project site.

Environmental Impacts

Project Impacts on Plant and Wildlife Species

The project would result in construction-related disturbance of vegetated areas. Project-related disturbance on the portion on the land-side of the levee would involve the removal of common plants typical in the area. This would be considered a less than significant impact. However, the project would also disturb the riparian area along the slough with the installation of the new discharge pipes and the dissipator box.

While the new pipes would generally installed within the alignment of the existing pipes, existing trees and other shrubs that may be used by nesting raptors or other protected birds may need to be removed. Trees and shrubs within the site could be used by other birds protected by the Migratory Bird Treaty Act of 1918. The grasslands may be used by ground-nesting species. The following mitigation measure below would reduce the potential impact on plant and wildlife species that use the habitats on the project site.

Level of Significance: Potentially significant

Mitigation Measures:

4-1. Any vegetation removal that occurs during the avian nesting season (February 1 through August 31) shall be immediately preceded by a field survey by a qualified biologist. If active nests are found, adequate marking of the nest site shall be provided, as specified by the biologist, and vegetation removal in the vicinity of the nest shall be delayed until the young fledge, as determined by the biologist.

Significance After Mitigation: Less than significant

Implementation: RD 1614 will be responsible for conducting field surveys and marking nest sites, if necessary.

Monitoring: RD 1614 will ensure that its contractors comply with nest protection measures, if necessary.

Impacts on Waters of the U.S. and Wetlands

The tributary slough to the Calaveras River is the only jurisdictional Water of the U.S. on or adjacent to the site. As previously noted, there are no vernal pools, seasonal wetlands, marshes, ponds or lakes of any type within or immediately adjacent to the project site.

The limit of federal jurisdiction in the slough is the ordinary high water line, which is approximately 3.6 feet above mean sea level. A wetland delineation of the parcel that contains the slough was conducted in 2001 and verified by the U.S. Army Corps of Engineers (ACOE) in 2002 (Corps File No. 200100497). In the vicinity of the outfall, the jurisdictional width across the slough is approximately 40 feet. The bank of the slough is steep, and there are no adjacent wetlands. There are a few brambles of Himalayan blackberry right along the water line.

The project would involve a small amount of work (less than 0.01 acres) within jurisdictional waters of the U.S. - mainly associated with installation of the energy dissipater box in the slough. Therefore, wetland permits and/or certification would need to be obtained from ACOE, CDFG, the State Lands Commission and the Regional Water Quality Control Board (RWQCB) prior to placement of any fill (e.g., fill dirt, rock, concrete) in the slough. In order to minimize potential adverse impacts to special-status fish species, the permitting agencies are expected to limit the in-water work period to August 1 through October 31, when delta smelt, green sturgeon, Chinook salmon, and Sacramento Valley steelhead are least likely to be in downstream waterways. Due to the small amount of disturbance required, the regulatory agencies may or may not require compensatory mitigation. Mitigation measures described below would reduce potential impacts on Waters of the U.S. to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

4-2. Wetland permits and/or other required certifications shall be obtained from the agencies with jurisdiction over the slough prior to placement of any fill in the slough, including the U.S. Army Corps of Engineers, the California Department of Fish and Game, the State Lands Commission and the Central Valley Regional Water Quality Control Board (RWQCB). Permits and/or certifications may include, but are not limited to, Clean Water Act Section 404 permit and Section 401 certification, Streambed Alteration Agreement, and discharge permits from the Central Valley RWQCB.

4-3. If wetland mitigation is required by the U.S. Army Corps of Engineers or other agencies, RD 1614 shall provide off-site mitigation at an agency-approved wetland mitigation bank.

Significance After Mitigation: Less than significant.

Implementation: RD 1614 will be responsible for applying for the necessary permits and certifications, and for implementing any conditions of approval, including wetland mitigation if required.

Monitoring: RD 1614 will ensure that its contractors comply with any conditions of approval attached to permits and certifications, including wetland mitigation if required.

Impacts on Special-Status Plant Species

As previously noted, Table 2 of Appendix A lists special-status species known to occur in the project vicinity, or for which suitable habitat exists in the vicinity. Twelve species of special-status plants were identified in the CNDDB search: alkali milk-vetch, San Joaquin spearscale, water shield, round-leaved filaree, bristly sedge, palmate-bracted bird's-beak, wooly rose mallow, delta tule pea, Mason's lilaeopsis, Delta mudwort, Sanford's arrowhead and Suisun marsh aster. No special-status plant species were identified in the USFWS Species List.

Special-status plants generally occur in relatively undisturbed areas and are largely found within unique vegetation communities, such as chenopod scrub, vernal pools, marshes and swamps, and areas with unique soils. In contrast, the project site is a dead-end slough vegetated primarily with ornamentals and containing an existing storm drain outfall. The adjacent upslope ruderal grassland on the levee and around the pump house is highly disturbed and has no unique vegetation communities.

Most of the identified special-status plant species occur in marsh and swamp habitats. Wooly rose mallow is recorded in the CNDDB growing in the Calaveras River approximately 0.25 miles west of the site. Bristly sedge, Mason's lilaeopsis, delta mudwort, water shield, delta tule pea, Sanford's arrowhead, and Suisun marsh aster are recorded growing in marsh and swamp habitats in Delta waterways further from and primarily west of the site. The terminal end of the slough is a well-shaded riparian corridor supporting no marsh vegetation. Due to an absence of marsh or swamp habitat in the project site, it is unlikely any of these delta marsh species occur in the site.

Round-leaved filaree occurs in cismontane woodland and annual grassland habitats. However, the disturbed upland grassland in the site is routinely disked, mowed, and/or sprayed. This highly disturbed upland grassland habitat does not provide suitable habitat for special-status plants. San Joaquin spearscale occurs in seasonal alkali wetlands in chenopod scrub, alkali meadow, and valley and foothill grassland habitats; there is no suitable habitat in the site for this species. Palmate-bracted bird's-beak occurs in chenopod scrub and valley and foothill grassland habitats; there is also no suitable habitat in the site for this species. Finally, alkali milk-vetch is a vernal pool species; there are no vernal pools in the site. Due to a lack of habitat and associated high levels of disturbance, it is unlikely any special-status plant species occur in the site. Therefore, impacts on special-status plant species are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impacts on Special-Status Wildlife Species

Table 2 of Appendix A lists special-status wildlife species known to occur in the project vicinity, or for which suitable habitat exists in the vicinity. The potential for intensive use of habitats within the project site by special-status wildlife species is also generally considered low. Special-status wildlife species recorded in the greater project vicinity in the CNDDB (2011) include Swainson's hawk, burrowing owl, tricolored blackbird, giant garter snake, western pond turtle, California tiger salamander, western pond turtle and

delta smelt. The remaining species in Table 2 are not recorded in the CNDDB, but are on the USFWS Species List for the area.

Swainson's hawk, burrowing owl, tricolored blackbird and other bird species protected by the Migratory Bird Treaty Act have the potential to occur in or near the project site, and could be adversely affected by site construction if they nested in or near the work areas during construction. Due to location of the site, lack of habitat, and high levels of disturbance, the project site does not provide suitable habitat for other special-status wildlife species identified in the CNDDB search or included in the USFWS Species List. The biological resource study in Appendix A provides detailed information on why the project would have no likely impact on these other special-status wildlife species.

The Swainson's hawk is a migratory hawk listed by the State of California as a threatened species. Swainson's hawks are found in the Central Valley primarily during their breeding season, although a population is known to winter in the San Joaquin Valley. Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their nest territories by late August.

No Swainson's hawks were observed during the project site field survey, which was undertaken near the end of the Swainson's hawk nesting season. The ruderal grasslands in the site only provide moderate quality foraging habitat for Swainson's hawks and many of the trees along the slough are too small for raptor nesting. A few relatively large trees along the slough, and even larger trees in the greater project vicinity, are more suitable for nesting Swainson's hawks. There are a few records of nesting Swainson's hawks in the project vicinity; the nearest occurrence of this species recorded in the CNDDB search area is approximately 0.5 miles south of the site. Therefore, the potential for nesting Swainson's hawk on or adjacent to the project site exists. The mitigation measure described below would reduce potential impacts on Swainson's hawk to a level that would be less than significant.

Potential impacts on other bird species were described above in the discussion on potential project impacts on plant and wildlife species. Mitigation Measure 4-1, described above, would reduce such impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

4-4. Pre-construction surveys for nesting Swainson's hawks within 0.25 miles of the site shall be conducted by a qualified biologist prior to any construction activities between March 1 and September 15. The surveys shall incorporate methodologies from CDFG's 1994 Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California and the 2000 Swainson's Hawk Technical Advisory Committee (SHTAC) survey guidelines. If active

nests are found, a qualified biologist shall determine the need (if any) for temporal restrictions on construction, which shall be implemented by RD 1614 and its contractors. Alternatively, the project may choose to participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), and implement the measures required by the SJMSCP to protect Swainson's hawk.

Significance After Mitigation: Less than significant

Implementation: RD 1614 will be responsible for retaining a qualified biologist to conduct field surveys and for implementing recommended restrictions on construction activities, if necessary.

Monitoring: RD 1614 will ensure that its contractors comply with any Swainson's hawk protection measures specified by the biologist.

5. CULTURAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource?	☐	☐	☐	■
b) Cause a substantial adverse change in the significance of a unique archaeological resource (i.e., an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest or best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person)?	☐	■	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	■
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	■	☐	☐

NARRATIVE EXPLANATION

Environmental Setting

The project site is located in an area that has been the subject of extensive cultural resource investigation for the adjacent Marianna Estates subdivision project (InSite Environmental, 2002, Appendix B). The project site is located in an area that has been developed for residential and recreational use. The area has been intensively farmed and ranched since the middle of the 19th century, activities that have also impacted many of the prehistoric and early historic sites in this region. The project site itself includes multiple episodes of importing and compacting fill material to buttress the levee adjacent to the river. The confluence of the Calaveras River and the San Joaquin River is located approximately one-half mile to the west. The project site is not in current agricultural use, but has been subjected to intensive agriculture in the past. The project

vicinity appeared to contain lands ranging from moderate to high in sensitivity for both prehistoric and historic-period sites and features.

A records search for the Marianna Estates project found that no prehistoric sites or features have been recorded within or adjacent to the project area. A subsequent field survey of the Marianna Estates project site revealed no evidence of prehistoric use or activity. These negative results could relate at least in part to the extensive disturbance to which the property has been subjected, including the imported fill material and contemporary residences and roads which are distributed throughout the property.

Environmental Impacts

Project Impacts on Cultural Resources

The project site has not been identified as a prehistoric or historic site. The Marianna Estates work identified 10 existing structures, four of which were occupied residences and associated outbuildings from circa 1930. Both structures have been substantially modified since their original construction, and neither depicts an accurate representation of a period or style. A garage/storage building is approximately 40 years in age, and was not considered historic. The remaining five structures were houseboats no longer suitable for navigation on the river and extensively modified from their original condition for residential use. None of these structures would be subject to to disturbances as a result of the project. The pump station was not identified as a potential historic resource.

Development on any portion of the project site has the potential to unearth buried and previously undiscovered cultural resources. In this case, proper treatment of any resources encountered would be necessary to avoid environmental effects. The following mitigation measures outline the procedures that will be followed in such an event and which would reduce any potential cultural resource impacts to a less than significant level.

Level of Significance: Potentially significant

Mitigation Measures:

5-1. If any subsurface cultural resources are encountered during construction of the project, all construction activities in the vicinity of the encounter shall be halted until a qualified archaeologist can examine these materials and make a determination of their significance and recommend mitigation measures. The RD 1614 Project Engineer shall be notified and shall be responsible for implementing mitigation measures recommended by the archaeologist for any identified significant cultural resources, pursuant to the requirements of the CEQA Guidelines.

5-2. If human remains are encountered at any time during the development of the project, all work in the vicinity of the find shall halt and the RD 1614 Project Engineer and the County Coroner shall be notified immediately. The Coroner must contact the Native American Heritage Commission if the remains have been identified as being of Native American descent. At the same time, the Project Engineer shall retain a qualified archaeologist to evaluate the archaeological implications of the find and recommend any

mitigation measures that may be required under CEQA; the engineer will be responsible for implementing those recommendations. The CEQA Guidelines detail steps to be taken when human remains are found to be of Native American origin.

Significance After Mitigation: Less than significant

Implementation: RD 1614 will be responsible for reporting archeological or burial finds, for retaining an archaeologist to evaluate and make recommendations regarding archeological materials if encountered, and for implementing those regulations.

Monitoring: If cultural resources are uncovered, RD 1614 will be responsible for ensuring that the above mitigation measures and any other measures recommended by the archaeologist are implemented during construction.

6. GEOLOGY AND SOILS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	■
ii) Strong seismic ground shaking?	☐	☐	■	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
iv) Landslides?	☐	☐	☐	■
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c) Be located on strata 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?	☐	■	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	■	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

The project site is located within the western portion of alluvial Great Valley geomorphic province, a 450-mile long, and 50 mile-wide sediment-filled structural trough, which is

flanked on the east and west by the Sierra Nevada and Coast Ranges. The project site is located on the eastern edge of the Sacramento-San Joaquin Delta, approximately mid-way between the two mountain ranges. Sediment deposits within the Great Valley may range to more than 30,000 feet in thickness with the older, marine sediments generally overlain by the more recent continental sediments.

The project site is located in an area where the elevation ranges from 2 feet below to 12 feet above mean sea level. Relief across the area, which drains generally from north to south away from the adjoining Calaveras River, is about 15 feet. The site is within the drainage of the Calaveras River, tributary to the San Joaquin River.

The project site and vicinity consist of banks, former banks and fill material. The U.S. Soil Conservation Service (now the Natural Resource Conservation Service) classified the native soils on the project site as the Scribner-Urban Land Complex. These are non-prime soils with an apparent depth of 3-5 feet. Permeability of this complex is moderately slow, runoff is very slow, and the hazard of water erosion is slight. This soil has a moderate shrink/well potential. The Soil Conservation Service identified the main limitation on development on this soil as the potential for subsidence. Flooding was also identified as a hazard to development; however, there is an existing levee between the project site and the Calaveras River and the slough.

There are no active or potentially active faults located in the project vicinity. The Stockton area is subject to seismic shaking from fault features located to the east and west, and, shaking intensities resulting from Maximum Credible Earthquakes on these faults may reach Modified Mercalli Intensity IX in Stockton. Seismic activity at Intensity IX can break underground pipes, damage foundations, and shift buildings off foundations (Alfors, 1973). New construction must conform to Zone 3 requirements of San Joaquin County's adopted Uniform Building Code, which requires "earthquake-resistant" construction methods.

Based on the saturated nature of the soils in the project vicinity, the project site may be subject to liquefaction hazards. Due to the flat topography of the area, the project site is not subject to landslide hazards.

Environmental Impacts

Project Impacts on Geology and Soils

The proposed project would involve no exposure to faulting or fault-related hazards. There are no active or potentially active faults in the project vicinity. The project would not involve substantial exposure to seismic shaking; the project area is subject to low to moderate shaking risks. Standard engineering practices and enforcement of the applicable provisions of the Uniform Building Code would avoid substantial damage to the levee structure under anticipated seismic shaking events.

A geotechnical study conducted for the adjacent Marianna Estates project indicates that the project site is generally suitable for the residential uses proposed by that project (Kleinfelder, 2001). Existing soil limitations could result in potential for compression, settlement, shrink-swell and post-construction heave or swell of slabs. The Marianna Estates study identified soils engineering measures that would account for these limitations. Appendix B of this Initial Study contains a copy of the geotechnical study.

Additional soils engineering work will be required in conjunction with the design of the project. Project design will account for soil limitations specific to proposed drainage improvements. Mitigation described below would require the project to comply with recommendations made by any additional geotechnical studies. Compliance with this mitigation measure would reduce potential geology and soil impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

6-1. All improvements associated with the project shall conform to the applicable specifications of the soils or geotechnical report to be prepared for the project, which will evaluate soil limitations on the project site and provide recommendations to address any identified limitations.

Significance After Mitigation: Less than significant

Implementation: RD 1614 will be responsible for ensuring that project design conforms to the County's adopted Uniform Building Code and the geotechnical recommendations of the soils/geotechnical report.

Monitoring: RD 1614, in coordination with San Joaquin County Community Development Department, Building Division, will ensure that the project is constructed in accordance with applicable building codes and the soils/geotechnical study.

7. GREENHOUSE GAS EMISSIONS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	■	☐

NARRATIVE EXPLANATION

Environmental Setting

Global climate change is a subject of scientific and public concern as well as of government action. Global climate change is understood to be the result of atmospheric concentrations of greenhouse gases (GHGs) that trap heat in the earth's atmosphere. GHGs are both naturally occurring and are emitted by human activity. GHGs include carbon dioxide (CO2), the most abundant GHG, as well as methane (CH4), nitrous oxide (N2O) and other gases. Total worldwide emissions of GHGs in 2004 were estimated at 20,135 million metric tons of CO2 equivalent (MMT CO2e); U.S. emissions during the same year were estimated at 7,074 MMT CO2e.

GHG emissions are associated with the combustion of carbon-based fuels. Major GHG sources in California include transportation (40.7%), electric power (20.5%), industrial (20.5%), agriculture and forestry (8.3%) and others (8.3%). GHG emissions in California in 2004 were estimated at 484 MMT CO2e (California Energy Commission, 2006). An inventory of GHG emissions conducted by the City of Stockton indicates that the City generated approximately 2.4 MMT CO2e in 2005. Transportation accounted for approximately 64% of the GHG emissions in Stockton. Commercial and industrial activities accounted for approximately 18.4% of emissions, and residential land uses accounted for approximately 14.8% (City of Stockton, 2009).

The State of California is identifying strategies and implementing GHG emission reduction programs through AB 32, the Global Warming Solutions Act of 2006. AB 32 identifies global climate change as a "serious threat to the economic well-being, public health, natural resources and the environment of California." The State adopted its Global Climate Change Scoping Plan in December 2008. The Scoping Plan proposes to achieve a 29% reduction in projected business-as-usual emission levels for 2020, which is assumed to achieve the 2020 goal of reducing GHG emissions to 1990 levels. Primary strategies addressed in the Scoping Plan include a regional cap-and-trade program, new industrial and emission control technologies, alternative energy generation technologies, advanced energy conservation in lighting, heating, cooling and ventilation, reduced-carbon fuels, hybrid and electric vehicles, and other methods of improving vehicle mileage.

The SJVAPCD has taken an active role in facilitating compliance with AB 32 for land use agencies and businesses. A Final Staff Report on addressing GHG emission impacts under CEQA, issued in December 2009, describes the approach the SJVAPCD has adopted to determine if project-specific GHG emissions would have a significant impact. This approach relies on the use of performance-based standards, known as Best Performance Standards, to assess the significance of project-specific GHG emissions, as required by CEQA. For projects not implementing Best Performance Standards, or for any projects requiring an EIR, demonstration of a 29% reduction in GHG emissions from business-as-usual conditions is required to determine that a project would have a less than cumulatively significant impact. The 29% reduction standard was determined by the SJVAPCD to be consistent with the emission reduction targets established in the state's Climate Change Scoping Plan.

San Joaquin County currently has no Climate Action Plan or other GHG reduction plans applicable to development projects.

Environmental Impacts

Project GHG Emissions

The project would not directly generate GHG emissions. The pumps would operate on electricity, and would not rely on diesel or other fuel engines. None of the other activities associated with project operations would generate GHG emissions.

With the use of electrically powered pumps, the project would generate indirect GHG emissions, through the generation of electricity necessary for pump operations. The pumps would operate primarily during and immediately after storm events, when

collected runoff would be pumped to the slough. During the dry season, pump operations would occur less frequently, as less runoff would be collected.

To estimate the amount of indirect GHG emissions resulting from the project, the electricity use of the existing pump station is multiplied by emission factors for the three most common GHGs (carbon dioxide, methane and nitrous oxide), with the products added together for total GHG emissions (other GHGs are unlikely to be generated in significant amounts as a result of the project). The emission factors are provided by the Local Government Operations Protocol, Version 1.1, developed by the California Air Resources Board and by the California Climate Action Registry. The products are then multiplied by the global warming potential for each GHG, which starts at 1 for carbon dioxide, and converted to metric tons carbon dioxide equivalent (CO2e), which is the standard unit of measure for reporting GHG emissions. The project engineer provided the annual electricity usage of the existing station, estimated to be equivalent to the usage by the proposed new station (Almaas, pers. comm.). Table 3-1 provides the GHG emission estimates for the project.

TABLE 3-1
PROJECT-RELATED ANNUAL GHG EMISSIONS

GHG	Electricity Use (MWh)	Emission Factor (lbs/MWh)	Emissions (metric tons)	GWP	CO2e (metric tons)
Carbon dioxide	3.12	635.67	0.89961	1	0.89961
Methane	3.12	0.029	0.00004	21	0.00084
Nitrous oxide	3.12	0.010	0.00001	310	0.00310
Total					**0.90355**

Notes: MWh – megawatt hours; GWP – global warming potential; CO2e – carbon dioxide equivalent

Sources: Local Government Operations Protocol, Version 1.1, California Air Resources Board et al., 2010; Almaas, pers. comm.

As shown in Table 3-1 above, the project would result in indirect emissions of less than one metric ton annually. By comparison, the Bay Area Air Quality Management District once set a project operational emission significance threshold of 1,100 MT CO2e annually, although this threshold was recently invalidated. The SJVAPCD has not established a similar significance threshold. However, as indicated by the above information, the project would not emit a significant amount of GHGs. Therefore, GHG impacts are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Consistency with Applicable Plans

As previously noted, the SJVAPCD currently has adopted a methodology to determine if project-specific GHG emissions would have a significant impact. This approach relies on the use of Best Performance Standards or demonstration of a 29% reduction in GHG emissions from business-as-usual conditions. The SJVAPCD currently has no Best Performance Standards that are applicable to this project.

The GHG emissions calculated in Table 3-1 are indirect project emissions, resulting from the emissions generated by the provision of electrical power for project use. The project would not directly generate any GHG emissions. However, as shown above, the project would generate relatively few GHG emissions, directly or indirectly. Moreover, recently the State of California enacted SB X1-2, which requires all electricity retailers in the state to have 20% of their retail sales from renewable sources by the end of 2013, 25% by the end of 2016, and 33% by the end of 2020. The use of electricity from renewable sources would reduce the amount of GHGs from electrical power generation. Therefore, the indirect GHG emissions from the project would be further reduced. The project would be consistent with the applicable plans for GHG reduction.

Level of Significance: Less than significant

Mitigation Measures: None required

8. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	■
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	■	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	■
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e) For a project located within 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, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

Hazardous materials are defined as substances or combinations of substances that may contribute to increases in serious illness or mortality, or pose a substantial hazard to human health or the environment when improperly treated, stored, transported or disposed. Hazardous wastes are hazardous materials that no longer have a practical use. Although distinct from hazardous materials as defined, petroleum products also represent potential concerns for health and environmental contamination.

Environmental Data Resources, Inc., conducted a record search for potential hazardous waste and materials sites in the project vicinity. A report on this search is available in Appendix C of this Initial Study. This search involved a check of federal and state databases that may provide an indication of past land uses, spills, permits, enforcement actions, investigations and remedial activities associated with hazardous materials use, spills, waste generation or transport. The proposed project site and immediate vicinity were not recorded on any of the databases searched by Environmental Data Resources. These include databases compiled pursuant to Government Code Section 65962.5, such as the EnviroStor database of the California Department of Toxic Substances Control (DTSC) and the GeoTracker database of the State Water Resources Control Board (SWRCB). The nearest recorded site is Pacific School, a leaking underground storage tank site on Brookside Road approximately one-half mile northwest of the project site, on the opposite side of the Calaveras River.

The project site is located in a predominantly developed area, and therefore is not subject to any substantial wildland fire hazards. It is also not located within any safety zone established for the Stockton Metropolitan Airport by the 1993 Airport Land Use Plan, which is the most recent applicable plan to the Stockton airport.

Environmental Impacts

Potential Exposure to Hazardous Materials or Wastes

The proposed project would not involve exposure of construction workers or future users of the proposed improvements to any substantial known environmental hazards. As noted above, a search of environmental contamination records for the project site did not reveal any records of on-site contamination or potential contamination associated with past land uses in the vicinity. There is no evidence that the project would involve exposure to known hazardous material or waste contamination.

Construction of the proposed project would involve the use of some hazardous materials including petroleum fuels, lubricating and hydraulic oils and cleaning solutions, among others. Most of the hazardous materials use associated with the project would be associated with the operation of heavy construction equipment; plans and specifications will require that the contractor immediately clean up any hazardous material spills. As a result, hazardous materials use would not represent a substantial environmental threat to soils or water resources.

The project proposes the demolition of the existing pump station structure. Older structures may contain asbestos products, and the demolition of these structures may

release asbestos dust or fibers into the environment. Asbestos has been classified as a carcinogen. The SJVAPCD has regulations which require compliance with the asbestos demolition and renovation requirements developed by the U.S. Environmental Protection Agency (EPA) in the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation (40 Code of Federal Regulations, Part 61, Subpart M). The SJVAPCD regulations require an asbestos inspection before any demolition that occurs at a regulated facility. A "regulated facility" is defined as a facility subject to the NESHAP, and includes all commercial buildings, residential buildings with more than four dwelling units, other structures, and non-portable equipment.

Should the asbestos inspection discover any asbestos-containing materials that would be disturbed during a renovation or demolition, these materials must be removed prior to those projects under most circumstances. Also, California Occupational Safety and Health Administration and California Environmental Protection Agency hazardous waste regulations apply in most cases. A project must submit an asbestos notification form to the SJVAPCD for any regulated demolition, 10 working days before the activity begins. The notification requirement applies even if the asbestos inspection does not discover any asbestos-containing materials.

It is not known if the existing pump station contains any asbestos materials, and the project engineer is unaware of any asbestos-containing materials at the site. Nevertheless, the SJVAPCD has determined that the pump station is considered a regulated facility under NESHAP (Mumford, electronic mail). Therefore, demolition activities associated with the project would be subject to the SJVAPCD's asbestos regulations. The following mitigation measure would require the project to follow SJVAPCD regulations regarding demolition of structures potentially containing asbestos, which are designed to minimize the release of asbestos fibers into the environment.

Level of Significance: Potentially significant

Mitigation Measures:

8-1. Prior to demolition activities, the Lead Agency shall conduct an asbestos inspection of the pump station, in accordance with San Joaquin Valley Air Pollution Control District (SJVAPCD) regulations. SJVAPCD regulations require the inspection to be conducted by or under the direction of a consultant certified by the California Occupational Safety and Health Administration (Cal-OSHA). The inspection report shall be submitted to the SJVAPCD along with the asbestos notification form, which must be submitted to the SJVAPCD ten (10) working days before demolition activity begins. In accordance with SJVAPCD Rule 3050, applicable fees must be submitted along with the notification form.

If asbestos-containing materials are discovered which would be disturbed during demolition activities, these materials must be removed prior to demolition. Removal work shall be conducted by a contractor whose employees are properly trained and equipped for such work in accordance with Cal-OSHA regulations. The handling, transport and disposal of the asbestos-containing materials shall be conducted in accordance with California Environmental Protection Agency and National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations.

Significance After Mitigation: Less than significant

Implementation: The Lead Agency will be responsible for conducting the asbestos inspection, filing the required forms and reports with the SJVAPCD, and overseeing any asbestos removal if necessary.

Monitoring: The Lead Agency, in coordination with the SJVAPCD, will ensure compliance with the asbestos regulations.

Potential Exposure to Other Hazards

As previously noted, the proposed project site is not located near any railroads, airports or airstrips, nor is it subject to any substantial wildland fire hazards. There are no existing high-voltage electrical lines on or near the project site, which could expose workers to possible electromagnetic field hazards.

Project construction would involve minor and localized effects on traffic flow in the project area, but these effects would not interfere with emergency response or evacuation activities, as most construction work would occur on the parcel where the existing station is located. Work on the proposed water line would some work in Wisconsin Avenue; however, the work would not block through traffic on Wisconsin Avenue and River Drive.

Level of Significance: Less than significant

Mitigation Measures: None required

9. HYDROLOGY AND WATER QUALITY -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	■	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	■
c) 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?	☐	☐	■	☐
d) 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?	☐	☐	■	☐
e) Create or contribute runoff water which would exceed the	☐	☐	☐	■

capacity of existing or planned stormwater drainage systems?				
f) 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?	☐	☐	☐	■
g) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	■
h) 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?	☐	☐	■	☐
i) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

The proposed project site is located adjacent to the Calaveras River, a tributary of the San Joaquin River and the Sacramento-San Joaquin Delta. The project site is located at the eastern limits of the Delta approximately 0.8-1.0 river miles upstream of the San Joaquin River. The Calaveras River drains an area of approximately 610 square miles. The river can generate peak 10-year discharges of 12,500 cubic feet per second, but there is no flow in the river near Stockton on many days of the year due to upstream diversions. Water from the Calaveras River is diverted into Mormon Slough, from which it is withdrawn for irrigation and domestic consumption. Unused water returns to the Calaveras River channel via the Stockton Diverting Canal. In the event of a 100-year flood, water can be channeled directly into the Calaveras, rather than flowing into Mormon Slough (Jones and Stokes Associates, 1988).

A backwater slough extends approximately 500 feet south from the Calaveras River, near the project site. The slough is defined by existing levees; the slough divides the western two-thirds from the eastern one-third of the project site. The slough is not presently navigable and supports a dense growth of wetland vegetation. Additional description of this feature is provided in Section 4, Biological Resources.

The project site is located within the San Joaquin Valley Groundwater Basin (California Department of Water Resources, 2003). The groundwater basin is characterized by relatively thick aquifers composed of unconsolidated alluvium with both unconfined and confined groundwater conditions. The project area is considered a poor area for groundwater recharge due to the clay and hardpan nature of the soils. According to the environmental contamination data base search conducted for the project, groundwater depths in the project area are in the range of 8-11 feet below the ground surface (EDR, 2011).

The proposed pump station site is protected from flooding by existing levees along the Calaveras River, the backwater slough, the San Joaquin River and Smith Canal. Project area levees are maintained by RD 1614. Areas adjacent to the Calaveras River are located within the Calaveras River floodway, and these areas are subject to inundation on a regular basis. According to the most recent Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), the project site and nearby slough are in Zone A, which indicates that both are within a 100-year floodplain.

The Federal Clean Water Act includes requirements for certain cities, counties and urbanized areas to establish programs to reduce pollutants in stormwater runoff and to prohibit non-stormwater runoff into a storm drainage system or any water body. As a result of these requirements, the City of Stockton was required to obtain a Municipal National Pollutant Discharge Elimination System (NPDES) permit. The project site is within the City of Stockton, and therefore subject to the NPDES permit. The City's NPDES permit requires that the City establish a program to minimize stormwater pollution from all activities including any construction activities. State regulations require that any construction project in the State that disturbs over one acre of land file for coverage under the State General Construction Permit. Projects less than one acre that are part of a larger development also require coverage. .

The project site is not located near a large body of water or the ocean, and the topography of the vicinity is flat. Therefore, it is not subject to inundation by seiche, tsunami or mudflow.

Environmental Impacts

Project Impacts on Surface and Groundwater Resources

The proposed project would discharge storm drainage collected from nearby urban residential areas into a slough tributary to the Calaveras River. Most of this discharge would occur during the wet season (November to April), when most storm drainage would occur. A limited amount of drainage would be collected and discharged during the dry season. The amount of discharge would be consistent with past discharges from the existing station, and would not significantly alter the hydrology of the slough and the Calaveras River, which have more water during the wet season and less water in the dry season.

Both the existing and the proposed pump station are designed to collect storm drainage during storm events, to be released in controlled amounts during and after such events. This moderates the amount of runoff that enters the Calaveras River, thereby reducing the potential for flooding. Therefore, the project would not substantially alter the hydrology of the slough and the Calaveras River so as to increase the flooding potential.

The project would not lead to a demand on surface water in the area. Since the project would have no well, it would not directly affect groundwater supplies. Section 17, Utilities and Service Systems, discusses water supply issues in more detail. The project would have a less than significant impact on surface and groundwater resources.

Level of Significance: Less than significant

Mitigation Measures: None required

Project Impacts on Water Quality

Construction of the proposed improvements would result in soil disturbance, potential for soil erosion, and a remote potential for sediment transport to surface waters. The construction process would also involve the potential for releases of other pollutants to runoff waters, including oil and gas and chemical substances used in the construction process. Construction disturbance would be minimal – the amount of land that would be disturbed would be less than one acre.

As previously noted, the project is located in an area subject to the City of Stockton's NPDES permit. The City has adopted a Storm Water Management Plan to ensure compliance of projects with the provisions of the NPDES permit. This plan requires construction activities to implement measures to reduce the amount of sedimentation to enter storm drainage or other surface waters. Mitigation described below would require compliance with the plan. In addition, as described in Section 4, Biological Resources, the project would be required to comply with the conditions of applicable federal and state permits pertaining to wetlands and surface waters, many of which are designed to minimize impacts on water quality.

Level of Significance: Potentially significant

Mitigation Measures:

9-1. RD 1614 and its contractors shall comply with all applicable provisions of the City of Stockton's Storm Water Management Plan. These provisions shall include the installation of perimeter erosion and sediment controls such as fiber rolls and gravel drives, placing sediment barriers around any stockpiles, and re-vegetating affected portions of the construction area.

Significance After Mitigation: Less than significant

Implementation: The Lead Agency shall consult with the City of Stockton Municipal Utilities Department to ensure that proper measures are included in project construction, and the contractor shall implement all erosion control and sediment measures.

Monitoring: The Lead Agency shall monitor the contractor's work to ensure that all required control measures have been implemented at the construction site.

Flooding Hazards Associated with Project

The project site, including the pump station and pipelines, is located in an area designated as a potential 100-year floodplain by FEMA. In addition, project facilities in the slough area would be within a 100-year high water mark. However, the project would not place any residents on the site. Occasionally, maintenance workers would visit the site, but it is unlikely that such workers would visit the site when a flood threatens. The station could be damaged by flooding, but given the existence of the levee, the risk appears low. Project impacts related to flooding are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

10. LAND USE AND PLANNING – Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	■
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	■
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

The project site consists of an existing pump station enclosed by a chain link fence. Two discharge pipes cross over a existing levee north of the project site and end at a backwater slough on the opposite side of the levee from the pump station. The pump station site is located on a parcel in the City of Stockton that is designated as Low Density Residential in the Stockton General Plan 2035, and is zoned RL – Residential, Low Density. According to the Stockton Zoning Ordinance (Stockton Municipal Code Chapter 16.24), "public and semipublic utility facilities" are an allowable land use in the RL zone with an administrative use permit.

The area east and south of the project site contains residential neighborhoods. West of and adjacent to the project site is Inman Field, a complex of Little League baseball fields. North of the project site is an open space area with a slough that discharges into the Calaveras River. Northeast of the site, at the end of River Road, is the Stockton Yacht Club, a private recreational boating facility.

Environmental Impacts

Project Consistency with Applicable Land Use Plans

The project site is within the land use planning jurisdiction of the City of Stockton; however, the project is not subject to local land use approval. The existing and proposed pump stations are consistent uses with the existing City land use designations and zoning. As discussed in Section 4, Biological Resources, the project would not conflict with the SJMSCP.

Level of Significance: No impact

Mitigation Measures: None required

Land Use Conflicts Related to the Project

The proposed project involves improvements to an existing pump station. The project would not involve the division of any established community in the area, as the pump station is not within a residential area. The project would not involve any encroachment on the adjoining residential or recreational uses.

Level of Significance: No impact

Mitigation Measures: None required

11. MINERAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state?	☐	☐	☐	■
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	■

NARRATIVE EXPLANATION:

Environmental Setting

The proposed project site is located in a predominantly residential area. There are no known mineral resources associated with the project site. The City of Stockton General Plan 2035 and its Background Report do not identify the project site as potentially containing valuable mineral resources. The project site is located within an area designated by the State Geologist as MRZ-1, areas with “little likelihood of containing significant deposits” of economic minerals (Jensen and Silva, 1989). No mineral resource operations occur in the vicinity.

Environmental Impacts

Impacts on Mineral Resources

The proposed project is located in an area that has no identified mineral resource significance. The project would have no effects on identified mineral resources.

Level of Significance: No impact

Mitigation Measures: None required

12. NOISE – Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or	☐	☐	■	☐

noise ordinance, or applicable standards of other agencies?				
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	■
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	■
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	■	☐	☐
e) For a project located within 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, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

The project proposes improvements to an existing pump station. Activities at the existing station are generally confined to the operation of pumps to remove collected storm drainage in the sump and to send it through discharge pipes to the backwater slough. The pumps are enclosed in a building with cement walls and a corrugated metal roof. Occasionally, vehicles enter and park at the station during maintenance work.

The proposed project site is located in a predominantly urban residential area of western Stockton, with residential neighborhoods located to the south and east. The only major nonresidential facilities in the area are the Stockton Yacht Club and Inman Field. The Stockton Yacht Club is a private recreational boating facility that generates little noise. Inman Field is a source of noise during sporting events held at the Little League fields. However, as described in Section 14, Public Services, activities at Inman Field are limited to specific months and times. There are no nearby freeways, railroads, airports or airport flight patterns that affect the noise environment of the project area or generate groundborne vibrations.

The potential for noise impact is related to noise levels and the noise sensitivity of potential “receptors” (i.e. land uses) in the vicinity of the noise source. Single-family residences in the vicinity of the project site are considered sensitive noise receptors. Noise sensitivity for these residential uses is reflected in the criteria contained within the Noise Element of the current San Joaquin County General Plan; the County General Plan establishes an acceptable exterior noise level of 65 decibels (dB) Ldn for residential areas. Ldn is the 24-hour day and night "average" noise exposure level that accounts for the greater sensitivity of most people to nighttime noise by adding 10 dB to noise levels measured between 10:00 p.m. and 7:00 a.m.

Environmental Impacts

Project Noise Impacts

Project construction would temporarily elevate noise levels in the vicinity of the subject levee. Construction noise would be generated by the demolition and removal of existing structures and pipelines, and the installation of new pipelines and structures. Noise associated with the operation of construction equipment would typically range from 80-90 dB at a distance of approximately 50 feet. This noise could potentially affect residents of the nearby neighborhoods to the south and east. A less significant source of construction noise would be worker vehicle traffic.

Noise generated by construction activities would be temporary, and would cease once construction work is completed. In addition, facilities such as the dissipator box and the discharge pipes would be installed on the side of the levee opposite from the residential areas. The levee would provide a barrier to noise associated with the construction of these facilities. Nevertheless, other facilities would be constructed where nearby residences would be exposed to construction noise. Mitigation measures below would reduce potential noise impacts to a level that would be less than significant.

Upon completion of construction, the proposed project would involve no substantial change in existing noise levels. Project operations are expected to generate little noise that would affect adjacent land uses. The pumps would be the main source of operational noise. A 50-horsepower pump generates a noise level of approximately 63 dBA at a distance of 50 feet, while a 150-horsepower pump generates a noise level of approximately 76 dBA at a distance of 50 feet. The pumps would be housed in a concrete building that would muffle the noise. In addition, the nearest residence to the pump station is approximately 75 feet away, so noise levels would be attenuated by distance. Finally, the main pumps would operate only during period when large amounts of storm water are generated, typically during and after storms. For period of low storm water generation, the “low flow” 50-horsepower pump would operate.

The proposed project would not result in any increase in local traffic, but would accommodate ongoing maintenance traffic as the existing pump station currently does. It is possible that such traffic may decrease for a period of time, as the newer facilities would not require as much maintenance as the existing station.

Level of Significance: Potentially significant

Mitigation Measures:

12-1. Temporary noise impacts resulting from project construction shall be minimized by restricting hours of operation of noise-generating equipment in the immediate vicinity of existing residences to 6:00 AM to 7:00 PM Monday through Friday and to 7:00 AM to 6:00 PM on Saturday and Sunday.

12-2. The contractor shall ensure that all construction equipment used on the project site is properly muffled at all times, with mufflers installed in accordance with manufacturers’ specifications.

Significance After Mitigation: Less than significant

Implementation: The contractor shall implement all noise control measures.

Monitoring: The Lead Agency shall monitor the contractor's work to ensure that all noise control measures have been implemented at the construction site.

13. POPULATION AND HOUSING -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	■
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

The area served by the pump station is located in the unincorporated area of San Joaquin County. The County population has grown from a 2000 U.S. Census population of 563,598 to a 2010 U.S. Census population of 685,306. As of the 2010 U.S. Census, the County had 233,755 housing units, an increase from the 2000 U.S. Census figure of 189,160.

Environmental Impacts

Project Impacts on Population and Housing

The proposed project would not involve any direct or substantial indirect effect on population or housing. The project would not construct any housing, nor would it remove any housing from the existing stock. The project would improve an existing pump station and increase its functionality. However, it would have no noticeable impact on the existing storm drainage collection capacity of the area. Therefore, it would not indirectly induce any housing growth.

Level of Significance: No impact

Mitigation Measures: None required

14. PUBLIC SERVICES -- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	☐	☐	☐	■
b) Police protection?	☐	☐	☐	■
c) Schools?	☐	☐	☐	■
d) Parks?	☐	☐	☐	■
e) Other public facilities?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

Fire protection services in the project area are provided by the Stockton Fire Department. The responding fire station to an emergency on the project site would be Station #10, located on 2903 West March Lane. In addition to a fire engine, Station #10 houses the Department's Hazardous Materials Team.

General law enforcement services for the project site and vicinity are provided by the San Joaquin County Sheriff's Department. The main Sheriff's station is located at 7000 Michael Canlis Boulevard in the community of French Camp.

The project site is within the Stockton Unified School District. The nearest District school facility to the project site is Hoover Elementary School, located at 2900 Kirk Avenue.

The San Joaquin Parks and Recreation Department provides parks and recreational facilities for residents in unincorporated San Joaquin County. The nearest County park is Madison Park, on 2100 Michigan Avenue.

Inman Field is located directly southwest of the project site and is the oldest field in the Stockton area. The field is privately owned and used for Hoover Tyler Little League Baseball. The field is used from January through July, with games Monday through Saturday evenings beginning at 5:00 p.m. Practices begin at 9:30 a.m. on weekends. Inman Field also has a concession stand that opens a half-hour before evening games. The field does not host any special events except for tournaments in July and baseball season opening and closing day events.

Environmental Impacts

Impacts on Public Services and Facilities

The proposed project is the improvement of an existing storm drainage pump station. As discussed in Section 13, Population and Housing, the project would not add new residents or housing nor indirectly induce such growth, which would generate a demand for public services. Therefore, the project would not generate a need for new or expanded fire protection, police protection, school, park or other public facilities.

Level of Significance: No impact

Mitigation Measures: None required

15. RECREATION	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

Project impacts on parks and recreational facilities were addressed in Section 14, Public Services.

Environmental Impacts

Project Impacts on Recreation

As noted in Section 14, Public Services, the project would not directly affect any existing parks or recreational facilities. As described in Section 13, Population and Housing, the project would not induce any population growth; therefore, it would not increase the demand for recreational facilities.

Level of Significance: No impact

Mitigation Measures: None required

16. TRANSPORTATION/TRAFFIC – Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	■
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	■
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	■
d) Substantially increase hazards to a design feature (e g., sharp curves or dangerous intersections) or incompatible uses (e g, farm equipment)?	☐	☐	☐	■
e) Result in inadequate emergency access?	☐	☐	☐	■
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

As previously noted, the project is located adjacent to a predominantly residential area in an unincorporated area of San Joaquin County. The main street adjacent to the project site is Wisconsin Avenue, a north-south residential street that connects the project site to Country Club Boulevard, where the avenue ends. River Drive begins where Wisconsin Avenue ends, adjacent to the project site. River Drive goes in a northeastern direction before ending at the Stockton Yacht Club, near the Calaveras River. Access to Wisconsin Avenue and River Drive is available from Alpine Avenue, Michigan Avenue and Country Club Boulevard, the main east-west streets in the project vicinity.

Limited bus service is provided in the vicinity by the San Joaquin Regional Transit District. Its Route 61 includes an occasional run along Princeton Avenue, Wisconsin Avenue and Michigan Avenue. There are no existing or designated bike lanes in the immediate vicinity. Pedestrian facilities are limited to sidewalks in the residential neighborhoods near the project site.

The Calaveras River in the project vicinity is a navigable waterway. However, the principal use of the river is for recreational boating. The Stockton Yacht Club is located

immediately upstream (east) of the project site, and there are numerous private recreational boat docks located in the vicinity.

Environmental Impacts

Project Impacts on Transportation

The proposed project would not involve new traffic generation. The proposed project does not involve the development of new land uses that would generate or attract new vehicle trips. The project proposes an upgrade to an existing pump station, and the improved station would not generate additional traffic. Maintenance vehicles would visit the new station, but not at a frequency greater than that for the existing station. It is possible that the project would lead to fewer maintenance visits, as the existing station is in a deteriorating condition that likely requires more frequent maintenance visits. Access would be readily available to the project site for emergency vehicles, and the project would not obstruct roadways that would be used by emergency vehicles.

The project would generate a minor temporary increase in traffic due to construction, mainly from construction equipment and vehicles from workers. However, this increase in traffic would be temporary, and would no longer occur once construction work is completed. Given the size of the project site, it is expected that construction vehicles would mostly stay off adjacent streets, and therefore would not obstruct any emergency vehicle access to the area. After project completion, emergency vehicle access to the site would not be restricted. Given the project site size and location, construction traffic would not significantly interrupt traffic flow in the adjacent residential area.

The project would not generate any need for expanded public transit service or new bike and pedestrian facilities, as the project would not generate any additional residents or housing (see Section 13, Population and Housing). A dissipator box and some discharge pipes would be placed in the backwater; however, these facilities would not interfere with navigation on the Calaveras River, as they would be placed at the end of a slough not used by boats. Overall, the project would have no impact on transportation.

Level of Significance: No impact

Mitigation Measures: None required

17. UTILITIES AND SERVICE SYSTEMS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	■
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental	☐	☐	■	☐

effects?

d) Are sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	■
e) Has the wastewater treatment provider which serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
f) Is the project served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	■
g) Comply with federal, state. and local statutes and regulations related to solid waste?	☐	☐	☐	■

NARRATIVE EXPLANATION

Environmental Setting

Sewage collection services in the project area are provided by the Pacific Gardens Sanitary District. Sewage from the project vicinity is conveyed easterly in a force main to an existing city trunk line located along the west side of Interstate 5. Sewage treatment services in the Stockton vicinity, including the project area, are provided by the City of Stockton. Sewage treatment occurs at the City's Regional Wastewater Control Facility (RWCF), located on Navy Drive.

Water service in the project area, including the residential areas located immediately south and east of the site, is provided by Cal Water, a private water service company. Existing Cal Water lines are located near the project site in River Drive.

Storm drainage terminal discharge facilities in the project area are owned and operated by RD 1614. All storm drainage collection and conveyance facilities within Smith Tract are owned and operated by the City of Stockton and San Joaquin County, and are located in existing developed streets. These lines drain to the existing pump station on the project site. Line sizes range from 12-14 inches in local streets to trunk lines of 30-36 inches in or adjacent to River Road, Princeton Avenue and Wisconsin Avenue. The existing pump station discharges to the backwater slough located on the project site, and thereby to the Calaveras River.

The County franchise hauler, Sunset Disposal Service, provides solid waste collection services to the project site. Solid waste is disposed at the County's existing Foothills landfill facility located east of Lodi on Harney Lane. The Foothills Landfill has a remaining life span of approximately 45 years (InSite Environmental, 2002).

Electricity is provided by PG&E in the project vicinity. There is an electric power line pole located on the project site, and power poles are located along Wisconsin Avenue. Telephone, cable television and natural gas services are not available on the project site, but are available in the adjacent residential neighborhoods.

Environmental Impacts

Project Impacts on Storm Drainage System

The project proposes improvements to an existing storm drainage pump station. These include improvements to the station housing, the addition of new pumps and discharge pipes, and the addition of a dissipator box at the discharge point. The result of the project would be improved collection and discharge of storm drainage from nearby development.

Most of the improvements associated with the project would be constructed on the existing station site. However, the additional discharge pipes and the dissipator box would require further encroachment in the backwater slough. Section 4, Biological Resources, describes potential impacts related to this encroachment in the slough, including impacts on riparian vegetation and Waters of the U.S. The conclusion was that impacts on biological resources would not be significant with mitigation. Other potential environmental impacts have been identified in this document. All identified impacts can be reduced to less than significant levels with mitigation.

The project proposes replacement of existing storm drainage lines entering the pump station with upgraded lines and manholes. This work would be conducted on the project site and would not require disturbance of adjacent areas. No other storm drainage lines would need to be installed or expanded.

The result of the project would be improved storm drainage facilities, with potential environmental impacts that can be mitigated to levels that are less than significant. Impacts related to the storm drainage system, therefore, are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Project Impacts on Other Utilities and Energy

The project proposes the install of a two-inch diameter water line to the project site. This portion of the project would require trenching and installation in an existing roadway (Wisconsin Avenue/River Drive). However, the work would occur in an already developed area, and would not affect any open space or other undeveloped land. The roadway would be repaved once pipeline work is completed, so there would be no permanent impact on the roadway.

The proposed project would not involve any new demands for sewer, solid waste, telephone, cable television or natural gas utilities, as no new residences or businesses would be established on the project site. Therefore, no new facilities would need to be extended to the project site, or expanded to accommodate any demand.

Construction of the project would not result in energy usage that would be considered wasteful or inefficient. Project operations may result in a slight increase in electricity use, as four new pumps would be installed, as compared with the existing two pumps.

However, the new pumps would be more efficient than the existing pumps, so the use of each new pump would consume less energy than each existing pump. In addition, RD 1614 proposes to use no more than two of the more powerful (100 horsepower) pumps at any given time, saving the third 100-horsepower pump as a reserve. For lower storm drainage volumes, the project proposes to use a 50-horsepower pump, which would consume less electricity than the 100-horsepower pumps. As a result, the project would not result in a significant increase in energy consumption, requiring additional energy facilities or resources.

Level of Significance: Less than significant

Mitigation Measures: None required

18. MANDATORY FINDINGS OF SIGNIFICANCE --	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	☐	■	☐	☐
b) 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 projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	■
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■	☐	☐

NARRATIVE EXPLANATION

Finding (a) is checked as "Potentially Significant Unless Mitigated" on the basis of potential biological and cultural resources impacts described in Section 4 and 5. All identified biological and cultural resource impacts described in both sections would be reduced to less than significant levels with implementation of mitigation measures in the respective sections.

A cumulative impact is an environmental impact that may result from the combination of two or more environmental impacts associated with the proposed project with each other, or the combination of one or more project impacts with related environmental impacts caused by other projects. There are no other similar (i.e. levee improvement) projects in the vicinity with which the project could involve cumulative effects. In addition, there are no construction projects of any kind proposed in the project vicinity. None of the potential environmental effects addressed individually in this Initial Study would combine to result in a significant effect cumulatively.

Potential impacts on human health and safety were evaluated in Sections 6, 8 and 16. The only identified potential impact that may result in substantial adverse effects on human beings is the potential for release of asbestos. As described in Section 8, SJVAPCD considers demolition of the existing pump station an activity subject to its asbestos removal regulations. Mitigation Measure 8-1 would ensure compliance with the SJVAPCD's asbestos regulations, and would avoid any potential asbestos impacts. No other impacts with a potentially adverse effect on human health and safety were identified with the project.

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PERSONS CONSULTED

Almaas, Erik, P.E. Kjeldsen, Sinnock & Neudeck, Inc.

Mumford, Adam. Air Quality Specialist II, San Joaquin Valley Air Pollution Control District. Electronic mail, July 26, 2011.

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APPENDIX A
BIOLOGICAL RESOURCE STUDY

MOORE BIOLOGICAL CONSULTANTS

July 29, 2011

Mr. Terry Farmer
Kleinfelder
2001 Arch-Airport Road, Suite 100
Stockton, CA 95206

Subject: BASELINE BIOLOGICAL RESOURCES ASSESSMENT FOR THE WISCONSIN AVENUE PUMP STATION PROJECT, STOCKTON, SAN JOAQUIN COUNTY, CALIFORNIA

Dear Terry:

On behalf of Reclamation District No. 1614, thank you for asking Moore Biological Consultants to conduct a baseline biological resources assessment for the Wisconsin Avenue Pump Station project (Figures 1 and 2). The focus of our work was to document existing biological resources at the site, conduct a survey to determine presence or absence of potentially jurisdictional waters or wetlands, and search for suitable habitat for or presence of special-status species within the project site. This letter report details the methodology and results of our investigation.

Project Overview

The project is the upgrade of a storm drain pump station on a tributary slough to the Calaveras River. The project involves replacement of the pump house and equipment, replacement of the pipes through the levee between the pump station and the slough, and installation of an open rectangular box in the bed of the slough. The box structure will dissipate flows and prevent channel scour; water will be conveyed into the box via the new pipes and once the box fills, the water will gently overflow the edges of the box and discharge into the slough.

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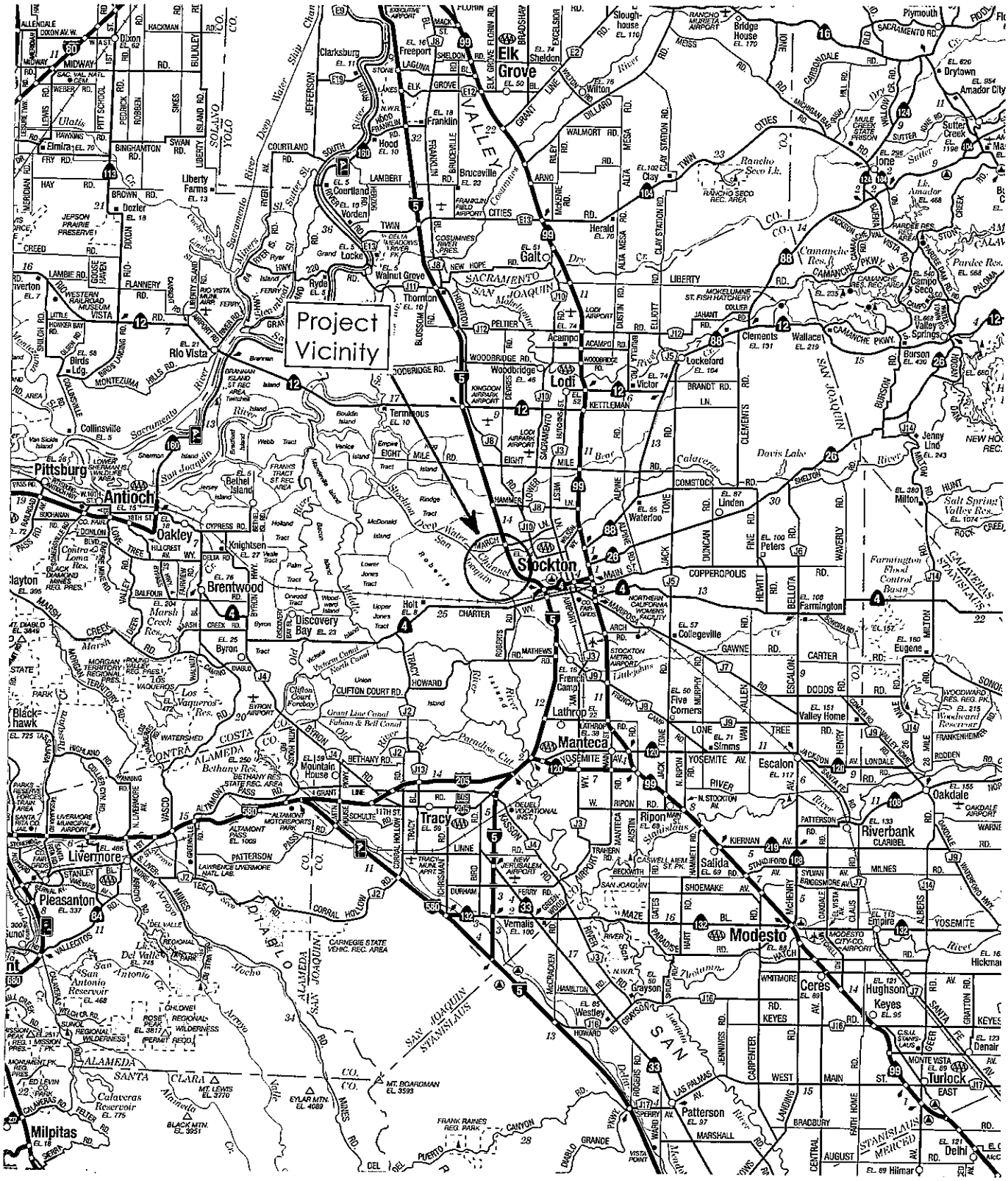
e-mail: moorebio@softcom.net


Project Vicinity
Stockton
Lodi
Manteca
Tracy
Modesto
Ceres
Turlock
Riverbank
Oakdale
Livermore
Pleasanton
Antioch
Pittsburg
Oakley
Brentwood
Milpitas
Patterson
Escalon
Ripon
Salida
Lathrop
Elk Grove
Galt
Clements
Linden
Farmington
Hughson
Keyes
Denair
Delhi
Valley Home
Waterloo
Acampo
Woodbridge
Thornton
Walnut Grove
Courtland
Clarksburg
Freeport
Hood
Franklin
Bruceville
Wilton
Herald
Clay
Jone
Sutter Creek
Drytown
Amador City
Plymouth
Sheldon
Slough-house
Bridge House
Rio Vista
Birds Ldg.
Collinsville
Knightsen
Byron
Discovery Bay
Holt
Clayton
Black-hawk
Livermore
Mountain House
Vernalis
Grayson
Westley
Denair
Hilmar
Turlock
Milpitas
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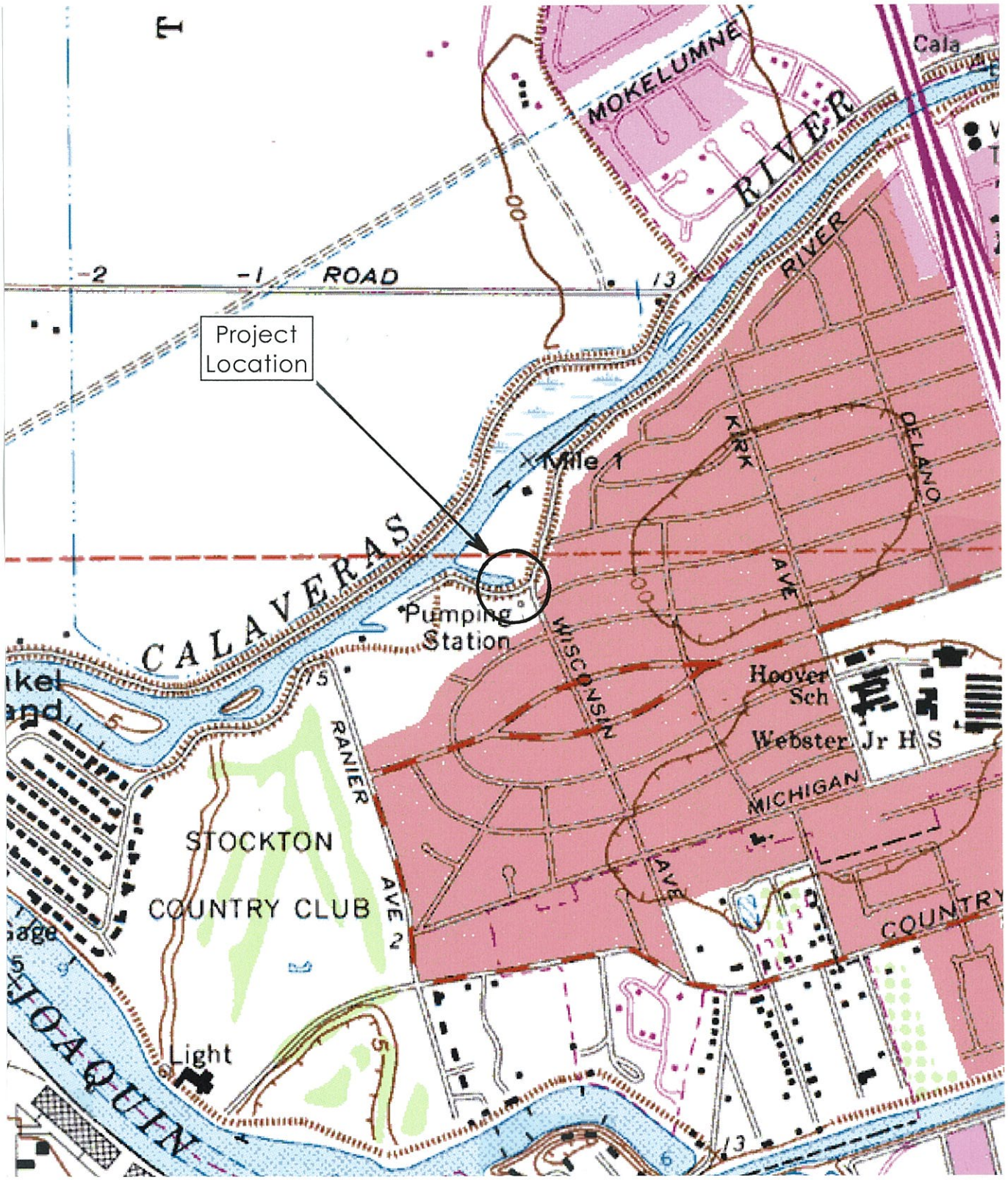
Brentwood
Pleasanton
Livermore



Scale: 1 inch = 1,000 feet

Source: USGS 7.5-minute Stockton West topographic quadrangle

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FIGURE 2
PROJECT LOCATION

Methods

Prior to the field survey, we conducted a search of California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDB, 2011). The CNDDB search encompassed the USGS 7.5-minute Stockton West and Holt topographic quadrangles, which is approximately 120 square miles surrounding the site. The United States Fish and Wildlife Service (USFWS) list of Federally Threatened and Endangered species that may occur in or be affected by projects in the Stockton West and Holt topographic quadrangles (Appendix A) was also reviewed. This information was used to identify special-status wildlife and plant species that have been previously documented in the project vicinity or have the potential to occur based on suitable habitat and geographical distribution.

A field survey was conducted on June 21, 2011. The survey consisted of walking throughout the site, making observations of current habitat conditions and noting surrounding land use, general habitat types, and plant and wildlife species. The survey included an assessment of the project site for presence or absence potentially jurisdictional Waters of the U.S. (a term that includes wetlands) as defined by the U.S. Army Corps of Engineers (ACOE, 1987; 2008), special-status species, and suitable habitat for special-status species (e.g., elderberry shrubs, vernal pools). Additionally, trees within and near the site were assessed for the potential use by nesting raptors, especially Swainson's hawk (*Buteo swainsoni*) and the area was searched for burrowing owls (*Athene cunicularia*) or any burrows with evidence of past occupancy.

Results

GENERAL SETTING: The project site is along a tributary slough to the Calaveras River in Stockton, California (Figure 1). The site is located within an unnumbered Section within Township 1 North, Range 6 East of the USGS 7.5-minute Stockton West topographic quadrangle (Figure 2). The pump house is at an elevation of

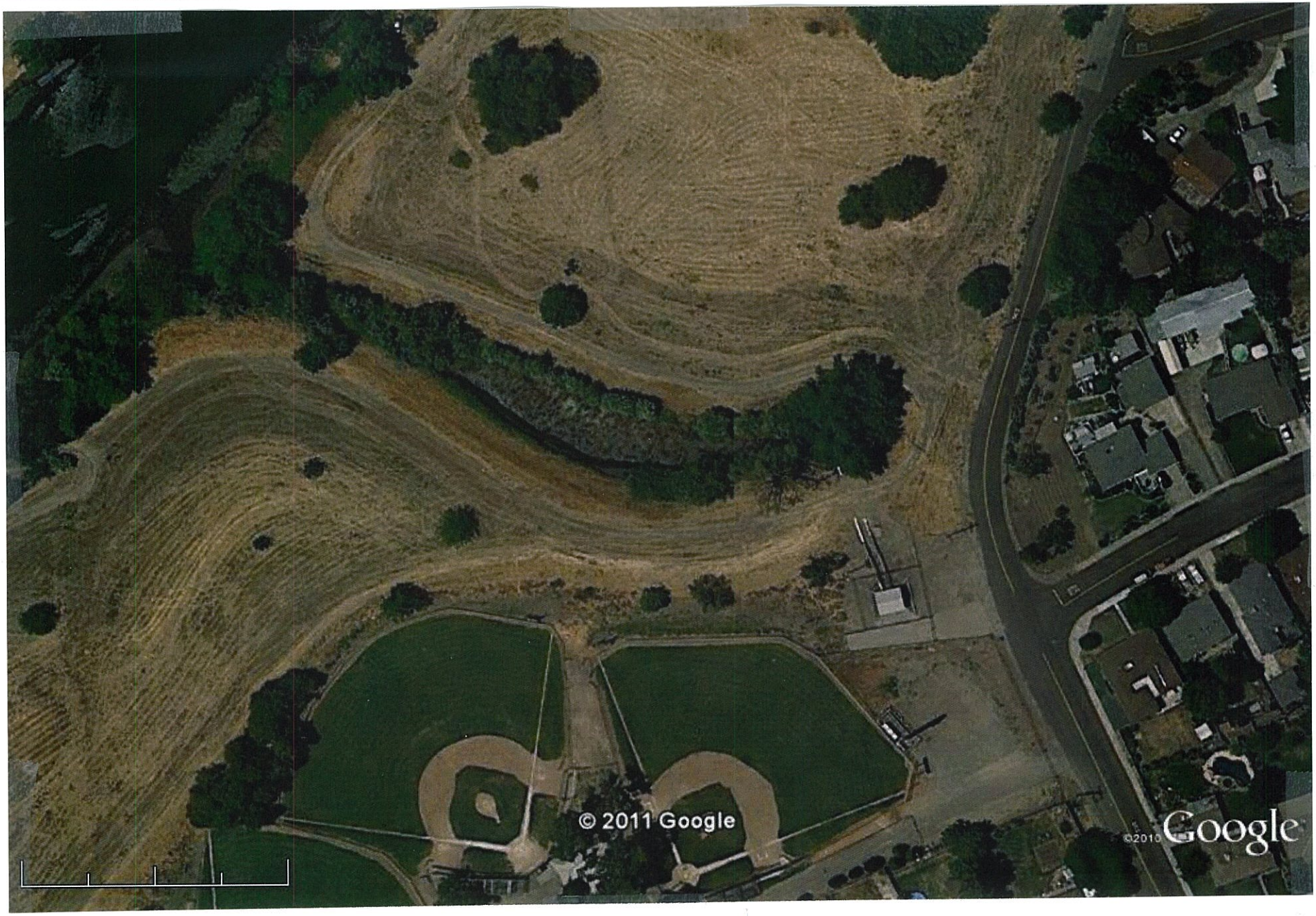
approximately mean sea level; the top of the levee is at an elevation of approximately 15 feet above mean sea level.

Surrounding land uses in this portion of San Joaquin County are primarily residential (Figure 3). There is a baseball park to the southwest of the site and residential subdivisions beyond the baseball park. Residential subdivisions are also located to the east of the site. Lands to the north and northwest are of the site are part of an undeveloped in-fill parcel along the Calaveras River.

VEGETATION: California annual grassland series (Sawyer and Keeler-Wolf, 1995) best describes the vegetation in the upland portions of the project site. Grasses including oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), Bermuda grass (*Cynodon dactylon*), and foxtail barley (*Hordeum murinum*) are dominant grass species. Other grassland species such as black mustard (*Brassica nigra*), wild radish (*Raphanus sativa*), prickly lettuce (*Lactuca serriola*), bull thistle (*Cirsium vulgare*), yellow star-thistle (*Centaurea solstitialis*), common mallow (*Malva neglecta*), and filaree (*Erodium* sp.) are intermixed with the grasses. Table 1 is a list of plant species observed in the site.

Valley oak series (Sawyer and Keeler-Wolf, 1995) best describes the variably wide band of trees, vines, and shrubs along the shoreline of the slough. Oregon ash (*Fraxinus latifolia*) and black walnut (*Juglans californicus*) are the only native trees in the vicinity of the outfall, most of the trees and shrubs along the slough are ornamentals or non-native species such as almond (*Prunis dulcis*) and Himalayan blackberry (*Rubus discolor*). There is no emergent wetland vegetation in the shaded dead-end of the slough where the energy dissipater box will be installed; off-site and closer to the Calaveras River, the slough is more open and supports both cattails (*Typha* sp.) and tules (*Scirpus acutus*).

No blue elderberry shrubs (*Sambucus mexicana*) were observed in or near the project site.



Source (Basemap): Google Earth
Scale: 1 inch = 100+/- feet

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FIGURE 3
AERIAL PHOTOGRAPH

TABLE 1

PLANT SPECIES OBSERVED IN THE SITE

Avena sp.	oats
Brassica nigra	black mustard
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft chess brome
Centaurea solstitialis	yellow star-thistle
Cirsium vulgare	bull thistle
Cynodon dactylon	Bermuda grass
Erodium botrys	filaree
Erodium circutarium	red-stem filaree
Fraxinus latifolia	Oregon ash
Hordeum murinum	foxtail barley
Juglans californicus	black walnut
Lactuca serriola	prickly lettuce
Malva neglecta	common mallow
Prunus dulcis	almond
Raphanus sativus	wild radish
Rubus discolor	Himalayan blackberry
Rumex crispus	curly dock

WILDLIFE: A limited variety of bird species were observed during the recent surveys. Turkey vulture (*Cathartes aura*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), western kingbird (*Tyrannus verticalis*), American crow (*Corvus brachyrhynchos*), and western scrub jay (*Aphelocoma coerulescens*), and house finch (*Carpodacus mexicanus*) were observed in the site.

There are a few potential nest trees in and near the site that may be suitable for nesting raptors and other protected migratory birds, including Swainson's hawk. A few stick nests were observed within some of the trees near the site and future use of these trees by nesting raptors is possible. Further, it is considered likely that a few songbirds nest within trees, shrubs, and grassland habitats in or adjacent to the site each year.

A limited variety of mammals common to rural areas likely occur in the project site. Sign of raccoon (*Procyon lotor*) was observed in the site, but no mammals were observed during the survey. No California ground squirrel (*Spermophilus beecheyi*) or their burrows were observed in the site. Based on habitat types present, a limited number of amphibians and reptiles may use habitats in the site. However, no reptiles or amphibians were observed in the project site during the recent survey.

WATERS OF THE U.S. AND WETLANDS: Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, their tributaries, and adjacent wetlands. State and federal agencies regulate these habitats and Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into any waters of the U.S., including wetlands. Both CDFG and ACOE have jurisdiction over modifications to riverbanks, lakes, stream channels and other wetland features.

"Waters of the U.S.", as defined in 33 CFR 328.4, encompasses Territorial Seas, Tidal Waters, and Non-Tidal Waters; Non-Tidal Waters includes interstate and intrastate rivers and streams, as well as their tributaries. The limit of federal jurisdiction of Non-Tidal Waters of the U.S. extends to the "ordinary high water mark". The ordinary high water mark is established by physical characteristics such as a natural water line impressed on the bank, presence of shelves, destruction of terrestrial vegetation, or the presence of litter and debris.

Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

The Calaveras River is a navigable water of the U.S. subject to Section 10 of the River and Harbor Act as well as Section 404 of the Clean Water Act. The tributary slough is also jurisdictional as it drains directly into the Calaveras River. The tributary slough and the Calaveras River also fall under the jurisdiction of CDFG, the State Lands Commission, and the California Regional Water Quality Control Board (RWQCB).

The limit of federal jurisdiction in the slough is the ordinary high water line, which is approximately 3.6 feet above mean sea level. A wetland delineation of the infall parcel that contains the slough was conducted in 2001 and verified by ACOE in 2002 (Corps File No. 200100497). In the vicinity of the outfall, the jurisdictional width across the slough is approximately 40 feet.

In the vicinity of the outfall, the bank of the slough is steep and there are no adjacent wetlands (see attached photographs). There are a few brambles of Himalayan blackberry right along the water line.

Beyond the tributary slough to the Calaveras River, no other potentially jurisdictional wetlands or Waters of the U.S. were observed in or near the project site. Specifically, there are no vernal pools, seasonal wetlands, marshes, ponds, or lakes of any type within or immediately adjacent to the project site.

SPECIAL-STATUS SPECIES: Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve

endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

Special-status species also include other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The presence of species with legal protection under the Endangered Species Act often represents a major constraint to development, particularly when the species are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a take of these species.

Special-status plants are those which are designated rare, threatened, or endangered and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS). Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act Guidelines, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS, 2010). Finally, special-status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

Based on habitats present and high levels of existing development and disturbance in and near the site, the likelihood of occurrence of listed, candidate, and other special-status species in the project site is considered to be generally low. Table 2 provides a summary of the listing status and habitat requirements of special-status species that have been documented in the greater project vicinity or for which there is potentially suitable habitat in the greater project vicinity. This

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
PLANTS						
Alkali milk-vetch	*Astragalus tener var. tener*	None	None	1B	Playas, vernal pools, and adobe clay areas within valley and foothill grassland.	Unlikely: the ruderal grassland and dead-end slough do not provide suitable habitat for this species. The nearest occurrence of alkali milk-vetch in the CNDDB (2011) search area is approximately 1 miles south of the site.
San Joaquin spearscale	*Atriplex joaquiniana*	None	None	1B	Chenopod scrub, alkali meadow, valley and foothill grassland.	Unlikely: the ruderal grassland in the project site is highly disturbed and does not provide suitable habitat for this species. The nearest occurrence of San Joaquin spearscale in the CNDDB (2011) search area is approximately 3.5 miles southeast of the site.
Water shield	*Brasenia schreberi*	None	None	2	Marshes and swamps.	Unlikely: while it may occur in regional delta waterways, the shaded dead-end slough does not support marsh not vegetation and is not suitable habitat for water shield. This species is recorded in the CNDDB (2011) approximately 3.5 miles southeast of the site. The CNDDB describes this 1893 population as "extirpated" (i.e., it no longer exists).
Round-leaved filaree	*California macrophyllum*	None	None	2	Cismontane woodland and valley and foothill grassland.	Unlikely: the ruderal grassland and dead-end slough do not provide suitable habitat for this species. The nearest occurrence of round-leaved filaree in the CNDDB (2011) search area is approximately 3.5 miles southeast of the site.
Bristly sedge	*Carex comosa*	None	None	2	Marshes and swamps, lake margins, wet places.	Unlikely: while it may occur in regional delta waterways, the shaded dead-end slough does not support marsh not vegetation and is not suitable habitat for bristly sedge. This species is recorded in the CNDDB (2011) approximately 4.5 miles southwest of the site.
Palmate-bracted bird's-beak	*Cordylanthus palmatus*	E	E	1B	Chenopod scrub, valley and foothill grassland.	Unlikely: the ruderal grassland and dead-end slough do not provide suitable habitat for this species. The CNDDB (2011) reports an historical (1881) sighting of palmate-bracted bird's-beak approximately 3.5 miles southeast of the site. This historical population is described as "possibly extirpated".

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Wooly rose mallow	*Hibiscus lasiocarpus*	None	None	2	Freshwater marshes and swamps.	Unlikely: while it may occur in regional delta waterways, the shaded dead-end slough does not support marsh not vegetation and is not suitable habitat for this species. Wooly rose mallow is recorded in the CNDDB (2011) in the Calaveras River, approximately 0.25 miles west of the site.
Delta tule pea	*Lathyrus jepsonii var. jepsonii*	None	None	1B	Marshes and swamps.	Unlikely: while it may occur in regional delta waterways, the shaded dead-end slough does not support marsh not vegetation and is not suitable habitat for this species. The nearest occurrence of delta tule pea in the CNDDB (2011) search area is approximately 1.5 miles southwest of the site.
Mason's lilaeopsis	*Lilaeopsis masonii*	None	R	1B	Marshes, swamps and riparian scrub.	Unlikely: while it may occur in regional delta waterways, the shaded dead-end slough does not support marsh not vegetation and is not suitable habitat for Mason's lilaeopsis. The nearest occurrence of this species in the CNDDB (2011) search area is approximately 4 miles northwest of the site.
Delta mudwort	*Limosella subulata*	None	None	2	Marshes and swamps.	Unlikely: while it may occur in regional delta waterways, the shaded dead-end slough does not support marsh not vegetation and is not suitable habitat for this species. The nearest occurrence of delta mudwort in the CNDDB (2011) search area is approximately 9 miles southwest of the site.
Sanford's arrowhead	*Sagittaria sanfordii*	None	None	1B	Standing or slow moving freshwater ponds, marshes, and ditches.	Unlikely: while it may occur in regional delta waterways, the shaded dead-end slough does not support marsh not vegetation and is not suitable habitat for Sanford's arrowhead. The nearest occurrence of this species in the CNDDB (2011) search area is approximately 3 miles southeast of the site.
Suisun marsh aster	*Symphotrichum lentum*	None	None	1B	Marshes and swamps.	Unlikely: while it may occur in regional delta waterways, the shaded dead-end slough does not support marsh not vegetation and is not suitable habitat for this species. The nearest occurrence of Suisun marsh aster in the CNDDB (2011) search area is approximately 4 miles northwest of the site.

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
WILDLIFE						
Birds						
Swainson's hawk	*Buteo swainsoni*	None	T	N/A	Breeds in stands of tall trees in open areas. Requires adjacent suitable foraging habitats such as grasslands or alfalfa fields supporting rodents.	Moderate: the grasslands surrounding the slough provide foraging habitat for Swainson's hawk. There are potential nest trees along the slough and in the greater project vicinity. There are many records of nesting Swainson's hawks throughout Stockton; nesting Swainson's hawk are recorded in the CNDDB (2011) approximately 0.5 miles south of the site.
Burrowing owl	*Athene cunicularia*	None	SC	N/A	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	Unlikely: there are very few ground squirrel burrows in the grassland surrounding the slough. No burrowing owls or evidence of occupancy were found during the survey. The nearest occurrence of nesting burrowing owls in the CNDDB (2011) search area is approximately 3 miles east of the site.
Tricolored blackbird	*Agelaius tricolor*	None	SC	N/A	Requires open water and protected nesting substrate, usually cattails and riparian scrub with surrounding foraging habitat.	Unlikely: no tricolored blackbirds or suitable nesting habitat were observed in the site. Marsh habitat further west in the slough and in the Calaveras River could potentially be used for nesting and grassland surrounding the slough are suitable for foraging. Tricolored blackbirds may occasionally fly over the site. The nearest occurrence of this species in the CNDDB (2011) search area is approximately 6 miles south of the site.
Mammals						
Riparian brush rabbit	*Sylvilagus bachmani riparius*	E	E	N/A	Riparian thickets in Stanislaus and southern San Joaquin Counties.	Unlikely: the ruderal grassland and dead-end slough do not provide suitable habitat for riparian brush rabbit. This species is not known from the Stockton and there are no recorded occurrences of this species in the CNDDB (2011) search area.

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
San Joaquin kit fox	*Vulpes macrotis mutica*	E	T	N/A	Inhabits open, dry grasslands and scrublands with loose textured soils.	Unlikely: there is no suitable habitat in the site for San Joaquin kit fox. This species is not known from the Stockton and there are no recorded occurrences of this species in the CNDDB (2011) search area.
Reptiles & Amphibians						
Giant garter snake	*Thamnophis gigas*	T	T	N/A	Freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches, primarily for dispersal or migration.	Unlikely: while it may occur in regional delta waterways, the shaded dead-end slough is not suitable habitat for this species. The Calaveras River is not listed in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJCOG, 2000) as potential habitat for giant garter snake. This species has not been reported anywhere near the site for decades; the nearest historical occurrence is a 1976 observation in the Stockton Diverting Canal, approximately 5.5 miles northeast of the site (CNDDB, 2011).
California red-legged frog	*Rana aurora draytonii*	T	SC	N/A	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Unlikely: there is no suitable habitat for California red-legged frog in or near the project site. California red-legged frog is also presumed extinct on the floor of the Central Valley of California. There are no recorded occurrences of this species in the CNDDB (2011) search area. The site is not within designated critical habitat for California red-legged frog (USFWS, 2006).
California tiger salamander	*Ambystoma californiense*	T	T	N/A	Seasonal water bodies without fish (i.e., vernal pools and stock ponds) and grassland/ woodland habitats with summer refugia (i.e., burrows).	Unlikely: There is no suitable habitat within or near the site for California tiger salamander. This species occurs in the transitional bands between the valley floor and foothills and is not currently known from the project vicinity. The only record of this species documented in the CNDDB (2011) within the 120+/- square-mile search area is an historical occurrence approximately 2 miles southeast of the site near Victory Park; this population is described as extirpated. The site is not within designated critical habitat for California tiger salamander (USFWS, 2005a).

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Western pond turtle	*Emys marmorata*	None	SC	N/A	Ponds, marshes, streams, and ditches with emergent aquatic vegetation and basking areas.	Unlikely: although it may occur in nearby waterways, the shaded dead-end slough is not suitable habitat for western pond turtle. The nearest documented occurrence of this species in the CNDDB (2011) search area is approximately 8 southwest of the site.
Fish						
Central Valley steelhead	*Oncorhynchus mykiss*	T	None	N/A	Riffle and pool complexes with adequate spawning substrates within Central Valley drainages.	Unlikely: although this species occurs in regional delta waterways on a seasonal basis, the dead-end slough is not suitable habitat for Central Valley steelhead. There are no occurrences of Central Valley steelhead recorded in the CNDDB (2011) within the search area. The Calaveras River is designated critical habitat for Central Valley steelhead (NOAA, 2005).
Winter-run Chinook salmon	*Oncorhynchus tshawytscha*	E	E	N/A	Deep flowing pools and riffle complexes with adequate spawning substrates; currently known only from the Sacramento River system.	Unlikely: although historically present in the San Joaquin River system, viable populations of winter-run Chinook salmon are currently restricted to the Sacramento River and some of its major tributaries. There are no occurrences of this species recorded in the CNDDB (2011) within the search area.
Spring-run Chinook salmon	*Oncorhynchus tshawytscha*	T	T	N/A	Deep flowing pools and riffle complexes with adequate spawning substrates; currently known only from the Sacramento River system.	Unlikely: although historically present in the San Joaquin River system, viable populations of spring-run Chinook salmon are currently restricted to the Sacramento River and some of its major tributaries. There are no occurrences of this species recorded in the CNDDB (2011) within the search area.

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Green sturgeon	*Acipenser medirostris*	T	SC	N/A	Freshwater and saltwater habitats; spawn in freshwater rivers.	Unlikely: although this species occurs in regional delta waterways on a seasonal basis, the dead-end slough is not suitable habitat for this species. There are no occurrences of green sturgeon recorded in the CNDDB (2011) within the search area.
Delta smelt	*Hypomesus transpacificus*	T	T	N/A	Shallow lower delta waterways with submersed aquatic plants and other suitable refugia.	Unlikely: although this species occurs in regional delta waterways on a seasonal basis, the dead-end slough is not suitable habitat for this species. Delta smelt is recorded in the CNDDB (2011) in the San Joaquin River, approximately 0.5 miles southwest of the site. The project site is within designated critical habitat for delta smelt (USFWS, 1994).
Invertebrates						
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	None	N/A	Vernal pools	Unlikely: there are no vernal pools in the site. There are no occurrences of vernal pool fairy shrimp recorded in the CNDDB (2011) within the search area. The site is not within designated critical habitat for vernal pool fairy shrimp or other listed branchiopods (USFWS 2005b).
Vernal pool tadpole shrimp	*Lepidurus packardi*	E	None	N/A	Vernal pools	Unlikely: there are no vernal pools in the site. There are no occurrences of vernal pool tadpole shrimp recorded in the CNDDB (2011) within the search area.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	T	None	N/A	Elderberry shrubs, usually in Central Valley riparian habitats.	Unlikely: no blue elderberry shrubs were observed within or adjacent to the project site. There are no occurrences of valley elderberry longhorn beetle recorded in the CNDDB (2011) in the search area.

1 T= Threatened; E = Endangered.

2 T = Threatened; E = Endangered; R = Rare; SC=State of California Species of Special Concern

3 CNPS List 1B includes species that are rare, threatened, or endangered in California and elsewhere; List 2 includes plants that are rare, threatened or endangered in California but are more common elsewhere.

table also includes an assessment of the likelihood of occurrence of each of these species within the project site.

SPECIAL-STATUS PLANTS: Twelve (12) species of special-status plants were identified in the CNDDB (2011) search: alkali milk-vetch (*Astragalus tener var. tener*), San Joaquin spearscale (*Atriplex joaquiniana*), water shield (*Brasenia schreberi*), round-leaved filaree (*California macrophyllum*), bristly sedge (*Carex comosa*), palmate-bracted bird's-beak (*Cordylanthus palmatus*), wooly rose mallow (*Hibiscus lasiocarpus*), delta tule pea (*Lathyrus jepsonii var. jepsonii*), Mason's lilaeopsis (*Lilaeopsis masonii*), Delta mudwort (*Limosella subulata*), Sanford's arrowhead (*Sagittaria sanfordii*), and Suisun marsh aster (*Symphotrichum lentum*) (Table 2). No special-status plant species are identified in the USFWS Species List (attached).

Special-status plants generally occur in relatively undisturbed areas and are largely found within unique vegetation communities such as chenopod scrub, vernal pools, marshes and swamps, and areas with unique soils. In contrast, the project site is a dead-end slough vegetated primarily with ornamentals and containing an existing storm drain outfall. The adjacent upslope ruderal grassland on the levee and around the pump house is highly disturbed and unremarkable.

Most of the species listed in Table 2 occur in marsh and swamp habitats. Wooly rose mallow is recorded in the CNDDB (2011) growing in the Calaveras River approximately 0.25 miles west of the site. Bristly sedge, Mason's lilaeopsis, delta mudwort, water shield, delta tule pea, Sanford's arrowhead, and Suisun marsh aster are recorded in the CNDDB (2011) growing in marsh and swamp habitats in delta waterways further from and primarily west of the site. The terminal end of the slough is a well-shaded riparian corridor supporting no marsh vegetation. Due to an absence of marsh or swamp habitat in the project site, it is unlikely anh of these delta marsh species occur in the site.

Round-leaved filaree occurs in cismontane woodland and annual grassland habitats. However, the disturbed upland grassland in the site is routinely disked, mowed, and/or sprayed. This highly disturbed upland grassland habitat does not provide suitable habitat for special-status plants. San Joaquin spearscale occurs in seasonal alkali wetlands in chenopod scrub, alkali meadow, and valley and foothill grassland habitats; there is no suitable habitat in the site for this species. Palmate-bracted bird's-beak occurs in chenopod scrub and valley and foothill grassland habitats; there is also no suitable habitat in the site for this species. Finally, alkali milk-vetch is a vernal pool species; there are no vernal pools in the site. Due to a lack of habitat and associated high levels of disturbance, it is unlikely any special-status plant species occur in the site.

SPECIAL-STATUS WILDLIFE: The potential for intensive use of habitats within the project site by special-status wildlife species is also generally considered low. Special-status wildlife species recorded in greater project vicinity in the CNDDB (2011) include Swainson's hawk, burrowing owl, tricolored blackbird (*Agelaius tricolor*), giant garter snake (*Thamnophis gigas*), western pond turtle (*Emys marmorata*), California tiger salamander (*Ambystoma californiense*), western pond turtle (*Emys marmorata*), and delta smelt (*Hypomesus transpacificus*). The remaining species in Table 2 are not recorded in the CNDDB within the 120+/- square mile search area (i.e., the Stockton West and Holt topographic quadrangles) but are on the USFWS Species List for the area.

Swainson's hawk, burrowing owl, tricolored blackbird, and other bird species protected by the Migratory Bird Treaty Act have potential to occur in or near the project site and could be adversely affected by site construction if they nested in or near the work areas during construction.

SWAINSON'S HAWK: The Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species. The Migratory Bird Treaty Act and Fish and Game Code of California protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15).

Swainson's hawk are found in the Central Valley primarily during their breeding season, a population is known to winter in the San Joaquin Valley.

Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their nest territories by late August.

No Swainson's hawks were observed during the 2011 survey, which was undertaken near the tail end of the Swainson's hawk nesting season. The ruderal grasslands in the site only provide moderate quality foraging habitat for Swainson's hawks and many of the trees along the slough are too small for raptor nesting. A few relatively larger trees along the slough and even larger trees in the greater project vicinity are more suitable for nesting Swainson's hawks. There are a few records of nesting Swainson's hawks in the project vicinity; the nearest occurrence of this species recorded in the CNDDB (2011) search area is approximately 0.5 miles south of the site.

OTHER SPECIAL-STATUS SPECIES: Due to location of the site, lack of habitat, and high levels of disturbance, the project site does not provide suitable habitat for other special-status wildlife species identified in the CNDDB search or included in the USFWS Species List. Most of the species in Table 2 only occur in unique or uncommon habitat types not found on the site. For example, vernal pools or stock ponds lacking fish are required for California tiger salamander (*Ambystoma californiense*); these habitats are not present in the project site. California red-legged frog (*Rana aurora draytonii*) requires perennial aquatic habitat, but is presumed extinct on the floor of the Central Valley of California.

The site is outside the known range of some of the other species in Table 2. For example, San Joaquin kit fox (*Vulpes macrotis mutica*) and the riparian brush rabbit (*Sylvilagus bachmani riparius*) have never been found near Stockton.

The slough and annual grassland in the site are highly disturbed and provide very marginally suitable habitat for giant garter snake; however, there is no marsh or swamp habitat in the slough at the outfall site and no areas for basking. Further, the CNDDB (2011) contains only one occurrence of giant garter snake within the search area, a single 1976 observation in the Stockton Diverting Canal, over 5 miles east of the site. However, when follow-up surveys were conducted by CDFG at this location over a three-day period in 1995, no giant garter snakes were observed and the habitat was rated only as "fair" (Hansen, 1995). Within the search area, the CNDDB contains no other occurrences of giant garter snake. While habitats within the on-site tidal slough and along the Calaveras River are suitable for giant garter snake, the likelihood of occurrence of this species in the project site is considered low, as it has not been documented in the greater project vicinity.

Delta smelt (*Hypomesus transpacificus*), green sturgeon (*Acipenser medirostris*), Chinook salmon (*Oncorhynchus tshawytscha*), and Central Valley steelhead (*Oncorhynchus mykiss*) are fish that occur in the San Joaquin River system on a seasonal basis and some of these species may occur in the Calaveras River on occasion. However, the shaded dead-end slough in the project site does not provide suitable spawning habitat for any of these special-status fish species.

Finally no other unique or biologically important habitat types were observed in the project site. There are no blue elderberry shrubs on site, precluding the occurrence of the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). There are no vernal pools or seasonal wetlands to support vernal pool fairy shrimp (*Branchinecta lynchi*) or vernal pool tadpole shrimp (*Lepidurus packardi*).

Discussion, Conclusions and Recommendations

- The project site is an existing pump station, a highly disturbed dead-end slough, and grassland vegetated with ruderal grasses and weeds.

- The tributary slough to Calaveras River is the only jurisdictional Water of the U.S. in the site. There are no vernal pools, seasonal wetlands, marshes, ponds, or lakes of any type within or immediately adjacent to the project site.

- Work within jurisdictional Water of the U.S. in the site should be limited to the minimum necessary to complete the construction. The project will involve a small amount of work (less than 0.01 acres) within jurisdictional waters of the U.S. associated with installation of the energy dissipater box in the dead-end slough. Therefore, wetland permits and/or certification will need to be obtained from ACOE, CDFG, the State Lands Commission and RWQCB prior to placement of any fill (e.g., fill dirt, rock, concrete) in the slough.

- In order to minimize potential adverse impacts to special-status fish, the permitting agencies are expected to limit the in-water work period to August 1 through October 31, when delta smelt, green sturgeon, Chinook salmon, and Sacramento Valley steelhead are least likely to be in downstream waterways.

- On-site mitigation for loss of waters of the U.S. is impractical due to the minor acreage of needed mitigation and costs of constructing, maintaining, and monitoring a mitigation site. If mitigation is required by ACOE, off-site mitigation at an agency-approved wetland mitigation bank is recommended.

- Due to a lack of suitable habitat, it is unlikely any special-status plants occur in the site.

- With the exception of Swainson's hawk, no special-status wildlife species are expected to occur in the project site on more than a very occasional or transitory basis.

- Pre-construction surveys for nesting Swainson's hawks within 0.25 miles of the site are recommended for construction activities between March 1 and September 15. The surveys shall incorporate methodologies from CDFG's 1994 Staff Report regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California and the Swainson's Hawk Technical Advisory Committee (SHTAC) survey guidelines (SHTAC, 2000). If active nests are found, a qualified biologist should determine the need (if any) for temporal restrictions on construction.

- Trees and shrubs within the site could be used by other birds protected by the Migratory Bird Treaty Act of 1918. The grasslands may be used by ground-nesting species. Any vegetation removal during the avian nesting season (February 1 through August 31) shall be immediately preceded by survey. If active nests are found, adequate marking of the nest site shall be provided and vegetation removal in the vicinity of the nest shall be delayed until the young fledge.

Thank you, again, for asking Moore Biological Consultants to assist with the project. Please feel free to call me at (209) 745-1159 with any questions.

Sincerely,

Diane S. Moore, M.S.
Principal Biologist

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Existing pump station, looking northwest; 06/21/11.

Existing pipes daylighting through the levee at the east tip of the slough, looking west; 06/21/11.

Slough just downstream (west) of the existing outfall, looking northwest; 06/21/11.

Existing pipes daylighting through the levee at the east tip of the slough, looking northeast; 06/21/11.

Outfall location, looking northwest and down into the slough from the south bank; 06/21/11.

Outfall location, looking souhtwest and down into the slough from the north bank; 06/21/11.

APPENDIX B
MARIANNA ESTATES GOETECHNICAL STUDY

KLEINFELDER
An employee owned company

File No. 31263.G01
June 13, 2003

Mr. Wayne Bruns
Willow Equities
1783 Hester Avenue
San Jose, CA 95128

Mr. George Putnam
Pacific Mountain Partners, LLC
2410 San Ramon Valley Blvd., Suite 23
San Ramon, CA 94583

Subject: **ADDITIONAL GEOTECHNICAL SERVICES REPORT**
PROPOSED MARIANNA ESTATES SUBDIVISION
STOCKTON, CALIFORNIA

Dear Messrs. Bruns and Putnam:

Kleinfelder is pleased to present the results of our additional geotechnical services performed for the proposed Marianna Estates subdivision to be located between Rainier and Wisconsin Avenues in Stockton, California. The accompanying report includes background information regarding the anticipated construction, the purpose of our services, and scope of services provided. In addition, discussions regarding our investigative procedures and the site conditions encountered during our field exploration are presented. Finally, geotechnical conclusions and recommendations are provided for project design and construction. The appendix of the report includes logs of borings and a summary of laboratory tests. We have also included an information sheet published by ASFE. Our firm is a member of ASFE, and we feel this sheet will help you better understand geotechnical engineering reports.

We appreciate the opportunity of providing our services for this project. If you have questions regarding this report or if we may be of further assistance, please contact our office.

Respectfully submitted,

KLEINFELDER, INC.

REGISTERED PROFESSIONAL ENGINEER PATRICK CRAIG DELL No. 2186 Exp. 3-31-04 GEOTECHNICAL STATE OF CALIFORNIA

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PLATE NO. 1 – VICINITY AND BORING LOCATION MAP

APPENDIX A – LOGS OF BORINGS AND SUMMARY OF LABORATORY TESTING

APPENDIX B – NOVEMBER 21, 2001 GEOTECHNICAL INVESTIGATION REPORT

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ADDITIONAL GEOTECHNICAL SERVICES REPORT
PROPOSED MARIANNA ESTATES SUBDIVISION
STOCKTON, CALIFORNIA

1. INTRODUCTION

In this report we present the results of our additional geotechnical services performed for the proposed Marianna Estates subdivision to be located between Rainer and Wisconsin Avenues in Stockton, California. The site location relative to existing streets is shown on Plate 1.

We refer to our original geotechnical investigation report prepared for this project dated November 27, 2001, File No. 20-4660-01.G01. The original geotechnical investigation report was prepared to address design considerations for development of the subdivision with regards to foundation design, general grading, etc. Since the preparation of this report, additional design considerations have been developed as part of the project. These include plans to move the top of the levee towards the Calaveras River, raise the grade along the Calaveras River, and dredge the existing Calaveras River inlet within the subdivision site. We understand that no structures are planned to be constructed on this new fill. In addition, a bridge will be constructed to provide access over the inlet. A separate report is being prepared for the design of the bridge foundations and abutments and will be submitted under separate cover.

Grading plans provided by Thompson Hysell Engineers and MBK Engineers indicate that up to approximately 7 feet of engineered fill will be added to the existing bench along the Calaveras River. This bench is located 4 to 6 feet above the normal river elevation. The width of the fill will vary from 5 to 50 feet. The fill will be added in order to raise the grade along the Calaveras River sufficiently to provide for the minimum required freeboard of 3 feet above the design 100-year flood event. We understand that this project will not be reviewed by the Federal Emergency Management Agency (FEMA) since no change to the flood insurance map for this area is being proposed. The new fill will be tied into the existing fill that makes up the levee providing flood protection for this area at the present time. The inlet will be dredged to provide access for boats to the Calaveras River.

The additional riverside fill will be constructed with a 3h:1v (3 horizontal to 1 vertical) waterside slope up to the proposed levee crown elevation. From the crown elevation, the fill will extend horizontally until tying into the existing levee. Landside slopes will not be constructed since the fill will tie into the existing slope. The waterside slope of the dredged inlet will be 2:1 up to the top of slope. The top of slope on the east side of the inlet will be dredged from 10 to 50 feet to widen the inlet. The depth of dredging will be between approximately 5 to 9 feet in the bottom of the inlet.

A plot plan showing the proposed subdivision layout is presented on Plate 1. The grading plans prepared by MBK Engineers and Thompson Hysell Engineers should be reviewed for more details regarding the grading plan for this project. In the event these grading details are

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inconsistent with the final design criteria, our firm should be contacted prior to final design in order that we may update our recommendations as needed.

2. PURPOSE AND SCOPE OF SERVICES

The purpose of our services was to explore and evaluate the subsurface conditions at various locations within the project boundaries along the Calaveras River and the inlet in order to develop recommendations related to the geotechnical aspects of levee project design and construction.

The scope of our services was outlined in our proposal dated June 2, 2003 (Proposal No. STO3P193) and included the following:

- A visual site reconnaissance to investigate the surface conditions at the project site;
- A field investigation that consisted of drilling borings and performing Cone Penetrometer Tests (CPT's) within the areas of the proposed levee fill and dredging to explore the subsurface conditions along the Calaveras River and inlet;
- Laboratory testing of representative samples obtained during the field investigation to evaluate relevant physical and engineering parameters of the subsurface soils;
- Evaluation of the data obtained and an engineering analysis to develop our geotechnical conclusions and recommendations;
- Preparation of this report which includes:
  - A description of the proposed project;
  - A description of the field and laboratory investigations;
  - A description of the surface and subsurface conditions encountered during our field investigation;
  - Conclusions and recommendations related to the geotechnical aspects of:
    - Levee fill construction and slope stability;
    - Dredged inlet slope stability;
    - General levee earthwork addressing site preparation, fill materials, engineered fill, temporary excavations, permanent slopes, and wet/unstable subgrade mitigation.
  - An appendix that includes logs of borings, a summary of laboratory tests, and a copy of the original geotechnical investigation report prepared for this project by Kleinfelder.

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3. FIELD AND LABORATORY INVESTIGATIONS

Field Investigation

The subsurface conditions at the site were explored from June 4 through 6, 2003, by drilling five borings and performing two Cone Penetrometer Tests (CPT's) to depths ranging from about 31.5 to 71.5 feet below existing grade. The borings were drilled using a Failing truck-mounted drill rig utilizing mud-rotary drilling techniques.

The CPT's were performed by hydraulically pushing a 1.4-inch diameter electric cone penetrometer into the subsurface soils using an enclosed truck-mounted ram system. During penetration the cone or tip resistance and sleeve friction resistance was recorded on a nearly continuous basis to the maximum depth of exploration. Based on published correlations, the data obtained was used to estimate stratigraphy, soil type, groundwater depth, and in situ soil parameters, such as shear strength and standard penetration (N) values.

The approximate boring and CPT locations are presented on Plate 1.

During the drilling operations, penetration tests were performed in accordance with ASTM D-1586 at regular intervals using a Modified California Sampler to evaluate the relative density of coarse-grained (cohesionless) soil and to retain soil samples for laboratory testing. The penetration tests were performed by initially driving the sampler 6 inches into the bottom of the bore hole using a 140 pound trip-hammer falling 30 inches to penetrate loose soil cuttings and "seat" the sampler. Thereafter, the sampler was progressively driven an additional 12 inches, with the results recorded as the corresponding number of blows required to advance the sampler 12 inches, or any part thereof. A pocket penetrometer was used to evaluate the consistency of fine-grained (cohesive) soil samples retained. In the absence of pocket penetrometer test results, the consistency of fine-grained soils was estimated from penetration tests. In addition, several samples were obtained by hydraulically pushing thin-walled Shelby tubes into the soils. An engineer with our firm maintained a log of the borings and visually classified the soils encountered according to the Unified Soil Classification System (see Plate A-1 of Appendix A). Soil samples obtained from the borings were packaged and sealed in the field to reduce moisture loss and disturbance and brought to our Stockton and Pleasanton laboratories for testing.

A key to the Logs of Borings is presented on Plate A-2 of Appendix A. The Logs of Borings for our current explorations are presented on Plates 3 through A-7 of Appendix A. A soil behavior type classification chart and our CPT results (including measured tip resistance, sleeve friction and interpreted soil profiles) are presented on Plates A-9 through A-11 of Appendix A. Please note the borings and CPT's were located in the field by visual sighting and/or pacing from existing site features. Therefore, the location of borings and CPT's shown on Plate 1 should be considered highly approximate and may vary from that indicated on the plate.

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Laboratory Investigation

Laboratory tests were performed in accordance with current ASTM standards on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory testing program was formulated with emphasis on the evaluation of natural moisture content, in-place density, grain-size distribution, plasticity, consolidation potential, and undrained shear strength of the materials encountered.

The results of laboratory tests are summarized on Plates A-9 and A-12 through A-19 in Appendix A. This information, along with the field observations, was used to prepare the final test boring logs.

4. SITE CONDITIONS

Surface Conditions

At the time of our field explorations, several sheds were located on the waterside bench along the Calaveras River. There are numerous trees and heavy concentrations of shrubs and bushes along the river in this area. Several dirt roads leading from the top of the existing levee to the bench provide vehicular access for house boats docked along this section of river. Overhead utilities running to these structures were observed. Access to the entire section was somewhat limited due to the trees and bushes. The bench is situated 4 to 6 feet above normal river elevation.

Heavy weeds were present along the top of the inlet at the time of our field explorations. A field with a moderate to heavy growth of weeds was present on both sides of the top of the inlet. Numerous large trees were present portions of the inlet. Pipes from a nearby pump station were located near the southwest corner of the inlet. The sides of the inlet were covered with a heavy growth of weeds and bushes that extended to the bottom of the inlet. Water in the inlet is controlled by tidal fluctuations with the inlet being dry part of the time.

The locations of underground utilities in the area of our field explorations are unknown.

Subsurface Conditions

Based on our findings, the subsurface soils encountered in borings B-1 and B-2 along the Calaveras River consisted predominately of soft to hard sandy clay. These soils extended to depths of approximately 4 to 6 feet below existing site grade. In boring B-1, the surface soils were underlain by very loose clayey sand and very soft silty and sandy clay and soft organic silt, clay and peat. These soils extended to a depth of approximately 22 feet below site grade. Below the peat soils, medium stiff to stiff silty and sandy clay and loose clayey sand extended to the maximum depth explored of 41.5 feet.

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In boring B-2, the surface soils were underlain by very loose to medium dense clayey and silty sand that extended to a depth of 18 feet below the existing site grade. The sands were underlain by very soft to very stiff sandy clays that extended to a depth of approximately 38.5 feet below existing site grade. These clays were underlain by loose to medium dense clayey and silty sands that extended to the maximum depth explored of 46.5 feet below existing site grade.

In boring B-3, the surface soils consisted of medium dense silty sand that appeared to be fill soils that extended to a depth of approximately 3 feet below site grade. The silty sand extended to a depth of approximately 7 feet below site grade. The sands were underlain by stiff to hard sandy clay that extended to a depth of approximately 21.5 feet below site grade. The clay was underlain by interbedded strata of silty sand and very stiff sandy clay that extended to the maximum depth explored of 31.5 feet below existing site grade.

The subsurface soil conditions along the existing inlet consisted predominately of very stiff to hard sandy clay that extended to depths of 3.5 to 5 feet below existing site grade. In boring B-4, the surface clays were underlain by interbedded layers of very soft to very stiff silty and sandy clay that extended to a depth of approximately 16.5 below existing site grade. The clay was underlain by a layer of medium stiff organic silt that extended to a depth of 24 feet below site grade. The organic silt was underlain by soft to stiff silty and sandy clay that extended to a depth of 43.5 feet below existing site grade. The clay was underlain by interbedded layers o f medium dense to very dense silty sand and hard sandy clay that extended to the maximum depth explored of 71.5 below existing site grade.

In boring B-5, the surface clay soil was underlain by a layer of clayey gravel and sandy clay with gravel that are probably fill. These soils extended to a depth of 10 feet below existing site grade. They were underlain by a layer of medium stiff organic clay that extended to a depth of approximately 13.5 feet below existing site grade. This soil was underlain by interbedded layers of very soft to hard silty and sandy clay and loose to dense clayey and silty sand that extended to the maximum depth explored of 71.5 feet below existing site grade.

Based on soil correlation charts, the soils encountered in the two CPT's appear to be consistent with those encountered in our borings.

Due to the drilling technique used to advance our borings, the test borings were not checked for the presence of groundwater during drilling operations. Groundwater is anticipated to be present at depths of approximately 10 feet below the top of the bench where the borings were drilled. It should be noted that groundwater elevations and soil moisture conditions within the project area will vary depending on seasonal rainfall, irrigation practices, land use, and/or river conditions not apparent at the time of our field investigation. The evaluation of such factors is beyond the scope of this investigation.

Detailed descriptions of the subsurface conditions encountered during our field investigation are presented on the Logs of Borings and CPT's, Plates A-3 through A-11 of Appendix A.

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5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Slope Stability Analysis

A slope stability analysis of both the proposed fill along the Calaveras River and the dredged inlet slope was performed. The computer program SLOPE/W was utilized to perform this analysis. Each of the conditions analyzed and the soil parameters used are discussed in the following subsections.. The results of our computer slope stability analysis are included in Appendix A.

Calaveras River Levee

It is proposed to add up to 7 feet of fill along the Calaveras River in order to raise the grade to provide for more building space within the subdivision project while still providing100-year flood protection. The width of the fill will vary from almost nothing where the east and west ends tie into the existing levee up to 40 or 50 feet within the middle portion of the project site. The waterside slope will be constructed at a 3:1 slope up to the levee crown elevation. Then the fill will extend horizontally to tie into the existing slope.

We performed our analysis in accordance with the Army Corps of Engineers (COE) Design Manual 1910, "Design and Construction of Levees." This manual indicates that several conditions need to be analyzed for slope stability. These conditions include end of construction, long-term or steady state, and sudden drawdown. The analysis for sudden drawdown in applicable only to dams or levees where a rapid draining of the pool can cause drastic changes in the soil conditions. In the San Joaquin Delta area, the possibility of a true "rapid drawdown" condition is very remote. Therefore, our analysis was performed considering a drawdown from 100-year flood elevation to mean low water elevation. In addition, an analysis for seismic stability was also performed. The design manual indicates minimum factors of safety that must be met based on these conditions.

In our analysis of the area along the Calaveras River, we used data from our recent field explorations and laboratory tests along with data and experience from our analysis and construction of the Brookside development levee across the Calaveras River from the Marianna Estates project. We have been involved with the Brookside project for over 15 years. We were the project geotechnical engineers that performed the analysis as part of the FEMA process to remove that site from within the 100-year flood zone.

The following table presents the soil parameters used in our analyses.

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SOIL PROPERTIES

Soil Type		ϕ' (degrees)	c' (psf)	Undrained Shear Strength (psf)	Moist Unit Weight (pcf)
I.	Fill Soils	32	100	-	120
II.	Clayey Sand	30	50	-	110
III.	Organic Soils	22	300	500	80
IV.	Silty to Sandy Clay	28	300	500	110
V.	Clayey Sand	30	50	-	115
VI.	Silty Sand	34	25	-	115

Our analysis of the section along the Calaveras River with up to 7 feet of engineered fill indicates that the proposed section will provide factors of safety that exceed the COE requirements. The factors of safety are summarized in the following table.

FACTORS OF SAFETY – CALAVERAS RIVER

Condition	Computed Factor of Safety	Required Factor of Safety
End of construction	2.1	1.3
Long-term or steady state	2.2	1.4
Sudden drawdown	1.4	1.0
End of construction seismic	1.1	1.0

Dredged Inlet Section

It is proposed to dredge out the existing inlet to provide for boat access to the Calaveras River. This dredging will involve dredging the bottom and sides of the inlet. The bottom will be dredged from 7 to 9 feet deep. The east side of the inlet will be widened by 20 to 45 feet. The new slope on the east side will be dredged at a 2:1 slope. Our analysis of this section was performed the same as was the analysis for the section along the Calaveras River with the exception that an analysis of end of construction was not performed. The reason for this is that the slope is being constructed by dredging and not placement and compaction of new fill. Therefore, an end of construction condition will not exist for this section of the project.

Our analysis of the dredged slope of the inlet indicates that the slope will be stable with factors of safety for general slope failure that exceed the requirements of the COE design manual. These are summarized in the following table.

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FACTORS OF SAFETY – INLET

Condition	Computed Factor of Safety	Required Factor of Safety
Long-term or steady state	2.2	1.4
Sudden drawdown	1.9	1.0
Steady-state seismic	1.5	1.0

5.2 Settlement

Construction of the engineered fill on the bench along the Calaveras River will cause some settlement of the underlying soils to occur. Based on our laboratory test results, our experience with similar soil conditions in the area, and assumptions regarding the unit weight of the engineered fill that will be used to construct the new levee, we estimate that settlement under 7 feet of fill could vary from approximately 3 to 6 inches. We estimate that the time for this settlement to occur will be approximately 3 to 4 months after the placement of the fill.

5.3 General Earthwork

The following presents recommendations for general earthwork criteria.

5.3.1 Site Stripping

Prior to general levee grading, surface vegetation, trees, bushes, organic topsoil and any debris should be removed and disposed of outside the construction limits. Deep stripping may be required where concentrations of organic soils or tree roots are encountered during site grading. As a minimum, the upper six inches of existing subgrade should be stripped from the area of levee fill. The exposed subgrade should then be scarified a minimum of 6 inches, moisture conditioned, and compacted as engineered fill. The depth of stripping and/or discing should be determined in the field by a representative of Kleinfelder prior to earthwork.

Although not encountered or identified during our investigation, it is possible that buried objects such as abandoned utility lines, septic tanks, cesspools, wells, foundations, etc., may exist on site. If encountered within the area of construction, these items should be removed and disposed of off-site. Existing wells should be abandoned in accordance with applicable regulatory requirements. Existing utility pipelines that extend beyond the limits of the proposed construction and will be abandoned in-place should be plugged with cement grout to prevent migration of soil and/or water. All excavations resulting from removal activities should be cleaned of loose or disturbed material and dish-shaped with sides sloped 3(h):1(v) or flatter to permit access for compaction equipment.

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5.3.2 Temporary Excavations

Construction site safety generally is the sole responsibility of the Contractor, who shall also be solely responsible for the means, methods, and sequencing of construction operations. The Contractor should be aware that slope height, slope inclination, or excavation depths (including utility trench excavations) should in no case exceed those specified in local, state, and/or federal safety regulations (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations). Flatter slopes and/or trench shields may be required if loose, cohesionless soils and/or water are encountered along the slope face. Heavy construction equipment, building materials, excavated soil, and vehicular traffic should not be allowed within a lateral distance equal to 1/3 the slope height from the top of any excavation. During wet weather, earthen berms or other methods should be used to and/or prevent runoff water from entering all excavations. All runoff water, seepage groundwater encountered within excavations should be collected and disposed of outside the construction limits.

5.3.3 Fill Materials

All native and import fill soils for the levee should be nearly free of organic or other deleterious debris and less than 3 inches in maximum dimension. In general, mixtures of silt and clay with some sand are acceptable for use as import fill. All imported fill materials to be used for engineered fill should be sampled and tested by the project Geotechnical Engineer prior to being transported to the site. Specific requirements for import fill are provided below.

Gradation (ASTM C136)	
Sieve Size	**Percent Passing**
3-inch	100
No. 4	70-100
No. 200	30 minimum
Plasticity (ASTM D4318)	
Liquid Limit	**Plasticity Index**
Less than 45	Greater than 8
Organic Content (ASTM D2974)	
Less than 3 percent	

5.3.4 Engineered Fill

All fill soils, either native or imported, required to bring the site to final grade should be compacted as engineered fill. Fill soils or native soil composed of silts, and clays and import fill should be uniformly moisture conditioned to between 2 and 4 percentage points above the optimum moisture content, placed in horizontal lifts less than 8 inches in loose thickness, and compacted to at least 90 percent of the maximum dry density as determined by ASTM Test

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Method D 1557[1]. Additional fill lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable. Discing and/or blending may be required to uniformly moisture condition soils used for engineered fill.

Since very soft soils were encountered along the Calaveras River, it is our opinion that the rate of fill placement should be limited to only 2 to 3 feet per day. Placement of fill at a faster rate may cause the soil pore pressures to increase and thereby cause a decrease in effective shear strength. This could weaken the soils and cause failure of the levee. We recommend that the pore pressure be monitored by pneumatic or vibrating wire piezometers placed within the soft soils. If the fill placement causes a significant increase in pore pressure, fill placement should stop on that section until the pore pressure dissipates back to within ten percent of the initial pore pressure. If the measurements indicate that the pore pressures have not increased significantly, fill placement can continue. Based on our previous experience with similar soils, we anticipate one to two days for the pore pressure to dissipate.

5.3.5 Wet/Unstable Subgrade Mitigation

Since grading along the Calaveras River and the inlet will not be permitted during the flood season, roughly from October to April, we anticipate that if site grading is performed early in the spring during or following extended periods of rainfall, the moisture content of the near-surface soils may be significantly above optimum. This condition, if encountered, could seriously delay grading by causing an unstable subgrade condition. Typical remedial measures include discing and aerating the soils during dry weather, mixing the soils with dryer materials, or removing and replacing the soils with approved fill material. Our firm should be consulted prior to implementing any remedial measure to observe the unstable subgrade condition and provide site-specific recommendations.

5.4 Construction Monitoring

Since the soils encountered in our test borings vary from very soft to stiff, in our opinion the rate of fill placement should be limited to reduce the potential for increasing the soil pore pressure and thus reducing the effective shear strength of the soils. This could cause failure of the levee. Pneumatic or vibrating wire piezometers should be installed into the weak and soft soil layers encountered between depths of 10 and 20 feet below the existing bench. Three piezometers situated along the river should be sufficient to provide data for fill placement.

In addition to the piezometers, settlement monitors should be installed. These should be installed during construction and monitored twice a week for the first two weeks after fill placement, then once a week for the next two weeks, and monthly thereafter until the settlement has stopped or the rate of settlement has decreased to insignificant. Two or three settlement stations should be sufficient.

[1] *This test procedure should be used wherever relative compaction, maximum dry density, or optimum moisture content is referenced within this report.*

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5.5 Liquefaction Potential Analysis

An analysis of the potential for liquefaction will be submitted under separate cover.

5.6 Erosion Protection

We understand from Thompson Hysell Engineers that flow velocities along the Calaveras River during the 100-year flood event are estimated to be between 4 and 6 feet per second. Based on the COE design manual and based on our experience with numerous other levees in the Stockton area, riprap protection may be needed if erosion occurs.

During construction, we recommend that the river be protected from soil erosion on the site by the use of silt fences embedded a minimum of 6 inches into the existing slope. We also recommend that grading be performed to keep the slopes graded back to the site and not towards the river or inlet in an effort to reduce the potential for runoff to flow into the river. If grading operations are suspended during the rainy season, we recommend construction of earthen berms along the tops of slopes to reduce the potential for runoff into the river.

6. ADDITIONAL SERVICES

The review of plans and specifications, field observations, and testing by Kleinfelder, Inc. is an integral part of the conclusions and recommendations made in this report. If Kleinfelder, Inc. is not retained for these services, the client agrees to assume Kleinfelder, Inc.'s responsibility for any potential claims that may arise during construction. The actual tests and observations by Kleinfelder, Inc. during construction will vary depending on type of project and soil conditions. The tests and observations would be additional services provided by our firm. The costs for these services are not included in our current fee arrangements.

As a minimum, our construction services should include observation and testing during site preparation, grading, and placement of engineered fill.

7. LIMITATIONS

1. The conclusions and recommendations of this report are for design purposes for the design and construction of the levee fill and dredging portion of the Marianna Estates Subdivision project as described in the text of this report. The conclusions and recommendations in this report are invalid if:

    - The assumed grading details change
    - The report is used for adjacent or other property

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- Changes of grades and/or groundwater occur between the issuance of this report and construction

- Any other change is implemented which materially alters the project from that proposed at the time this report was prepared

2. The conclusions and recommendations in this report are based on the borings drilled and CPTs performed for this investigation. It is possible that variations in the soil conditions exist between or beyond the points of exploration, or the groundwater elevation may change, both of which may require additional investigations, consultation, and possible design revisions.

3. We are not corrosion engineers. A competent corrosion engineer should be retained to design corrosion protection systems appropriate for the project.

4. This report was prepared in accordance with the generally accepted standard of practice that existed in San Joaquin County at the time the report was written. No warranty, expressed or implied, is made.

5. It is the CLIENT'S responsibility to see that all parties to the project, including the designer, contractor, subcontractor, etc., are made aware of this report in its entirety.

6. This report may be used only by the client and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both on site and off site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify Kleinfelder, Inc. of such intended use. Based on the intended use of the report, Kleinfelder, Inc. may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder, Inc. from any liability resulting from the use of this report by any unauthorized party.

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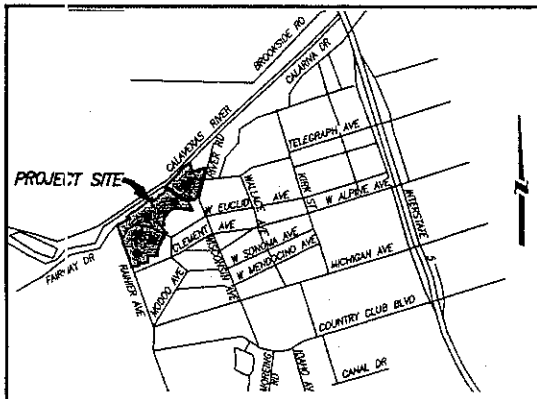
B-1 DENOTES NUMBERS AND APPROXIMATE LOCATIONS OF BORINGS DRILLED FOR THIS INVESTIGATION

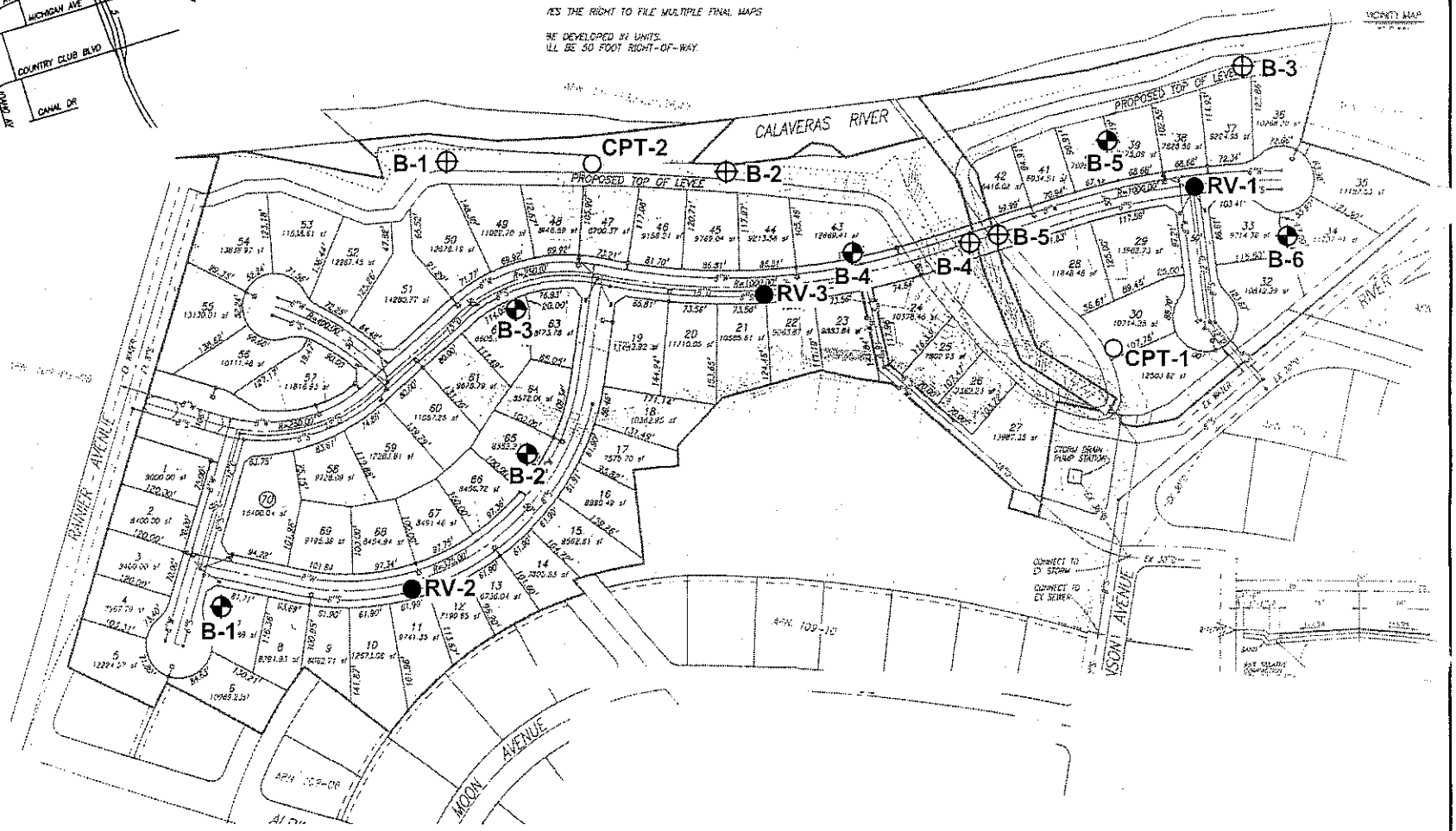
CPT-1 DENOTES NUMBERS AND APPROXIMATE LOCATIONS OF CPT TESTS PERFORMED FOR THIS INVESTIGATION

B-1 DENOTES NUMBERS AND APPROXIMATE LOCATIONS OF BORINGS DRILLED FOR NOV. 27, 2001 INVESTIGATION

RV-1 DENOTES NUMBERS AND APPROXIMATE LOCATIONS OF RESISTANCE VALUE TESTS PERFORMED FOR NOV. 27, 2001 INVESTIGATION



VICINITY MAP



NOT TO SCALE

KLEINFELDER

DATE PRODUCED:6/13/2003	DATE REVISED:
PROJ. NO.:31263.G01	FILENAME:STO3D472.FH9

VICINITY AND BORING LOCATION MAP
PROPOSED MARIANNA SUBDIVISION
STOCKTON, CALIFORNIA

PLATE No.

1

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File No. 31263.G01
August 19, 2003

Mr. Wayne Bruns
Willow Equities
1783 Hester Avenue
San Jose, CA 95128

Mr. George Putnam
Pacific Mountain Partners, LLC
2410 San Ramon Valley Blvd., Suite 23
San Ramon, CA 94583

Subject: **ADDENDUM TO ADDITIONAL GEOTECHNICAL SERVICES REPORT PROPOSED MARIANNA ESTATES SUBDIVISION STOCKTON, CALIFORNIA**

Dear Messrs. Bruns and Putnam:

This is an addendum to the Additional Geotechnical Services Report prepared for the Marianna Estates subdivision to be constructed in Stockton, California. We refer to the Additional Geotechnical Services Report prepared for this project dated June 13, 2003. In Section 5.6 of the referenced report, we stated that, "We understand from Thompson Hysell Engineers that flow velocities along the Calaveras River during the 100-year flood event are estimated to be between 4 and 6 feet per second. Based on the COE design manual and based on our experience with numerous other levees in the Stockton area, riprap protection may be needed if erosion occurs."

We note that the above section indicates "...riprap protection may be needed <u>if</u> erosion occurs." Based on discussions with Mr. Mark Fortner of MBK Engineers, who performed the hydraulic study for this project, the flow velocities in the middle of the Calaveras River are estimated to be between 4 and 6 feet per second. Velocities along the sides of the river are expected to be less, probably 2 to 4 feet per second. The levee in this section of the river is protected by vegetation with no riprap. The levee on the other side of the river is also protected by vegetation and no riprap and protects a residential development. In addition, no modifications to the levee below the 100-year flood elevation are planned. Therefore, it is our opinion that additional slope protection of this section of the levee is not warranted at this time. As stated above, if erosion does occur, the amount of erosion should be evaluated and additional slope protection provided if needed.

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KLEINFELDER 2825 East Myrtle Street, Stockton, CA 95205-4794 (209) 948-1345 (209) 948-0621 fax

We trust this letter provides the requested information. If you have any questions or need further assistance, please contact our office.

Respectfully submitted,

KLEINFELDER, INC.

Patrick C. Dell, G.E.
Senior Engineer

PCD:lr
1 fax c: Gary Rogers, Thompson Hysell

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KLEINFELDER 2825 East Myrtle Street, Stockton, CA 95205-4794 (209) 948-1345 (209) 948-0621 fax

APPENDIX C
EDR REPORT

Wisconsin Ave. Pump Station
Wisconsin Ave/River Road
Stockton, CA 95204

Inquiry Number: 3038742.2s
April 11, 2011

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

WISCONSIN AVE/RIVER ROAD
STOCKTON, CA 95204

COORDINATES

Latitude (North):	37.969700 - 37˚ 58' 10.9''
Longitude (West):	121.350900 - 121˚ 21' 3.2''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	644854.6
UTM Y (Meters):	4203530.5
Elevation:	5 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	37121-H3 STOCKTON WEST, CA
Most Recent Revision:	1987

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	2006, 2005
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ..... National Priority List Deletions

Federal CERCLIS list

CERCLIS ..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ..... State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Solid Waste Information System

State and tribal leaking storage tank lists

SLIC ..... Statewide SLIC Cases
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST ..... Active UST Facilities

EXECUTIVE SUMMARY

AST ..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land
FEMA UST ..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

VCP ..... Voluntary Cleanup Program Properties
INDIAN VCP ..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
ODI ..... Open Dump Inventory
WMUDS/SWAT ..... Waste Management Unit Database
SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
HIST Cal-Sites ..... Historical Calsites Database
SCH ..... School Property Evaluation Program
Toxic Pits ..... Toxic Pits Cleanup Act Sites
CDL ..... Clandestine Drug Labs
US HIST CDL ..... National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST ..... Facility Inventory Database
HIST UST ..... Hazardous Substance Storage Container Database
SWEEPS UST ..... SWEEPS UST Listing

Local Land Records

LIENS 2 ..... CERCLA Lien Information
LUCIS ..... Land Use Control Information System
LIENS ..... Environmental Liens Listing
DEED ..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
CHMIRS ..... California Hazardous Material Incident Report System
LDS ..... Land Disposal Sites Listing
MCS ..... Military Cleanup Sites Listing

Other Ascertainable Records

RCRA-NonGen ..... RCRA - Non Generators

EXECUTIVE SUMMARY

DOT OPS	Incident and Accident Data
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
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
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
CA BOND EXP. PLAN	Bond Expenditure Plan
WDS	Waste Discharge System
NPDES	NPDES Permits Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
Notify 65	Proposition 65 Records
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
HAZNET	Facility and Manifest Data
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
FINANCIAL ASSURANCE	Financial Assurance Information Listing
PCB TRANSFORMER	PCB Transformer Registration Database
PROC	Certified Processors Database
MWMP	Medical Waste Management Program Listing
COAL ASH DOE	Sleam-Electric Plan Operation Data

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
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.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

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 02/07/2011 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC SCHOOL Status: No Further Action	***3122 BROOKSIDE ROAD***	***NNW 1/2 - 1 (0.617 mi.)***	***2***	***7***

State and tribal leaking storage tank lists

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 02/03/2011 has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BROOKSIDE DEVELOPMENT	***BROOKSIDE RD W***	***NNW 1/4 - 1/2 (0.452 mi.)***	***1***	***7***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

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 approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
STOCKTON NAVAL COMMUNICATIONS		SW 1/2 - 1 (0.902 mi.)	0	7

EXECUTIVE SUMMARY

HIST 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 [CALSITES].

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.5 miles of the target property.

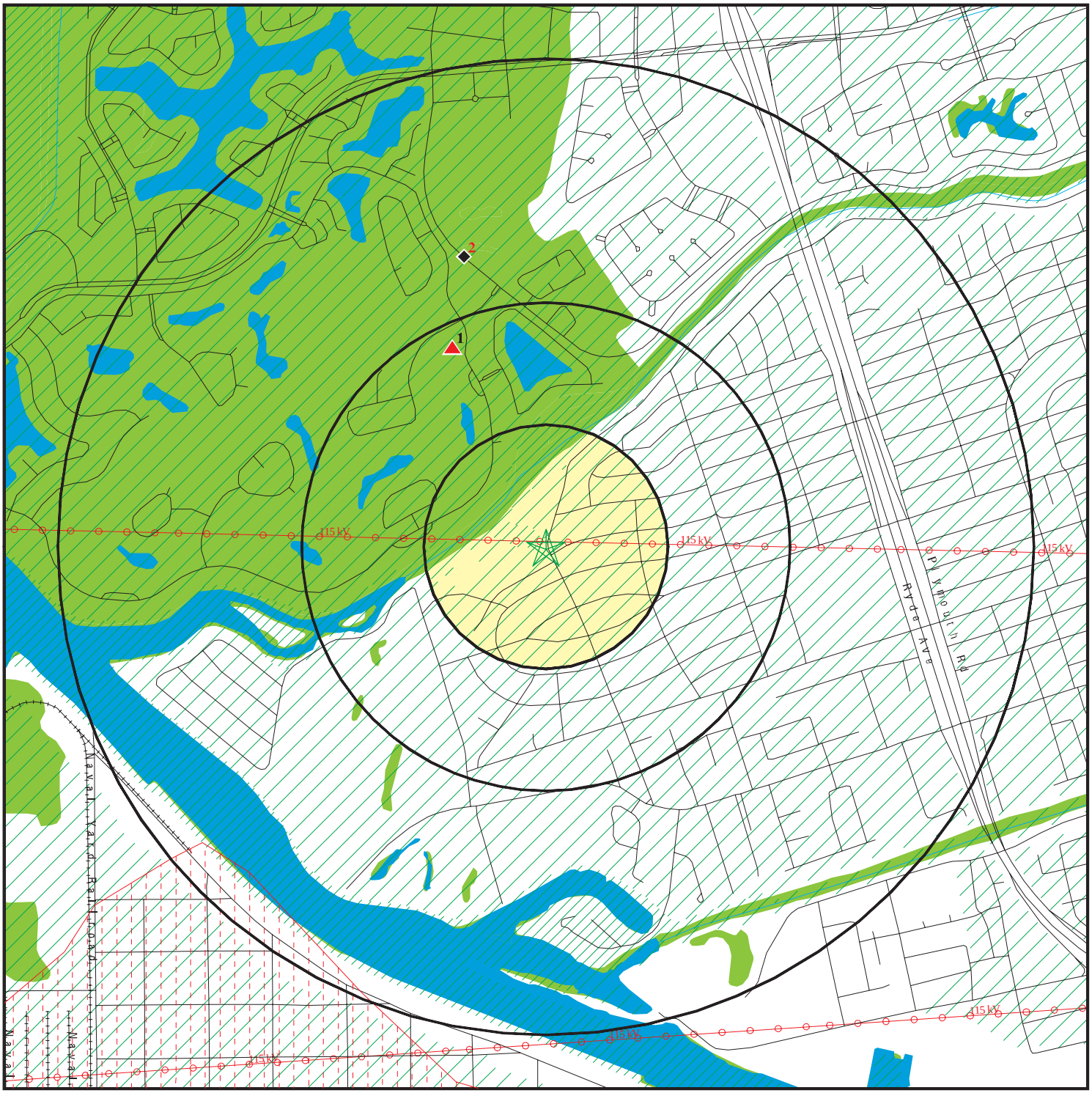
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BROOKSIDE DEVELOPMENT	***BROOKSIDE RD W***	***NNW 1/4 - 1/2 (0.452 mi.)***	***1***	***7***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 29 records.

Site Name	Database(s)
NAVAL COMMUNICATIONS STATION, STOC	FTTS, HIST FTTS
NAVAL COMMUNICATIONS STATION STOCK	FTTS, HIST FTTS
SJRRC MAINTENANCE FACILITY	DEED
NAVAL COMMUNICATIONS STATION, STOC	HIST Cal-Sites
NORGE CLEANING VILLAGE	CERCLIS, FINDS
MORADA PRODUCE CO.	SWF/LF
USN COMMUNICATION STATION LANDFILL	SWF/LF
CALIFORNIA WATER SERVICE #65	UST
VICTORY PARK-FIRE STATION	UST
SMITH CANAL PUMP STATION	UST
SMITH, JAMES	UST
JOHN CERRI	UST
ARCO STATION #5469*	UST
SJRRC MAINTENANCE FACILITY	VCP, ENVIROSTOR
CALAVERAS RIVER BRIDGE NO. 29-088	RCRA-SQG, FINDS
3525 PARK AVE.	ERNS
2790 FLEMINGS AVE	ERNS
HOUSTON AVE 300FT WEST OF MANTHEY	ERNS
INT LORRAINE AVE & BURGUNDY DR	ERNS
KELLY DR & MOSER SLOUGH, PUMP STAT	ERNS
LINCOLN AVE AND A NEARBY SIDING	ERNS
LINCOLN AVE	ERNS
312 A LUCE AVE.	ERNS
NAVAL COMMUNICATION STATION	ERNS
VAN BUSKIRK PARK, HOUSTON AVE 300	ERNS
4905 BE WEBER AVE	ERNS
SR4 X TRACY AVE	ERNS
STOCKTON NAVAL COMMUNICATION STATI	FINDS
NAVAL COMMUNICATIONS STATION (NCS)	SLIC

OVERVIEW MAP - 3038742.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites

0 1/4 1/2 1 Miles

- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Wisconsin Ave. Pump Station	CLIENT: InSite Environmental
ADDRESS: Wisconsin Ave/River Road	CONTACT: Victoria Jordan
Stockton CA 95204	INQUIRY #: 3038742.2s
LAT/LONG: 37.9697 / 121.3509	DATE: April 11, 2011 7:10 pm

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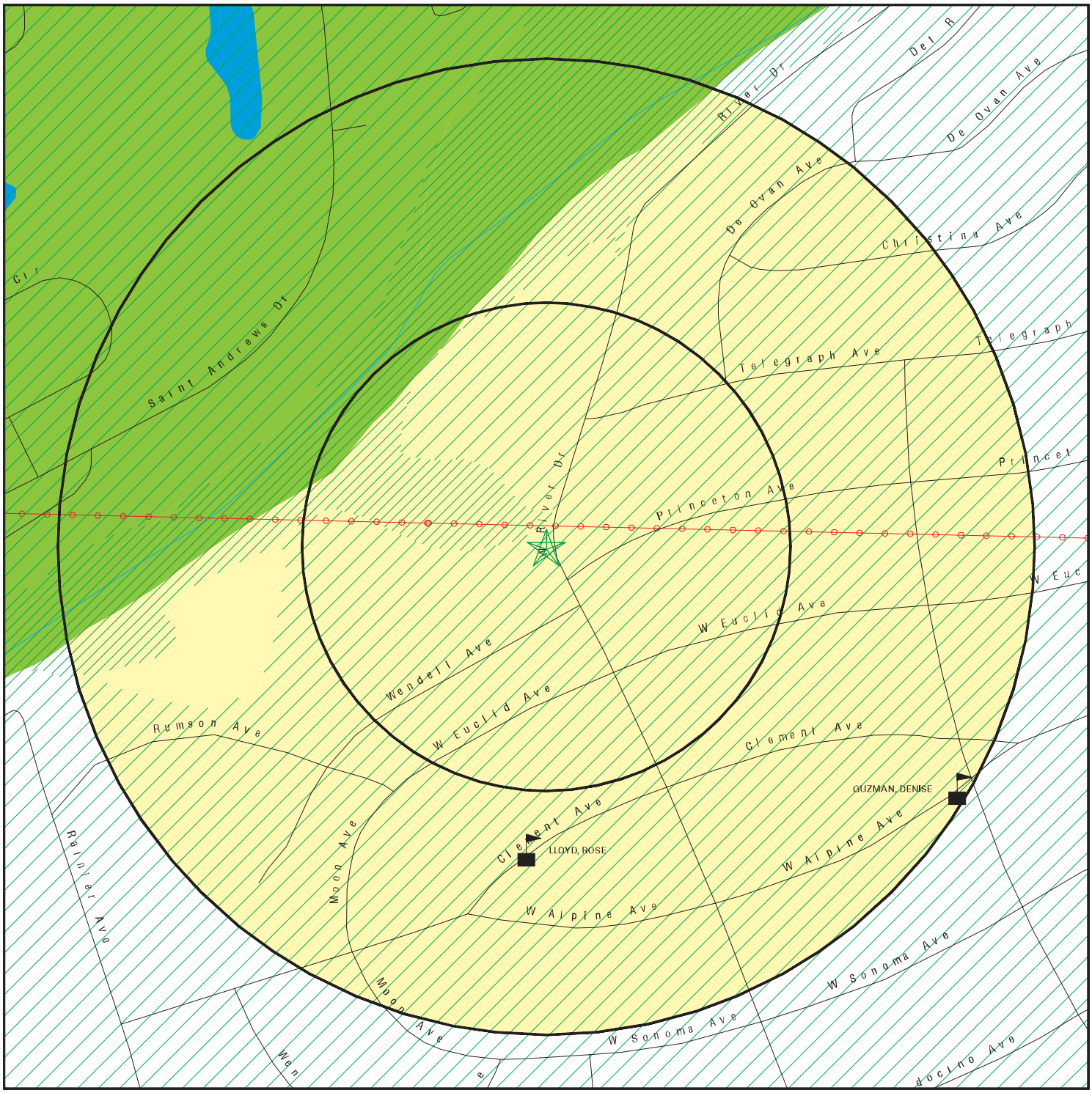
DETAIL MAP - 3038742.2s



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Wisconsin Ave. Pump Station ADDRESS: Wisconsin Ave/River Road Stockton CA 95204 LAT/LONG: 37.9697 / 121.3509	CLIENT: InSite Environmental CONTACT: Victoria Jordan INQUIRY #: 3038742.2s DATE: April 11, 2011 7:11 pm

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