

Initial Study

DWR Oroville Operations & Maintenance Center Garage Shop & Temporary Office Building

Department of Water Resources
Division of Engineering



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Table of Contents

I.	Executive Summary.....	2
II.	Introduction.....	2
III.	Project Description	2
IV.	Environmental Setting	5
V.	Summary of Avoidance, Minimization, and Conservation Measures	16
VI.	Description of the Species and Their Habitat.....	17
VII.	Environmental Baseline.....	18
VIII.	Effect of the Action	18
IX.	Effects Determination for Listed Species and Designated Critical Habitats	19
X.	Summary	19
XI.	References	20
XII.	Appendix A – USFWS Species List	21
XIII.	Appendix B – CEQA Environmental Checklist.....	27

I. Executive Summary

The California Department of Water Resources (DWR) proposes to construct a Butler-type pre-engineered metal garage shop at the DWR Operations and Maintenance (O&M) Center in the City of Oroville, Butte County. The garage shop would be of metal construction and approximately 5,000 square feet. Electric and natural gas service would be supplied to the structure. The garage shop is intended to be used for vehicle storage and mechanical shop space.

Additionally, DWR proposes the installation a 3,600 square foot prefabricated modular building and utilities. Utilities to this modular building would include electricity, water, sanitary sewer, natural gas, and telecommunications. These utilities would be installed in a trench.

The purpose of this Initial Study (IS) is to review the proposed construction activities in order to determine any possible effects to both State and federal species listed as threatened, endangered, or candidates for such listing as well as designated critical habitats.

This IS has been prepared by DWR. On the basis of this study it is determined that the proposed project with the incorporation of the identified mitigation measures will not have a significant effect on the environment.

II. Introduction

The project is to construct a garage shop and install a modular building at the DWR Oroville O&M Center. The garage shop will supply covered storage and work area for DWR mobile equipment. The modular building will supply office space for Division of Environmental Services staff.

III. Project Description

Location

The project is located within the City limits of Oroville in Butte County, California 39° 30' 32.84" N latitude, 121° 30' 23.87" W longitude; T19N, R4E, section 15, Mt. Diablo Meridian. It is located in the Oroville 7.5 minute quad map on Southview Drive between Westwood Way and Glen Drive.

Site Description

The site is located in a mixed residential and light industrial area of the incorporated region of the City of Oroville.

Construction Activities

Construction of a Butler-type pre-engineered metal garage shop is being proposed at the DWR O&M Center in the city of Oroville, Butte County. The garage shop would be of metal construction and approximately 5,000 square feet. Electric and natural gas service would be supplied to the structure.

Additionally, DWR proposes the installation of modular office building. Utilities to this modular building will include electricity, water, sanitary sewer, natural gas, and telecommunications. These utilities would be installed in a trench.

1. **Staging Area** – The staging area will be in established asphalt parking areas. Materials may be stockpiled at this location. Vehicles will be parked in established parking lots during work hours.
2. **Equipment** – Construction equipment could include: excavator, compaction roller, boom truck, grader, dump truck, equipment truck, semi trucks and personal vehicles.
3. **Duration** – This proposed project should take no more than 8 months to complete.
4. **Materials** – Construction materials could include: clean compacted fill, sand, aggregate base rock, asphalt, buried pipe, reinforced concrete, a pre-engineered metal building, and a pre-fabricated modular building.
5. **Site Resource Protection** – Worker Environmental Awareness Program (WEAP) training will be provided to all workers prior to the start of work. The disturbed nature of the site and the urban setting limit the potential for any impacts to sensitive species or habitat. Trees adjacent to the site have the potential to support nesting birds. Surveys will be performed prior to the start of construction for the presence of nesting birds.
6. **Work Access** – The work site will be accessed from Glen Drive, Meadowview Drive, or Southview Drive.
7. Approximately 0.78 acre of ground disturbing activity will occur in the job site.

Figure 1. Site Vicinity Location – Oroville Quadrangle

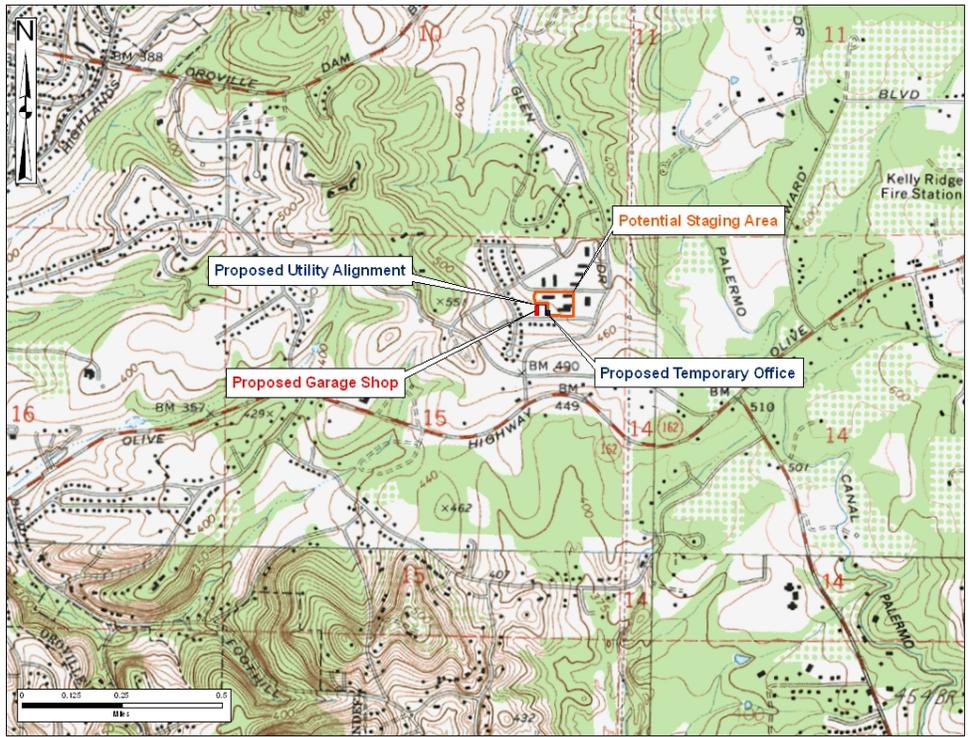


Figure 2. Aerial View of the Site Location



Required Permits

California Environmental Quality Act (CEQA; Public Resources Code 21000 et seq.)

CEQA applies to actions directly undertaken, financed, or permitted by State lead agencies, and establishes State policy to prevent significant and avoidable damage to the environment. It requires any public agency to disclose the environmental impacts of its projects to the public through appropriate environmental documentation. DWR has prepared this proposed Mitigated Negative Declaration and IS, in compliance with CEQA.

Federal Clean Water Act National Pollutant Discharge Elimination System (NPDES) Permit

All storm water discharges associated with construction activity, where clearing, grading, and excavation results in soil disturbance of at least 0.4 hectare (ha) (1 ac) of total land area, by law must comply with the provisions of an NPDES Permit and develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). This project will be performed under the General Permit for Construction Activities. A SWPPP will be obtained as a condition of construction of this project.

IV. Environmental Setting

Climate

The project area is in a region of Mediterranean climate, characterized by hot, dry summers and mild, wet winters. The area receives on average 27 inches of precipitation with most precipitation, in the form of rain, coming in winter and peaking in January. Summers in the Oroville area are generally clear, hot, and dry, with an average 24-hour temperature of 78°F in July, with high temperatures typically above 90 °F. Winters are generally mild and wet with highs averaging in the mid-40s to low-50s.

Greenhouse Gas Emissions (GHG)

Warming of the climate system is now considered to be unequivocal (IPCC, 2007). Global average surface temperature has increased approximately 1.33 °F over the last one hundred years, with the most severe warming occurring in the most recent decades. Eleven of the twelve years from 1995 to 2006, rank among the twelve warmest years in the instrumental record of global average surface temperature (going back to 1850). Continued warming is projected to increase global average temperature between 2 and 11 °F over the next one hundred years (IPCC, 2007).

The causes of this warming have been identified as both natural processes and as the result of human actions. Increases in GHG concentrations in the Earth's atmosphere are thought to be the main cause of human induced climate change.

GHGs naturally trap heat by impeding the exit of solar radiation that has hit the Earth and is reflected back into space. The six principal GHGs of concern are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons, and perfluorocarbons. Conventionally, greenhouse gases have been reported as carbon dioxide equivalents (CO₂e). CO₂e takes into account the relative potency of non-CO₂ greenhouse gases and converts their quantities to an equivalent amount of CO₂ so that all emissions can be reported as a single quantity.

CEQA requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. CEQA requires that the cumulative impacts of GHG, even additions that are relatively small on a global basis, need to be considered.

It is unlikely that any single project by itself could have a significant impact on the environment. However, the cumulative effect of human activities has been clearly linked to quantifiable changes in the composition of the atmosphere, which in turn have been shown to be the main cause of global climate change (IPCC, 2007). Therefore, the analysis of the environmental effects of GHG emissions from this project will be addressed as a cumulative impact analysis.

DWR has not established a quantitative significance threshold for GHG emissions; instead, each project is evaluated on a case by case basis using the most up to date calculation and analysis methods. The proposed project could result in a significant impact if it would generate GHG emissions:

- either directly or indirectly, that may have a significant cumulative impact on the environment;
- that would conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases, including the state goal of reducing greenhouse gas emissions in California to 1990 levels by 2020, as set forth by the timetable established in California Global Warming Solutions Act of 2006 (AB 32).

Based on the size, scope, and purpose of this project the following significance criteria will be used to determine the significance of GHG emissions from this project:

- A. Whether the proposed project has the potential to conflict with or is consistent with plans to reduce or mitigate GHGs.

Including:

- the first applicable plan for the reduction of GHG emissions in California established by AB 32;

- regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions; or
 - Whether the proposed project is part of a plan that includes overall reductions in GHG emissions.
- B. Whether the relative amounts of GHG emissions over the life of the proposed project are large enough to constitute a considerable contribution to a cumulative impact.
- C. Whether the proposed project has the potential to contribute to a lower carbon future, such as:
- whether the design of the proposed project is inherently energy efficient;
 - whether all applicable best management practices that would reduce GHG emissions are incorporated into the proposed project design;
 - whether the proposed project implements or funds its fair share of a mitigation strategy designed to alleviate climate change;
 - whether there are process improvements or efficiencies gained by implementing the proposed project.

Construction Impact-

The proposed project will be for a short term, approximately eight (8) months. The project scale is relatively small. The project foot print is less than two acres, including the staging area.

The primary source of GHG emissions would be from diesel-powered construction equipment and hauling of materials to the worksite. This project is estimated to generate 96.5 MT CO₂e. These quantities were determined through the use of a DWR *Greenhouse Gas Emission Inventory and Calculation* spreadsheet. Material hauling to the worksite and construction equipment estimates were based on historical data documented from similar construction projects and prorated based on size.

By using prefabricated structures the emissions from construction will be reduced. The garage shop will be insulated to minimize impacts of ambient weather conditions. No heating or cooling will be installed in the garage shop. The temporary office building will be in compliance with Title 24 Building Energy Efficiency Standards.

The project could result in a significant GHG emission impact if construction

emissions from the project exceed any of the significance thresholds set forth above. However, the anticipated emissions are not considered significant as determined below in Tables 1, 2, and 3.

Operations Impact-

DWR has a commitment to supply 33% of its total statewide electric usage for business and operations facilities¹ from renewable resources. DWR also participates in a statewide 33% offset of CO₂ emissions from the consumption of natural gas. Both efforts will significantly reduce the operational impacts of this project.

The garage shop will be insulated to minimize impacts of ambient weather conditions. No heating or cooling will be installed in the garage shop which will limit utility usage significantly. A natural gas line will be supplied to the garage shop for the potential future use of a small task heater. This potential future use will be very periodic and minimal if installed. The temporary office building will be in compliance with Title 24 Building Energy Efficiency Standards and will benefit from the energy offsets discussed above. All fixtures and appliances installed will be Energy Star compliant.

By placing the two structures adjacent to the existing DWR facilities instead of an alternative location in downtown Oroville, the number of vehicle trips will be reduced, resulting in decreased GHG emissions.

The project could result in a significant GHG emissions impact if net ongoing GHG emissions from the project exceed any of the significance thresholds set forth above. However, the anticipated emissions are not considered significant as determined below in Table 4.

¹ Excludes electricity used to operate the State Water Project.

Table 1. Construction Equipment Emissions

Type of Equipment	Maximum Number per Day	Total Operation Days	Total Operation hours ¹	Fuel Consumption Per Hour ²	Total Fuel Consumption (gal. diesel)	CO ₂ e/gal Diesel ³	Total CO ₂ Equivalent Emissions (metric tons)
Backhoes	1	5.5	44	3	132	0.010391	1.4
Bulldozers	1	4	32	13	416	0.010391	4.3
Compactors	1	4	32	18	576	0.010391	6.0
Cranes	1	2	16	3	48	0.010391	0.5
Dump Trucks	1	0.5	4	30	120	0.010391	1.2
Grader	1	1	8	9	72	0.010391	0.7
Loaders	1	4	32	10	320	0.010391	3.3
Pavers	1	2	16	7	112	0.010391	1.2
Roller	1	2	16	11	176	0.010391	1.8
Highway Truck	2	4	64	10	640	0.010391	6.7
Air Compressors	1	2	16	2	32	0.010391	0.3
Water Truck	1	2	16	30	480	0.010391	5.0
TOTAL					3,124		32.5

¹ A 8-hour work day is assumed.

² Caterpillar Performance Handbook, Edition 36

³ World Resources Institute-Mobile combustion CO₂ emissions tool. June 2003 Version 1.2

Table 2. Construction Workforce Transportation Emissions

Average Number of Workers per Day	Total Number of Workdays	Average Distance Travelled (round trip)	Total Miles Travelled	Average Passenger Vehicle Fuel Efficiency ⁴	Total Fuel Consumption (gal. gasoline)	CO ₂ e/gal Gasoline ³	Total CO ₂ Equivalent Emissions (metric tons)
16	135	50	108000	20.8	5192.3	0.00901	46.8

⁴ United States Environmental Protection Agency. 2008. Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2008. [EPA420-R-08-015]

Table 3. Construction Materials Transportation Emissions

Trip Type	Total Number of Trips	Average Trip Distance (round trip)	Total Miles Travelled	Average Semi-truck Fuel Efficiency	Total Fuel Consumption (gal. diesel)	CO ₂ e/gal Diesel ³	Total CO ₂ Equivalent Emissions (metric tons)
Delivery	105	100	10500	6	1750	0.010391	18.2
Spoils	15	20	300	6	50.00	0.010391	0.5
TOTAL							18.7

Table 4. Operational Emissions

	MWH of electricity	MT CO₂e/MWH⁵	CO₂ e emissions/year	Estimated Life of Bldg./ years	Total CO₂ e emissions (metric tons)
Average Annual Electricity Needed	162.5	0.329858	53.6	50	2680.1*

⁵ eGRID2007 Version 1.1, December 2008 (Year 2005 data) CAMX-WECC subregion.

*This quantity will be reduced by 33% by DWR greenergy purchases.

SUMMARY

Construction Equipment Emissions	32.5	metric tons
Workforce Transportation Emissions	46.8	metric tons
Construction Materials Emissions	18.7	metric tons

Total Construction Greenhouse Gas Emissions	97.9	MT CO₂ equivalents
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Operational Emissions	2,680.1	metric tons
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Total Lifespan Greenhouse Gas Emissions	2,778.0	MT CO₂ equivalents
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Average Greenhouse Gas Emissions/year	55.6	MT CO₂ equivalents
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Significance Determination -

Pursuant to AB 32, stationary, continuous sources of GHG emissions that generate greater than 25,000 MT of CO₂ equivalents per year are mandated to report their GHG emissions to California Air Resources Board (CARB). CARB has released a preliminary draft staff proposal that recommends 7,000 metric tons of CO₂ equivalents per year be used as the baseline threshold for impacts. Neither 25,000 nor 7,000 MTCO₂e are being put forth as thresholds of significance, they are being presented here to provide a measure of scale for the emissions from this project. This project only produces 97.9 MTCO₂e equivalents during its construction, a temporary increase in GHG. The construction emissions equate to about 2 MTCO₂e/yr during the 50 year life-time of the project. The operational yearly emissions are estimated to be 55.6 MTCO₂e but likely be only 37 MTCO₂e because of DWR's commitment to purchase renewable power for 33% of its facility electricity demand.

This project is consistent with statewide GHG reduction goals and has a less than significant cumulative impact from GHG emissions.

Mitigation Measures

Because this project has a less than significant cumulative impacts on GHG emissions no mitigation measures are required for GHG emissions. However, additional measures included in this plan will contribute to further reductions in the GHG emissions from this project. Best Management Practices identified in the Air Quality and Transportation sections of this document would reduce air quality impacts and subsequently reduce GHG production. The buildings will be constructed to meet energy efficiency requirements. DWR also will be purchasing 33% of the statewide electricity needs from renewable sources and purchasing offset credits for 33% of its natural gas needs.

Geology and Soil

The proposed construction would temporarily disturb the soils in and around the building site. The soils would undergo various construction activities including clearing and grubbing, and grading. These impacts are limited to the period of construction. The project will reduce in the long-run disturbances to soil and geology by stabilizing the slope with the result that the impacts would be less-than-significant.

Hydrology and Water Quality

Implementation of the project would not result in any change in hydrology. The project construction may result in the potential for increased erosions and sedimentation and potential for spills of fuels and lubricants. These impacts will be addressed by the application of best management practices specified in erosion control plans which could include the use of sediment barriers, seasonal timing of

work during the dry season, mulch and mulch tackifiers. Erosion and sedimentation following project completion is expected to be less than existing conditions.

The contractor will follow standard grading and erosion control practice to avoid and minimize potential discharge of any contaminated runoff from disturbed areas.

Traffic, Transportation and Noise

Increases to project construction-related traffic near project site will be temporary and limited to the construction period. The contractor will coordinate with local public works and planning agencies to develop a traffic management plan for the site and obtain all necessary permits prior to construction.

Project implementation will increase noise and vibration levels near the project site. Construction activity at the site will take place between 7:00 AM and 6:00 PM Monday through Saturday. Site vehicle access will be intermittent, limited to daylight hours and subject to haul-speed restrictions in order to reduce noise and vibration levels adjacent to the site. Access to the construction site is from public roads by personnel trucks and small construction equipment. Advanced notice of construction timing will be provided to nearby residences and businesses.

Potential impact from noise and traffic are considered less-than-significant, if normal measures to prevent unnecessary noise are implemented and the contractor develops and adheres to the traffic management plan.

Air Quality

California is divided geographically into 15 air basins to manage the air resources of the State regionally, and the project site is located within the Sacramento Valley air basin, and within the jurisdiction of Butte County. The CARB has developed guidelines that help determine the significance of temporary and intermittent air quality effects resulting from construction activities. The CARB requires best available control technology requirements, has a daily emission limit of 80 pounds per day of particulate matter smaller than 10 microns (PM₁₀), an annual limit of 10 tons per year for any criteria pollutant, and record keeping and reporting requirements. Air quality impacts from the project would not be considered significant if the project will not generate 80 pounds or more of PM₁₀ from daily construction activities.

Construction activities have potential for resulting in localized, short-term construction emissions from stationary, mobile, and area sources. These sources include construction equipment, trucks used for hauling, and fugitive dust from earthwork. Construction equipment and haul trucks emit hydrocarbons, nitrogen oxides, sulfur oxides, carbon monoxide, and particulate matter. Fugitive dust is emitted from earthmoving, aggregate stockpiling, and concrete processing.

Construction equipment and passenger vehicles could potentially cause short-term construction emissions. However, it is not anticipated that the emissions will cause a significant amount of PM₁₀. Construction-related emissions are further discussed in the Greenhouse Gas Emissions section of this document.

The project's contract specifications require that the contractor submit and implement an Air Quality Control Plan, as well as conduct preventive maintenance, implement dust control measures, and use the best available control technology for diesel-fueled construction equipment.

Recreation

The project site is wholly contained within the Oroville O&M Center. There are no recreational opportunities at this location to be impacted.

Cultural Resources

Surveys of the area for both Native American, post-settlement historic or important cultural features did not indicate the presence of any known prehistoric or other historic resources in the project area. The contractor will report any findings uncovered during the course of construction, activities will be halted and a qualified archeologist will be consulted immediately to evaluate any find.

Growth-inducing Effects

Construction of the proposed garage shop and the installation of the modular office building will not result in any growth-inducing effects.

Biological Resources

The project area is located in a highly disturbed residential and light industrial area. The disturbed nature of the area precludes the presence of protected plant species. No trees will be trimmed or removed as part of this project. No vernal pools, streams, or wetlands are on, or adjacent to, the project area.

Adjacent trees have the potential to support nesting birds. The distance of these trees and the pre-existing heavy level of human activity at and near this site make impacts to bird species unlikely. DWR will perform pre-construction surveys to detect the potential presence of nesting birds. If nesting birds are detected, a qualified biologist will determine if the construction activities need to be modified to mitigate any potential impacts.

Special Status Species Assessment

A list of special status species and candidate species potentially occurring in the project area was created from the US Fish and Wildlife Service (USFWS)

Sacramento office web-based species list generator for the Oroville quad map. A record search of the California Natural Diversity Database for the Oroville quad was also done. The following table lists the scientific and common names for each species, its status, and a description of its habitat and the potential to be in the project area. The “likelihood for Project to Impact” is defined as follows:

- **Unlikely:** The project site and/or immediate area do not support suitable habitat for a particular species. Project is outside of the species known range.
- **Low Potential:** The project site and/or immediate area only provide limited habitat for a particular species. The Project may be outside of the species known range.
- **Medium Potential:** The project site and/or immediate area only provide suitable habitat for a particular species, although there may be no known sightings in the area.
- **High Potential:** The project site and/or immediate area provide ideal habitat for a particular species and/or the species is known to occur in the project area.

The species with an “**Unlikely**” determination are not expected to be found in the Project area because general, breeding and/or nesting habitat is not available in the Project area. These species are not discussed further in this IS.

Key to the “Status” in the following table:

- FE: Federally listed endangered
- FT: Federally listed threatened
- FPD: Federally proposed for delisting as endangered or threatened
- FC: Candidate to become listed species
- SE: State listed endangered
- ST: State listed threatened
- CSC: California species of concern
- Rare: California rare designation

Table 1. Special Status Species and Effect Determination

Common name <i>Species</i>	Status	Habitat Effect	Oroville O&M Garage	
			Determination	Critical Habitat
INVERTEBRATES				
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	Vernal pools; also sandstone rock outcrop pools	Unlikely - no suitable habitat within project site or immediate area.	No
vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE	Vernal pools containing clear to highly turbid water in a wide range of sizes	Unlikely - no suitable habitat within project site or immediate area.	No
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	Riparian and oak savanna habitats with blue elderberry shrubs; elderberries are the host	Low - no host plants identified within 100 ft of project area	No

Common name <i>Species</i>	Status	Habitat Effect	Oroville O&M Garage	
			Determination	Critical Habitat
		plant		
FISH				
green sturgeon <i>Acipenser medirostris</i>	FT	Large, mainstem rivers with cool water and cobble, clean sand, or bedrock for spawning	Unlikely - no suitable habitat within project site or immediate area.	No
delta smelt <i>Hypomesus transpacificus</i>	FT	Estuarine or brackish water up to 18 ppt; spawn in shallow brackish water upstream of the mixing zone where salinity is around 2 ppt	Unlikely - no suitable habitat within project site or immediate area.	Yes
Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT	Rivers and streams with cold water, clean gravel of appropriate size for spawning, and suitable rearing habitat; rear in freshwater ≥ 1 years	Unlikely - no suitable habitat within project site or immediate area.	Yes
winter-run chinook salmon <i>Oncorhynchus tshawytscha</i>	FE	Mainstem rivers reaches with cool water and available spawning; rear 5 to 10 month in the river and estuary; migrate to the ocean to feed and grow until sexually mature	Unlikely - no suitable habitat within project site or immediate area.	No
Central Valley spring-run chinook salmon <i>Oncorhynchus tshawytscha</i>	FT	Low- to mid-elevation rivers and streams with cold water, clean gravel of appropriate size for spawning, and suitable rearing habitat; typically rear in freshwater for one or more years before migrating to the ocean	Unlikely - no suitable habitat within project site or immediate area.	No
AMPHIBIANS				
California red-legged frog <i>Rana aurora draytonii</i>	FT	Permanent and semi permanent aquatic habitats such as creeks and cold-water ponds, with emergent and submergent vegetation;	Unlikely - no suitable habitat within project site or immediate area.	No
REPTILES				
giant garter snake <i>Thamnophis gigas</i>	FT	Sloughs, canals, low-gradient streams and marsh habitats; irrigation ditches and rice fields; grassy banks and emergent vegetation for basking; high ground protected from flooding during winter	Unlikely - no suitable habitat within project site or immediate area.	No
MAMMALS				

Common name <i>Species</i>	Status	Habitat Effect	Oroville O&M Garage	
			Determination	Critical Habitat
None			Unlikely	No
PLANTS				
Meadowfoam <i>Limnanthes floccosa ssp.</i> <i>Californica</i>	FE	Vernal Pools	Unlikely - no suitable habitat within project site or immediate area.	No

Valley Elderberry Longhorn Beetle

The project site is outside of the USFWS's designated critical habitat for the federally threatened Valley elderberry longhorn beetle (VELB). Surveys for the host plant of the beetle, the blue elderberry bush (*Sambucus mexicanus*) found none on or adjacent to the project site. Therefore no mitigation measures are required to protect valley elderberry longhorn beetle.

V. Summary of Avoidance, Minimization, and Conservation Measures

Best Management Practices

The contractor will use best management practices (BMPs) as specified by the Central Valley Regional Water Quality Control Board and through the Storm Water Pollution Prevention Program.

Contractor Access to Biological Information

A copy of the Initial Study and Negative Declaration will be provided to the contractor and maintained on the job site.

Pre-Construction Surveys

The action area will be surveyed by a qualified biologist for potential occurrence of special status species indicated in the USFWS species lists for the Oroville Quad, Butte County and listed in the DFG Natural Diversity Database. The survey will include nesting birds that may be adjacent to the work site. Avoidance measures will be implemented if any special status species are found during the course of the investigation.

Work Window

There are no species related work window restrictions on this project. Daily work will be restricted to 0700 to 1800 to minimize any potential impacts to adjacent home owners.

VI. Description of the Species and Their Habitat

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (VELB) is found only in association with its host plant, the blue elderberry (*Sambucus spp.*), and is listed as a threatened species under the ESA (45 FR 52803) but not listed under CESA. VELB is found in scattered populations throughout its historical distribution throughout the Central Valley from Redding (Shasta County) to Bakersfield (Kern County) (Arnold et al. 1994). Information on the historical distribution and abundance of VELB is scarce because, historically, this species has always been of limited abundance (USFWS 1984).

The range for VELB includes most of the California Central Valley north to Trinity County, south to San Diego County, and east to San Bernardino County (Barr 1991). Along the eastern edge of the species range, adult beetles have been found in the foothills of the Sierra Nevada at elevations of up to 2,220 ft, and beetle exit holes have been located on blue elderberry plants at elevations up to 2,940 ft. Along the western edge of the species range, adult beetles have been found on the eastern slope of the Coast Ranges at elevations of up to 500 ft, and beetle exit holes have been detected on blue elderberry plants at elevations up to 730 ft (Barr 1991).

Life History and Habitat Requirements

The VELB is closely associated with blue elderberry, an obligate host for beetle larvae that is found in or near riparian and oak woodland habitats. The life history for VELB is assumed to follow a sequence of events similar to those of related taxa. Female beetles deposit eggs in crevices in the bark of living blue elderberry plants. Presumably, the eggs hatch shortly after they are laid, and the larvae bore into the pith of the trunk or stem. When larvae are ready to pupate, they move through the pith of the plant, open an emergence hole through the bark, and return to the pith for pupation. Adults exit through the emergence holes and can sometimes be found on blue elderberry foliage, flowers, or stems or on adjacent vegetation. The entire life cycle of the VELB is thought to encompass two years, from the time the eggs are laid and hatch until adults emerge and die (USFWS 1984).

The presence of exit holes in blue elderberry stems indicates previous VELB habitat use. Exit holes are cylindrical and approximately 0.25 inch in diameter. Exit holes can be found on stems that are 1 or more inches in diameter. The holes may be located on the stems from a few inches to about 9 to 10 ft above the ground (Barr 1991).

Factors Affecting Abundance

The decline in VELB distribution is most likely related to the extensive loss of riparian forests in the Central Valley, which has reduced the amount of available habitat for the species and most likely decreased and fragmented the range of the species (USFWS 1984). Insecticide drift from cultivated fields and orchards adjacent to blue elderberry shrubs can affect VELB populations if drift occurs at a time when adults are present on the shrubs (Barr 1991). Furthermore, herbicide drift from agricultural fields and orchards also can affect the health of blue elderberry shrubs, thereby reducing the quantity and quality of VELB habitat. The survival of VELB and blue elderberry are being affected by invasive species to riparian habitats. The Argentine ant (*Linepithema humile*) has been spreading in riparian habitat and negatively affects VELB survival (Talley et al. 2006). Exotic plant competition negatively affects the VELB host blue elderberry plant. Invasive exotic plants in riparian communities (e.g., black locust (*Robinia pseudoacacia*), giant reed (*Arundo donax*), and Himalaya blackberry (*Rubus armeniacus*)) form monotypic stands as they begin to dominate the habitat. Presence of giant reed promotes a more frequent fire cycle. (Talley et al. 2006)

Occurrence in the Project Area

Blue elderberry shrubs, the host plant for valley elderberry longhorn beetle, were not observed within or adjacent to the project area.

VII. Environmental Baseline

The proposed project site is within the campus of the established DWR O&M Center at the Oroville Field Division Head Quarters. The O&M Center campus is comprised of office buildings, shops, warehouses, and associated parking lots. Land that is not currently developed within the O&M Center is maintained as lawn or dirt lots which sparsely support ruderal plants.

The O&M Center is bounded on the north by the California Department of Parks Oroville Headquarters. The rest of the adjacent property is residential homes. No wildlife species are expected on or adjacent to the project area due to the urban nature of the site. The potential for nesting birds exist in the adjacent trees. Pre-exploration surveys will determine if such nesting birds are present.

VIII. Effect of the Action

Construction activities may temporarily increase noise and dust which might disturb any special status species that might be present.

IX. Effects Determination for Listed Species and Designated Critical Habitats

The project site is in a highly disturbed area with limited opportunities for listed species to occur. The construction activities will be minor and temporary. The use of Best Management Practices on project will result in a determination that the project is not likely to adversely affect listed species

X. Summary

In consideration of the above information, the proposed action is not likely to result in impacts to these species as long as the applicable Best Management Practices are adhered to. This conclusion is based on DWR's commitment to minimize any temporary or permanent species or habitat impacts through incorporation of the Best Management Practices for the species listed in this IS.

The project is not likely to adversely impact listed species including delta smelt, fall run chinook salmon, steelhead, green sturgeon, meadowfoam, giant garter snake, and valley elderberry longhorn beetle.

XI. References

- Arnold, R.A. 1984. Interim report for contract C-616 with the California Department of Fish and Game.
- Barr, C. B., 1991. The distribution, habitat, and status of the Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* Fisher (Coleoptera: Cerambycidae). U.S. Fish and Wildlife Service. Sacramento, CA.
- California Natural Diversity Data Base. June 2010. California Department of Fish and Game. Sacramento, California.
- Talley, T.S., D. Wright, and M. Holyoak. 2006. Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) 5-year review: summary and evaluation. Prepared for the USFWS, Sacramento Office, Sacramento, CA.
- USFWS. 1984. Recovery Plan for the Valley Elderberry Longhorn Beetle. Endangered Species Program.

XII. Appendix A – USFWS Species List



United States Department of the Interior
FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825



March 5, 2009

Document Number: 090305091931

Christine Erickson
California Department of Water Resources
2825 Watt Ave. Suite 100
Sacramento, CA 95821

Subject: Species List for Smith Canal Flood Control Project Feasibility Study

Dear: Ms. Erickson

We are sending this official species list in response to your March 5, 2009 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be June 03, 2009.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at www.fws.gov/sacramento/es/branches.htm.



**U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office**

**Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested**

**Document Number: 090305091931
Database Last Updated: January 29, 2009**

Quad Lists

Listed Species

Invertebrates

- Branchinecta lynchi
 - vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus
 - valley elderberry longhorn beetle (T)
- Lepidurus packardii
 - vernal pool tadpole shrimp (E)

Fish

- Acipenser medirostris
 - green sturgeon (T) (NMFS)
- Hypomesus transpacificus
 - Critical habitat, delta smelt (X)
 - delta smelt (T)
- Oncorhynchus mykiss
 - Central Valley steelhead (T) (NMFS)

- Critical habitat, Central Valley steelhead (X) (NMFS)
- Oncorhynchus tshawytscha
 - Central Valley spring-run chinook salmon (T) (NMFS)
 - winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

- Ambystoma californiense
 - California tiger salamander, central population (T)
- Rana aurora draytonii
 - California red-legged frog (T)

Reptiles

- Thamnophis gigas
 - giant garter snake (T)

Quads Containing Listed, Proposed or Candidate Species:

STOCKTON WEST (462A)

County Lists

No county species lists requested.

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or

injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.
- During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.
- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.
- Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of

your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be June 03, 2009.

XIII. Appendix B – CEQA Environmental Checklist

DWR Oroville Operations & Maintenance Center Garage Shop & Utilities

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

The existing vacant dirt lot will be replaced by a metal building. This will have a less than significant impact on visual character of the site. The building will be lit minimally with directional, diffused lighting; therefore this will be a less than significant source of light.

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to 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 the 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

III. 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:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Construction activities have the potential to temporarily increase air pollutants due to increased emissions and fugitive dust. BMPs will be used to minimize these impacts to less than significant.

IV. BIOLOGICAL RESOURCES: Would the project:

a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

V. CULTURAL RESOURCES: Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VI. GEOLOGY AND SOILS: Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Construction activities that disturb soils have the potential to result in increase soil erosion. Through the appropriate use of BMPs will be used to minimize these impacts to less than significant.

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Construction activities generate greenhouse gas emissions. Through the appropriate use of BMPs these impacts will be minimized to less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Construction activities have the potential to increase runoff turbidity during soil disturbing activities. BMPs will be used to minimize these potential impacts to less than significant.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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X. LAND USE AND PLANNING: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XI. MINERAL RESOURCES: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XII. NOISE: Would the project result in:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|) 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Construction activities have the potential to increase ambient noise levels due to the operation of heavy equipment. Hours of operation of such equipment will be limited to 0700 to 1900 to will be used to minimize these impacts to less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XIII. POPULATION AND HOUSING: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XIV. PUBLIC SERVICES:

a) 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:

- | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XV. RECREATION:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XVI. TRANSPORTATION/TRAFFIC: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Construction traffic will cause a temporary increase in vehicle use in surface streets adjacent to the project area. A Traffic Control Plan will be implemented to minimize these impacts to less than significant.

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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, substantially 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |