

**DRAFT**

**INITIAL STUDY**

**MITIGATED NEGATIVE DECLARATION**

**CLEAR LAKE STATE PARK**

**SEWER LIFT REPAIR AND REPLACEMENT PROJECT**



**July 2007**



State of California  
**DEPARTMENT OF PARKS AND RECREATION**  
Acquisition and Development  
One Capital Mall, Suite 500  
Sacramento, CA 95814



## MITIGATED NEGATIVE DECLARATION

**PROJECT:** SEWER LIFT REPLACEMENT AND REPAIR PROJECT

**LEAD AGENCY:** California Department of Parks and Recreation

**AVAILABILITY OF DOCUMENTS:** The Initial Study for this Mitigated Negative Declaration is available for review at:

- Northern Service Center  
California Department of Parks & Recreation  
One Capitol Mall - Suite 410  
Sacramento, CA 95814
- Northern Buttes District Headquarters  
California Department of Parks & Recreation  
400 Glen Drive  
Oroville, CA 95966
- Clear Lake State Park  
5300 Soda Bay Road  
Kelseyville, CA 95451
- Lake County Library  
1425 North High Street  
Lakeport, CA 95453
- California Department of Parks and Recreation Internet Website  
[http://www.parks.ca.gov/?page\\_id=980](http://www.parks.ca.gov/?page_id=980)

### PROJECT DESCRIPTION:

The Department of Parks and Recreation proposes to repair or replace seven of the existing sewer lift stations in the sewage collection system at Clear Lake State Park. The sewer lift stations service park facilities such as restrooms and showers, and together remove sewage waste from the park. The following is a brief summary of project work.

- Replace existing below-ground sewage lift vaults, pumps, and electronic controls with new sewage lift vaults and equipment.
- At the site of each lift station, install a new above-ground concrete pad and fiberglass cover to house above-ground piping and control panels.
- Replace and raise concrete pads and vault lids in place to avoid flooding during high water events.
- Replace electrical connections at the seven sewer lift sites. In addition, replace and upgrade approximately 2,090 total feet of electrical wiring to LS-2, 3, 4 and 6.
- Install a new telemetry system with a radio antenna adjacent to each of the seven lift stations, at a repeater station, and at a control panel near the entrance station to allow lift stations to operate in conjunction with one another.

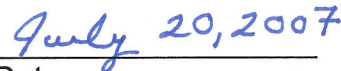
A copy of the Initial Study is attached. Questions or comments regarding this Initial Study/Mitigated Negative Declaration should be submitted in writing to:

Heidi West – Environmental Coordinator  
California Department of Parks and Recreation  
Northern Service Center  
One Capitol Mall - Suite 500  
Sacramento, CA 95814

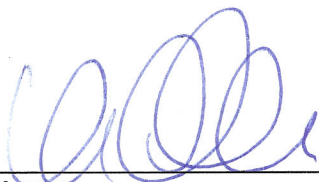
Pursuant to Section 21082.1 of the California Environmental Quality Act, the California Department of Parks and Recreation (DPR) has independently reviewed and analyzed the Initial Study and Negative Declaration for the proposed project and finds that these documents reflect the independent judgment of DPR. DPR, as lead agency, also confirms that the project mitigation measures detailed in these documents are feasible and will be implemented as stated in the Negative Declaration.



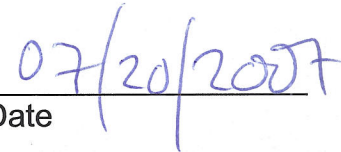
\_\_\_\_\_  
Heidi West  
Environmental Coordinator



\_\_\_\_\_  
Date



\_\_\_\_\_  
Kathy Amann  
Service Center Manager  
Acquisition and Development



\_\_\_\_\_  
Date

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# CHAPTER 1 INTRODUCTION

## 1.1 INTRODUCTION AND REGULATORY GUIDANCE

The Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Sewer Lift Repair and Replacement Project at Clear Lake State Park, Lake County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq.*, and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq.*

An Initial Study is conducted by a lead agency to determine if a project may have a significant effect on the environment [CEQA Guidelines §15063(a)]. If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the project plans or proposals made by or agreed to by the applicant mitigate the potentially significant effects to a less-than-significant level, a Mitigated Negative Declaration may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

## 1.2 LEAD AGENCY

The lead agency is the public agency with primary approval authority over the proposed project. In accordance with CEQA Guidelines §15051(b)(1), "the lead agency will normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is DPR. The contact person for the lead agency is:

Gary Leach  
Construction Supervisor II  
California Department of Parks and Recreation  
Northern Service Center  
One Capitol Mall, Suite 500  
Sacramento, California 95814  
(916)445-8691

Questions or comments regarding this Initial Study/Mitigated Negative Declaration should be submitted to:

Heidi West  
Environmental Coordinator  
California Department of Parks and Recreation  
Northern Service Center  
One Capitol Mall, Suite 500  
Sacramento, California 95814

E-mail Address: [CEQANSC@parks.ca.gov](mailto:CEQANSC@parks.ca.gov) (Specify *Clear Lake* on the subject line.)

Fax Number: (916)445-8883

Submissions must be in writing and postmarked, or received by fax or email, no later than August 22, 2007. The originals of any faxed document must be received by regular mail within ten (10) working days following the comment deadline, along with proof of successful fax transmission.

### **1.3 PURPOSE AND DOCUMENT ORGANIZATION**

The purpose of this document is to evaluate the potential environmental effects of the proposed Sewer Lift Repair and Replacement Project at Clear Lake State Park. Mitigation measures have also been incorporated into the project to eliminate any potentially significant impacts or reduce them to a less-than-significant level.

This document is organized as follows:

- Chapter 1 - Introduction  
This chapter provides an introduction to the project and describes the purpose and organization of this document.
- Chapter 2 - Project Description  
This chapter describes the reasons for the project, scope of the project, and project objectives.
- Chapter 3 - Environmental Setting, Impacts, and Mitigation Measures  
This chapter identifies the significance of potential environmental impacts, explains the environmental setting for each environmental issue, and evaluates the potential impacts identified in the CEQA Environmental (Initial Study) Checklist. Mitigation measures are incorporated, where appropriate, to reduce potentially significant impacts to a less-than-significant level.
- Chapter 4 - Mandatory Findings of Significance  
This chapter identifies and summarizes the overall significance of any potential impacts to natural and cultural resources, cumulative impacts, and impact to humans, as identified in the Initial Study.
- Chapter 5 - Summary of Mitigation Measures



This chapter summarizes the mitigation measures incorporated into the project as a result of the Initial Study

- Chapter 6 - References  
This chapter identifies the references and sources used in the preparation of this IS/MND. It also provides a list of those involved in the preparation of this document.
- Chapter 7 - Report Preparation  
This chapter provides a list of those involved in the preparation of this document.

#### **1.4 SUMMARY OF FINDINGS**

Chapter 3 of this document contains the Environmental (Initial Study) Checklist that identifies the potential environmental impacts (by environmental issue) and a brief discussion of each impact resulting from implementation of the proposed project.

Based on the IS and supporting environmental analysis provided in this document, the proposed Sewer Lift Repair and Replacement Project would result in less-than-significant impacts for the following issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.

In accordance with §15064(f) of the CEQA Guidelines, a MND shall be prepared if the proposed project will not have a significant effect on the environment after the inclusion of mitigation measures in the project. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project would have a significant effect on the environment. It is proposed that a Mitigated Negative Declaration be adopted in accordance with the CEQA Guidelines.

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## **CHAPTER 2 PROJECT DESCRIPTION**

### **2.1 INTRODUCTION**

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Sewer Lift Repair and Replacement Project at Clear Lake State Park, located on Soda Bay Road north of Kelseyville, Lake County, California. The proposed project would repair or replace each of seven sewer lift stations that are responsible for pumping sewage from park facilities. Additionally, the project would install an electronic communications system (i.e., telemetry) to ensure lift stations function in conjunction with each other and to inform operators that the system is operating properly.

### **2.2 PROJECT LOCATION**

Clear Lake State Park is situated approximately ninety miles northeast of San Francisco in Lake County. The park is located five miles east of Lakeport and 3.5 miles northeast of Kelseyville at 5300 Soda Bay Road (Appendix A: Figure 1). The park features 590 acres of oak woodland, riparian forest, and wetland habitats along part of the shore and gentle hills just upslope of Clear Lake. The seven sewer lift stations to be repaired are located throughout the park adjacent to park facilities (Appendix A: Figure 2).

### **2.3 BACKGROUND AND NEED FOR THE PROJECT**

The existing sewer lift stations were installed in 1974. Due to age many mechanical and electrical components are either difficult to replace or are no longer available. As a result, the park is experiencing excessive maintenance costs and a significantly higher than expected risk of system-wide failure that would result in a sewage spill, a public health and environmental hazard.

Without this project, the park unit would continue to operate and maintain the existing sewer lift system using maintenance funds to repair and/or replace broken equipment. If the existing system stops functioning adequately, DPR would risk a partial or complete shutdown of its sewage system resulting in a closure of its public and business facilities until health and safety issues have been resolved. Closing all or a portion of the park would reduce recreational opportunities until repairs are made.

### **2.4 PROJECT OBJECTIVES**

The mission of the California Department of Parks and Recreation is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality recreation.

Sewer lift station repair and replacement would improve the integrity of the sewage disposal system at Clear Lake State Park, thereby protecting natural resources and

retaining the high-quality recreational opportunities in the park. The recommended work is expected to:

- Reduce the risk of sewage spills and overflows by installing new lift stations and telemetry system.
- Protect the health and safety of park employees, visitors, and area residents.
- Reduce potential hazards to natural resources such as Clear Lake.
- Reduce park maintenance costs by eliminating frequent repairs of old equipment.

## **2.5 PROJECT DESCRIPTION**

DPR proposes to repair and replace components of lift stations (LS) 2 through 8 in the park's sewage collection system. Each lift station is composed of two submersible pumps in a vault (i.e., wet well) and control components. The existing vaults are built of concrete (LS-2, 4), steel (LS-3, 5, 6, 7), or fiberglass (LS-8) with a collar and metal lid. Above ground and adjacent to each vault, control components are located in an electrical panel. Lift station replacement refers to installing a new pre-cast concrete vault, submersible pumps, and electronic controls (Appendix B: Figures 1 and 2).

The following work would be completed at each of the seven lift stations:

- Replace all pumps and electronic controls.
- Install a new above-ground concrete pad approximately eight feet long by seven feet wide.
- Install a fiberglass reinforced plastic (FRP) cover on top of the pad to house the above-ground piping and control panel. The fiberglass cover would be approximately five foot high by seven feet long by three feet wide and would be a color that blends with the natural environment.

Additional project components for each lift station are described below.

### LS-2 and LS-4:

- Repair existing concrete vaults at LS-2 and 4.
  - Re-line the interior of vault at each lift station and replace discharge line inside the vault.
  - Excavate pit approximately six feet long by six feet wide and four feet deep adjacent to the vault to connect new discharge line to the park sewage system.
  - Raise vault lid approximately three feet to bring the top of the vault above the high water level of Clear Lake (i.e., Federal Emergency Management Agency, or FEMA, 100-year flood level).
  - Import approximately ten cubic yards (cu yd) of native soil or clean fill to re-grade the surrounding area to match the new elevation at each station.
- Upgrade electrical system serving LS-2 to meet current standards.
  - Install new underground conduit and associated electrical wires from an existing Pacific Gas and Electric Company (PG & E) power pole located approximately 210 feet north of LS-2.
  - Trench approximately four inches wide by twenty feet long and twelve inches deep for new electrical conduit and backfill once installation is complete.

- Excavate approximately three feet long by four feet wide at soil surface and three feet deep to install new in-ground concrete box (i.e., pull box) where the trench meets the existing conduit.
- Upgrade electrical system serving LS-4 to meet current standards.
  - Replace and upgrade approximately 660 feet of old electrical wiring in an existing underground conduit that runs to LS-4 from an existing PG & E meter southwest of the lift station.

LS-3, LS-5, LS-6, LS-7 and LS-8:

- Replace existing lift station components for LS-3, 5, 6, 7, and 8. Increase vault diameter at each station to allow more space for new pumps.
  - Excavate pit approximately thirty-two feet in diameter at soil surface, twelve feet in diameter at the bottom of the pit, and ten feet deep to remove old vault and install new one.
  - Replace sewer and electrical connections within the pit.
  - Fence pit when crews are not working at that location.
  - Raise vault lid at LS-3, 5, 6, and 8 up to two feet to bring top of vault above the high water level of Clear Lake.
  - Import approximately six cu yd of native soil or clean fill to re-grade the surrounding area to match the new elevation at each station.
- Upgrade electrical system serving LS-3 to meet current standards.
  - Install new electrical conduit and associated wires from an existing PG & E power pole approximately 200 feet north of LS-3.
  - Trench for new electrical conduit would measure approximately four inches wide by 140 feet long and twenty-four inches deep and would be backfilled once installation is complete.
- Upgrade electrical system serving LS-6 to meet current standards.
  - Replace and upgrade approximately 1,000 feet of electrical wiring housed in an existing underground conduit that runs to LS-6 from an existing PG & E meter. The PG & E meter is situated about 300 feet southeast of the entrance station.
  - Install approximately seven new pull boxes at the following locations: one box at the PG & E meter, one at LS-6, and five at 200 foot intervals between these two points.
  - Pull box excavation holes would measure approximately three feet long by four feet wide at soil surface and be three feet deep.

Telemetry System: Install a new telemetry system to allow communication to occur between lift stations and the sewer lift control panel at the park entrance station.

- Install a new telemetry antenna adjacent to each of the seven lift stations (LS-2 through 8), at one repeater station, and at the control panel (Appendix B: Figures 3 and 4). The poles and antenna would be a color that blends with the natural environment.
  - Mount each lift station antenna on a new metal pole anchored in the ground with a concrete footing. Antenna and pole structure would measure approximately eleven feet high from ground level.

- Mount repeater station antenna on a pole attached to the water treatment building south of Upper Bay View Campground. Antenna and pole structure would measure approximately twenty-five feet high from ground level.
- Mount control panel antenna on a pole attached to the entrance station. Antenna and pole structure would measure approximately twenty-two feet high from ground level.

Sewage and Groundwater Removal:

Prior to lift station repair or replacement, DPR would use a pump truck to remove remaining sewage from existing lift station vaults. In addition, DPR could encounter sewage and/or contaminated groundwater during excavation activities and could perform the following:

- If necessary, pump groundwater from excavation pits into a dewatering tank with appropriate screens to remove debris such as sand and gravel.
- Transfer groundwater to a pump truck after particulate matter settles to the bottom of the tank. Transport to LS-1 near the park entrance station and release through a screen into the sewage collection system at LS-1. LS-1 would then pump the effluent into the county collection system.

Vegetation Removal:

During repair and replacement of lift station components, vegetation surrounding each of the seven stations would be removed to allow work to proceed without obstruction.

Staging and Storage Areas:

DPR proposes to park, stage, and store vehicle and equipment on paved surfaces due to sensitive archaeological resources located in the park. Potential non-sensitive areas include individual campsites or the group picnic area at the Kelsey Creek Campground, and the boat ramp parking area near the Visitor Center.

**2.6 PROJECT IMPLEMENTATION**

Repair or replacement of each of the seven sewer lift stations, electrical line upgrades, and telemetry system installation would be phased over a period of several months. Construction work associated with each station would occur for approximately two weeks and could take place on up to several stations at any given time. Work would occur during daylight weekday hours. However, weekend work could be implemented to accelerate the repair, replacement, or installation of equipment or to address emergency or unforeseen circumstances.

Heavy equipment such as an excavator, backhoe, and grader could be used during construction work. Most equipment would be transported to the lift station, electrical alignment, and telemetry antennae sites and staging areas and remain until associated work is completed. Vehicles used to transport materials and equipment and crew vehicles would also be present intermittently. Staging and storage areas for equipment would be confined to designated paved parking areas inside the park.

Best Management Practices (BMPs) would be incorporated into the project design to ensure that the natural and cultural resources in and around the project sites are adequately protected during and after construction activities. The BMPs discussed in this document and used in the implementation of the project are obtained from the California Stormwater Quality Association (CSQA) *Stormwater Best Management Practices Construction Handbook*. Temporary BMPs would be used to keep sediment on-site throughout the duration of the project. During construction work BMPs would be checked daily, maintained, and modified as needed. In addition, BMPs would be used after construction work to stabilize the site and minimize erosion.

DPR has consistently referenced CSQA BMPs and has identified them as an acceptable standard for use in all State Parks. The BMPs which apply to this project and which would be implemented include but are not limited to erosion, sediment, and waste management and materials pollution controls.

## 2.7 VISITATION TO CLEAR LAKE STATE PARK

Clear Lake State Park receives an average of 100,981 visitors per year. Repair and replacement of the seven sewer lift stations would not increase visitation, but the project is designed to provide adequate sanitary facilities for current and projected visitation levels.

Fiscal Year	Paid Day Use	Free Day Use	Overnight Camping	Total Attendance
1995-1996	17,862	22,886	61,971	102,718
1996-1997	16,710	19,034	54,752	90,496
1997-1998	17,114	19,782	53,619	90,515
1998-1999	18,104	17,359	49,981	85,443
1999-2000	20,755	14,645	49,214	84,614
2000-2001	25,767	20,168	56,301	102,235
2001-2002	27,904	22,838	63,217	113,959
2002-2003	31,830	19,993	61,182	113,005
2003-2004	27,870	19,321	59,708	106,899
2004-2005	25,740	18,163	52,995	96,897
2005-2006	24,925	18,389	80,697	124,011
Total Attendance	254,581	212,576	643,635	1,110,791
Average Attendance	23,144	19,325	58,512	100,981

(DPR Attendance Database 2007)

## 2.8 CONSISTENCY WITH LOCAL PLANS AND POLICIES

The proposed project is consistent with local plans and policies currently in effect. Please see Chapter 3, Section IX, Land Use and Planning, for further details.

## **2.9 DISCRETIONARY APPROVALS**

DPR retains approval authority for the proposed Sewer Lift Repair and Replacement Project. Although Clear Lake State Park does not have a General Plan, work to repair, replace, or rehabilitate existing facilities or to protect public health and safety are permitted under PRC § 5002.2(c). The project is also consistent with the DPR mission and its management directives aimed at creating opportunities for high-quality outdoor recreation.

The project also requires approval from the following government agencies:

- California Department of Fish and Game (Lake and Streambed Alteration Permit),
- U.S. Army Corps of Engineers (Clean Water Act Section 404 permit), and
- Regional Water Quality Control Board (Clean Water Act Section 401 Water Quality Certification).

DPR has sought technical assistance from the U.S. Fish and Wildlife Service about special status species under their jurisdiction and has contacted Kelseyville County Waterworks District 3 regarding sewage and groundwater pumping and reintroduction to the main sewer lift station (LS-1).

DPR will acquire all necessary reviews and permits prior to implementing any project components requiring regulatory review.

## **2.10 RELATED PROJECTS**

DPR often has other smaller maintenance programs, restoration, and interpretive projects planned for a park unit. At this time, no other projects are planned to occur in Clear Lake State Park when the Sewer Lift Repair and Replacement Project is scheduled; however, DPR plans to replace LS-1 at some point in the future. As the main lift station, LS-1 pumps raw sewage effluent that it receives from the other seven stations to the local sewage treatment plant. Currently, there is no funding to replace LS-1, so it is not a reasonably foreseeable project. LS-1 replacement would be evaluated for environmental effects in a separate CEQA compliance document.



## CHAPTER 3 ENVIRONMENTAL CHECKLIST

### PROJECT INFORMATION

1. Project Title: Sewer Lift Repair and Replacement
2. Lead Agency Name & Address: California Department of Parks and Recreation
3. Contact Person & Phone Number: Gary Leach (916) 445-8691
4. Project Location: Clear Lake State Park, Lake County
5. Project Sponsor Name & Address: California Department of Parks and Recreation  
Acquisition and Development Division  
Northern Service Center  
One Capital Mall - Suite 500  
Sacramento, California 95814
6. General Plan Designation: No General Plan has been prepared.
7. Zoning: Resource Conservation (Lake County 2006)
8. Description of Project:

The Department of Parks and Recreation proposes to repair or replace seven of the existing sewer lift stations in the sewage collection system at Clear Lake State Park. The sewer lift stations service park facilities such as restrooms and showers, and together remove sewage waste from the park. The following is a brief summary of project work.

  - Replace existing below-ground sewage lift vaults, pumps, and electronic controls with new sewage lift vaults and equipment.
  - At the site of each lift station, install a new above-ground concrete pad and fiberglass cover to house above-ground piping and control panels.
  - Replace and raise concrete pads and vault lids in place to avoid flooding during high water events.
  - Replace electrical connections at the seven sewer lift sites. In addition, replace and upgrade approximately 2,090 total feet of electrical wiring to LS-2, 3, 4 and 6.
  - Install a new telemetry system with a radio antenna adjacent to each of the seven lift stations, at a repeater station, and at a control panel near the entrance station to allow lift stations to operate in conjunction with one another.
9. Surrounding Land Uses & Setting:

Refer to Chapter 3 of this document (Section IX, Land Use and Planning)
10. Approval Required from Other Public Agencies:

Refer to Chapter 2 of this document (Section 2.9, Discretionary Approvals)

**1. 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.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                    | <input type="checkbox"/> Agricultural Resources             | <input type="checkbox"/> Air Quality            |
| <input type="checkbox"/> Biological Resources          | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Geology/Soils          |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality            | <input type="checkbox"/> Land Use/Planning      |
| <input type="checkbox"/> Mineral Resources             | <input type="checkbox"/> Noise                              | <input type="checkbox"/> Population/Housing     |
| <input type="checkbox"/> Public Services               | <input type="checkbox"/> Recreation                         | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems     | <input type="checkbox"/> Mandatory Findings of Significance | <input checked="" type="checkbox"/> None        |

**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 original scope of the proposed project **COULD** have had a significant effect on the environment, there **WILL NOT** be a significant effect because revisions / mitigations to the project have been made by or agreed to by the applicant. 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** or its functional equivalent will be prepared.

I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the impacts not sufficiently addressed in previous documents.

I find that, although the proposed project could have had a significant effect on the environment, because all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required.

Heidi West  
Heidi West  
Environmental Coordinator

July 20 2007  
Date

## EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.
4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration [CCR, Guidelines for the Implementation of CEQA, § 15063(c)(3)(D)]. References to an earlier analysis should:
  - a) Identify the earlier analysis and state where it is available for review.
  - b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.
  - c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.
6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.
7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.
8. Explanation(s) of each issue should identify:
  - a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
  - b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

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# ENVIRONMENTAL ISSUES

## I. AESTHETICS

### ENVIRONMENTAL SETTING

From Clear Lake State Park, visitors experience panoramic views of the expansive lake, gentle hills, and rolling mountains of the Coast Range. To the southeast, Mount Konocti, a dormant volcano and one of the region's dominant landscape features, rises to 4,299 feet.

The park is situated off of Soda Bay Road, a county-designated scenic highway (Lake County 2003). Lake County scenic highways follow a scenic corridor district composed of land adjacent to and visible from the roadway. Scenic corridors are characterized by unique, natural, or historic elements such as varied topography, colorful or natural vegetation, water features, pastoral settings, and historic buildings. No roads in Lake County have been officially designated as state scenic highways; however, four state routes are eligible for designation including State Routes (SR) 29 and 179 (i.e. combined route) which come within 2.5 miles south of Clear Lake State Park (Lake County 2003).

Upon entering the park from Soda Bay Road, visitors drive through an open meadow before reaching the entrance kiosk and station. The four park campgrounds, visitor center, and day use facilities are in close proximity to the lake and other scenic features such as Cole and Kelsey creeks, Kelsey Slough, and Dorn and Soda bays (Appendix A: Figure 3).

By way of two nature trails, visitors may hike to overlooks for scenic vistas, spring wildflower viewing, and year-around wildlife watching (DPR 2005). The Dorn Nature Trail is easily reached by way of the visitor center, swimming area, Lower Bayview Campground, and the Kelsey and Cole Creek campgrounds. The Lake Overlook lies along the Dorn Nature Trail and affords views of Kelsey Slough and over the valley oak and cottonwood covered Kelsey Creek Campground to the lake beyond. The lake supports species such as river otters, raccoons, waterfowl, raptors such as bald eagles and osprey, pelicans, and blue herons. The Indian Nature Trail begins just north of the Entrance Station and leads to the Meadow Overlook, which provides a broad bird's eye view for watching wildlife below. From the Meadow Overlook, deer, fox, coyote, great horned owls, quail, and wild turkeys may be seen as they forage or pass through the area along wildlife corridors.

The shores of Clear Lake State Park are also visible to boaters out on the lake. Boaters enjoy unobstructed views of the park shoreline, forested slopes, and resident wildlife.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

historic buildings within a state scenic highway?

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

## DISCUSSION

- a) LS-2 through 8 are positioned throughout the park to serve park facilities, including the visitor center, campgrounds, day use areas, and park residences. The three scenic vistas from the two overlooks within the park and the view of the park by boaters on the lake would likely be impaired temporarily by construction vehicles and equipment. Visitors at the Lake Overlook could see construction vehicles and activities at LS-3 and 4, while visitors at the Meadow Overlook could see construction related activities conducted at LS-6 and along the path of the LS-6 electrical conduit. In addition, construction work for LS-5 is near the swimming area and, therefore, could be visible to boaters on the lake. During project work, heavy construction vehicles would be used to excavate sewer lift stations, creating soil mounds and material stockpiles. New sewer lift stations, telemetry antennae, and other equipment would be stored at designated staging areas within the park and transported to each lift station as it is repaired or replaced. Construction equipment and materials would be temporary and would be removed from the park after project completion. Less than significant impact.

Existing lift station concrete pads measure on average about three by three feet and control boxes are about five feet high by three feet wide. New above-ground lift station components, including an eight-foot long by seven-foot wide concrete pad and a five foot high by seven feet long by three feet wide, would be larger than the components they would replace at each station. However, the new covers would be a color that blends in with the natural environment and would fit over controls and pipes, hiding them from view. The overall appearance of each lift station would be improved, reducing the potential impacts to a less than significant level.

A new pole and telemetry antenna would be installed with a concrete footing adjacent to each lift station. A telemetry repeater station antenna would be installed on the water treatment building and the control panel antenna would be mounted on a pole attached to the entrance station. The lift station antennae would measure approximately eleven feet tall, the repeater antenna would be twenty-five feet, and the control panel antenna would measure twenty-two feet. The poles and antennae would be a color that blends with the natural environment, reducing any potential impacts of glare to a less than significant level.

- b) The lift station sites and construction staging areas are located in Clear Lake State Park, which is not adjacent to or within viewing distance of a state scenic highway. No impact.
- c) As with any construction project, there would be some temporary decrease in the visual appeal of the areas immediately affected by the work being performed. However, the duration of construction related activities would be limited to approximately two weeks at

each sewer lift site and along part or all of the following alignments: LS-2, 3, 4 and 6 electrical conduits. Excavated materials would be replaced into construction holes or removed from the site. See Discussion (a) above. Less than significant impact.

- d) Lighting is not an element of this project. Construction work would be conducted during daylight hours, and no permanent new light sources would be introduced into the landscape. Lift station and antennae components would not produce metallic shine or glare. No impact.

## II. AGRICULTURAL RESOURCES

### ENVIRONMENTAL SETTING

Lying within the Pacific Coast Range, approximately ninety miles northwest of Sacramento and thirty-five miles east of the Pacific Ocean, Lake County is bounded by Mendocino County to the west, by Yolo, Colusa, and Glenn counties to the east, and Sonoma and Napa counties to the south (California State Board of Equalization 2007). Lake County encompasses roughly 804,477 acres (1,257 square miles) with roughly 109,581 acres of that area in agricultural production. Agricultural products include fruit, nut, and vegetable crops, as well as seed, nursery, and cut flower crops. Livestock and poultry farms are also found in Lake County (Lake County 2007). Per the 2004 – 2005 assessment roll, Lake County has approximately 49,500 acres under California Land Conservation Agreement contracts, including 385 acres in non-renewal status. Additionally, approximately 5.71% of Lake County land is covered under the Williamson Act contract (California State Association of Counties 2007).

Much of the area around Clear Lake, including some of the land that is now part of Clear Lake State Park, was once agricultural land used primarily for farming and the raising of livestock. Presently, vegetation within the park consists of oak woodland, chaparral, non-native grassland, and riparian communities. At this time, no land within the boundaries of the park is used or zoned for agricultural purposes. Additionally, no parkland, or the areas immediately surrounding the park, is included in any of the Important Farmland categories, as delineated in the Farmland Mapping and Monitoring Program (California Department of Conservation 2007).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

\* 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 Department of Conservation as an optional model for use in assessing impacts on agricultural and farmland.

### DISCUSSION

a, b, c) As noted above in the Environmental Setting, Clear Lake State Park does not support agricultural operations. All work proposed as part of the project would occur within park boundaries. The project would not impact any category of California Farmland, conflict with



any existing zoning for agricultural use or Williamson Act contract, or result in the conversion of farmland to non-agricultural use. No impact.

### III. AIR QUALITY

#### ENVIRONMENTAL SETTING

The area surrounding Clear Lake State Park is subject to air quality planning programs required by the federal Clean Air Act of 1970 (CAA), its amendments from 1990, and the California Clean Air Act of 1988 (CCAA). Both the federal and state statutes provide for ambient air quality standards to protect public health, timetables for progressing toward achieving and maintaining ambient standards, and the development of plans to guide air quality improvement efforts of state and local agencies.

Ambient air quality standards were developed to protect public health and welfare. Individuals or groups that are especially reactive to criteria pollutants are considered sensitive receptors such as children, the elderly, individuals susceptible to respiratory distress, and those who are acutely or chronically ill. Air standards specify the concentration of pollutants the public can be exposed to without experiencing adverse health effects. National and state standards are reviewed and updated periodically based on new health studies. California ambient standards tend to be at least as protective as national ambient standards and are often more stringent. Based on these standards (attainment, non-attainment, or unclassified), regional areas such as the Lake County Air Basin are given an air quality status “label” by the federal and state regulatory agencies for planning purposes. As defined by the CAA, a region with air quality as good as or better than the national ambient air quality standards has maintained or achieved “attainment”; a region that exceeds ambient air quality standards is designated as a “non-attainment” area; and a region that cannot be classified on the basis of available air quality data is designated as an “unclassified” area.

**Table III-1: Air Quality Standards Based on 2006 Lake County Air Quality Designations**

<b>Pollutant</b>	<b>State Designation</b>	<b>National Designation</b>
Ozone	Attainment	Unclassified/Attainment
PM <sub>10</sub>	Attainment	Unclassified
PM <sub>2.5</sub>	Attainment	Unclassified/Attainment
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Sulfates	Attainment	Not Applicable (N/A)
Lead	Attainment	N/A
Hydrogen Sulfide	Attainment	N/A
Visibility Reducing Particles	Attainment	N/A

(CARB 2007)

#### **Federal Requirements**

The U.S. Environmental Protection Agency (USEPA) is responsible for setting National Ambient Air Quality Standards (NAAQS) and establishing federal motor vehicle emission standards. The USEPA also has authority under the CAA to require states to prepare plans to attain NAAQS by deadlines specified in the federal act. The USEPA is the final reviewing authority and may approve or disapprove state air quality implementation plans.

The USEPA established national area designations for six criteria pollutants after the passage of the Clean Air Act of 1970. These pollutants include carbon monoxide (CO), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), lead, particulate matter 10 microns or less in diameter (PM<sub>10</sub>), and particulate matter 2.5 microns or less in diameter (PM<sub>2.5</sub>).

**State Requirements**

The California Air Resources Board (CARB) is the lead state agency for air quality and is responsible for preparing and submitting State Implementation Plans (SIP) to the USEPA. CARB also establishes emission standards for on-road motor vehicles and some off-road sources, develops consumer product standards for meeting California air quality goals, develops air quality models, conducts and funds air quality research, develops emission inventories, and provides assistance to local air districts.

Although the CCAA was not enacted until 1988, California ambient air quality standards first were established in 1969. CARB makes California area designations for ten ambient air pollutants commonly referred to as criteria pollutants (i.e., an air pollutant for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set). Criteria pollutants include ozone, suspended particulate matter (PM<sub>10</sub>), fine suspended particulate matter (PM<sub>2.5</sub>), carbon monoxide, nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and visibility reducing particles (VRPs). A pollutant has “attainment” status if the State standard for that pollutant has not been violated at any site in the area during a three-year period. Conversely, a pollutant has “non-attainment” status if there was at least one violation of a State standard for that pollutant in the area. An “unclassified” pollutant is one for which data is incomplete to determine attainment or non-attainment status.

**Local Requirements**

Local air pollution control districts and/or air quality management districts are responsible for developing the overall attainment strategy for their respective geographical area (Lake County Air Quality Management District 2006). Districts maintain authority to regulate stationary sources and some area emission sources. They also cooperate with Regional Transportation Planning agencies to develop measures affecting local transportation activities included in a SIP.

Clear Lake State Park is located in the Lake County Air Basin, managed by the Lake County Air Quality Management District (LCAQMD). The LCAQMD jurisdiction covers Lake County only. Clear Lake State Park and the project sites within the park boundary are located completely within Lake County (Lake County 2007).

<b>WOULD THE PROJECT:</b>	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	<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?
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?
- e) Create objectionable odors affecting a substantial number of people?

- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make these determinations.

**DISCUSSION**

- a) Work proposed as part of the Sewer Lift Repair and Replacement Project would not conflict with or obstruct the fulfillment of any applicable air quality plan for Lake County or the Lake County Air Basin. No impact.
- b, c) The proposed project would not emit air contaminants at a level that, by themselves, would violate any air quality standard or contribute to a permanent or long term increase in any air contaminant. However, construction related activities could produce short-term emissions of fugitive dust (PM<sub>10</sub>) and involve the use of equipment that would emit ozone precursors in and around the project site. Incorporation of the following minimization measure into the project design would reduce impacts to a less than significant level.

<b>MINIMIZATION MEASURE AIR-1: DUST AND OZONE REDUCTION</b>
<ul style="list-style-type: none"> <li>• All active construction areas will be watered at least twice daily during dry, dusty conditions.</li> <li>• All trucks hauling soil, sand, or other loose materials on public roads will be covered or required to maintain at least two feet of freeboard.</li> <li>• All gasoline-powered equipment will be maintained in good mechanical condition (according to manufacturer's specifications), and in compliance with all State and federal requirements.</li> <li>• Excavation and grading activities will be suspended when sustained winds exceed 15 miles per hour (mph), instantaneous gusts exceed 25 mph, or dust from construction related activities could obscure driver visibility on public roads.</li> </ul>

- d) Facilities where sensitive receptors are likely to be located include schools, playgrounds, childcare centers, retirement and convalescent homes, hospitals, medical clinics, and residences. All schools are at least 2.5 miles from the project site. The proposed project, however, would be located in the general vicinity of several park residences. Any equipment use that could generate fugitive dust would be of limited duration, both in daily

operation and as a percentage of the proposed work for this project. The construction areas would be closed to the public and work would generally occur during daylight hours. These conditions, combined with full implementation of the conditions described in **MINIMIZATION MEASURE AIR-1** above, will result in a less than significant impact.

- e) The proposed work would not result in the long-term generation of odors. Construction related emissions could result in a short-term generation of odors, including diesel exhaust and fuel or solvent vapors. Some park personnel and adjacent residents could consider these odors objectionable. However, because construction activities would be short-term, odorous emissions would be limited and dissipate rapidly in the air with increased distance from the source. Less than significant impact.

## IV. BIOLOGICAL RESOURCES

### ENVIRONMENTAL SETTING

Four prominent habitat types occur in Clear Lake State Park, including oak woodland, chaparral, non-native grassland, and riparian. The seven lift stations, electrical alignments, and telemetry antennae are located in various locations and habitats throughout the park. Each of these project locations has been previously disturbed as a result of installation of the existing lift stations or other equipment. The plant community types occurring at the lift station sites are described using the Sawyer and Keeler-Wolf (1995) vegetation classification system.

LS-2: This lift station is located in the valley oak alliance. The site is dominated by valley oak (*Quercus lobata*) and Oregon ash (*Fraxinus latifolia*). The understory is disturbed and sparsely vegetated by species such as ryegrass (*Lolium* sp.), poison oak (*Toxicodendron diversilobum*), brome grasses (*Bromus* sp.), and California blackberry (*Rubus ursinus*). Installation of underground electrical lines and one in-ground concrete pull box would occur along an existing electrical alignment. Approximately twenty feet of the existing electrical alignment that would be trenched for a new conduit and excavated for a new pull box is in an open area within valley oak alliance on the east side of the park entrance road. The open area is vegetated with non-native annual grasses and forbs. The alignment on the west side of the entrance road is situated in valley oak alliance.

LS-3: The lift station is situated within the California annual grassland alliance. This site occurs in a mowed-lawn environment dominated by non-native grasses and forbs. The dominant species at and surrounding the lift station site include storksbill (*Erodium cicutarium*), bindweed (*Convolvulus arvensis*), barley (*Hordeum* sp.), and Bermuda grass (*Cynodon dactylon*). Trenching approximately 200 feet for a new electrical conduit to LS-3 would occur through annual grassland.

LS-4: Located at the edge of riparian vegetation, LS-4 is also in a highly disturbed area. Vegetation surrounding the lift station includes Himalayan blackberry (*Rubus discolor*), California blackberry, woolly mullein (*Verbascum thapsus*), stinging nettle (*Urtica dioica*), and box elder (*Acer negundo* var. *californicum*). The 660 feet of old underground electrical conduit, in which wiring would be replaced, runs along the eastern edge of the park entrance road until it crosses the road to its LS-4 connection. The edge of the park entrance road is highly disturbed with bare areas and patches vegetated with non-native annual grasses and forbs.

LS-5: The lift station occurs at the edge of an existing dirt parking lot. This highly disturbed area is dominated by cheat grass (*Bromus tectorum*) and soft chess (*Bromus hordeaceus*). Surrounding the lift station are coyote brush (*Baccharis pilularis*), willow species (*Salix* sp.), blue elderberry (*Sambucus mexicana*), and button bush (*Cephalanthus occidentalis* var. *californicus*).

LS-6: Located at the edge of the California annual grassland series, LS-6 is surrounded predominately by non-native grasses. Species such as ripgut grass (*Bromus diandrus*), Medusa head (*Taeniatherum caput-medusae*), cheat grass, lotus (*Lotus* sp.), and bedstraw (*Galium* sp.) dominate the area. The 1,000 foot of old underground electrical wiring that would

be replaced passes through California annual grassland predominantly consisting of non-native grasses and forbs, but also including native species such as blue wildrye (*Elymus glaucus*). A portion of the alignment passes through valley oak alliance dominated by valley oak in the canopy, and poison oak and skunkbrush (*Rhus trilobata*) along with non-native annual grasses and forbs in the understory.

LS-7: Situated under the canopy of blue oaks, LS-7 is in close proximity to an existing park restroom facility. The understory is comprised of sparsely scattered non-native grasses and forbs.

LS-8: This lift station is located within a campground planted with valley oak and California sycamore (*Platanus racemosa*) that are maintained by park staff. The area surrounding the lift station is highly disturbed with non-native grasses and forbs.

### **Special Status Species**<sup>1</sup>

Sensitive biological resources that occur or potentially occur on the proposed project site are discussed in this section. Sensitive biological resources include the plants and animals that have been given special recognition by federal, state, or local resource agencies and organizations. Also considered are habitats that are listed as critical for the survival of a listed species or have special value for wildlife, as well as plant communities that are unique or of limited distribution. Specific information on biological resources is provided along with potential impacts to those resources from the construction of new facilities.

The U.S. Fish and Wildlife Service (USFWS) provided an official list of sensitive species that could be present in the project area or that could be affected by the project (USFWS 2006b). Sensitive species include Federal or State Threatened, Endangered, or Rare plant and wildlife species, and California Species of Special Concern (i.e., species that receive protection because of declining populations, limited ranges, and/or continuing threats that make them vulnerable to extinction). All sensitive species and their habitats were evaluated for potential impacts by this project. A query of the California Department of Fish and Game's (DFG) California Natural Diversity Database (CNDDDB) (DFG 2006b) was conducted for locations of sensitive species and habitats within the Lucerne 7.5 minute U.S. Geological Survey (USGS) quadrangle map. Special status plant species potentially occurring in the Lucerne quadrangle map and the surrounding eight 7.5 minute USGS quadrangle maps were obtained from the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2007).

Fifteen special status plant species, eleven wildlife species, and two sensitive natural communities are described below along with their potential to occur within the project area and

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<sup>1</sup> For the purposes of this document, special-status species are defined as plants and animals that are legally protected or that are considered sensitive by federal, state, or local resource conservation agencies and organizations. Specifically, this includes species listed as state or federally Threatened or Endangered, those considered as candidates for listing as Threatened or Endangered, species identified by the USFWS and/or DFG as Species of Concern, animals identified by DFG as Fully Protected or Protected, and plants considered California Native Plant Society (CNPS) to be rare, threatened, or endangered (i.e. plants on CNPS lists 1 and 2).

the impacts this project could potentially cause. Also described are six other raptor species that are protected under the Fish and Game Code (§ 3503.5) and that could occur within the project area.

### **Plant Species**

A list of all special status plant species was generated from CNPS<sup>1</sup> Inventory and CNDDDB queries (Appendix C: Table1).

Only those special status species likely to occur in the project area have been evaluated for potential impacts that could result from the proposed project. The likelihood of occurrence was based on species ranges in terms of elevation and on the presence of suitable habitat within the park. The lift stations are located in three of the four habitat types present in Clear Lake State Park; those habitat types are oak woodland, grassland, and riparian. There are no existing CNDDDB records indicating that any of these special status species occur within park boundaries. Additionally, in Spring 2007 a DPR botanist conducted a blooming period survey for special status plant species and no sensitive species were found within the project area.

**Bent-flowered fiddleneck** (*Amsinckia lunaris*) – Bent-flowered fiddleneck is a CNPS List 1B.2 annual herb that blooms from March through June. This species occurs in coastal bluff scrub, cismontane woodland, and valley and foothill grassland habitats. Habitat for this species occurs at LS-3, 6, and 8 and along the electrical alignments for LS-2, 3, 4, and 6. However, the sites are disturbed and no evidence of this species was found in the Spring 2007 survey. This species would not be affected by project implementation.

**Konocti manzanita** (*Arctostaphylos manzanita* ssp. *elegans*) – This CNPS List 1B.3 species occurs in chaparral, cismontane woodland, and lower montane coniferous forest habitats. Konocti manzanita is an evergreen shrub blooming from March through May. Habitat for this species occurs at-LS 2, 6, and 7 and along the electrical alignments for LS-2 and 6. During the botanical survey no manzanita shrubs were observed on, or in proximity to, any of the lift station sites. Therefore, Konocti Manzanita would not be affected by project implementation.

**Indian Valley brodiaea** (*Brodiaea coronaria* ssp. *rosea*) – Blooming from May through June, the Indian Valley brodiaea is a CNPS List1 B.1 and State Endangered perennial herbaceous species. It occurs in closed-cone coniferous forest, chaparral, cismontane woodland, and valley and foothill grassland habitats. Habitat for the brodiaea occurs at LS-2, 3, 6, 7, and 8 and along the electrical alignments for LS-2, 3, 4, and 6. However, the project sites occur in disturbed areas and Indian Valley brodiaea was not observed during the Spring 2007 survey. Therefore, Indian Valley brodiaea would not be affected by project implementation.

**Small-flowered calycadenia** (*Calycadenia micrantha*) – This annual herb is a CNPS List 1B.2 species that blooms from June through September. Small-flowered calycadenia occurs in chaparral, meadows and seeps, and valley and foothill grassland habitats. Habitat for this

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<sup>1</sup> California Native Plant Society (CNPS) Lists: List 1A = presumed extinct in California; List 1B = rare or endangered in California and elsewhere; List 2 = rare or endangered in California, more common elsewhere; List 3 = need more information; List 4 = plants of limited distribution. New threat code extensions are: .1 = seriously endangered in California; .2 = fairly endangered in California; and .3 not very endangered in California.



species occurs at LS-3, 6, and 8 and along the electrical alignment for LS-2 and 6. The species was not observed in the highly disturbed areas in proximity to the stations during the Spring 2007 survey. Therefore, small-flowered calycadenia would not be affected by project implementation.

**Rincon Ridge ceanothus** (*Ceanothus confusus*) – This CNPS List 1B.1 evergreen shrub blooms from February through June. Rincon Ridge ceanothus occurs in closed-cone coniferous forest, chaparral, and cismontane woodland. Suitable habitat for this species occurs adjacent to LS-2, 6, and 7 and along the electrical alignments for LS-2 and 6. However, no ceanothus shrubs were observed on, or in close proximity to, any of the project sites. Therefore, Rincon Ridge ceanothus would not be affected by project implementation.

**Brandegee's eriastrum** (*Eriastrum brandegeae*) – Blooming from April through August, this annual herb is a CNPS List 1B.2 and State Rare species. Brandegee's eriastrum occurs in chaparral and cismontane woodland habitats. Habitat for the eriastrum is adjacent to LS-2, 6, and 7, and along the electrical alignments for LS-2 and 6. The sites occur in disturbed areas and the species was not observed during the Spring 2007 survey. Therefore, Brandegee's eriastrum would not be affected by project implementation.

**Glandular western flax** (*Hesperolinon adenophyllum*) – Glandular western flax is a CNPS List 1B.2 annual herb that blooms from May through August and occurs in chaparral, cismontane woodland, and valley and foothill grassland habitats. LS-2, 3, 6, 7, and 8, as well as the electrical alignment for LS-2, 3, 4, and 6, are adjacent to these habitat types. However, during the Spring 2007 survey the species was not observed in the disturbed areas in the vicinity of the lift stations. Therefore, glandular western flax would not be affected by project implementation.

**Lake County western flax** (*Hesperolinon didymocarpum*) – This annual herb is a CNPS List 1B.2 and State Endangered species. Flowering from May through July, Lake County western flax occurs in chaparral, cismontane woodland, and valley and foothill grassland habitats. The species ranges from 1,082 to 1,197 feet in elevation, making its distribution outside the range of Clear Lake State Park. Although suitable habitats are present adjacent to LS-2, 3, 6, 7, and 8, and in the vicinity of the electrical alignments for LS-2, 3, 4, and 6, the elevation and site observations indicate Lake County western flax is not present and therefore would not be affected by project implementation.

**Colusa layia** (*Layia septentrionalis*) – Colusa layia is a CNPS List 1B.2 annual herb that blooms from April through May. This species occurs in chaparral, cismontane woodland, and valley and foothill grassland habitats. Suitable habitat for this species occurs within the park and adjacent to LS-2, 3, 6, 7, and 8 and the electrical alignments for LS-2, 3, 4, and 6. However, the project sites occur in disturbed areas and the species was not found during the Spring 2007 survey. Therefore, Colusa layia would not be affected by project implementation.

**Cobb Mountain lupine** (*Lupinus sericatus*) – Blooming from March through June, this perennial herb is a CNPS List 1B.2 species. It occurs in broadleaf upland forest, chaparral, cismontane woodland, and lower montane coniferous forest habitats. Suitable habitat occurs

adjacent to LS-2, 6, and 7 and along the electrical alignments for LS-2 and 6. However, the project sites occur in disturbed areas and during the Spring 2007 survey the species was not observed. Therefore, Cobb Mountain lupine would not be affected by project implementation.

**Mt. Diablo cottonweed** (*Micropus amphibolus*) – This CNPS List 3.2 species occurs on bare, grassy, or rocky slopes of broadleaf upland forest, chaparral, cismontane woodland, and valley and foothill grassland habitats. Mt. Diablo cottonweed is an annual herb blooming from March through May. LS-2, 3, 6, 7, and 8 and the electrical alignments for LS-2, 3, 4, and 6 are situated within appropriate habitat but are in areas of relatively disturbed areas with level topography away from rocky slopes. The species was not observed near the project sites during the Spring 2007 survey and therefore, Mt. Diablo cottonweed would not be affected by project implementation.

**Robust monardella** (*Monardella villosa* ssp. *globosa*) – This perennial rhizomatous herb is a CNPS List 1B.2 species. Blooming from June through July, robust monardella is found growing in broadleaf upland forest, chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats. Although appropriate habitat is found adjacent to LS-2, 3, 6, 7, and 8, and the electrical alignments for LS-2, 3, 4, and 6, the monardella was not observed in the disturbed areas surrounding the stations during the Spring 2007 survey. Therefore, robust monardella would not be affected by project implementation.

**Lake County stonecrop** (*Sedella leiocarpa*) – This annual herb blooms from April through May and is a CNPS List 1B.1 species. Lake County stonecrop occurs in rock outcrops in cismontane woodland, valley and foothill grassland, and vernal pools. There are no outcroppings adjacent to any of the lift stations, but rocky areas do occur along part of the electrical alignment for LS-2. However, the species was not found during the Spring 2007 survey. Therefore Lake County stonecrop would not be affected by project implementation.

**Green jewel-flower** (*Streptanthus breweri* var. *hesperidis*) – This chaparral or cismontane woodland dweller is a CNPS List 1B.2 species. Blooming from May through July, the green jewel-flower is an annual herb that occurs in rocky habitats. Suitable habitat for this species does not occur in the vicinity of any lift stations but does occur along the part of the electrical alignment for LS-2. However, the species was not found during the Spring 2007 survey. Therefore, green jewel-flower would not be affected by project implementation.

**Beaked tracyina** (*Tracyina rostrata*) – This annual herb is a CNPS List 1B.2 species that blooms from May through June. The beaked tracyina occurs in cismontane woodland and valley and grassland habitats. Although suitable habitat for beaked tracyina occurs adjacent to LS-2, 3, 6, 7, and 8, and along the electrical alignments for LS-2, 3, 4, and 6, this species was not observed in disturbed areas surrounding the stations during the Spring 2007 survey. Therefore, this species would not be affected by project implementation.

### **Wildlife Species**

A list of special status wildlife species known to occur or that could potentially occur on the proposed project site are included in Appendix C: Table 2. The list is based on CNDDDB and USFWS queries of the Lucerne and Kelseyville 7.5 minute USGS quadrangle maps. Species

have been included in the list based on the presence of suitable habitat and the species potential to occur in the vicinity of the lift stations.

### Invertebrates

**California freshwater shrimp** (*Syncaris pacifica*) – The State and Federally Endangered California freshwater shrimp is on the Kelseyville and Lucerne quad lists from the USFWS. This species is found within stream pools away from the main current where there are often undercut banks, exposed root systems, and vegetation hanging into the water. The California freshwater shrimp breeds in the fall of their second season and females carry their eggs until late spring when young shrimp emerge as miniature adults. California freshwater shrimp occur in coastal streams flowing toward the Pacific. There is no suitable habitat for this species in the vicinity of the lift stations. Therefore, California freshwater shrimp would not be affected by project implementation (USFWS 2006c).

**Valley elderberry longhorn beetle** (*Desmocerus californicus dimorphus*) – This species is listed as Federally Threatened. The valley elderberry longhorn beetle is nearly always found on or near to elderberry, the host plant. Elderberry shrubs must have stems over an inch in diameter for the beetle to use the plant for reproduction. Female beetles lay eggs on the bark and as the larva hatch, they burrow into the stems. After two years they enter the pupa stage and emerge from the stems as adults (USFWS 2006c). Elderberry shrubs occur in immediate proximity to LS-5 but according to USFWS this area is no longer considered critical habitat for the valley elderberry longhorn beetle. The project is designed to avoid the elderberry plants. As a result, the valley elderberry longhorn beetle, if occurring on shrubs near the project work area, would not be impacted by project implementation.

### Fish

**Sacramento perch** (*Archoplites interruptus*) – There is a very old record of this California Species of Concern in the CNDDDB records. The Sacramento perch inhabit sloughs, slow moving rivers, and lakes, and prefer beds of emergent, submergent, or rooted vegetation. Sacramento perch spawn during spring and early summer. The males establish territories up to 2.5 feet deep. Larvae remain in shallow waters within emergent vegetation until they reach about two inches in length (DFG 2006c). If the lift stations are within a flooded area or adjacent water bodies, construction work would not resume in that area until after July when the potential to affect the Sacramento perch is avoided.

**Clear Lake hitch** (*Lavinia exilicauda chi*) – The Clear Lake hitch is a California Species of Special Concern. These fish go through spawning from mid-March through May. They usually spawn after heavy rains over clean gravel in stream tributaries or even in flooded areas along the Clear Lake edges. Juveniles use submerged vegetation as refuge from predators along the shores of Clear Lake until they are between four and five centimeters (cm) long (i.e., approximately eighty days old), before they move to deeper waters. Loss of spawning streams and predation are the main causes of population decline (DFG 2006c). If the lift stations are within a flooded area or adjacent to a water body, construction work would not continue until July when the potential to affect the Clear Lake hitch is avoided.

### Amphibians

**California red-legged frog** (*Rana aurora draytonii*) – This Federally Threatened frog is also a California Species of Special Concern. The California red-legged frog needs permanent or temporary aquatic environment with emergent vegetation for breeding, but is also known to use a variety of other habitat types including riparian and upland areas. These frogs breed from November through March (USFWS 2006c). The tadpoles need the aquatic environment for 3.5 to 7 months before they emerge as frogs. The Clear Lake area is considered core recovery area for California red-legged frog; therefore the species' presence is assumed and avoidance measures would be implemented during project implementation.

### Reptiles

**Northwestern pond turtle** (*Emys marmorata marmorata*) – The northwestern pond turtle is an aquatic turtle that only leaves the water for reproduction, aestivation, and overwintering. This California Species of Special Concern typically becomes active in March as it becomes warmer and in November it overwinters either underwater in bottom mud or on land in a burrow. Mating occurs in April and May and the females lay eggs in a nest in an upland location. Females may lay more than one clutch a year, from April through August. Emerging hatchlings are thought to overwinter in the nest site before moving to an aquatic environment in spring (DFG 2006c). Although Clear Lake State Park is within the historical range for this species and potential habitat is found within the park, there are no CNDDDB records of its presence within the park. The closest reported occurrence of northwestern pond turtle is approximately six miles from the project site. However, due to historic range, potential habitat avoidance measures would be implemented to reduce potential impacts northwestern pond turtle to less than significant.

### Birds

**Yellow warbler** (*Dendroica petechia brewsteri*) – The yellow warbler, a California Species of Concern, is found in riparian deciduous habitats that contain cottonwoods, willows, alders, and other small trees and shrubs. The species usually migrates into California from April through October and breeds in late April through August (DFG 2006a). The yellow warbler was recorded singing during a bird survey conducted in Clear Lake State Park by a DPR biologist in 2005 (Shafer 2005). Nesting yellow warblers, if occurring within the vicinity of the project areas, could be affected by construction related noise during project implementation. Avoidance measures would be used to reduce potential impacts to the yellow warbler species to less than significant.

**Bald Eagle** (*Haliaeetus leucocephalus*) (**nesting and wintering**) – The Department of Interior announced the removal of the bald eagle from the list of Federally Threatened and Endangered Species in June 2007. The bald eagle is still considered a California Endangered species and is also protected by the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA) (USFWS 2006a). Eagles in California are either permanent residents or winter migrants, nesting below the crown of large, old growth trees near water. The bald eagle perches in high trees swooping down to catch fish, waterfowl, or small mammals found near the water. The breeding season is February through July (DFG 2006a). Suitable nesting and wintering habitat is known to occur within the project area for bald eagles. During UC Davis studies funded by the USEPA, a bald eagle pair was observed nesting at the lake in 1999 (Richerson 2001). However, construction work is scheduled to occur from

September through January to avoid the bald eagle nesting season. Therefore, no effects to bald eagle would occur as a result of project implementation.

**Osprey (*Pandion haliaetus*) (nesting)** – Osprey is listed as a California Species of Concern. Osprey build large nests in treetops or snags in open forests within fifteen miles of water foraging habitat (DFG 2006a). In the vicinity of Clear Lake, Osprey arrive to nest between mid-March through early April (DFG 2006a). A platform was installed in the vicinity of LS-3 after a known osprey nesting tree located about 500 feet from LS-4 fell about two years ago. In Spring 2007, two pairs of osprey were observed within the park: the first pair is currently nesting near LS-4 and the second pair is attempting to build a nest near LS-5. Lift station repair or replacement would be timed to conclude work on lift stations within the vicinity of nest sites before March to prevent impacts to osprey. If the osprey return to nest, avoidance measures would be used to reduce potential impacts to less than significant.

**Northern Spotted Owl (*Striz occidentalis caurina*)** – The northern spotted owl is listed as Federally Threatened. The distribution of northern spotted owl ranges from southwestern British Columbia to northwestern California south to Marin County (USFWS 2006a). This species requires multi-layered mixed conifer, redwood, and Douglas-fir habitats with a moderate to high canopy. These nocturnal hunters use tree cavities or platforms for nesting and mating occurs from March through June (DFG 2006a). The proposed project area does not contain suitable habitat for the northern spotted owl. Therefore, the species would not be impacted by project implementation.

**Other Raptor Species:** All raptors and their nests are protected under the Fish and Game Code (§ 3503.5). The following sensitive raptor species may occur within the project area.

**Cooper's hawk (*Accipiter cooperi*) (nesting)** – California Special Concern; **Northern harrier (*Circus cyaneus*) (nesting)** - California Special Concern; **White-tailed Kite (*Elanus leucurus*) (nesting)** – California Fully Protected; **Sharp-shinned Hawk (*Accipiter striatus*) (nesting)** – California Special Concern species; **Osprey (*Pandion haliaetus*) (nesting)** – California Special Concern; and **Northern goshawk (*Accipiter gentillis*) (nesting)** – California Special Concern. If present within or near the project area, avoidance measures would be implemented to avoid impacts to nesting raptor species.

### Mammals

**Fisher (*Martes pennanti*)** – This species is a California Species of Special Concern found in the Cascades, North Coast Range, and Klamath Mountains. Fishers use coniferous forests and deciduous riparian habitats with dense cover. The project area lacks dense cover habitat that the fisher prefers. Therefore, suitable habitat does not exist in the vicinity of the lift stations and the species would not be impacted by project implementation.

### **SENSITIVE NATURAL COMMUNITIES**

Sensitive natural communities are plant communities that are regionally uncommon or unique, unusually diverse, or of special concern to local, State, or federal agencies. Removal or substantial degradation of these plant communities constitutes a significant adverse impact under CEQA. The CNDDDB record search identified two sensitive natural communities that occur at Clear Lake, including the Clear Lake drainage seasonal lake-fish spawning stream

and the Clear Lake drainage Cyprinid/Catostomid stream. These sensitive communities are not within the project areas and therefore would not be affected by project implementation.

**BLUE OAK WOODLAND**

A tree canopy predominantly comprised of blue oak covers the Upper Bayview Campground, which is serviced by LS-7. During the replacement of LS-7, the contractor would remove up to three blue oak trees to access the lift station. Two of the three blue oaks that could be removed are stressed and partially dead. The third blue oak has a diameter at breast height (DBH) of fourteen inches. Oak removal associated with LS-7 replacement would occur outside of the breeding season for migratory birds. Removal of one relatively small diameter living oak tree and two dead oak trees would be a less than significant impact.

**WETLANDS AND WATERS OF THE UNITED STATES**

The U.S. Army Corps of Engineers (USACE) defines wetlands as lands that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Typically, USACE jurisdictional wetlands meet three wetland delineation criteria: (1) hydrophytic vegetation, (2) hydric soil types, and (3) wetland hydrology.

Waters of U.S. are under the jurisdiction of USACE, and are defined as all waters used in interstate or foreign commerce, waters subject to the ebb and flow of the tide, all interstate waters including interstate wetlands and other waters such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, wet meadows, and natural ponds.

USACE jurisdictional Waters of the U.S. occur at Clear Lake State Park. Several of the park’s lift stations are located within the FEMA designated 100-year floodplain of Clear Lake and are periodically inundated. These inundated areas have been determined by the USACE to be jurisdictional under Section 404 of the Clean Water Act (CWA).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands, as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal,	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

filling, hydrological interruption, or other means?

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

**DISCUSSION**

- a) Sensitive, candidate, or special status species could be affected by implementation of the Sewer Lift Repair and Replacement Project. Proposed measures to minimize or avoid impacts are discussed below.

Invertebrates

LS-5 is in close proximity to a mature blue elderberry shrub, a host plant of the valley elderberry longhorn beetle (VELB). The area designated as critical habitat for VELB includes Clear Lake State Park, but during informal consultation with USFWS it was determined that the beetle’s range does not extend as far west as originally identified. USFWS requested the implementation of mitigation measures to ensure that no take of the beetle would occur. Implementation of the following measure would reduce project-related impacts to VELB to less than significant.

<b>MITIGATION MEASURE BIO-1: VALLEY ELDERBERRY LONGHORN BEETLE (VELB)</b>
<ul style="list-style-type: none"> <li>• Prior to the start of lift station repair or replacement, a DPR biologist will flag all elderberry shrubs within 100 feet of each lift station to be replaced.</li> <li>• DPR or its contractor will install orange plastic construction fencing twenty feet outside the dripline of the elderberry shrubs with signs stating that the area is protected VELB habitat (This twenty foot fencing boundary differs for the elderberry closest to LS-5, for which the fence will be installed between the lift station and the dripline.).</li> <li>• Prior to the start of lift station replacement, a professional arborist will remove the branch closest to the lift station from the elderberry closest to LS-5. The arborist will place the trimmed branch on the ground, on the side of the shrub opposite construction of the lift station, to promote possible new seedling germination. DPR or its contractor will also install fencing outside the dripline of the elderberry at LS-5.</li> <li>• A DPR qualified biologist will observe all work at LS-5; if additional impacts are anticipated, the State’s Representative will temporarily halt work at that location and redirect work to other tasks. No work will commence until USFWS has been contacted and additional mitigations implemented.</li> </ul>

Fish

Clear Lake hitch and Sacramento perch are two California Species of Concern. During high water, LS-2 through 6 and LS-8 and their immediate vicinity in lower elevations could become inundated with water. High water usually occurs after heavy rains in the early spring during spawning for these two species. In conjunction with **MINIMIZATION MEASURE GEO-1 AND MINIMIZATION MEASURE HYDRO-1**, the following avoidance measure is designed to reduce project-related impacts to these sensitive fish species to a less than significant level.

<b>AVOIDANCE MEASURE BIO-2: SENSITIVE FISH SPECIES</b>
<ul style="list-style-type: none"> <li>• Construction work will be timed to avoid the spawning season, which is mid-March through May.</li> </ul>

Amphibians and Reptiles

Clear Lake State Park is within the core recovery area for the California red-legged frog (CRLF). Therefore CRLF could be impacted by project activities. The following mitigation measure would reduce potential impacts to a less than significant level.

Although there are no known occurrences of northwestern pond turtle (NPT) within Clear Lake State Park suitable habitat is present. If NPT are found during project implementation, the following measure would reduce potential impacts to a less than significant level.

<b>MITIGATION MEASURE BIO-3: CALIFORNIA RED-LEGGED FROG AND NORTHWESTERN POND TURTLE</b>
<p><u>Applies to both species:</u></p> <ul style="list-style-type: none"> <li>• A USFWS-approved biological monitor (for CRLF) or DPR-qualified biologists (for NPT) will monitor all construction activities for the duration of the project. The monitor(s) will inspect the project area at the beginning of each work day, throughout any ground disturbing activities, and during the placement of preventative measures to avoid impacts to the California red-legged frog.</li> </ul> <p><u>Applies to California red-legged frog:</u></p> <ul style="list-style-type: none"> <li>• Prior to the start of construction work, a USFWS-approved biologist will train contractors and project related personnel about the importance of California red-legged frog, its life history, and what measures will be taken to protect potential habitat during the project.</li> <li>• If a work site is to be temporarily de-watered by pumping, the contractor will completely screen pump intake hoses with wire mesh with mesh holes not larger than five millimeters to prevent red-legged frog impacts.</li> <li>• If California red-legged frog is encountered within the construction site, the State’s Representative will temporarily halt construction activities at that location and redirect work to other tasks. If the frog leaves the site of its own accord, then work will restart only if approved by the biological monitor. If the frog does not leave the project site, then work will be redirected until the USFWS has been notified and additional avoidance measures, if any, are discussed and implemented.</li> <li>• The contractor will use tightly woven fiber netting, coconut matting, or similar material for erosion control or other purposes at the project site to ensure that the California red-legged frog does not get trapped by erosion control methods. No plastic mono-filament matting will be permitted for erosion control.</li> </ul>

Birds



Raptors and their nests are protected under Fish and Game Code §3503.5. The following avoidance measure would prevent disturbance or loss of active nests and reduce project-related impacts to nesting raptors to a less than significant level.

<b>AVOIDANCE MEASURE BIO-4: OSPREY AND OTHER NESTING RAPTORS</b>
<ul style="list-style-type: none"><li>• Construction work will occur outside the nesting season which is March 1 through August 31 to avoid impacts to osprey or other nesting raptors.</li><li>• In the unexpected event that work will continue into the nesting season (March 1 through August 31), a DPR-qualified biologist will conduct a focused survey for nesting raptors during the nesting season to identify active nests within 250 feet of the project area. Timing of the survey will be at the discretion of the DPR-qualified biologist.</li><li>• If nesting raptors are found within 250 feet of the project area, no construction work will occur within the buffer area of 250 feet from the nest tree during active nesting season (March 1 through August 31) or until the young have fledged, as determined by a DPR-qualified biologist.</li></ul>

The nests of migratory birds species found within the project area are protected under the MBTA. The following measure is designed to reduce project-related impacts to nesting migratory bird species to a less than significant level.

<b>AVOIDANCE MEASURE BIO-5: MIGRATORY BIRD SPECIES</b>
<ul style="list-style-type: none"><li>• Construction work will occur outside the nesting season which is April 1 through August 31 to avoid impact to migratory bird species.</li><li>• In the unexpected event that work will continue into the migratory bird season, a DPR-qualified biologist will conduct a focused survey for migratory birds during the nesting season (April 1 through August 31) to identify active nests within 100 feet of the project area. Timing of the survey will be at the discretion of the DPR-qualified biologist.</li><li>• If nesting migratory bird species are found within 100 feet of the project area, no construction work will occur within the buffer area of 100 feet from the nest during active nesting season (April 1 through August 31) or until the young have fledged, as determined by a DPR-qualified biologist.</li><li>• If any trees must be removed for this project, the contractor or DPR will schedule tree removal work between September 1 and January 31 to protect nesting raptors and migratory birds.</li></ul>

- b) The two sensitive communities identified by the CNDDDB are the Clear Lake drainage seasonal lake-fish spawning stream and Clear Lake drainage Cyprinid/Catostomid stream. These communities would not be impacted by the Sewer Lift Repair and Replacement Project.
- c) Due to periodic inundation from high water levels this project would occur within jurisdictional Waters of the U.S., as determined by USACE. A Nationwide Permit application would be submitted to USACE. Implementation of **MINIMIZATION MEASURE GEO-1** and **MINIMIZATION MEASURE-HYDRO 1** would reduce erosion or and control runoff into streams. Less than significant impact.

- d) Through implementation of **BIO MEASURES 1** through **5**, potential impacts to movements, migration, or nursery sites of sensitive species (as discussed in the Environmental Setting) would be reduced to less than significant.
- e) At this time, Lake County does not have an Oak Woodland Management Policy in place to monitor oak woodland resources. No impact.
- f) This project does not conflict with the provisions of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact.

## V. CULTURAL RESOURCES

### ENVIRONMENTAL SETTING

The topography and natural resources in the vicinity of Clear Lake, including the area that is now Clear Lake State Park, provided an ideal setting for prehistoric occupation and resource procurement. The majority of the park is hilly, with elevations ranging from 2,075 feet at a peak near the southeast corner of the unit, to 1,320 at the lake edge (i.e., low water level). The park land not only borders Clear Lake, a natural water body, but also includes the lower reaches of both Kelsey and Cole creeks which run through the park and empty into the lake. Vegetation in the park includes those plants associated with oak woodland, chaparral, grasslands, freshwater habitat, and riparian forests.

Most public use areas within Clear Lake State Park are located on the flat lakeside, while the Upper and Lower Bayview campgrounds are on a rocky basalt flow arm of Mount Konocti. The paved park entrance road is off of Soda Bay Road. For about 200 yards it crosses a grassy meadow, and then runs between Cole Creek and the foot of the basalt boulder strewn extension of Mount Konocti (Appendix A: Figure 2). The portion of the meadow within the park covers over twenty-two acres and is flooded by Cole Creek, which backs up when Clear Lake experiences high water levels. The meadow also contains a park road comprised of fill and imported gravel. This unpaved road runs from the park entrance road near the entrance station toward the south-southeast, and then around the south end of the meadow near one of the park residences.

The boundaries of Clear Lake State Park encompass twenty-five recorded archaeological sites, all but two prehistoric. Three of the prehistoric sites could lie within the proposed project Area of Potential Effect (APE) and include CA-LAK-425, CA-LAK-426, and CA-LAK-1090. The potentially affected prehistoric sites have not been assessed for National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) eligibility.

### **Background**

**Ethnographic and Prehistoric:** The proposed project area is located at the cusp of the ethnographically known range of the Wappo and Eastern Pomo tribes. Also residing on the banks of Clear Lake were the Lake Miwok and Northern Pomo. The lake offered a variety of resources, including fish, waterfowl and tule for boats. The surrounding country offered both oak woodland and grasslands containing a variety of vegetal products and many game animals.

There are two obsidian sources around Clear Lake, one at Borax Lake on the east side and another at Mount Konocti on the west near Clear Lake State Park. Obsidian was a highly valued resource and control of a source provided powerful leverage. The ethnographic Wappo territory included Mount Konocti and about three miles of Clear Lake coastline north to Cole Creek. The Wappo reportedly allowed the neighboring Eastern Pomo access to the obsidian quarries, and received fishing and hunting privileges in Pomo territory in return.

Ethnographically named villages along the banks of Cole and Kelsey Creeks include *Xa dano*, *Dala dano*, *Kabetsawam*, *Kopbuutu*, and *Bidamiwine*. Recent work around the Soda Bay Road

Bridge over Cole Creek, just north of the Clear Lake State Park boundary, suggests that CA-LAK-950 is a remnant of the Wappo village *Dala dano*. Nearby prehistoric sites in the meadow area CA-Lak-422, -423, -424, -1078 and -1079 could be related outliers of this village. CA-LAK-425, within the park near the former junction of Kelsey and Cole creeks, is the reported location of the village known as *Xa dano*.

**Historic:** The first Euro-Americans to see the Clear Lake region were hunters and trappers who occasionally passed through in search of game. In 1836, a Spanish military expedition under the leadership of Captain Salvador Vallejo, brother of General Mariano Vallejo, found its way into the Clear Lake region. In 1839, Salvador and his brother Antonio applied for a grant of land; for an area encompassing the areas now known as Big, Scotts, Upper Lake, and Bachelor Valleys. Salvador was awarded this land, known as the Lupiyoma grant, in 1844; however, he never lived on the land. In 1847, after three years of using the land for cattle grazing Salvador sold some of his cattle to Charles Stone, the Kelsey brothers, Andrew and Benjamin, and a man named Shirland. Vallejo vacated his grant which, due to inadequate proof, had been denied by the U.S. Supreme Court.

Of the four men, only Charles Stone and Andrew Kelsey remained on the former grant and built an adobe house as headquarters for their ranch on the west bank of Kelsey Creek, immediately opposite the present site of the town of Kelseyville. Stone and Kelsey treated the local Native Americans as slaves, refusing pay for labor, failing to provide adequate supplies, and sending workers on gold mining expeditions which resulted in many deaths. In the fall of 1849, Stone and Kelsey paid for their ill treatment of the native people with their lives. Retaliation by the U.S. military for the deaths of Stone and Kelsey led to numerous Native American deaths, climaxing when an encampment on Indian Island was attacked.

The permanent Euro-American settlement of Lake County accelerated in 1848, when Walter Anderson and his wife settled in the lower part of Lake County, and William Scott settled in the valley that bears his name. By the mid 1850s settlers began to arrive in larger numbers. After 1854 cattle and stock-raising was gradually supplanted by agriculture in Lake County, and by 1860 attained much the same appearance it does today.

The land in the vicinity of Clear Lake State Park was first settled by Sam Hand, and then changed hands several times until Mr. and Mrs. Fred Dorn bought a sizeable portion of the land surrounding the mouth of Kelsey Creek in the 1920s. The meadow around the current park entrance was the location of a dairy and a couple of residences, but no other historic residences are known within the unit.

Early attempts to establish a park on property near Clear Lake failed largely due to public disinterest. In 1944 however, the Dorns, taking matters into their own hands, turned approximately fifty acres over to the county, including the mouth of Kelsey Creek. Two years later the county accepted an additional 250 acres from Mrs. Dorn. In May 1948, the State accepted the land from Lake County and began development of Clear Lake State Park.

**Archaeological Investigations of the Project Area:** The entire Clear Lake area was originally surveyed in the 1940s, and one site complex, CA-LAK-62, was recorded on Dorn

property. There have been two complete DPR archaeological surveys of Clear Lake State Park, and several smaller project-related surveys. The overview surveys were not completely reported, but archaeological site records for twenty-three prehistoric sites are on file at the Northwest Information Center (NWIC). In addition, the NWIC shows as many as twenty additional prehistoric sites recorded within a mile of the park.

**Historic Archaeological Resources:** According to NWIC files, there are two historic archaeological sites within Clear Lake State Park. Both are in the meadow area and probably are related to the dairy operation formerly located there. Neither is close to the APE of the proposed Sewer Lift Repair and Replacement Project.

**Prehistoric Archaeological Resources:** There are twenty-three recorded prehistoric archaeological sites within the park. These have not always been treated properly, and multiple impacts may have reduced the data potential and potential eligibility of these sites to the CRHR and NRHP. The cumulative effect of considering the prehistoric sites together could qualify them for archaeological district consideration.

There is no General Plan for Clear Lake State Park. However, a record search, literature review, and a recent field investigation conducted for the proposed project have revealed the presence of cultural resources within or near the APE. Archival information stored at the Northern Service Center (NSC) was consulted, as well as the *DPR Index to Historic and Archaeological Resources owned by the California Department of Parks*. A formal record search of the entire park was conducted by NWIC staff in February 2007. The search uncovered records for several archaeological sites recorded within the park that were not found in DPR records, despite the fact that they were recorded by DPR personnel.

The information compiled from the record search, literature review and field reconnaissance indicates that three archaeological sites, CA-LAK-424, -426, and -1079, may be within the APE of the current project. The potential impacts upon these sites could include:

- CA-LAK-424 - To provide ample electrical power to LS-6, electrical wiring would be upgraded and replaced through an existing, approximately 1,000 foot underground conduit. The conduit is currently located between a PG & E meter and LS-6 and the alignment of the underground conduit follows an abandoned road used prior to DPR ownership. The abandoned gravel road ran along the north and east perimeters of the meadow. Up to seven pull box holes would be dug along the existing conduit alignment to meet existing codes. CA-LAK-424 is recorded as a scatter of both flaked lithic and groundstone artifacts covering almost five acres of the western half of this meadow. The PG & E meter could be located within the site boundary.
- CA-LAK-426 – Kelsey Creek Campground is arrayed on a sandy bench extending north of the former Kelsey Creek outlet to the lake on the northeast side of Clear Lake State Park. This area is flooded up to two feet deep when Clear Lake experiences high water levels. A portion of the bench was recorded in 1973 as CA-LAK-426, based on a scatter of obsidian in the area. A follow-up site record in 1979 cast doubt on this site, as only non-cultural nodules of obsidian were observed. The same condition exists today, and DPR personnel who work at the unit explain this obsidian as coming from a local gravel source which has been imported to raise the level and improve drainage of the

campground. LS-8 is located in Kelsey Creek Campground, although it is not clearly within the archaeological site boundary. Recent fieldwork located obsidian around LS-8, but all appeared to be water worn pebbles, most of which were intact with cortex on all surfaces. The few examples of flake-like obsidian exhibited breaks that appear non-cultural and at least some patina on the obverse of the sheared side. Minor construction excavation would be required at LS-8 to upgrade the existing lift station.

- CA-LAK-1079 – This site was recorded as a flake scatter and single milling station along the gravel Park Road in the southeast corner of the entrance meadow. LS-6 is situated within the boundary of LAK-1079, and cultural obsidian and chert artifacts were recently noted in the vicinity of LS-6. Excavations for both a new lift station vault and electrical conduit pull boxes would take place at and in the vicinity of LS-6.

The record search by NWIC indicates that up to forty-five previously recorded prehistoric sites are located within a one-mile radius of the project area. The sites range from small temporary camps to large occupation areas with house depressions. The cultural assemblages at these sites include lithic scatters, flaked tools, and groundstone implements. There are also two historic sites. Based on the information compiled during the study phase of this project and given the local topography and natural environment, the proposed project is located in an area considered to be extremely sensitive for cultural resources.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**DISCUSSION**

- a) The APE of the proposed project includes the ground surrounding seven lift stations, designated as LS-2 through LS-8, paved staging areas, and a narrow corridor along an old abandoned road bed between LS-6 and a PG & E power supply box. Excavations for replacement of the lift station vaults and installation of telemetry antennae would include areas of up to 2,000 square feet to a maximum depth of ten feet at selected lift stations. Since ground disturbance would be limited to areas of previous excavation, no impacts to the historic resources located in Clear Lake State Park are expected from this activity. To provide ample electrical power to LS-6, electrical wiring would be replaced in an existing conduit that was trenched when it was originally installed, and up to seven pull box holes would be dug along the underground conduit alignment to meet existing codes. No impact.

- b) The region, the park unit, and the project area have a high degree of archaeological sensitivity. The topography and the natural environment provided an ideal setting for prehistoric occupation and land use. Many Native American sites have been recorded in and around Clear Lake State Park. Three recorded archaeological sites are located in the vicinity of the project APE. Construction activities associated with this project, including but not limited to ground disturbance and staging of equipment, could significantly impact archaeological resources. Implementation of **MITIGATION MEASURE CULT-1, MINIMIZATION MEASURE CULT-2, AND AVOIDANCE MEASURE CULT-3** below would reduce impacts to archaeological deposits to a less than significant level.

**MITIGATION MEASURE CULT-1: CONSTRUCTION EXCAVATION AND ARCHAEOLOGICAL MONITORING**

- All ground-disturbing activities (including but not limited to trenching, grading, and excavation to repair, remove, and replace old vaults) will be monitored by both a DPR-qualified archaeologist and a Native American representative of local tribes. The DPR project archaeologist will be notified a minimum of two weeks prior to the start of ground-disturbing work to schedule both monitors, unless other arrangements have been made in advance.
- Vehicle access and staging areas for the project will be located on existing pavement to avoid culturally sensitive areas.
- A DPR archaeologist will conduct exploratory excavations at the locations of the new electrical pull boxes prior to any excavation by the contractor to determine if archaeological deposits exist below the surface. The data generated from these excavations would determine if a data recovery or archaeological monitoring will be implemented. A Native American representative of affected tribes will monitor this work.
- A DPR archaeologist will review and approve in advance any changes in the project. Additional surveys (i.e., field inventory and pre-construction testing) will be conducted as necessary prior to the implementation of the proposed changes.
- A pre-construction archaeological testing program will be implemented in previously undisturbed areas of the APE to determine if archaeological deposits exist below the surface. The data generated from these investigations will determine whether further investigation is required.
- A report of the findings from the surface survey, any archaeological testing, and archaeological monitoring will be completed and copies distributed to the Archaeology, History, and Museums Division at DPR Headquarters, Northern Service Center, Northern Buttes District, the Northwest Information Center, and local Native American tribes.

A DPR archaeologist recently surveyed the areas associated with the proposed project and recorded archaeological resources. However, because of the natural ambiguity of archaeological resources (often located below the surface) and the obscured ground visibility due to ground cover vegetation, the full extent of cultural resources may not be known. Ground-disturbing activities proposed as part of the project could significantly impact unknown archaeological deposits in the APE. The following minimization measure, combined with **MITIGATION MEASURE CULT-1** above, would reduce impacts to previously unidentified archaeological sites and features to a less than significant level.

**MINIMIZATION MEASURE CULT-2: PREVIOUSLY UNDOCUMENTED FINDS**

- In the event that previously unknown cultural resources (including but not limited to dark soil containing shellfish, bone, flaked stone, groundstone, or deposits of historic trash) are encountered during construction related activities by anyone, the State's Representative will put work on hold at that specific location and personnel will be redirected to other tasks. A DPR-qualified archaeologist will record and evaluate the finds and work with the State's Representative to implement avoidance, preservation, or recovery measures as appropriate prior to any work resuming at that specific location.

Imported fill material necessary for repair or replacement of lift stations or associated electrical utilities could have a significant adverse impact to cultural resources in the park depending upon where the materials are procured. There is a potential for introducing irrelevant archaeological data or altering archaeological deposits with the importation of fill material. The fill material could contain cultural artifacts from another area that would inadvertently alter the archaeological record in the park and at the site. Potential impacts will be reduced to a less than significant level with the implementation of **AVOIDANCE MEASURE CULT-3**.

**AVOIDANCE MEASURE CULT-3: ARCHAEOLOGICAL RESOURCES**

- Prior to the start of construction related activities, a DPR-qualified archaeologist will inspect and approve proposed sources of imported soil to avoid importing cultural deposits from other areas.
- If imported fill is required, filter cloth or other method(s) approved by a DPR-qualified archaeologist will be used in those areas containing archaeological deposits, as a barrier between the archaeological deposit and the imported fill to prevent contamination of the archaeological deposits located in the park.
- In locations where fill is employed, both archaeological site records (DPR Form 523) and as-built plans will be updated to show the distribution of the fill material in relationship to the natural landforms.

- c) Human remains have been documented in Clear Lake State Park, and there is a potential of inadvertent discovery of previously unknown burials. If any human remains are identified during any phase of the proposed project, implementation of **MINIMIZATION MEASURE CULT-4** will reduce the impact to a less than significant level.

**MITIGATION MEASURE CULT-4: HUMAN REMAINS**

- In the event that human remains are discovered, work will cease immediately in the area of the find and the contractor will notify the State's Representative, who in turn will notify the appropriate DPR personnel. Any human remains and/or funerary objects will be left in place. The DPR Sector Superintendent (or authorized representative) will notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC) will be notified within 24 hours of the discovery if the Coroner determines that the remains are Native American. The NAHC will designate the "Most Likely Descendent" (MLD) of the



deceased Native American. The MLD will recommend an appropriate disposition of the remains. If a Native American monitor is on-site at the time of the discovery and that person has been designated the MLD by the NAHC, the monitor will make the recommendation of the appropriate disposition.

## **VI. GEOLOGY AND SOILS**

### **ENVIRONMENTAL SETTING**

#### **Topography**

Elevations at Clear Lake State Park begin at lake level which is approximately 1,320 feet above sea level (i.e., low water level) at the lake edge, and rise to a total elevation of 2,075 feet above sea level. Most of the lift stations identified for repair or replacement are located in campgrounds at elevations of 1,328 to 1,329 feet, with the exception of LS-7 which is located in the Upper Bayview Campground at approximately 1,580 feet.

#### **Geology – Regional and Park Specific**

Clear Lake is located within the California Coast Range Geomorphic Province, a northwest-trending chain of mountains forming the northern and central California Coast Range. Within this geomorphic province is an area known as the Clear Lake and Sonoma Volcanic Field, a northwest-trending line of volcanic fields less than five million years old (USGS 2007a). The late-Pliocene to early Holocene Clear Lake volcanic field contains lava dome complexes, cinder cones, and maars of basaltic-to-rhyolitic composition. The westernmost site of Quaternary volcanism in California, the Clear Lake field is located far to the west of the Cascade Range in a complex geologic setting within the San Andreas transform fault system. Mount Konocti, a composite dacitic lava dome on the south shore of Clear Lake, is the largest volcanic feature. Volcanism has been largely non-explosive, with only one major airfall tuff and no ash flows (USGS 2007a).

Clear Lake is located in an actively deforming basin (i.e., graben) formed primarily by shear and tensional stresses within the San Andreas Fault system and modified by eruption of the Clear Lake volcanics and subsequent subsidence (USGS 2007c). The area is still considered to be volcanically active. The latest eruptive activity, forming maars and cinder cones along the shores of Clear Lake, continued until about 10,000 years ago. A large silicic magma chamber provides the heat source for the Geysers, the world's largest producing geothermal field (USGS 2007a). According to the USGS (2007b), the most probable future potential hazard is from phreatic and phreato-magmatic explosions, base surges, and small volume tephra eruptions.

Clear Lake State Park is bordered to the north and east by Clear Lake and to the southeast by Mount Konocti. The Park is underlain by Pleistocene-age volcanic flows of gray to pink dacite and andesite, erupted from Mount Konocti. Off the western flank of Mount Konocti, the volcanic deposits are covered by younger Quaternary alluvial material mapped as lacustrine (i.e., lake) deposits; an example occurs at the Big Valley area, which is an alluvial plain west of the park. These sediments consist of a thick, unconsolidated silt deposit cut by present day streams such as Cole and Kelsey creeks within the park. The fine-grained and extensive, flat nature of this deposit identify it as lacustrine, probably deposited during a higher level stage of Clear Lake (McNitt 1968).

#### **Slope Stability**

No known areas with slope instability occur within the project area at the park. The topography is relatively gentle with no steep slopes.

Seismicity

Clear Lake lies within a seismically active area surrounded by active faults of the northwest-trending San Andreas transform system - the Maacama Fault Zone approximately fifteen miles to the west, the Bartlett Springs Fault System approximately eleven miles to the north, the Konocti Bay Fault Zone approximately eight miles to the southeast, and the Collayomi Fault two to three miles to the west (Table VI-1). The Konocti Bay fault zone is described as the most active area in the region (Burns 1996). While no damaging earthquakes have occurred in Lake County in the past 200 years (Lake County 2003), moderate shaking can be expected for future seismic events, resulting in peak ground accelerations at the site ranging from 0.35 (soft rock) to 0.38 (alluvium) force due to gravity (g) (California Geological Survey 2003). The Geysers geothermal area to the southwest is a constant source of micro-earthquakes (e.g., 1 to 3 on the Richter scale).

**Table VI-1: Faults and Parameters Near Clear Lake State Park**

<b>Fault Name and Geometry<sup>1</sup></b>	<b>Slip Rate (millimeters/year)</b>	<b>Recurrence Interval (years)</b>	<b>Maximum Moment Magnitude</b>	<b>Last Known Fault Displacement</b>
Bartlett Springs rl-ss	6.00	218	7.1	Evidence of Holocene offset, actual date unknown
Maacama rl-ss	9.00	220	7.1	Evidence of Holocene offset, last known event between 1520-1650 AD
Collayomi rl-ss	0.60	1,209	6.5	Late Pleistocene, no known Holocene movement
Konocti Bay	N/A <sup>2</sup>	N/A	N/A	Late Pleistocene, possible Holocene displacement of some strands

(Peterson, et al, 1996; USGS, 2007c, d, and e; and Burns 1996)

Soils

According to the Lake County Soil Survey (USDA 1989), there are six mapped soil types within the project area: 1) Benridge-Konocti Association; 2) Konocti-Benridge Complex; 3) Landlow Variant; 4) San Joaquin Variant; 5) Xerofluvents; and 6) Fluvaquentic Haplaquolls. Soil properties are summarized in Table VI-2 by the lift stations that are located on each soil type.

<sup>1</sup> Fault Geometry: rl-ss - Right Lateral Strike Slip

<sup>2</sup> N/A = Not available/not known

**Table VI-2: Soil Information**

<b>Map Unit Name and Number</b>	<b>Soil Permeability</b>	<b>Erosion Potential</b>	<b>Shrink/Swell Potential</b>	<b>Lift Station</b>
112-Benridge-Konocti Association, 15 – 30% slopes	Well drained, moderately slow permeability	Severe	Benridge: low to high, increases with clay content Konocti: low	7
131-Fluvaquentic Haplaquolls	Poorly drained, slow permeability	Slight	Not rated	4, 5, 8
151-Konocti-Benridge Complex, 50 – 75 % slopes	Well drained, moderately slow permeability	Severe	Benridge: low-high Konocti: low	1, 2
157-Landlow Variant Silty Clay Loam	Slow permeability	Slight	Moderate to high	3
203-San Joaquin Variant Fine Sandy Loam	Well drained, very slow permeability	Slight	Low to high	1
248-Xerofluvents, Very Gravelly	Excessively drained, rapid permeability	None, except along streams. Severe streambank erosion during storms.	Not rated	4

(USDA 1989 and USDA 2007)

Soils in the steeper part of the project area are the Benridge loam and Konocti cobbly loam, and both are rated severe for erosion potential. These soils are derived from volcanic rocks, ash, breccia, and tuff deposits. Soils on gentle slopes with slight erosion potential are the Landlow silty clay loam, San Joaquin fine sandy loam, and Fluvaquentic Haplaquolls. The Landlow is derived from lacustrine deposits, the San Joaquin is derived from volcanic parent rocks, and the Fluvaquentic Haplaquolls are sediments found in marshy areas and derived from lacustrine sediments. The Xerofluvents have slight erosion potential unless located along streambanks. Shrink-swell potential is variable within soil types and increases to high as the soil's clay content increases.

A geotechnical investigation (Taber Consultants 2005) for a separate project provides some site specific soil results for areas near LS-5 and 8. Just west of LS-5 adjacent to Kelsey Slough, the soils encountered are very loose to loose silty clay and clayey sand with scattered gravel zones. Denser sand, gravel, and silts were not encountered until approximately twenty-five feet below grade. Soils encountered in the vicinity of LS-8 are variable, ranging in texture from sand to sandy silt to sandy clay with some gravels, and with very loose to loose (granular soils) and very soft-soft (cohesive soils) densities. These two areas are within the

Fluvaquentic Haplaquolls soil unit. The area near LS-8 is reported to be underlain by fill materials, which was verified by the Taber report.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), 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 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"/>
f) 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"/>

**DISCUSSION**

a) The proposed project site is located within the seismically-active Northern California Coastal Region and active Clear Lake Volcanics area. No known mapped faults traverse the project area, so the chance of the rupture of a known earthquake fault is not likely. Moderate seismic ground-shaking and seismic-related ground failure are possible in the steeper areas of the project, but overall this project would not substantially increase the exposure of people or structures to risk of loss, injury, or death as a result of these events.

- i) The proposed project site is not located within an Alquist-Priolo Earthquake Fault Zone (APEFZ) as designated by the California Geological Survey (CGS 2000). Therefore, there would be no impact expected from surface rupture of a known fault due to this project.
  - ii) CGS has determined that faults in the area (Collayomi Fault Zone, Maacama Fault Zone, and Bartlett Springs Fault System) are capable of generating strong earthquakes with magnitudes of 6.5, 7.1 and 7.1, respectively (Petersen 1996). The expected ground acceleration at the project site would be on the order of 0.35 g to 0.38 g (CGS 2003). Therefore, the impact from ground shaking during an earthquake would be a less than significant impact.
  - iii) Seismic-induced ground failure, such as liquefaction, usually occurs in unconsolidated granular soils that are water saturated. During seismic-induced ground shaking, pore water pressure could increase in loose soils, causing soils to change from a solid to a liquid state (i.e., liquefaction). Site specific information from the Taber report (2005) indicates that the areas near LS-5 and 8, containing loose sandy soils and high groundwater levels, would be susceptible to liquefaction during strong seismic events. Any other low lying areas with loose soils and high groundwater levels (possibly at LS-3 and LS-4) could be equally susceptible. Other locations (LS-2, 6, and 7) could be less susceptible due to different soil types and probable lower groundwater levels. Overall, the impact to the areas associated with the proposed project due to seismic-induced ground failure would be less than significant.
  - iv) Landslides could occur where slopes are steep and soils are rated as erodible, in the area of LS-7 in Upper Bayview Campground. However, no evidence of slope instability is known in that area. No impact.
- b) A temporary increase in erosion could occur during ground disturbing activities associated with repair and replacement of lift stations and upgrading of associated electrical utilities. Implementation of the following measure would reduce soil erosion or loss of topsoil by the proposed project to a less than significant level.

**MINIMIZATION MEASURE GEO-1: EROSION CONTROL BMPs**

- Prior to the start of construction related activities, the contractor will prepare a Water Pollution Control Plan (WPCP) for this project. The WPCP will contain temporary and permanent erosion and sediment control Best Management Practices (BMPs) to prevent or minimize soil and surface water runoff during excavation and grading activities. BMPs will be used during all soil disturbing activities and until all disturbed soil has been stabilized (re-compacted, re-vegetated, etc).
- Permanent BMPs for erosion control will consist of properly compacting disturbed areas, keeping slopes around raised lift stations at a 5:1 slope or less (i.e.,  $\leq 20\%$  slope) and using a variety of site-specific re-vegetation or mulching techniques approved by a DPR-qualified biologist. Final design plans will include permanent BMP measures to be incorporated into the project.

- c) Portions of this project could be located within geologic units or soils that are known to be erodible. Storm water runoff would not be concentrated due to the project, but allowed to sheet flow or be directed into any existing storm drains. Less than significant impact.
- d) The soils mapped by the U.S. Department of Agriculture (USDA 1989, 2007) in the project areas have variable shrink-swell potential, with higher shrink-swell potential in clay-rich soils. Site specific information is available only near LS-5 and LS-8 (Taber 2005). At those locations, the near surface soils have low expansion potential (i.e., low shrink-swell potential). In addition, the lift stations that would be repaired or replaced are subsurface structures designed to withstand soil pressure. Therefore, they would not be susceptible to stresses from high shrink-swell behavior. No impact.
- e) The project would not involve the installation of a septic system or leach field. Therefore, there is no impact due to this project.
- f) No known unique paleontological resources exist within the proposed project area. Therefore, there is no impact due to this project.

## **VII. HAZARDS AND HAZARDOUS MATERIALS**

### **ENVIRONMENTAL SETTING**

Most of the lift stations that are included in the proposed project are located in high use areas of the Clear Lake State Park along road ways or within campgrounds. Construction is scheduled to begin after high park visitation has tapered off for the season to avoid impacting visitor use. Each of the lift stations would be replaced in its original location. Therefore, only previously disturbed areas would be affected.

### **Hazardous Materials**

The existing lift stations are part of the park's sewage collection system, which is connected to the public wastewater system managed by Kelseyville County Waterworks District 3. Removal of the lift stations would involve the management and disposal of hazardous material (Lake County Government 2006). The implementation of proper precautions would be implemented to remove raw sewage prior to the start of work and to clean the lift stations' vaults prior to their disposal. During construction, groundwater could be encountered due to the shallow depth of the water table. The groundwater, which could contain traces of sewage, would have to be removed in order for work to proceed.

The California Department of Toxic Substance Control (CDTSC) does not list any hazardous material sites from possible prior industrial use or construction of buildings within the park (CDTSC 2007).

### **Airports**

The proposed project is not within an airport land use plan, within two miles of a public airport, or a private airstrip (AirNave LLC 2007). The closest county airport is Lampson Field Airport approximately five miles southwest of Clear Lake State Park. The privately owned Ferndale Resort Seaplane Base is situated less than half a mile east of the park boundary and approximately one mile from the proposed project sites, but it is not operational at this time (Miller 2007).

### **Schools**

There are a number of schools located in the vicinity of the town of Kelseyville. The closest schools to the project sites are about 2.5 miles south and include Mountain Vista Middle School and Kelseyville Elementary (Mapquest 2007). There are no schools within one-quarter mile of Clear Lake State Park.

### **Fire**

The Kelseyville Fire Protection District serves as first responder for Clear Lake State Park because the district is located only about 2.5 miles from the park (Mapquest 2007). However, the California Department of Forestry and Fire Prevention (CDF) is charged with administering fire prevention and suppression services for the park, because the park land is part of the State Responsibility Lands with very high fire severity (USGS 2004). The Kelsey-Cobb CDF station, approximately 10.5 miles from the Kelseyville, provides additional support to the Kelseyville Fire Protection District (CDF 2007). In support of the ground forces, the CDF emergency response air program includes several pieces of air attack equipment. All CDF aircraft are



strategically located throughout California at thirteen air attack and nine helitack bases. The Boggs Mountain State Forest Helitack is located in Cobb, twenty miles south of the park (CDF 2007).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 §65962.5, and, as a result, create a significant hazard to the public or environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Be 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? If so, 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) Be located in the vicinity of a private airstrip? If so, 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"/>
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 from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**DISCUSSION**

a) Construction activities would require the use of certain potentially hazardous materials such as fuels, oils, or other fluids associated with the operation and maintenance of vehicles and equipment. Generally, these materials would be contained within vessels engineered for safe storage. Large quantities of these materials would not be stored at or transported to the lift station sites. However, spills, upsets, or other construction related accidents could result in a release of fuel or other hazardous substances into the environment. The

following minimization measure will reduce the potential for adverse impacts from these incidents to a less than significant level.

<b>MINIMIZATION MEASURE HAZMAT-1: SPILL PREVENTION AND RESPONSE</b>
<ul style="list-style-type: none"><li>• All equipment will be inspected by the contractor for leaks immediately prior to the start of construction related activities, and regularly inspected thereafter until equipment is removed from park premises.</li><li>• BMPs for Spill Prevention and Response (i.e., non-stormwater) will be included in the WPCP (See <b>MINIMIZATION MEASURE GEO-1.</b>). The WPCP will also include a map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment may occur. The Contractor will maintain a spill kit on-site throughout the life of the project. In addition, the following items will be addressed in the WPCP.<ul style="list-style-type: none"><li>▪ Areas designated for refueling, lubrication, and maintenance of equipment will be at least 50 feet from any spring/seep/wetland areas and 100 feet from creeks. In the event of any spill or release of any chemical in any physical form at the project site or within the boundaries of the Park during construction related activities, the contractor will immediately notify the State's Representative.</li><li>▪ Equipment will be cleaned and repaired (other than emergency repairs) outside of the park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside of park boundaries, at a lawfully permitted or authorized destination.</li></ul></li></ul>

Prior to repair and replacement of lift stations, raw sewage would be removed from each of the stations. To properly remove the hazardous material and prevent exposure to construction workers, the following minimization measure will be implemented.

<b>MITIGATION MEASURE HAZMAT-2: REMOVAL OF HAZARDOUS MATERIAL - SEWAGE</b>
<ul style="list-style-type: none"><li>• Prior to the start of repair and replacement of lift stations, the contractor will develop and submit a Site Safety Plan for DPR approval. This plan will identify precautions and protocols that the contractor will follow if a worker is exposed to raw sewage during work associated with the project.</li><li>• Before work begins at each lift station, the contractor will pump out any residual sewage and disinfect the vault of the station with a chlorine solution before demolition and removal.</li></ul>

For any groundwater accumulation within lift station excavation pits during lift station replacement, the contractor will follow **MINIMIZATION MEASURE HYDRO-1.**

- b) During the project, hazardous substances could be released to the environment from vehicle or equipment fluid spills or leaks. Implementation of the measures discussed above in **MINIMIZATION MEASURE HAZMAT-1** and **MITIGATION MEASURE HAZMAT-2** will reduce risks to on-site workers, the public, or the environment to less than significant.
- c) As noted in the Environmental Setting, the nearest school is approximately 2.5 miles south from the proposed project sites. No impact.

- d) No part of Clear Lake State Park is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5. No area within the project site is currently restricted or known to have hazardous materials present. No impact.
- e, f) The park is not located within an airport land use plan, within two miles of a public airport, or in the vicinity of a private air strip that is currently in use. No impact.
- g) All construction activities would take place within the boundaries of Clear Lake State Park and work would not restrict access to, cause delays on, or block any public road outside the proposed project areas. Traffic on Soda Bay Road could be impacted for short periods of time only, for delivery of construction materials or equipment. The project would not conflict with the emergency response plans of Lake County. No impact.
- h) Locations associated with the proposed project include or are adjacent to areas covered by annual grasses that would be flammable during the dry season (approximately June through October). Heavy equipment that could become hot with extended use would be in close proximity to flammable vegetation some of the time. Improperly outfitted exhaust systems or friction between metal parts and/or rocks could generate sparks, resulting in a fire. The following minimization measure will reduce the potential for adverse impacts from wildfire to a less than significant level.

**MINIMIZATION MEASURE HAZMAT-3: FIRE SAFETY**

- Prior to the start of any work associated with the proposed project, the contractor will develop and submit a Fire Safety Plan for DPR approval. The plan will include the emergency calling procedures that the contractor will follow for both CDF and the Kelseyville Fire Protection District.
- Spark arrestors or turbo charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all heavy equipment.
- Construction crews will park vehicles away from flammable material, such as dry grass or brush. At the end of each workday, heavy equipment will be parked over asphalt or concrete to reduce the chance of fire.

## VIII. HYDROLOGY AND WATER QUALITY

### ENVIRONMENTAL SETTING

#### Watershed – Surface Water

The western portion of Clear Lake State Park is within the lower watersheds of Cole and Kelsey creeks which discharge into Clear Lake. The eastern and northern slopes of the park also drain into Clear Lake. Clear Lake is the largest natural lake located entirely within California and is eighteen miles long with a surface area of sixty-eight square miles (Central Valley Regional Water Quality Control Board 2005). The outlet for Clear Lake is Cache Creek which flows south and east into the Yolo Bypass and eventually into the Sacramento River. The natural lake level is maintained by the Grigsby Riffle, a rock sill (i.e., ledge) in Cache Creek near Lower Lake. In 1872, Captain Rumsey established the low point of the sill as “Zero Rumsey” (i.e., equivalent to 1,318.256 feet above mean sea level; National Geodetic Vertical Datum 1929). Continuing even the present, all lake levels are referenced to this datum unit. In 1914 Cache Creek Dam was constructed three miles downstream of the Grigsby Riffle, and now regulates the level of Clear Lake (Lake County 2004).

#### Flooding

Due to its size, Clear Lake responds slowly to storm events and rises to flood stage only after prolonged, high intensity storms. The Clear Lake Dam has the ability to release water much faster than Cache Creek can transport water during high intensity rain events. The narrow and shallow creek channel below the dam slows the release of water from Clear Lake during a flood. Slowing dam releases causes Clear Lake to rise rapidly during heavy, prolonged rainstorms and does not allow lake levels to recede quickly after precipitation ceases (Lake County 1995).

High lake levels combined with storm events and increased flows in Kelsey and Cole creeks upstream of the lake result in periodic flooding in the lower lying areas of the Clear Lake State Park. The FEMA designated 100-year floodplain is defined as the area having a 1% chance of experiencing inundation in any given year. In the park, most low lying areas adjacent to Clear Lake are located within the 100-year floodplain and zoned AE with a flood elevation of 1, 331 feet mean sea level (msl) (FEMA 2005). LS-2, 3, 4, 6, and 8 are in low lying areas. LS-5 appears to be located in Zone X, defined as an area with a 0.2% annual chance flood or a 1% annual chance of flooding with depths less than one foot. LS-7 is on high ground outside of the flood zones. Information from park staff indicates that some of these locations flood more frequently.

#### Groundwater

Groundwater is utilized for both potable and agricultural purposes in Lake County. It is pumped from natural aquifers within the volcanic rocks and overlying alluvial material. A major groundwater basin adjacent to the park is the Big Valley Groundwater Basin (BVGB), previously referred to as the Kelseyville Basin. The BVGB is composed of extensive Quaternary to late Tertiary alluvial deposits, including lacustrine and upland terrace deposits. Groundwater recharge to the BVGB mainly occurs from infiltration from Kelsey Creek and underflow from adjacent subbasins (Department of Water Resources 2003).

The most significant problems associated with groundwater quantity in Lake County has been reduced groundwater levels, resulting from the mining of stream channel gravel deposits during the early and middle 20th century. Gravel mining allows stream channel scouring and downcutting, lowering the channel bottom relative to the surrounding ground elevations and allowing seepage of groundwater into the stream channels, instead of recharging aquifers from in-stream flows (Lake County 2003).

### **Water Uses, Quality and Supply**

The CVRWQCB regulates surface water and groundwater quality in the region and provides water quality standards and management criteria as required by the CWA. These standards and criteria are presented in the 1998 Water Quality Control Plan (i.e., Basin Plan) for the Central Valley region (CVRWQCB 1998). The Basin Plan identifies beneficial uses and water quality objectives for the Central Valley region, including the Sacramento and San Joaquin River basins. Beneficial uses of surface water from Cache Creek, Clear Lake, and associated tributaries include municipal supply, agricultural supply, water and non-water contact recreation, warm freshwater habitat, spawning, and wildlife habitat. In addition, the Basin Plan proposes cold freshwater habitat for Clear Lake, but this objective is currently unattainable because of episodic algal blooms (State Water Resources Control Board 2007).

Clear Lake is listed on the CWA Section 303(d) list as an impaired water body due to high levels of nutrients and mercury. Excess levels of phosphorus, which acts like a nutrient, contribute to nuisance algal blooms. The main sources of excess phosphorus are sediment-driven and include roads, agricultural activities, in-stream channel erosion, construction work, gravel mining, wildfires and controlled burns, timber harvesting, grazing, off-highway vehicles, dredging and filling, urban stormwater runoff and, to a lesser degree, input from sewage overflow (SWRQB 2007). While some naturally-occurring mercury contamination exists, the major source of mercury pollution in Clear Lake is from the now inactive Sulfur Bank Mine (superfund site), located south of Clearlake Oaks adjacent to the Sulphur Bank Rancheria (Richerson and Richerson 2000).

Groundwater quality throughout Lake County is good to excellent (Lake County 2004), with some local impairment by naturally-occurring high levels of boron, hydrogen sulfide, methane gas, barium, iron, manganese, total dissolved solids, turbidity, and by manmade impacts from coliform bacteria (Lake County 2006).

The domestic water supply for Lake County is derived from surface and groundwater resources close to service areas. Clear Lake is the largest source for domestic water supply, while groundwater is the second largest source. Groundwater is used extensively for agricultural operations and some industrial purposes (Lake County 2004), as well as for drinking water in rural areas. The water supply for Clear Lake State Park is provided by the Soda Bay Water System Service, managed by Lake County Special Districts (Lake County Government nd); surface water is drawn from Clear Lake for park use.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 that 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 alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through 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 on- or off-site flooding?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>
f) 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 structures that would impede or redirect flood flows within a 100-year flood hazard area?	<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 from flooding, including flooding resulting from the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## DISCUSSION

- a) During excavation, grading, trenching or other ground disturbing activities, a release of sediment to surface waters could occur. Other impacts to water quality could result from releases of fuels or other fluids from vehicles and equipment during the proposed project. During cleaning and removal of the existing lift stations, releases of raw sewage could occur. In addition, the old lift stations could have been experiencing leakage prior to

excavation and contaminated shallow groundwater. Best Management Practices (BMPs) would be implemented. **MINIMIZATION MEASURE HYDRO-1** would control releases of pollutants in storm (or other) water runoff and result in a less than significant impact.

<b>MINIMIZATION MEASURE HYDRO-1: PROTECTION OF WATER QUALITY</b>
<ul style="list-style-type: none"><li>Any groundwater removed from the excavation pits will be pumped into a dewatering tank with appropriate screens to remove debris such as sand and gravel. After particulate matter settles to the bottom of the tank, the contractor will transfer the water to a pump truck that will discharge the water into the man hole at LS-1. The Contractor will devise a procedure to screen out debris as the water is pumped into LS-1 to abide by Kelseyville County Waterworks District 3 requirements that any debris be filtered from the water. Any sludge remaining in the bottom of the settling tank will be disposed off-site in accordance with all federal, state and local guidelines.</li></ul>

- b) This project would not result in an impact to groundwater supplies. All active construction sites associated with the proposed project, would be watered at least twice daily during dry, dusty conditions (**MINIMIZATION MEASURE AIR-1**). This demand would be minor and temporary, and would not substantially or permanently affect the groundwater level in the park, because the water supply is from a municipal source. No impact.
- c) Existing drainage patterns in the areas associated with the project would not be altered in a manner that would significantly increase on- or off-site erosion or siltation. In addition and as described in **MINIMIZATION MEASURE HYDRO-1**, BMPs for erosion would be integrated into the design and construction plans for the project. Therefore, a less than significant impact would result due to this project.
- d) Some of the lift stations would be raised up to a maximum of approximately three feet to help protect them from flood events; elevating the stations would not substantially alter the existing drainage patterns in a manner that would significantly increase the rate or amount of surface runoff to result in on- or off-site flooding. No impact.
- e) This project would not create or contribute water runoff that would exceed the capacity of existing or planned stormwater drainage systems. With the implementation of BMPs for soil erosion, spill prevention, and sewage disposal, there would be a less than significant impact from polluted runoff, spillage, or sewage exposure are expected from this project. Refer to **MINIMIZATION MEASURE HYDRO-1** above.
- f) With the implementation of BMPs for soil erosion and spill prevention, no substantial degradation to water quality from soil erosion, runoff, release of vehicle or equipment fluids, or sewage are expected from this project. Less than significant impact. Also, refer **MINIMIZATION MEASURE HYDRO-1** above.
- g) The proposed project areas include lower elevations within the FEMA designated 100-year floodplain. However, the project areas do not include any housing structures. No impact.

- h) This project would include repair and replacement of seven lift stations that are located within the designated 100-year floodplain of Clear Lake and/or Cole and Kelsey creeks. Lift stations would be raised from between approximately 1.05 to 2.82 feet to be above the 100-year flood elevation of 1,331 feet msl. This is not a significant affected area or elevation increase that would impede or redirect floodwater flows. No impact.
- i) The project would not expose people or property to an increased risk from flooding, including flooding resulting from the failure of a levee or dam. Most of the project areas are subject to flooding, but this is an existing condition. The affected parts of the park are closed to the public during flood events. No impact.
- j) A seiche is an oscillation of a body of water that generates a wave similar to a tsunami in an enclosed or semi-enclosed basin. Seiches are generated by large earthquakes, volcanic eruptions, or landslides that cause a displacement of water and subsequent wave(s). In general, the topography where lift stations and electrical conduits are located is relatively flat and not prone to landslides or mudflows. LS-3, 4, 5, and 8 are located along the margin of Clear Lake and LS-1, 2, and 6 are located in relatively flat, low-lying inland sites, where a slight potential of exposure to a seiche exists. Therefore, there could be an impact to the existing lift stations from a seiche, but the proposed project would not increase the risk to these stations. Less than significant impact.



## IX. LAND USE AND PLANNING

### ENVIRONMENTAL SETTING

Clear Lake State Park is situated in Lake County along the southwestern shore of Clear Lake and is surrounded by the unincorporated communities of Finley, Kelseyville, and Soda Bay. The 590-acre park contains over two miles of lake frontage. Soda Bay Road, a county-designated scenic highway (Lake County 2003), bisects the park into northern and southern sections. All park facilities, such as the visitor center and campgrounds, are concentrated in the northern section of the park.

The park is located in the Rivas Planning Area, one of eight community planning areas in Lake County. The Rivas Planning Area encompasses approximately forty-one square miles of the central part of the county southwest of Clear Lake. The land use designation for Clear Lake State Park is Resource Conservation (Lake County 2006). Resource Conservation land is open space with specific natural resource uses and protections. It is defined by several attributes including significant plant or animal habitats, certain forested and watershed elements, agricultural lands within the Williamson Act, hazardous mining areas, and ownership by a county, state, or federal agency (Lake County 2005).

Agriculture, rural residential, and low density residential are the land use designations west of the park; rural and rural residential uses lie south of the park; and low density residential, suburban, and commercial districts stretch along the shore to the east. Several government agencies oversee and regulate Clear Lake, the shoreline, and water management including Lake County, the cities of Clearlake and Lakeport, DFG, and USACE (Lake County 2003).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a 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"/>

### DISCUSSION

- The proposed project is situated completely within the boundaries of Clear Lake State Park. No established community exists within the boundaries of the park. No impact.
- A General Plan has not been completed for Clear Lake State Park, but work to repair, replace, or rehabilitate existing facilities or to protect public health and safety is permitted under PRC §5002.2(c). No aspect of the proposed project is in conflict with local zoning,

regulatory policies, land use plans, conservation plans, or ordinances. Appropriate consultations would be done and permits completed in compliance with all applicable local, state, and federal requirements. No impact.

- c) There is no applicable habitat conservation plan or natural community conservation plan in effect for the park. No impact.

## X. MINERAL RESOURCES

### ENVIRONMENTAL SETTING

The main mineral resources currently extracted in Lake County are sand and gravel that are used to make aggregate materials important in the construction industry. These mineral resources generally are extracted from creek systems and their floodplains, or quarries. Kelsey Creek, which runs through Clear Lake State Park, was once a major source of aggregate. Kelsey Creek's importance as an aggregate source has diminished due to regulations that were imposed as a result of channel degradation.

Geothermal resources, both dry steam and hot water, underlie much of the southern portion of Lake County to the south of the park. The Geysers geothermal area is the largest producing geothermal field in the world (USGS 2007a). Clear Lake State Park is located within a Geothermal Setback Area, established in 2004 by the Lake County Board of Supervisors. Within this setback area, which includes the populated area around Clear Lake, no geothermal development is permitted (Lake County 2005).

Minor amounts of borax have been mined in the Clear Lake area. Borax Lake was the site of the first borax mine in the U.S., and was mined in the late 1800's.

Gold and silver mining has taken place in Lake County; the former McLaughlin Mine was a major disseminated gold producer operated by Homestake Mining Company. The open pit mine is undergoing decommissioning, including extensive reclamation (UC Davis 2006). Other minerals mined in the past include sulfur and cinnabar, a sulfide of mercury. Both of these minerals were found at the Sulfur Bank Mine, which began as a sulfur mine in 1865 and was later mined for mercury until it closed in 1957. Although no longer active, the mine is now a major source of mercury contamination in Clear Lake and was declared a Superfund site in 1990.

No known past mining activities have occurred in the project area or in the Park in general. Mineral resource extraction is not permitted under the Resource Management Directives of the Department of Parks and Recreation.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Result in the loss of availability of a known mineral resource that is or 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"/>

### DISCUSSION

- a) No known mineral resources of local or regional importance have been identified at the project site. Therefore, no loss of availability of a known mineral resource would occur due to this project. No impact.
- b) No known mineral resource sites are delineated on any local general plans or other land use plans. No impact.

## XI. NOISE

### ENVIRONMENTAL SETTING

Sound is any detectable fluctuation in air pressure and generally is measured on a logarithmic scale in decibels (dB). When unwanted sound (i.e., noise) is measured, an electronic filter is used to de-emphasize extreme high and low frequencies to which human hearing has decreased sensitivity. Resulting noise measurements are expressed in weighting frequencies called A-weighted decibels (dBA). While zero dBA is the low threshold of human hearing, a sustained noise equal or greater than 90 dBA is painful and can cause hearing loss (Table XI-1, Bearden 2000).

Noise is further described according to how it varies over time and whether the source of noise is moving or stationary. Background noise in a particular location gradually varies over the course of a 24-hour period with the addition and elimination of individual sounds. Several terms are used to describe noise and its effects, one of which includes the instantaneous maximum noise level ( $L_{max}$ ).  $L_{max}$  is the highest sound level (dBA) measured during a specific time period.

Federal, state, and local governments have defined noise and established standards to protect people from adverse health effects such as hearing loss and disruption of certain activities. Noise is defined in the California Noise Control Act, Health and Safety Code, California Code of Regulations (CCR) § 46,022 as excessive or undesirable sound made by people, motorized vehicles, boats, aircraft, industrial equipment, construction, and other objects. To promote compatibility among various land uses and protect health and safety, Lake County has a zoning ordinance that controls potential nuisances such as noise and vibration. The noise zoning ordinance states that the  $L_{max}$  for any activity over a one hour period shall not exceed 55 dBA between 7:00 a.m. to 10 p.m. or 45 dBA between 10 p.m. to 7:00 a.m. for residential, agricultural, and resource zoning districts (Lake County 2005). Maximum noise exposure limits are applicable beyond any property lines of the property containing the noise, but construction site sounds between the hours of 7:00 a.m. and 7:00 p.m. are exempt as long as standard, reasonable practices are followed.

Clear Lake State Park is located off of Soda Bay Road in a rustic area of Lake County between several small, unincorporated communities. Seven municipal airports, private airfields, and sea plain bases exist throughout the county (Hometown Locator 2007). Of these, Ferndale Resort Seaplane Base is less than half a mile east of the park boundary and approximately one mile from the proposed project sites, but it is not currently open to air traffic (Miller 2007).

The park is known for its natural, quiet setting with typical sounds from birds singing, wind through the trees, and waves lapping at the shore. Other sounds commonly occur throughout the year or intermittently, including the drone of intermittent motor vehicles on Soda Bay Road, motorboats on Clear Lake, and farm equipment used for local agriculture on adjacent property. Especially during the summer months, park visitors and their vehicles are likely to be heard within the park particularly in campground and day use areas.

Four park residences currently exist inside the park boundary. LS-6 and LS-7 are 450 and 300

feet from the nearest park residences respectively (Speers 2007). Land zoned for rural, agricultural, and low density residential uses is situated to the west and south sides of the park, while residential, suburban, and commercial areas stretch along the coast to the east (Lake County 2003). The closest private residence is west of the park along Steelhead Drive and is approximately 300 feet from LS-2 and LS-3.

**Table XI-1: Sound Levels Generated by Various Sources of Noise**

Sound Level	dbA
Quiet library, soft whispers	30
Living room, refrigerator	40
Light traffic, normal conversation, quiet office	50
Air conditioner at 20 feet, sewing machine	60
Vacuum cleaner, hair dryer, noisy restaurant	70
Average city traffic, garbage disposals, alarm clock at 2 feet	80
<b>Constant exposure to the following sound levels can lead to hearing loss</b>	
Subway, motorcycle, truck traffic, lawn mower	90
Garbage truck, chain saw, pneumatic drill	100
Rock band concert in front of speakers, thunderclap	120
Gunshot blast, jet plane	140
Rocket launching pad	180

(Bearden 2000)

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generate or expose people to excessive groundborne vibrations or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Be 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? If so, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

project area to excessive noise levels?

## DISCUSSION

- a) Trucks and heavy equipment such as a backhoe, dump truck, or pump could operate during equipment delivery, lift station repair and replacement, telemetry system installation, and associated electrical upgrades. Project related noise levels at and near the lift station sites could fluctuate, depending on the type and number of vehicles and equipment in use at any given time. Depending on the specific project related activities being performed, short-term increases in ambient noise levels could result in speech interference near the project sites and could annoy park visitors. Under these circumstances, park visitors could also seek out other nearby parks or recreation areas. Generally, project related work would not occur during the summer or on weekends or holidays when visitation is high. Weekend work could be implemented, but only to accelerate the proposed project or address emergency or unforeseen circumstances.

Not all lift stations would be repaired or replaced at one time; several lift stations and associated park facilities would remain open for visitor use during project implementation. If project related noise disturbs park visitors, other nearby parks and recreational areas are available for use.

Noise associated with the proposed project is considered to have a potentially significant short-term impact to nearby noise-sensitive receptors. Implementation of the following minimization measure would reduce potential impacts to a less than significant level.

<b>MINIMIZATION MEASURE NOISE-1: NOISE EXPOSURE</b>
<ul style="list-style-type: none"><li>• Project related activities will be limited to park operating hours between 7:00 a.m. and 7:00 p.m.</li><li>• Internal combustion engines used for any purpose in the project areas will be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for project related activities will utilize the best available noise control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.</li><li>• Stationary noise sources and staging areas will be located as far from visitors as possible. If they must be located near visitors, stationary noise sources will be muffled to the extent feasible, and/or where practicable, enclosed within temporary sheds.</li></ul>



- b) Project related activities would not involve the use of explosives, pile driving, or other intensive construction techniques that could generate significant ground vibration or noise. Minor vibration adjacent to excavating and heavy equipment during construction work would be generated only on a short term basis. Therefore, ground borne vibrations and noises would have a less than significant impact.
- c) Once repair and replacement of lift stations, associated electrical upgrades, and installation of a new telemetry system is completed, project related noises would cease. The project

would not create any source of noise that would contribute to a substantial permanent increase in noise levels in the vicinity of the project areas. No impact.

- d) See Discussion (a) and (c) above. Implementation of **MINIMIZATION MEASURE NOISE-1** will reduce any potential impacts to a less than significant level.
- e) The project is not located within an airport land use plan but is less than half a mile west of the privately owned Ferndale Resort Seaplane Base. The seaplane base has traditionally been for public use, but is not open at this time (Miller 2007). See Discussion (a) and (c) above. Implementation of **MINIMIZATION MEASURE NOISE-1** will reduce any potential impacts to a less than significant level.
- f) The project is not located in the vicinity of a private airstrip. No impact.



## XII. POPULATION AND HOUSING

### ENVIRONMENTAL SETTING

A variety of communities, each with its own unique characteristics, occurs in Lake County. Some communities are distinguished by their agricultural heritage, while others are rooted in a long-standing resort-style or lakefront-living atmosphere. Some rural mountain communities have maintained their remote feel, but other towns have grown into comparatively larger, urban cities.

The population of Lake County was estimated at 64,105 people at the beginning of 2006, with Lakeport was estimated with 5,125 people, or about 8% of the population. While the overall population in the county grew between 2005 and 2006, the population in Lakeport fell by 0.4% (Department of Finance 2006). In the year ending December 31, 2006, approximately 22% of county's total population resided in Clearlake, the county's largest city. According to the California Department of Finance's City/County Population Estimates with Annual Percent Change, from January 1, 2006 to January 1, 2007, Clearlake's population has increased 2.2%, from 13,840 to 14,150.

According to the 2004 Population Projections by Race/Ethnicity, Gender and Age Report from the California Department of Finance, the population for Lake County will reach 109,488 people in 2050, an increase of 86% from the 2000 population level of 58,863. The projected population increases for the years 2010, 2020, 2030, and 2040 are 69,259, 79,696, 89,638, and 99,501 respectively (DOF 2006, 2004).

The park is a recreational resource utilized by both locals and out-of-town visitors. A store that offers convenience items and fishing supplies is the only business opportunity within the park. The store concessionaire currently holds a year-to-year lease (Palmer 2007).

Currently, LS-6 pumps waste from a section of the park sewage system that serves a park maintenance building and several staff residences. Housing within Clear Lake State park is limited to two existing staff residences and two trailer pads, of which only one is being used at the current time. Thus, the permanent population in the park is relatively static, with approximately seven to ten people living in the park per year. These numbers are based on DPR staffing requirements and no significant growth is anticipated in the foreseeable future.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

replacement housing elsewhere?

- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

## DISCUSSION

- a) This project does not contain any elements that would induce regional population growth. All jobs created by the project are related to short-term construction related activities and would be temporary in nature. Visitation to the area is not expected to change as a result of the project. No impact.
- b) All work would take place within the confines of the park boundary and is limited to upgrading the existing sewer lift system. The project would not have a housing component and therefore would not modify or displace existing housing or necessitate the replacement of housing elsewhere. No impact.
- c) LS-6 would be taken off line for approximately two weeks until construction is completed. LS-6 and its associated electrical lines serve the two existing staff residences and two trailer pads. The proposed project would displace park residents living in homes and trailer(s) at the park when LS-6 and its associated electrical lines are replaced.

Implementation of the following mitigation measure would reduce project-related impacts of displacing park staff from their residences to a less than significant level.

<b>MITIGATION MEASURE POP-1: REPLACEMENT HOUSING AND FACILITIES</b>
<ul style="list-style-type: none"><li>DPR will provide alternative housing to park residents during replacement of LS-6 and its associated electrical equipment.</li></ul>

### XIII. PUBLIC SERVICES

#### ENVIRONMENTAL SETTING

Lake County is composed of fourteen communities and two incorporated cities, which differ in population size, proximity to main roadways, amenities, and public services. Clear Lake State Park is located between Soda Bay and Kelseyville, both unincorporated communities (Lake County 2006).

#### Fire Protection

Clear Lake State Park has been identified with potential for very high fire danger and is part of the State Responsibility Lands (USGS 2004). CDF administers fire prevention and suppression services for this park. Kelseyville Fire Protection District, about 2.5 miles from Clear Lake State Park, is the first responder for fire emergencies (Mapquest 2007). In addition, the Kelsey-Cobb CDF Station is approximately 10.5 miles from Kelseyville and provides additional support to the Kelseyville Fire Protection District (CDF 2007).

#### Police Protection

State Park Rangers assigned to Clear Lake State Park are POST-certified (i.e., Peace Officer Standards and Training) law enforcement officers. They are responsible for maintaining a peaceful and safe environment and responding to park emergencies. The Lake County Sheriff's Office has responsibility for the unincorporated areas of the county and can assist State Park Rangers with investigations. If necessary, the California Highway Patrol, located in Kelseyville about 2.5 miles southwest of Clear Lake State Park, is available to respond to emergency calls and assist with criminal investigations (Mapquest 2007).

#### Schools

The closest schools to the proposed project sites, Mountain Vista Middle School and Kelseyville Elementary, are both located about 2.5 miles to the south (Mapquest 2007).

#### Parks

All of the Clear Lake State Park lift stations are located completely within park unit boundaries and service the visitor center, campgrounds, day use areas (e.g., fish cleaning station and swimming area), park residences, and the maintenance building. Two other public parks occur in the vicinity, including Lakeside County Park, which is 1.75 miles west of Clear Lake State Park, and Kelseyville County Park which is 2.25 miles south in the town of Kelseyville. Like Clear Lake State Park, Lakeside County Park maintains a boat ramp for public use. Additionally Anderson Marsh State Historic Park, the only other unit managed by DPR in Lake County, is located approximately ten miles southwest at the lake outlet.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

need for new or physically altered governmental facilities, 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION**

- a) The proposed project would replace seven sewer lift stations throughout Clear Lake State Park outside of peak visitation periods.

Fire Protection: Vehicles and equipment could be used in the vicinity of flammable vegetation to implement the proposed project (e.g., annual grassland). Vehicle and equipment use could present an increased fire risk that could result in additional demands on CDF and local fire response teams if a fire occurs. Any impact on firefighting services would be temporary and nothing in the project scope would contribute to the need for an increase in the level of public service. Implementation of **MINIMIZATION MEASURE HAZMAT-3**, combined with the availability of on-site fire suppression equipment and support for State Park Rangers, would reduce the potential impact to Fire Protection Services to a less than significant level.

Police Protection: As noted above in the Environmental Settings, Clear Lake State Park maintains ranger protection year-round, with primary patrols in camping and day use areas. No additional demands on law enforcement are expected as a result of this project. No impact.

Schools: No schools exist within or adjacent to Clear Lake State Park. No elements of the proposed project would result in increased student enrollment and therefore no additional schools or personnel would be needed. No impact.

Parks: Work related to this project could cause minor delays and inconveniences at the park entrance and around staging areas. During repair or replacement, LS-2 through 8 and the park facilities they serve (e.g., campground) would be closed to park visitors. Up to several lift stations would be closed at any given time during repair and replacement so that some campgrounds and other public park facilities would remain open. In addition, project related activities would occur after the summer so as to minimize impacts to park visitors. Therefore, other parks in the surrounding areas would likely experience a minimal increase in use due to this project. Less than significant impact.

With **MINIMIZATION MEASURE HAZMAT-3**, this project will have a less than significant effect on any public services.

## XIV. RECREATION

### ENVIRONMENTAL SETTING

Three state parks, fifteen county parks, three city parks occur throughout Lake County. In addition, other government-owned land open for public access are situated throughout Lake County and include areas such as the Mendocino National Forest (U.S. Forest Service), Cache Creek Management Area (U.S. Bureau of Land Management), and Boggs Mountain Demonstration State Forest (CDF). These public lands provide a variety of outdoor recreation activities such as hiking, camping, and boating.

Clear Lake offers a variety of opportunities for water recreation, including boating, fishing, swimming and water-skiing. Fishermen catch catfish, Sacramento perch, hitch, crappie, bluegill, and bass. In particular, bass fishing at Clear Lake is renowned and the lake is considered the best bass fishing lake in the nation by professional bass fishing organizations (DPR 2007). Additionally, Clear Lake State Park provides nesting and foraging habitat for a variety of bird species, including waterfowl and osprey, and is a popular destination for recreational bird watchers.

Clear Lake State Park has a variety of overnight and day use facilities for visitors. Overnight facilities include 147 campsites, two reserved bike/hike-in campsites, and one group campsite specifically available for groups up to fifty people. The park's Indian Nature Trail, used by native Pomo people who inhabited the area, and Dorn Nature Trail, which affords views of Clear Lake, are self guided trails available to hikers. Other facilities consist of boat ramps and moors, picnic areas, restrooms, dump stations for recreation vehicles (RV), showers, and a visitor center that features displays about the area's natural and cultural history.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) 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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

- a) Project related activities would not occur during the summer months or on holiday weekends when visitation is high. In addition, not all lift stations would be repaired or replaced at one time; several lift stations and associated facilities would remain open for visitor use during project implementation. Even though some visitors could use other parks and recreational facilities during the proposed project, any increase in use of other areas is

expected to be minimal. Less than significant impact.

- b) The proposed project would upgrade existing facilities within Clear Lake State Park and would not be implemented during the summer months when visitation to the park is high.

The project would neither increase the use of other state, county, or city parks, other public lands, or recreational facilities. Nor would it include the construction or expansion of any recreational facilities. No impact.

## XV. TRANSPORTATION/TRAFFIC

### ENVIRONMENTAL SETTING

The nearest highway to Clear Lake State Park is State Route (SR) 29, which runs from SR 20, northwest of Clear Lake, past Kelseyville, and down south toward Napa County. For most of its length, SR 29 is a two lane rural highway. Connected to SR 29 is Soda Bay Road, an extension of SR 281 that runs along the southern shore of Clear Lake and bisects Clear Lake State Park. Soda Bay Road can also be reached from Kelseyville via Gaddy Lane (DPR 2007). Lake County classifies Soda Bay Road as a major travel connector, providing a route to residents in local communities who are not served by state highways (Lake County 2003).

Level of Service (LOS) is a means of describing the operation of a roadway based on delays and maneuverability. Ratings range from LOS "A" which describes free flowing conditions with no delays, to LOS "F" which represents gridlock and significant delays. Lake County's goal is to have all county roadways operating at a LOS "C" or better. In 2003, the peak hour volume in one direction along a stretch of SR 29 near Kelseyville was estimated at 535 vehicles per hour (vph) in the morning and 504 vph in the afternoon (DOT 2006). Therefore, SR 29 currently operates at LOS "D" but is expected to deteriorate to LOS "E" within the next fifteen years if no action is taken to improve congestion (DOT 2007).

Most traffic circulation in Lake County is from private automobile use, while countywide public transportation is limited and consists of buses run by Lake Transit. However, no railways provide train service within the county. Two bus routes run near Clear Lake State Park; one route is through Kelseyville along SR 29 and the other runs along Soda Bay Road. The SR 29 bus route runs Monday through Saturday and seven to eight times daily, while the Soda Bay Road route runs eastbound and westbound three times daily (Lake Transit n.d.).

Lake County has two airports, including Lampson Field Airport in Lakeport, and Pearce Airport in Clearlake (Lake County 2003). In addition, several small, privately owned airports and airfields are scattered throughout the county. The closest of these to Clear Lake State Park, Ferndale Resort Seaplane Base, is located along the edge of Soda Bay less than half a mile from the eastern park boundary and approximately one mile away from the lift station sites (Hometown Locator 2007, TopoZone 2006). However, the seaplane base is not currently in use (Miller 2007).

<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
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#### WOULD THE PROJECT:

- a) Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| b) Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Cause 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 type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards? | <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 checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Result in inadequate parking capacity?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**DISCUSSION**

- a) Repair or replacement of lift stations, associated electrical upgrades, and the telemetry system installation would take place within Clear Lake State Park. Trucks and other vehicles used to haul equipment and materials to the project sites within the park could temporarily increase traffic. However, trips made by these construction vehicles would be intermittent, and the addition of a limited number of vehicles would not cause a significant increase in traffic volume. In residential areas, trucks would comply with all local size and weight restrictions. No public roads outside of the park would be blocked. Less than significant impact.
- b) As noted in the Environmental Setting, SR 29 currently operates at LOS “D”. The temporary addition of a limited number of project related vehicle trips per day during daylight hours would not exceed, individually or cumulatively, the LOS rating for SR 29. Less than significant impact.
- c) The nearest airport to the project area is a small, privately owned seaplane base that is not in use at this time. Neither of the county owned airports is located in the vicinity of Clear Lake State Park. The Sewer Lift Repair and Replacement Project does not contain any component that would change air traffic patterns or the location of any existing airport. No impact.
- d) The proposed project would not alter any roads that are currently in use or increase hazards to traffic. No transportation related changes would result. No impact.
- e) Although the addition of construction vehicles and equipment could cause minor delays along interior park roads, access requirements for emergency vehicles would be maintained at all times. All project related activities would take place within park boundaries and construction vehicles would not block access to areas that remain open to the public during the project. In addition, the main park road forms a loop, ensuring that



closure of certain sections of road would not result in inadequate emergency access in the park; emergency vehicles could simply gain access from the other end of the loop if necessary. Less than significant impact.

- f) Some equipment staging would take place in designated park parking lots near each lift station, resulting in a temporary loss of parking spaces for visitors. Since project related work would take place during the off season, there would be a reduced demand for visitor parking. Therefore, loss of parking spaces would not result in inadequate parking. No permanent impacts to parking would result from the proposed project and overall visitation to the park is not expected to change, such that more parking would be required as a result of the project. Less than significant impact.
- g) There are no policies, plans, or programs supporting alternative transportation that apply to this project. No impact.

## **XVI. UTILITIES AND SERVICE SYSTEMS**

### **ENVIRONMENTAL SETTING**

Public restrooms within Clear Lake State Park are located at the campgrounds and day use areas, as well as at the visitor center. Showers are also available at several of the campgrounds. Potable water is provided by the Soda Bay Water System Service which is run by Lake County Special Districts. Potable water is provided to customers in the service area from Clear Lake (Lake County Government n.d.). Clear Lake State Park maintains a tank that stores water for distribution to the visitor center, campgrounds, and park residences. No water treatment occurs within park boundaries (Barajas 2007).

Phone service, provided by AT&T, is available at the park residences, the visitor center and administrative offices, the entrance station and kiosk, and the maintenance shop. AT&T wireless internet service is also available to park visitors in the vicinity of the visitor center.

Electricity for the park is provided by PG&E and is distributed throughout the park by way of both overhead and underground lines. Currently, the seven sewer lift stations scheduled for repair and replacement receive electricity from underground electrical conduits. The park also contains propane tanks which service the park residences and maintenance shop.

This project proposes to install a telemetry system to allow for communication between the stations. New repeater stations installed as part of this system would be solar powered and not connected to the existing electrical system. Although the project involves some upgrading of the electrical equipment and wiring servicing the lift stations, overall demand for electricity is not expected to change (Panuschka 2007).

Park staff collect trash waste from campgrounds and day use facilities and transport it to large bins, where it is later collected by Timberline Disposal Company based in Lakeport. From the park, the disposal company transports and dumps the trash at Eastlake Landfill located in Clearlake (Gonzales 2007).

A total of eight sewer lift stations serve restroom, shower, and other waste-generating facilities throughout Clear Lake State Park. Sewage and wastewater are transported by gravity to the nearest lift station, which then pump the effluent toward LS-1 near the park entrance. From there, sewage waste is pumped out of the park to a wastewater treatment plant in Kelseyville, owned and operated by the Kelseyville County Waterworks District 3 (Lake County 2003). During the off season for park visitation, the park produces and pumps approximately 4,320 gallons per day (gpd) to the treatment plant (Panuschka 2007). In Summer 2006, the park sent 10,840.9 gpd on average to the wastewater treatment plant, with the flow on summer holidays averaging 16,631.7 gpd. The highest flow recorded during that period was 33,870 gpd (Lake County Special Districts 2007). According to a 1973 agreement between DPR and Kelseyville County Waterworks District 3, the park may pump a maximum volume of 40,000 gpd to the wastewater treatment facility (Clear Lake State Park Sewer Agreement 1973).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Exceed wastewater treatment restrictions or standards 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?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Would the construction of these facilities 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?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Would the construction of these facilities 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 that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 as they relate to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## DISCUSSION

- a) Clear Lake State Park is in the jurisdiction of the Sacramento branch of the Central Valley Regional Water Quality Control Board (CVRWQCB, Region 5). The project would be in compliance with all applicable water quality standards and waste discharge requirement (See **MINIMIZATION MEASURE HAZMAT-1** regarding potential impact from accidents, spills, or upset.). No impact.
- b) The proposed project would not result in the construction of a new water or wastewater treatment facility or the expansion of existing facilities. The project would repair and replace existing sewer lift stations used to pump wastewater generated inside the park into the public sewer system. The proposed project would not increase the overall capacity of the park wastewater treatment system, increase the number of park facilities served by the lift stations, or permanently increase the volume of sewage pumped into the local public system. There would be no impacts on the park's potable water system.

- c) The proposed project does not include storm water drainage facilities and would not alter existing storm drain conditions. No impact.
- d) As noted in the Environmental Setting above, potable water for Clear Lake State Park is provided by Lake County Special Districts. The water supply for the park is adequate to meet existing demand. The proposed project does not include the construction of new facilities that would increase park visitation or demand for water. Overall water use is not expected to change as a result of this project. No impact.
- e) Currently, wastewater from Clear Lake State Park is pumped to the wastewater treatment plant managed by Kelseyville County Waterworks District 3. The overall volume of wastewater generated by the park would not exceed 40,000 gpd during implementation of the proposed project or change permanently as a result of the project.

If groundwater is encountered during the project, it would be pumped into a dewatering tank with an appropriate screen to remove sand, silt, gravel, and other debris. While the water is held in the dewatering tank, particulate matter would settle to the bottom. The groundwater would then be transferred to a pump truck that would discharge the water through another screen into the manhole at LS-1. Settling and screening would remove materials that could damage the treatment plant's sewage processing facilities. Groundwater discharge as a result of the project could result in temporary increases in the amount of wastewater being handled by the treatment plant. Therefore, repair and replacement of lift stations would only occur during the off season when the volume of water sent to the wastewater treatment plant is well below capacity. Implementation of **MINIMIZATION MEASURE HYDRO-1** will reduce impacts to a less than significant level.

- f) The project would not increase the park's solid waste disposal needs. Trucks provided by the contractor would remove debris from project related activities. No impact.
- g) The project would comply with all federal, state, and local statutes and regulations as they relate to solid waste. Existing lift stations that are removed from the park sewer system as part of the proposed project would be decontaminated and then disposed of in a licensed landfill. No impact.

## CHAPTER 4

### MANDATORY FINDINGS OF SIGNIFICANCE

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### DISCUSSION

- a) The proposed project was evaluated for potential significant adverse impacts to the natural environment and its plant and animal communities. The project site could support certain special status animal species. It has been determined that the project would have the potential to degrade the quality of the habitat for valley elderberry longhorn beetle (VELB) and potential nesting habitat for sensitive raptor and migratory birds. In addition, the project would have the potential to reduce the number or restrict the range of rare or endangered animals, including the California red-legged frog (CRLF), Western pond turtle (WPT), Clear Lake hitch, and Sacramento perch. However, full implementation of all mitigation and avoidance measures incorporated into this project would reduce those impacts, both individually and cumulatively, to a less than significant level.
- b) The proposed project was evaluated for potential significant adverse impacts to the cultural resources of Clear Lake State Park and its immediate environment. It has been determined that proposed project activities would have the potential to cause significant adverse impact to archaeological resources. Full implementation of the mitigation, minimization, and avoidance measures incorporated into this document would reduce impacts to previously unidentified archaeological sites and features to a less than significant level.

- c) DPR often has smaller maintenance programs and rehabilitation projects planned for a park unit. However, no other projects, other than for routine maintenance, are planned for the project area in the foreseeable future. Additionally, impacts from other environmental issues addressed in this evaluation do not overlap in such a way as to result in cumulative impacts that are greater than the sum of the parts. Less than significant impact.
- d) Most project related environmental effects have been determined to pose a less than significant impact on humans. However, possible impacts from fugitive dust (Air Quality), construction accidents (Hazards and Hazardous Waste), waste (Hydrology and Water Quality), construction-generated noise (Noise), displacement of people (Population and Housing), and inadequate wastewater treatment facilities (Utilities and Services), though temporary in nature, have the potential to result in significant adverse effects on humans. These potentially significant adverse impacts would be reduced to a less than significant level if all mitigation, minimization, and avoidance measures incorporated into this project are fully implemented.



## **CHAPTER 5**

### **SUMMARY OF AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES**

DPR will implement the following avoidance, minimization, and mitigation measures to reduce project impacts from the proposed Clear Lake State Park Sewer Lift Repair and Replacement Project.

#### **AESTHETICS**

No avoidance, minimization, or mitigation measures necessary.

#### **AGRICULTURAL RESOURCES**

No avoidance, minimization, or mitigation measures necessary.

#### **AIR QUALITY**

##### **MINIMIZATION MEASURE AIR-1: DUST AND OZONE REDUCTION**

- All active construction areas will be watered at least twice daily during dry, dusty conditions.
- All trucks hauling soil, sand, or other loose materials on public roads will be covered or required to maintain at least two feet of freeboard.
- All gasoline-powered equipment will be maintained in good mechanical condition (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- Excavation and grading activities will be suspended when sustained winds exceed 15 miles per hour (mph), instantaneous gusts exceed 25 mph, or dust from construction related activities could obscure driver visibility on public roads.

#### **BIOLOGICAL RESOURCES**

##### **MITIGATION MEASURES BIO-1: VALLEY ELDERBERRY LONGHORN BEETLE (VELB)**

- Prior to the start of lift station repair or replacement, a DPR biologist will flag all elderberry shrubs within 100 feet of each lift station to be replaced.
- DPR or its contractor will install orange plastic construction fencing twenty feet outside the dripline of the elderberry shrubs with signs stating that the area is protected VELB habitat (This twenty foot fencing boundary differs for the elderberry closest to LS-5, for which the fence will be installed between the lift station and the dripline.).
- Prior to the start of lift station replacement, a professional arborist will remove the branch closest to the lift station from the elderberry closest to LS-5. The arborist will place the trimmed branch on the ground, on the side of the shrub opposite construction of the lift station, to promote possible new seedling germination. DPR or its contractor will also install fencing outside the dripline of the elderberry at LS-5.
- A DPR qualified biologist will observe all work at LS-5; if additional impacts are anticipated, the State's Representative will temporarily halt work at that location and redirect work to other tasks. No work will commence until USFWS has been contacted and additional mitigations implemented.



### **AVOIDANCE MEASURE BIO-2: SACRAMENTO PERCH AND CLEAR LAKE HITCH**

- Construction work will be timed to avoid the spawning season, which is mid-March through May.

### **MITIGATION MEASURE BIO-3: CALIFORNIA RED-LEGGED FROG AND NORTHWESTERN POND TURTLE**

#### **Applies to both species:**

- A USFWS-approved biological monitor (for CRLF) or DPR-qualified biologists (for NPT) will monitor all construction activities for the duration of the project. The monitor(s) will inspect the project area at the beginning of each work day, throughout any ground disturbing activities, and during the placement of preventative measures to avoid impacts to the California red-legged frog.

#### **Applies to California red-legged frog:**

- Prior to the start of construction work, a USFWS-approved biologist will train contractors and project related personnel about the importance of California red-legged frog, its life history, and what measures will be taken to protect potential habitat during the project.
- If a work site is to be temporarily de-watered by pumping, the contractor will completely screen pump intake hoses with wire mesh with mesh holes not larger than five millimeters to prevent red-legged frog impacts.
- If California red-legged frog is encountered within the construction site, the State's Representative will temporarily halt construction activities at that location and redirect work to other tasks. If the frog leaves the site of its own accord, then work will restart only if approved by the biological monitor. If the frog does not leave the project site, then work will be redirected until the USFWS has been notified and additional avoidance measures, if any, are discussed and implemented.
- The contractor will use tightly woven fiber netting, coconut matting, or similar material for erosion control or other purposes at the project site to ensure that the California red-legged frog does not get trapped by erosion control methods. No plastic mono-filament matting will be permitted for erosion control.

### **AVOIDANCE MEASURE BIO-4: OSPREY AND OTHER NESTING RAPTORS**

- Construction work will occur outside the nesting season which is March 1 through August 31 to avoid impacts to osprey or other nesting raptors.
- In the unexpected event that work will continue into the nesting season (March 1 through August 31), a DPR-qualified biologist will conduct a focused survey for nesting raptors during the nesting season to identify active nests within 250 feet of the project area. Timing of the survey will be at the discretion of the DPR-qualified biologist.
- If nesting raptors are found within 250 feet of the project area, no construction work will occur within the buffer area of 250 feet from the nest tree during active nesting season (March 1 through August 31) or until the young have fledged, as determined by a DPR-qualified biologist.

### **AVOIDANCE MEASURE BIO-5: MIGRATORY BIRD SPECIES**

- Construction work will occur outside the nesting season which is April 1 through August 31 to avoid impact to migratory bird species.
- In the unexpected event that work will continue into the migratory bird season, a DPR-qualified biologist will conduct a focused survey for migratory birds during the nesting

season (April 1 through August 31) to identify active nests within 100 feet of the project area. Timing of the survey will be at the discretion of the DPR-qualified biologist.

- If nesting migratory bird species are found within 100 feet of the project area, no construction work will occur within the buffer area of 100 feet from the nest during active nesting season (April 1 through August 31) or until the young have fledged, as determined by a DPR-qualified biologist.
- If any trees must be removed for this project, the contractor or DPR will schedule tree removal work between September 1 and January 31 to protect nesting raptors and migratory birds.

## **CULTURAL RESOURCES**

### **MITIGATION MEASURE CULT-1: CONSTRUCTION EXCAVATION AND ARCHAEOLOGICAL MONITORING**

- All ground-disturbing activities (including but not limited to trenching, grading, and excavation to repair, remove, and replace old vaults) will be monitored by both a DPR-qualified archaeologist and a Native American representative of local tribes. The DPR project archaeologist will be notified a minimum of two weeks prior to the start of ground-disturbing work to schedule both monitors, unless other arrangements have been made in advance.
- Vehicle access and staging areas for the project will be located on existing pavement to avoid culturally sensitive areas.
- A DPR archaeologist will conduct exploratory excavations at the locations of the new electrical pull boxes prior to any excavation by the contractor to determine if archaeological deposits exist below the surface. The data generated from these excavations would determine if a data recovery or archaeological monitoring will be implemented. A Native American representative of affected tribes will monitor this work.
- A DPR archaeologist will review and approve in advance any changes in the project. Additional surveys (i.e., field inventory and pre-construction testing) will be conducted as necessary prior to the implementation of the proposed changes.
- A pre-construction archaeological testing program will be implemented in previously undisturbed areas of the APE to determine if archaeological deposits exist below the surface. The data generated from these investigations will determine whether further investigation is required.
- A report of the findings from the surface survey, any archaeological testing, and archaeological monitoring will be completed and copies distributed to the Archaeology, History, and Museums Division at DPR Headquarters, Northern Service Center, Northern Buttes District, the Northwest Information Center, and local Native American tribes.

### **MINIMIZATION MEASURE CULT-2: PREVIOUSLY UNDOCUMENTED FINDS**

- In the event that previously unknown cultural resources (including but not limited to dark soil containing shellfish, bone, flaked stone, groundstone, or deposits of historic trash) are encountered during construction related activities by anyone, the State's Representative will put work on hold at that specific location and personnel will be redirected to other tasks. A DPR-qualified archaeologist will record and evaluate the finds

and work with the State's Representative to implement avoidance, preservation, or recovery measures as appropriate prior to any work resuming at that specific location.

### **AVOIDANCE MEASURE CULT-3: ARCHAEOLOGICAL RESOURCES**

- Prior to the start of construction related activities, a DPR-qualified archaeologist will inspect and approve proposed sources of imported soil to avoid importing cultural deposits from other areas.
- If imported fill is required, filter cloth or other method(s) approved by a DPR-qualified archaeologist will be used in those areas containing archaeological deposits, as a barrier between the archaeological deposit and the imported fill to prevent contamination of the archaeological deposits located in the park.
- In locations where fill is employed, both archaeological site records (DPR Form 523) and as-built plans will be updated to show the distribution of the fill material in relationship to the natural landforms.

### **MITIGATION MEASURE CULT-4: HUMAN REMAINS**

- In the event that human remains are discovered, work will cease immediately in the area of the find and the contractor will notify the State's Representative, who in turn will notify the appropriate DPR personnel. Any human remains and/or funerary objects will be left in place. The DPR Sector Superintendent (or authorized representative) will notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC) will be notified within 24 hours of the discovery if the Coroner determines that the remains are Native American. The NAHC will designate the "Most Likely Descendent" (MLD) of the deceased Native American. The MLD will recommend an appropriate disposition of the remains. If a Native American monitor is on-site at the time of the discovery and that person has been designated the MLD by the NAHC, the monitor will make the recommendation of the appropriate disposition.

## **GEOLOGY AND SOILS**

### **MINIMIZATION MEASURE GEO-1: EROSION CONTROL BMPs**

- Prior to the start of construction, the contractor will prepare a Water Pollution Control Plan (WPCP) for this project. The WPCP will contain temporary and permanent erosion and sediment control Best Management Practices (BMPs) to prevent or minimize soil and surface water runoff during excavation and grading activities. BMPs will be used during all soil disturbing activities and until all disturbed soil has been stabilized (re-compacted, re-vegetated, etc).
- Permanent BMPs for erosion control will consist of properly compacting disturbed areas, keeping slopes around raised lift stations at a 5:1 slope or less (i.e.,  $\leq 20\%$  slope) and using a variety of site-specific re-vegetation or mulching techniques approved by a DPR-qualified biologist. Final design plans will include permanent BMP measures to be incorporated into the project.

## **HAZARDS AND HAZARDOUS MATERIALS**

### **MINIMIZATION MEASURE HAZMAT-1: SPILL PREVENTION AND RESPONSE**

- All equipment will be inspected by the contractor for leaks immediately prior to the start of construction related activities, and regularly inspected thereafter until equipment is removed from park premises.
- BMPs for Spill Prevention and Response (i.e., non-stormwater) will be included in the WPCP (See **MINIMIZATION MEASURE GEO-1.**). The WPCP will also include a map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment may occur. The Contractor will maintain a spill kit on-site throughout the life of the project. In addition, the following items will be addressed in the WPCP.
  - Areas designated for refueling, lubrication, and maintenance of equipment will be at least 50 feet from any spring/seep/wetland areas and 100 feet from creeks. In the event of any spill or release of any chemical in any physical form at the project site or within the boundaries of the Park during construction related activities, the contractor will immediately notify the State's Representative.
  - Equipment will be cleaned and repaired (other than emergency repairs) outside of the park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside of park boundaries, at a lawfully permitted or authorized destination.

### **MITIGATION MEASURE HAZMAT-2: REMOVAL OF HAZARDOUS MATERIAL – SEWAGE**

- Prior to the start of repair and replacement of lift stations, the contractor will develop and submit a Site Safety Plan for DPR approval. This plan will identify precautions and protocols that the contractor will follow if a worker is exposed to raw sewage during work associated with the project.
- Before work begins at each lift station, the contractor will pump out any residual sewage and disinfect the vault of the station with a chlorine solution before demolition and removal.

### **MINIMIZATION MEASURE HAZMAT-3: FIRE SAFETY**

- Prior to the start of any work associated with the proposed project, the contractor will develop and submit a Fire Safety Plan for DPR approval. The plan will include the emergency calling procedures that the contractor will follow for both CDF and the Kelseyville Fire Protection District.
- Spark arrestors or turbo charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all heavy equipment.
- Construction crews will park vehicles away from flammable material, such as dry grass or brush. At the end of each workday, heavy equipment will be parked over asphalt or concrete to reduce the chance of fire.

## **HYDROLOGY AND WATER QUALITY**

### **MINIMIZATION MEASURE HYDRO-1: PROTECTION OF WATER QUALITY**

- Any groundwater removed from the excavation pits will be pumped into a dewatering tank with appropriate screens to remove debris such as sand and gravel. After particulate matter settles to the bottom of the tank, the contractor will transfer the water to a pump

truck that will discharge the water into the man hole at LS-1. The Contractor will devise a procedure to screen out debris as the water is pumped into LS-1 to abide by Kelseyville County Waterworks District 3 requirements that any debris be filtered from the water. Any sludge remaining in the bottom of the settling tank will be disposed off-site in accordance with all federal, state and local guidelines.

## **LAND USE AND PLANNING**

No avoidance, minimization, or mitigation measures necessary.

## **MINERAL RESOURCES**

No avoidance, minimization, or mitigation measures necessary.

## **NOISE**

### **MINIMIZATION MEASURE NOISE-1: NOISE EXPOSURE**

- Project related activities will be limited to park operating hours between 7:00 a.m. and 7:00 p.m.
- Internal combustion engines used for any purpose in the project areas will be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for project related activities will utilize the best available noise control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.
- Stationary noise sources and staging areas will be located as far from visitors as possible. If they must be located near visitors, stationary noise sources will be muffled to the extent feasible, and/or where practicable, enclosed within temporary sheds.

## **POPULATION AND HOUSING**

### **MITIGATION MEASURE POP-1: REPLACEMENT HOUSING AND FACILITIES**

- DPR will provide alternative housing to park residents during replacement of LS-6 and its associated electrical equipment.

## **PUBLIC SERVICES**

Refer to **MINIMIZATION MEASURE HAZMAT-3**.

## **RECREATION**

No avoidance, minimization, or mitigation measures necessary.

## **TRANSPORTATION / TRAFFIC**

No avoidance, minimization, or mitigation measures necessary.

## **UTILITIES AND SERVICE SYSTEMS**

Refer to **MINIMIZATION MEASURES HAZMAT-1** and **HYDRO-3**.

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## Chapter 7 Report Preparation

### CALIFORNIA DEPARTMENT OF PARKS AND RECREATION NORTHERN SERVICE CENTER

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State Historian II

Kathleen Considine, PG  
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Environmental Scientist

Anne Jacobs  
Environmental Services Intern

Gerhard Panuschka, PE  
Senior Civil Engineer

Lauren Schaub  
Environmental Services Intern

Heidi West  
Environmental Coordinator

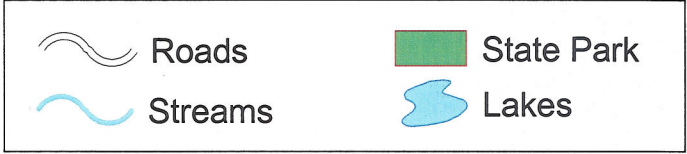
Warren Wulzen  
Associate State Archaeologist

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APPENDIX A

# MAPS AND PHOTOGRAPHS

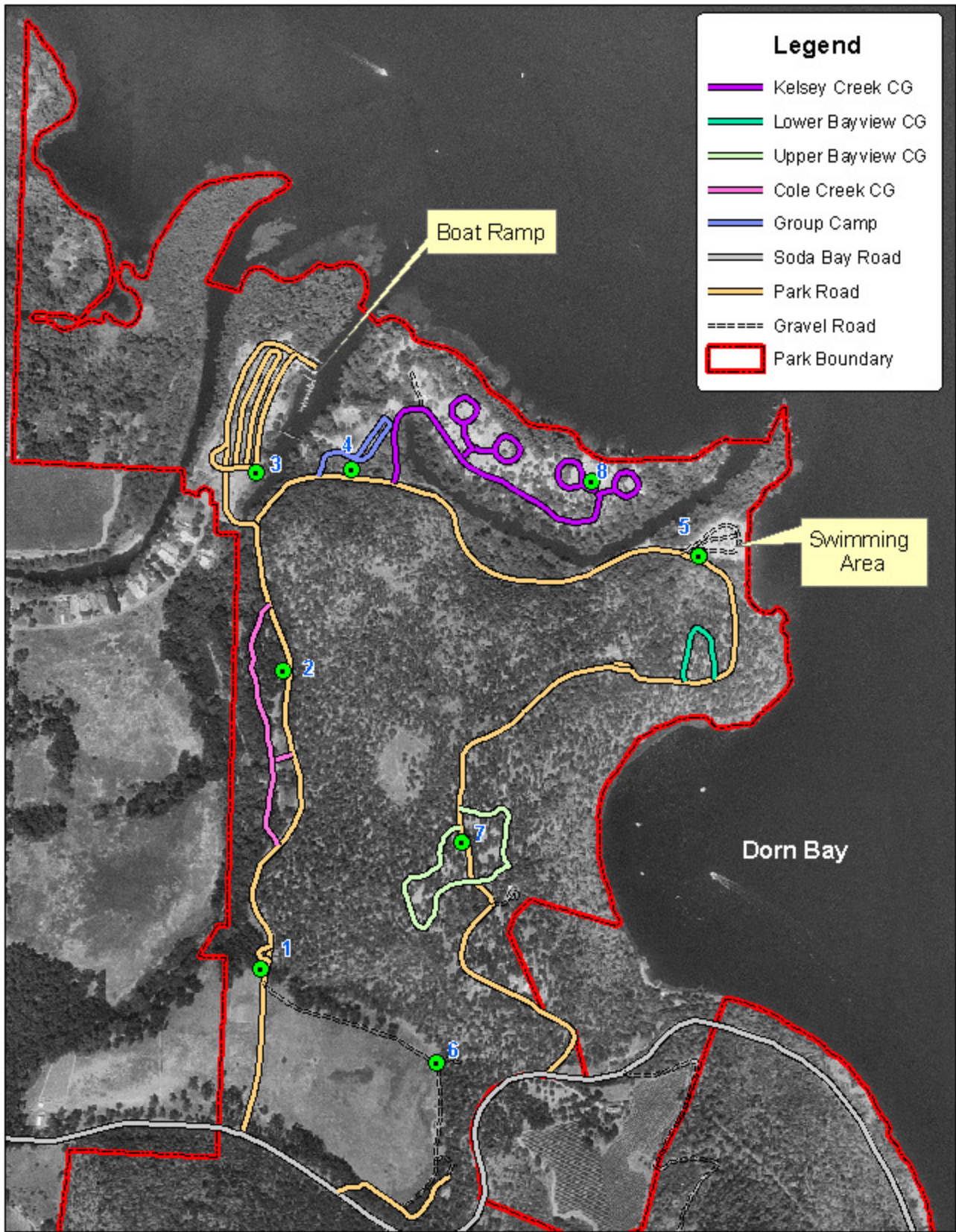
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Main View: NAD 83 Teale Albers Projection  
 Scale: 1:21,779



**Figure 1:  
 Clear Lake  
 State Park**



**Figure 2: Lift Station Locations,  
Clear Lake State Park**



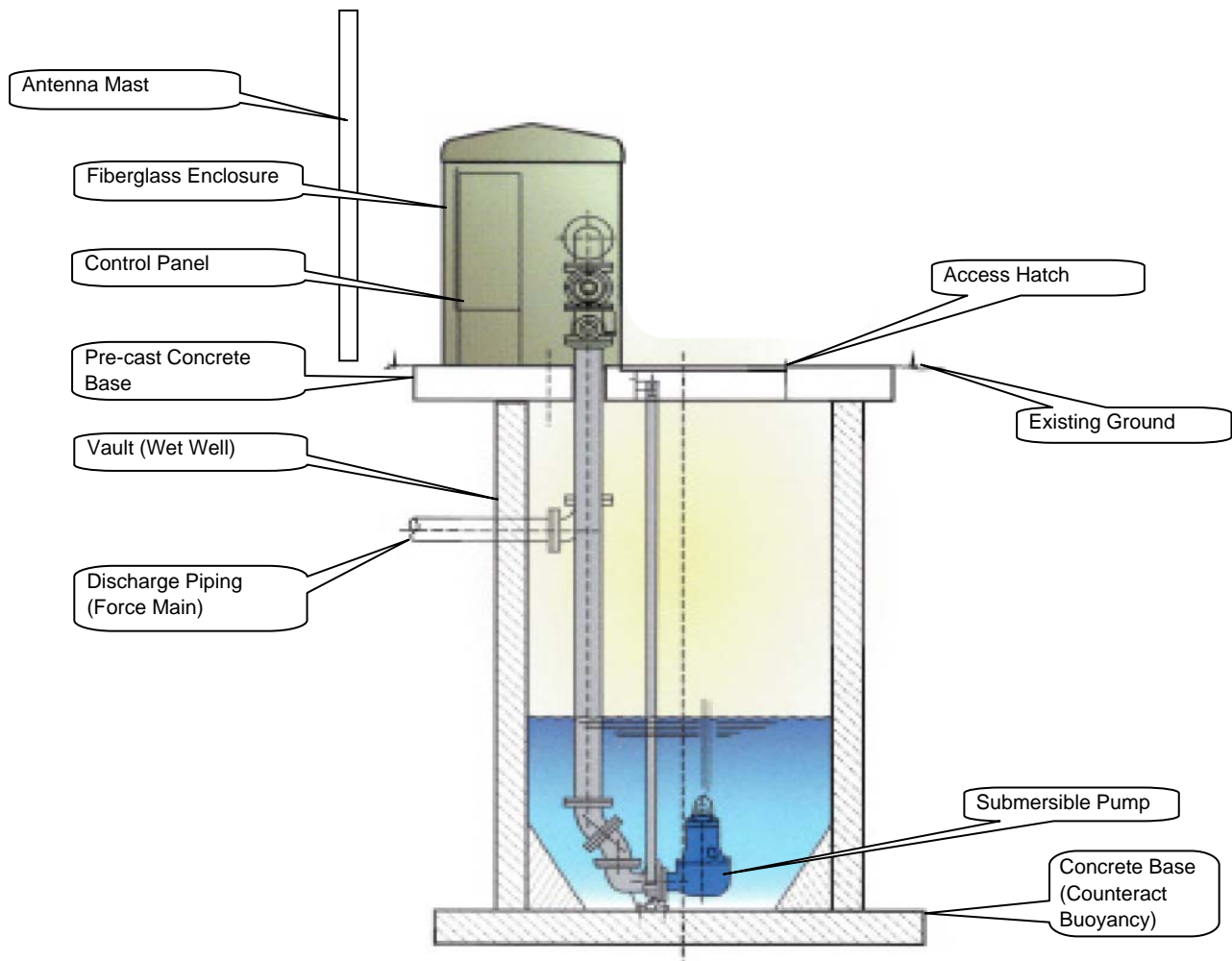
Figure 3: Existing Sewer Lift Station  
at Clear Lake State Park

APPENDIX B

# PROJECT DESIGN GRAPHICS

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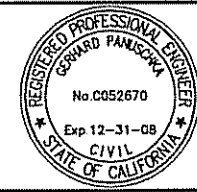




**Figure 1: Sewer Lift Station Components**



ACQUISITION & DEVELOPMENT DIVISION  
One Capitol Mall  
Sacramento, CA  
95814-3229



CALIFORNIA STATE FIRE MARSHAL APPROVED  
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.  
Reviewed by: Data  
DPR ACCESS COMPLIANCE REVIEW  
ACCESSIBILITY SECTION  
CERTIFICATION #  
Reviewed by: Data  
ACCESSIBILITY COMPLIANCE AND STATE FIRE MARSHAL SIGNED ORIGINALS ARE ON FILE AT THE DEPARTMENT OF PARKS AND RECREATION, NORTHERN SERVICE CENTER.

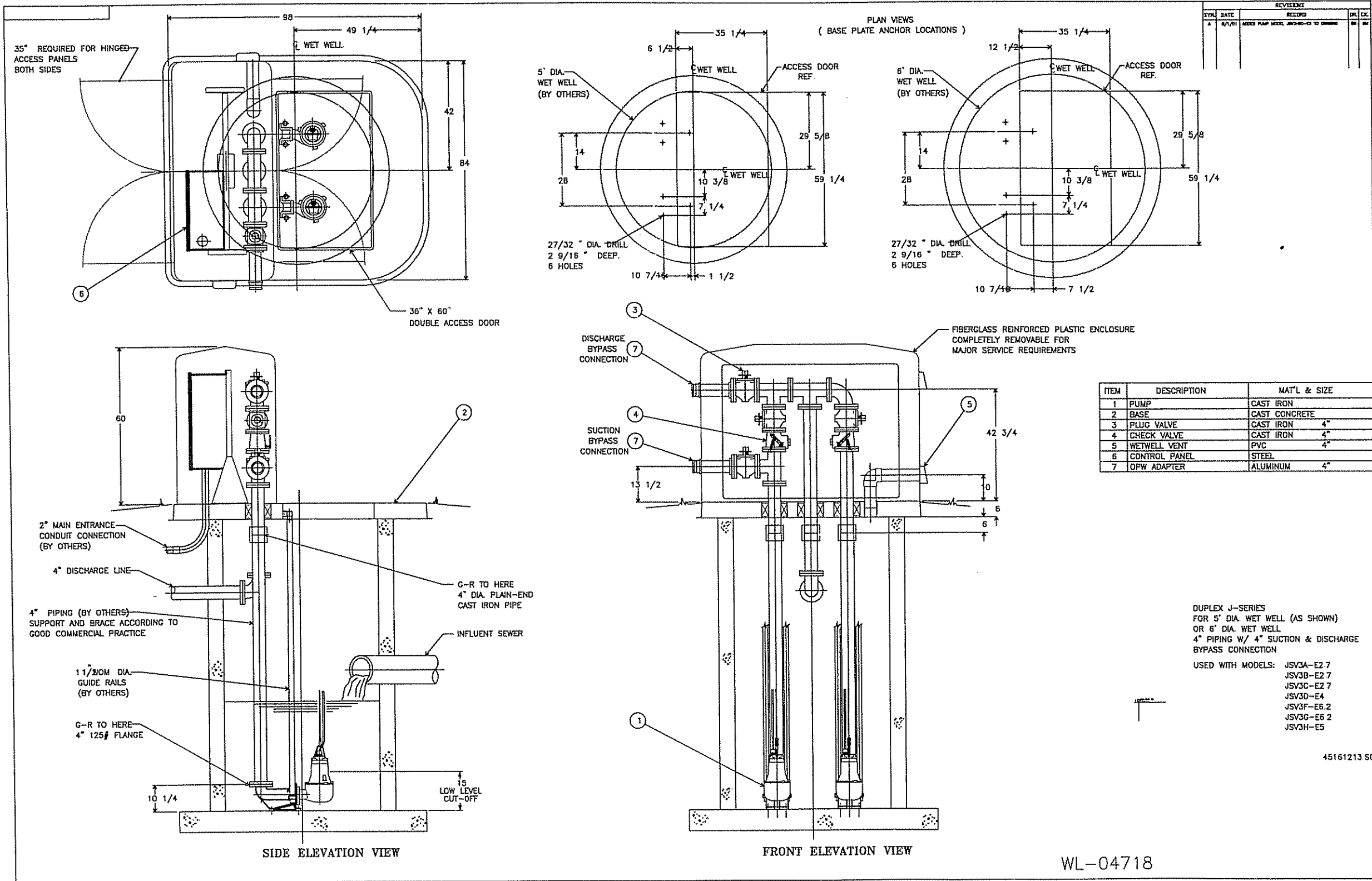
DESIGNED: DESIGNER  
DRAWN: STAFF  
CHECKED: SUPERVISOR  
DATE: XX-XX-XXXX

REVISIONS	
NO.	DATE

CLEAR LAKE STATE PARK  
REPAIR AND REPLACE SEWER LIFT STATIONS AND  
TELEMETRY  
**PACKAGED LIFT STATION DETAILS**

DRAWING NO  
XXXX.XXX

SHEET NO  
**C-16**  
XXX OF XX

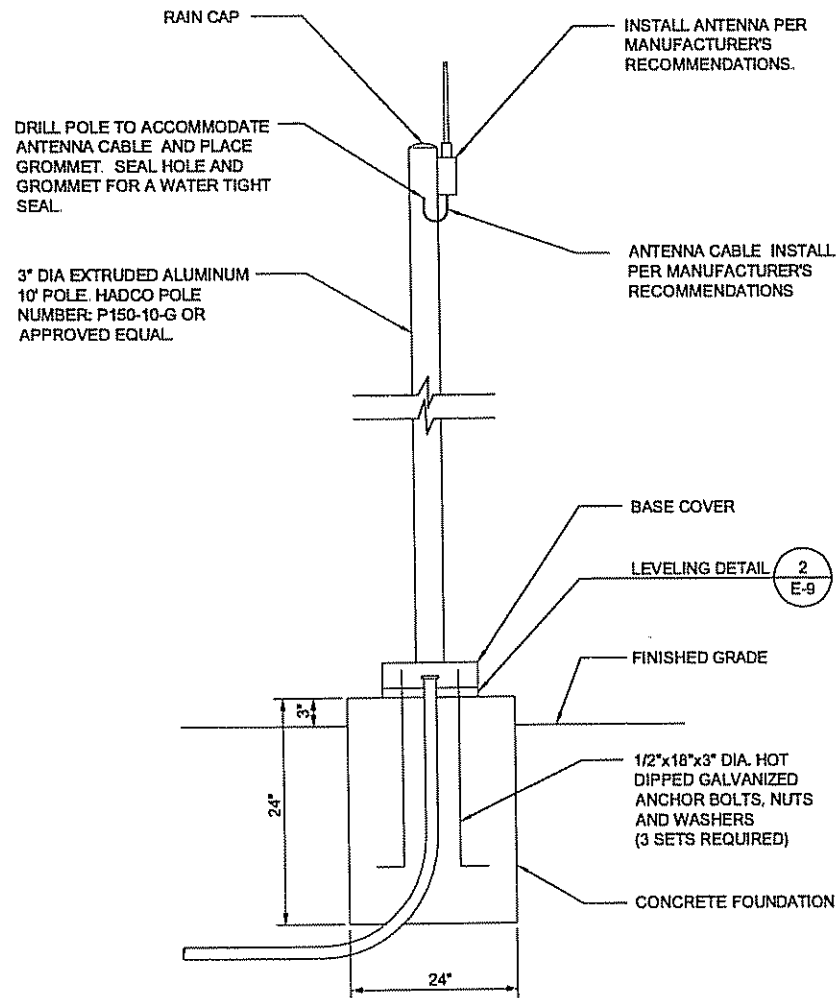


1 LIFT STATION DETAILS  
SCALE@22X34 N.T.S.

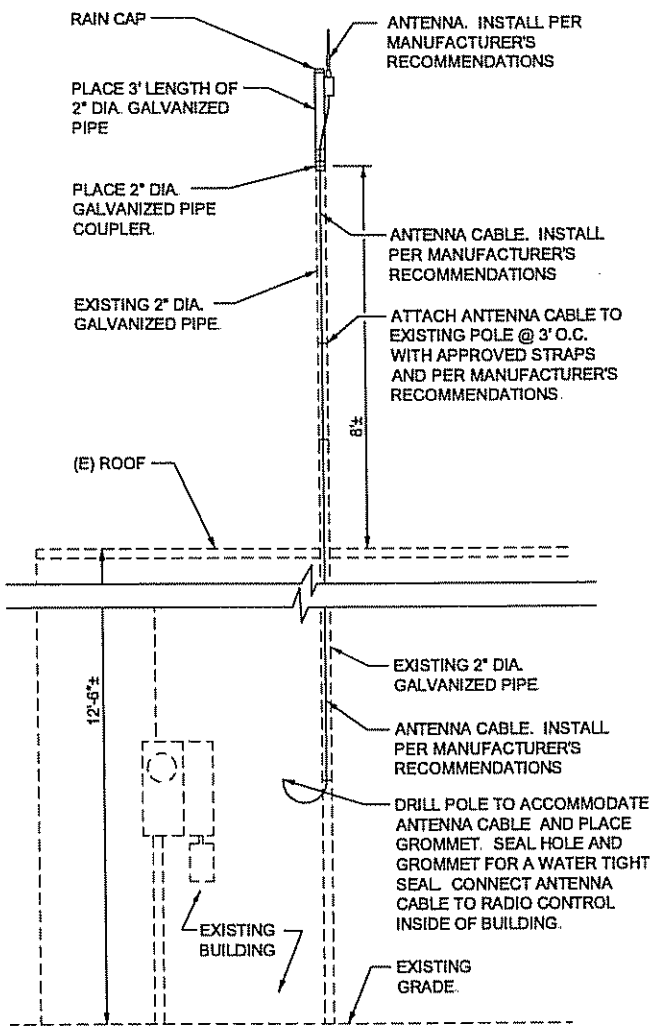
Figure 2: Lift Station Details

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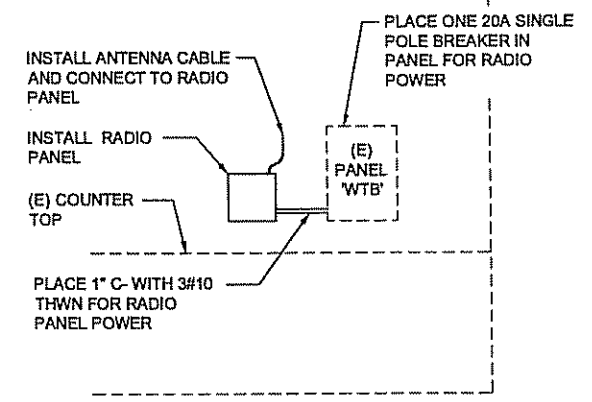
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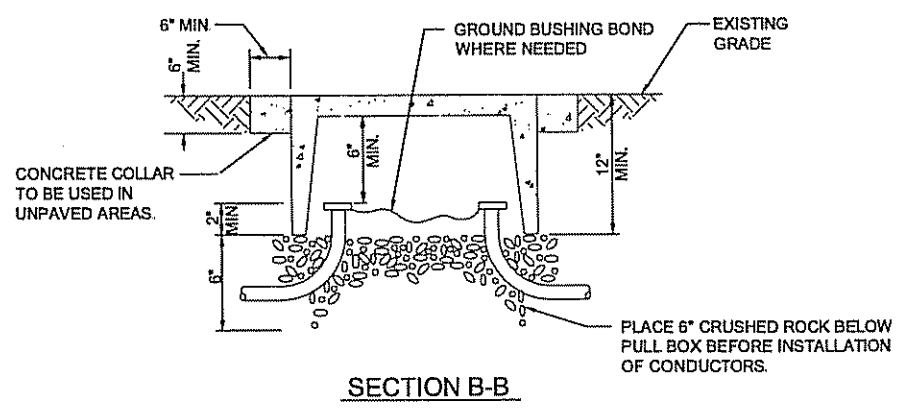
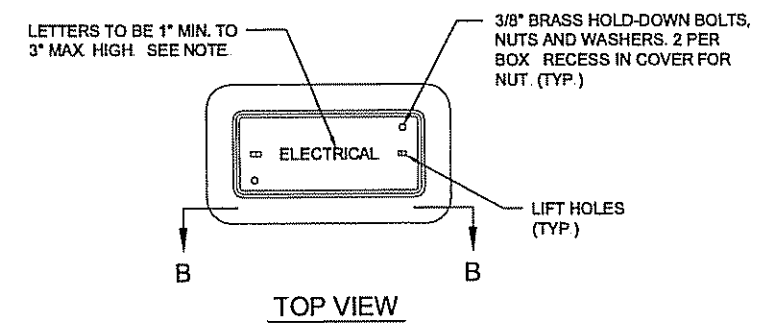
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SCALE@22X34 NTS



**3 WATER TREATMENT BUILDING ANTENNA**  
SCALE@22X34 NTS

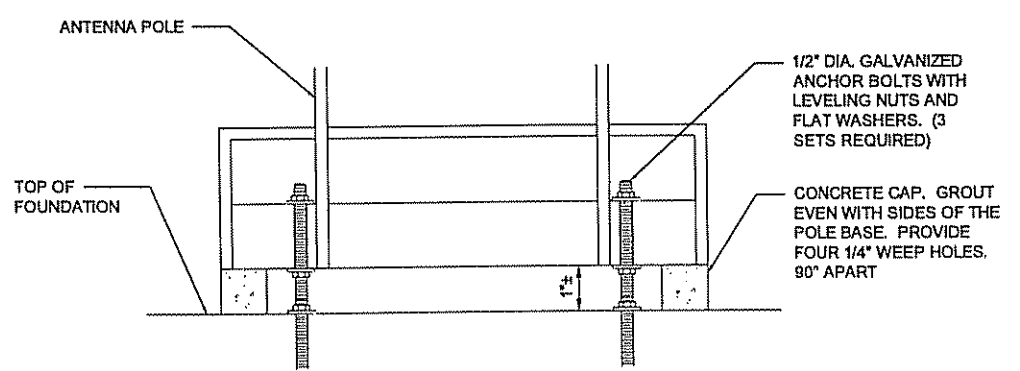


**4 WATER TREATMENT BUILDING INTERIOR**  
SCALE@22X34 NTS



**NOTE:**  
PULL BOX TO BE CALTRANS No. 5 MINIMUM, UNLESS OTHERWISE NOTED ON THE PLANS

**5 PULL BOX DETAIL**  
SCALE@22X34 NTS



**NOTE:**

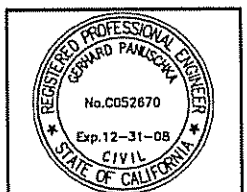
- ALL LEVELING NUTS MUST BE LEVEL AND EVEN PRIOR TO INSTALLING THE POLES. CARE MUST BE TAKEN WHEN TIGHTENING BOLTS TO NOT CRACK OR BREAK BASE PLATE
- ALL ANCHOR BOLTS SHALL BE ASTM A-307. ALL STRUCTURAL STEEL SHALL BE ASTM A-36.

**2 LEVELING DETAIL**  
SCALE@22X34 NTS

**Figure 3: Lift Station and Water Treatment Building Antenna/Radio Telemetry**



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Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_  
DPR ACCESS COMPLIANCE REVIEW ACCESSIBILITY SECTION CERTIFICATION # \_\_\_\_\_  
Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_  
ACCESSIBILITY COMPLIANCE AND STATE FIRE MARSHAL SERVICES DIVISION AND FIRE AT THE DEPARTMENT OF PARKS AND RECREATION NORTHERN SERVICE CENTER

DESIGNED: DESIGNER  
DRAWN: STAFF  
CHECKED: SUPERVISOR  
DATE: XX-XX-XXXX

REVISIONS	DATE

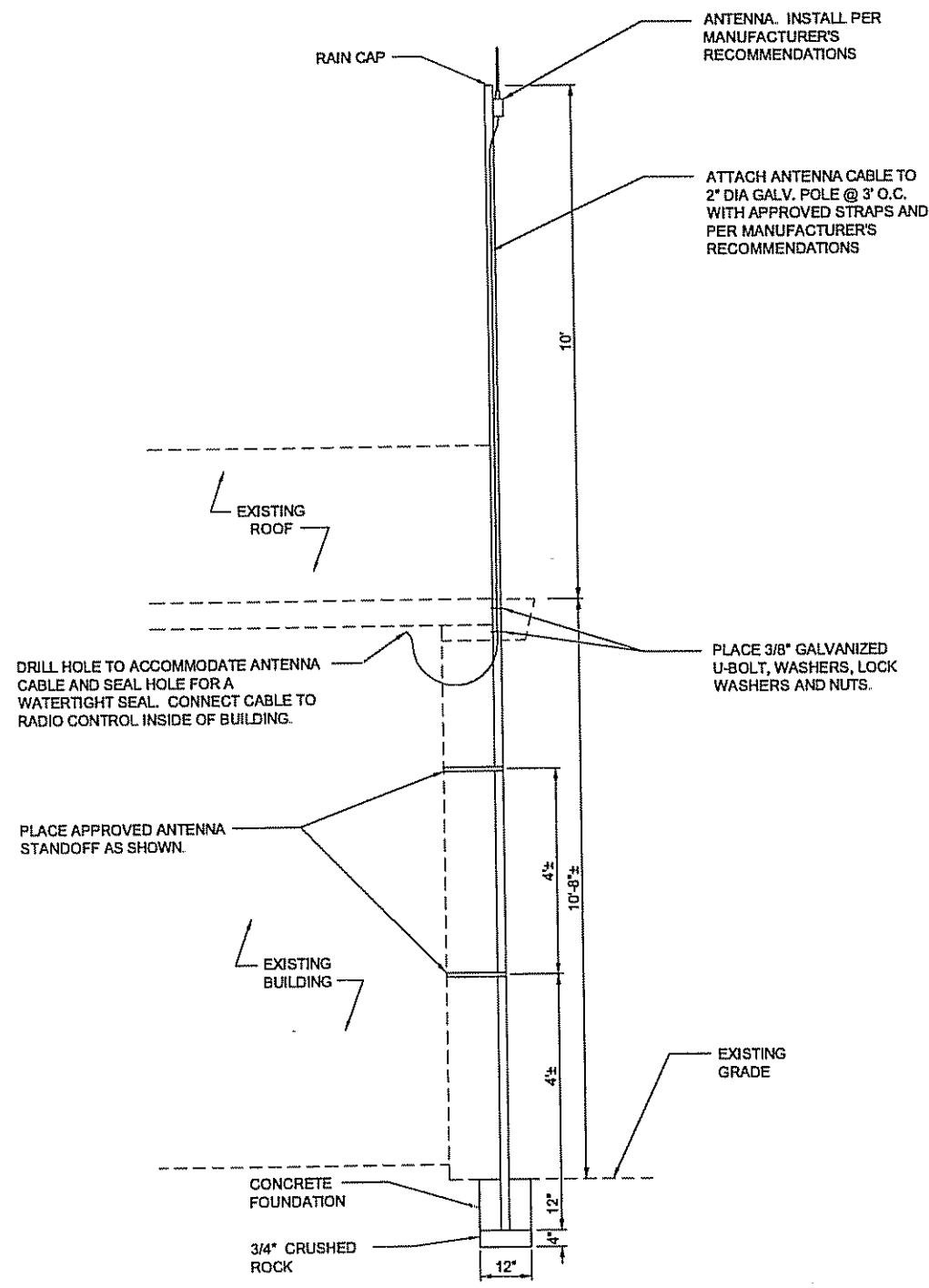
CLEAR LAKE STATE PARK  
REPAIR AND REPLACE SEWER LIFT STATIONS AND TELEMETRY  
ANTENNA DETAILS

DRAWING NO.  
XXXX.XXX

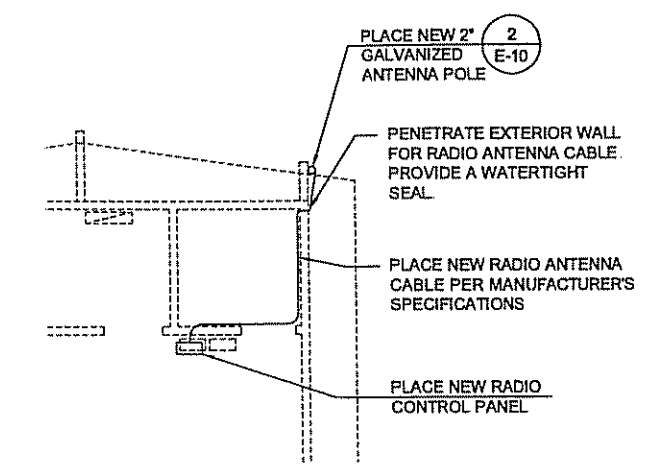
SHEET NO.  
E-9

XXX OF XX

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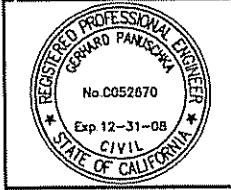
**2** ENTRANCE STATION ANTENNADWG  
 SCALE@22X34 NTS



**1** ENTRANCE STATION-BLDG LAYOUT  
 SCALE@22X34 NTS



ACQUISITION & DEVELOPMENT DIVISION  
 One Capitol Mall  
 Sacramento, CA  
 95814-3229



CALIFORNIA STATE FIRE MARSHAL APPROVED  
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by	Date
DPR ACCESS COMPLIANCE REVIEW ACCESSIBILITY SECTION CERTIFICATION #	
Reviewed by	Date
ACCESSIBILITY COMPLIANCE AND STATE FIRE MARSHAL'S CHECKS ORIGINALS ARE ON FILE AT THE DEPARTMENT OF PARKS AND RECREATION, NORTHERN SERVICE CENTER	

DESIGNED:	DESIGNER
DRAWN:	STAFF
CHECKED:	SUPERVISOR
DATE:	XX-XX-XXXX

REVISIONS	
NO.	DATE

CLEAR LAKE STATE PARK  
 REPAIR AND REPLACE SEWER LIFT STATIONS AND TELEMETRY  
**ENTRANCE STATION RADIO**

DRAWING NO.  
 XXXX.XXX

SHEET NO.  
**E-10**  
 XXX OF XX

**Figure 4: Entrance Station Antenna/Radio Telemetry**

APPENDIX C

**SPECIAL STATUS SPECIES TABLES**

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## Special Status Species Lists

<b>Table 1: List of Special Status Plant Species Known to Occur or Potentially Occur Near Clear Lake State Park</b>				
Scientific Names	Common Names	CNPS <sup>3</sup>	Status	Probability of Occurrence in Project Area
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	List 1B.2		Potentially suitable habitat
<i>Arctostaphylos canescens</i> ssp. <i>sonomensis</i>	Sonoma manzanita	List 1B.2		No suitable habitat
<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	Konocti manzanita	List 1B.3		Potentially suitable habitat
<i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>	Raiche's manzanita	List 1B.1		No suitable habitat
<i>Brodiaea coronaria</i> ssp. <i>rosea</i>	Indian Valley brodiaea	List 1B.1	SE	Potentially suitable habitat
<i>Calycadenia micrantha</i>	small-flowered calycadenia	List 1B.2		Potentially suitable habitat
<i>Carex hystericina</i>	bottlebrush sedge	List 2.1		Outside of elevation range
<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	List 1B.1		Potentially suitable habitat
<i>Cryptantha clevelandii</i> var. <i>dissita</i>	serpentine cryptantha	List 1B.1		No suitable habitat
<i>Didymodon norrisii</i>	Norris's beard-moss	List 2.2		Outside of elevation range
<i>Eriastrum brandegeae</i>	Brandegee's eriastrum	List 1B.2	SR	Potentially suitable habitat
<i>Erigeron angustatus</i>	narrow-leaved daisy	List 1B.2		Outside of elevation range
<i>Eriogonum luteolum</i> var. <i>caninum</i>	Tiburon buckwheat	List 3.2		No suitable habitat
<i>Eriogonum nervulosum</i>	Snow Mountain buckwheat	List 1B.2		No suitable habitat
<i>Eryngium constancei</i>	Loch Lomond button-celery	List 1B.1	SE / FE	No suitable habitat
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	List 1B.2	SE	No suitable habitat
<i>Hesperolinon adenophyllum</i>	glandular western flax	List 1B.2		Potentially suitable habitat
<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	List 1B.2		No suitable habitat
<i>Hesperolinon didymocarpum</i>	Lake County western flax	List 1B.2	SE	Potentially suitable habitat
<i>Horkelia bolanderi</i>	Bolander's horkelia	List 1B.2		No suitable habitat
<i>Imperata brevifolia</i>	California satintail	List 2.1		No suitable habitat
<i>Lasthenia burkei</i>	Burke's goldfields	List 1B.1	SE / FE	No suitable habitat
<i>Layia septentrionalis</i>	Colusa layia	List 1B.2		Potentially suitable habitat

**Table 1: List of Special Status Plant Species Known to Occur or Potentially Occur Near Clear Lake State Park**

Scientific Names	Common Names	CNPS <sup>3</sup>	Status	Probability of Occurrence in Project Area
<i>Legenere limosa</i>	legenere	List 1B.1		No suitable habitat
<i>Lupinus antoninus</i>	Anthony Peak lupine	List 1B.3		Outside of elevation range
<i>Lupinus sericatus</i>	Cobb Mountain lupine	List 1B.2		Potentially suitable habitat
<i>Micropus amphibolus</i>	Mt. Diablo cottonweed	List 3.2		Potentially suitable habitat
<i>Monardella villosa</i> ssp. <i>globosa</i>	robust monardella	List 1B.2		Potentially suitable habitat
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	List 3.1		No suitable habitat
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	List 1B.1		No suitable habitat
<i>Navarretia leucocephala</i> ssp. <i>pauciflora</i>	few-flowered navarretia	List 1B.1	ST / FE	No suitable habitat
<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	many-flowered navarretia	List 1B.2	SE / FE	No suitable habitat
<i>Orcuttia tenuis</i>	slender Orcutt grass	List 1B.1	SE / FT	No suitable habitat
<i>Plagiobothrys lithocaryus</i>	Mayacamas popcorn-flower	List 1A		No suitable habitat
<i>Potamogeton zosteriformis</i>	eel-grass pondweed	List 2.2		No suitable habitat
<i>Sedella leiocarpa</i>	Lake County stonecrop	List 1B.1	SE / FE	Potentially suitable habitat
<i>Streptanthus breweri</i> var. <i>hesperidis</i>	green jewel-flower	List 1B.2		Potentially suitable habitat
<i>Tracyina rostrata</i>	beaked tracyina	List 1B.2		Potentially suitable habitat

<sup>1</sup>Known to occur in the Park

<sup>2</sup>Special status species potentially impacted by implementation of proposed action.

<sup>3</sup> California Native Plant Society (CNPS) Lists: List 1A = presumed extinct in California; List 1B = rare or endangered in California and elsewhere; List 2 = rare or endangered in California, more common elsewhere; List 3 = need more information; List 4 = plants of limited distribution. New threat code extensions are: .1 = seriously endangered in California; .2 = fairly endangered in California; and .3 not very endangered in California.

SE State Endangered  
 ST State Threatened  
 SR State Rare  
 CSC California Special Concern  
 FE Federally Endangered  
 FT Federally Threatened  
 FSC Federal Special Concern

<b>Table 2: List of Special Status Animal Species Known to Occur or Potentially Occur Near Clear Lake State Park</b>				
Scientific Name	Common Name	Status	Habitat Description	Probability of Occurrence in Project Area
<b>Invertebrates</b>				
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	FE	vernal pools	No suitable habitat
<i>Syncaris pacifica</i>	California freshwater shrimp	SE / FE	low elevation perennial freshwater stream	Suitable habitat unlikely
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	FT	riparian forests, usually on elderberry	Suitable habitat present
<b>Fish</b>				
<i>Archoplites interruptus</i>	Sacramento perch	CSC	slow moving rivers	Suitable habitat present
<i>Hypomesus transpacificus</i>	delta smelt	ST / FT	Suisun bay upstream through the Delta	No suitable habitat
<i>Lavinia exilicauda chi</i>	Clear Lake hitch	CSC	slow warm water, lakes, streams	Suitable habitat present
<i>Oncorhynchus kisutch</i>	central California coho salmon	FT	clear, cool freshwater streams; estuarine and marine waters	No fish ladder on the Cache Creek Dam to allow access
<i>Oncorhynchus mykiss</i>	Northern California steelhead	FT	clear, cool freshwater streams; estuarine and marine waters	No fish ladder on the Cache Creek Dam to allow access
<i>Oncorhynchus tshawytscha</i>	California coastal chinook salmon	FT	clear, cool, freshwater streams; estuarine and marine waters	No fish ladder on the Cache Creek Dam to allow access
<b>Amphibians</b>				
<i>Rana aurora draytonii</i>	California red-legged frog	FT	freshwater wetlands and streams	Potentially suitable habitat
<b>Reptiles</b>				
<i>Emys marmorata marmorata</i>	Western pond turtle	CSC	permanent water source	Potentially suitable habitat
<b>Birds</b>				
<i>Brachyramphus marmoratus</i>	marbled murrelet (nesting)	SE / FT	old growth coniferous forests; marine waters	No suitable habitat
<i>Dendroica petechia brewsteri</i>	yellow warbler (nesting)	CSC	riparian deciduous habitats	heard singing within Park
<i>Haliaeetus leucocephalus</i>	bald eagle (nesting)	SE / FT	ocean shore, lake	Suitable habitat likely



<b>Table 2: List of Special Status Animal Species Known to Occur or Potentially Occur Near Clear Lake State Park</b>				
Scientific Name	Common Name	Status	Habitat Description	Probability of Occurrence in Project Area
	and wintering)		margins, and rivers	
<i>Pandion haliaetus</i>	osprey (nesting)	CSC	treetops / snags open forests; near water	Present in the Park
<i>Strix occidentalis caurina</i>	northern spotted owl	FT	old growth and mature second growth coniferous forests	Suitable habitat unlikely
<b>Mammals</b>				
<i>Martes pennanti</i>	fisher	FSC	coniferous and deciduous forests	Suitable habitat unlikely

<sup>1</sup>Known to occur in the Park

<sup>2</sup>Special status species potentially impacted by implementation of proposed action.

- SE State Endangered
- ST State Threatened
- SR State Rare
- CSC California Special Concern
- FE Federally Endangered
- FT Federally Threatened
- FSC Federal Special Concern

APPENDIX D  
**ACRONYMS**

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## APPENDIX D

### ACRONYMS USED IN THIS DOCUMENT

<b>APE</b>	Area of Potential Effect
<b>APEFZ</b>	Alquist-Priolo Earthquake Fault Zone
<b>BGEPA</b>	Bald and Golden Eagle Protection Act
<b>BMP</b>	Best Management Practice
<b>BOE</b>	California State Board of Equalization
<b>BVGB</b>	Big Valley Groundwater Basin
<b>CAA</b>	Clean Air Act (federal)
<b>CARB</b>	California Air Resources Board
<b>CCAA</b>	Clean Air Act (California)
<b>CCR</b>	California Code of Regulations
<b>CDC</b>	California Department of Conservation
<b>CDF</b>	California Department of Forestry and Fire Protection
<b>CDTSC</b>	California Department of Toxic Substance Control
<b>CEQA</b>	California Environmental Quality Act
<b>CGS</b>	California Geological Survey
<b>cm</b>	Centimeters
<b>CNDDDB</b>	California Natural Diversity Database (DFG)
<b>CNEL</b>	Community Noise Equivalent Level
<b>CNPS</b>	California Native Plant Society
<b>CRHR</b>	California Register of Historical Resources
<b>CRLF</b>	California red-legged frog
<b>CSAC</b>	California State Association of Counties
<b>CSQA</b>	California Stormwater Quality Association
<b>cu yd</b>	Cubic yard
<b>CVRWQCB</b>	Central Valley Regional Water Quality Control Board
<b>CWA</b>	Clean Water Act
<b>dB</b>	Decibel
<b>dBA</b>	A-weighted decibel
<b>DBH</b>	Diameter at Breast Height
<b>DFG</b>	California Department of Fish and Game
<b>DOF</b>	California Department of Finance
<b>DOT</b>	California Department of Transportation
<b>DPR/CDPR</b>	California Department of Parks and Recreation (California State Parks)
<b>DWR</b>	Department of Water Resources
<b>EIR</b>	Environmental Impact Report
<b>FEMA</b>	Federal Emergency Management Agency
<b>FMMP</b>	Farmland Mapping and Monitoring Program
<b>FRP</b>	Fiberglass reinforced plastic

<b>ft</b>	Feet
<b>gpd</b>	Gallons per day
<b>IS</b>	Initial Study
<b>IS/MND</b>	Initial Study/Mitigated Negative Declaration
<b>LCAQMD</b>	Lake County Air Quality Management District
<b>L<sub>eq</sub></b>	Equivalent sound level
<b>L<sub>max</sub></b>	Instantaneous maximum noise level
<b>LOS</b>	Level of Service
<b>LS</b>	Lift Station(s)
<b>MBTA</b>	Migratory Bird Treaty Act
<b>MLD</b>	Most Likely Descendent
<b>MND</b>	Mitigated Negative Declaration
<b>mph</b>	Miles per hour
<b>msl</b>	Mean sea level
<b>NAAQS</b>	National Ambient Air Quality Standards
<b>NAHC</b>	Native American Heritage Commission
<b>NPT</b>	Northwestern pond turtle
<b>NRHP</b>	National Register of Historic Places
<b>NWIC</b>	Northwest Information Center
<b>PG &amp; E</b>	Pacific Gas and Electric Company
<b>PM<sub>2.5</sub></b>	Suspended particulate matter with an aerodynamic diameter of 2.5 micrometers or less
<b>PM<sub>10</sub></b>	Suspended particulate matter with an aerodynamic diameter of 10 microns or less
<b>POST</b>	Police Officer Standards and Training
<b>PRC</b>	Public Resources Code
<b>SIP</b>	State Implementation Plans
<b>SP</b>	State Park
<b>sq ft</b>	Square feet
<b>SR</b>	State Route
<b>SWRCB</b>	State Water Resources Control Board
<b>USACE</b>	United States Army Corps of Engineers
<b>USDA</b>	United States Department of Agriculture
<b>USEPA</b>	United States Environmental Protection Agency
<b>USFWS</b>	United States Fish and Wildlife Service
<b>USGS</b>	United States Geological Survey
<b>VELB</b>	Valley Elderberry Longhorn Beetle
<b>vph</b>	Vehicles per hour
<b>VRP</b>	Visibility Reducing Particle(s)
<b>WPCP</b>	Water Pollution Control Plan