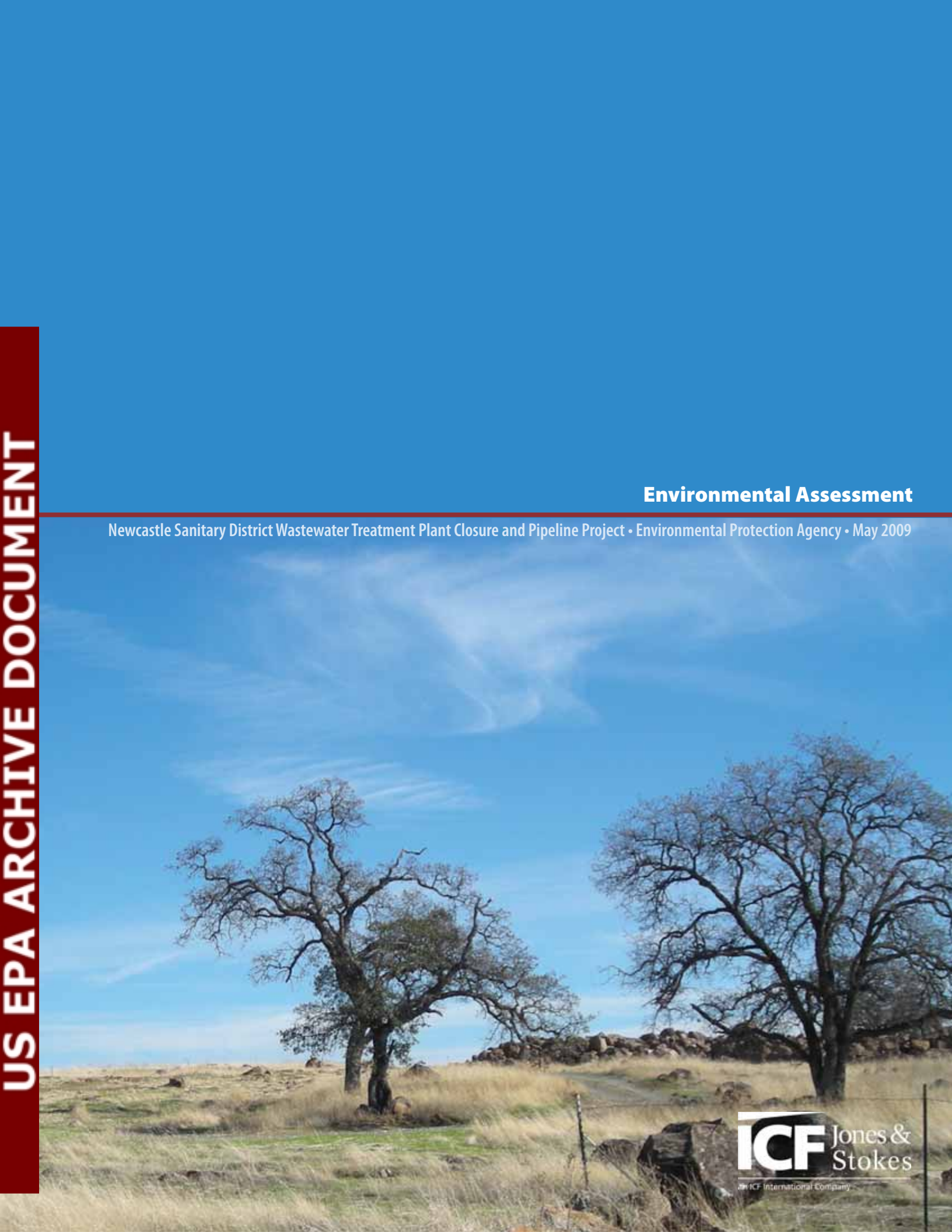


US EPA ARCHIVE DOCUMENT

**Environmental Assessment**

Newcastle Sanitary District Wastewater Treatment Plant Closure and Pipeline Project • Environmental Protection Agency • May 2009





**Environmental Assessment**

**Newcastle Sanitary District  
Wastewater Treatment Plant Closure  
and Pipeline Project**

*Prepared for:*

U.S. Environmental Protection Agency  
75 Hawthorne Street  
San Francisco, CA 94105

*Prepared by:*

ICF Jones & Stokes  
630 K Street, Suite 400  
Sacramento, CA 95814  
Contact: Mike Rushton  
916/737-3000

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# Acronyms and Abbreviations

adwf	average dry weather flows
Alternative 1	Alternative 1 – No Project/No Action Alternative
Alternative 2	Alternative 2 – Callison/Sisley Road Alignment
amsl	above mean sea level
ARB	Air Resources Board
BMP	best management practice
BP	Before Present
CAA	Clean Air Act
CAAQS	California state ambient air quality standards
CBC	California Building Code
CBSC	California Building Standards Commission
CCAA	California Clean Air Act
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CIWMP	Countywide Integrated Waste Management Plan
CNNDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide

CO <sub>2</sub>	carbon dioxide
Corps	U.S. Army Corps of Engineers
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel level
dBc	C-weighted decibel level
dbh	diameter at breast height
DFG	California Department of Fish and Game
DWR	California Department of Water Resources
EA	Environmental Assessment
EDU	equivalent dwelling unit
EID	Environmental Information Document
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
FR	<i>Federal Register</i>
FWS	U.S. Fish and Wildlife Service
G	force of gravity
GHG	greenhouse gas
gpm	gallons per minute
Hz	Hertz
I-80	Interstate 80

IS	Initial Study
LAFCO	Placer County Local Agency Formation Commission
L <sub>eq</sub>	Equivalent Sound Level
L <sub>max</sub>	Maximum Sound Level
M	magnitude
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MSDS	Materials Safety Data Sheet
N <sub>2</sub> O	nitrous oxide
NAAQS	national ambient air quality standards
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO <sub>2</sub>	nitrogen dioxide
NOA	naturally-occurring asbestos
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NSD	Newcastle Sanitary District
PCAPCD	Placer County Air Pollution Control District
PCCP	Placer County Conservation Plan
PCWA	Placer County Water Agency
PM <sub>10</sub>	particulate matter smaller than 10 microns in diameter
PM <sub>2.5</sub>	particulate matter smaller than 2.5 microns in diameter
ppm	parts per million

ppv	peak particle velocity
PRC	Public Resources Code
Proposed Project	NSD WWTP Closure and Pipeline Project
psi	pounds per square inch
pwwf	peak wet weather flow
RA	Residential Agricultural
RDCWWTP	Regional Dry Creek Wastewater Treatment Plant
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SEL	Sound Exposure Level
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SPMUD	South Placer Municipal Utility District
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
UBC	Uniform Building Code
USC	United States Code
USGS	U.S. Geological Survey
VEE	Visible Emissions Evaluations
VMT	vehicle miles traveled
WRSL	Western Regional Sanitary Landfill
WWTP	Wastewater Treatment Plant



## Overview

The Newcastle Sanitary District (NSD) is planning to close the existing Newcastle Wastewater Treatment Plant (WWTP) as part of the Newcastle Sanitary District Wastewater Treatment Plant Closure and Pipeline Project (Proposed Project). The Proposed Project would also include the installation of a sewer conveyance pipeline and a pumping station for connection with the South Placer Municipal Utility District (SPMUD). As part of the Proposed Project, the NSD service area would be annexed into the SPMUD service area.

The improvements would consist of required earthwork and demolition to retire the treatment ponds, construction of a pump station and equalization storage facilities for the pumping operation, and installation of a force main to convey NSD wastewater to the SPMUD wastewater collection system approximately 1.5 miles to the southwest. The wastewater would then be conveyed to the Regional Dry Creek Wastewater Treatment Plant (RDCWWTP) in Roseville. The existing NSD WWTP would be decommissioned and the site would be used solely to accommodate the wastewater pump station and equalization storage facilities.

The new conveyance pipeline would share a portion of the alignment with the pipeline proposed as part of the Placer County Water Agency (PCWA) Foothill Water Treatment Plant project. The alignment runs parallel to the PCWA waterline along Taylor Road and connects with the existing SPMUD collection system.

## Project Location and Area

The NSD WWTP is located in Placer County, southwest of the town of Newcastle, north of Interstate 80, and south of Taylor Road (Figure 1-1). The project area includes the site of the WWTP and the proposed pipeline alignment along Taylor Road and its alternative along Callison and Sisley Roads. The topography in the project area ranges from 625 to 700 feet above mean sea level (amsl).



## Purpose of this Environmental Assessment

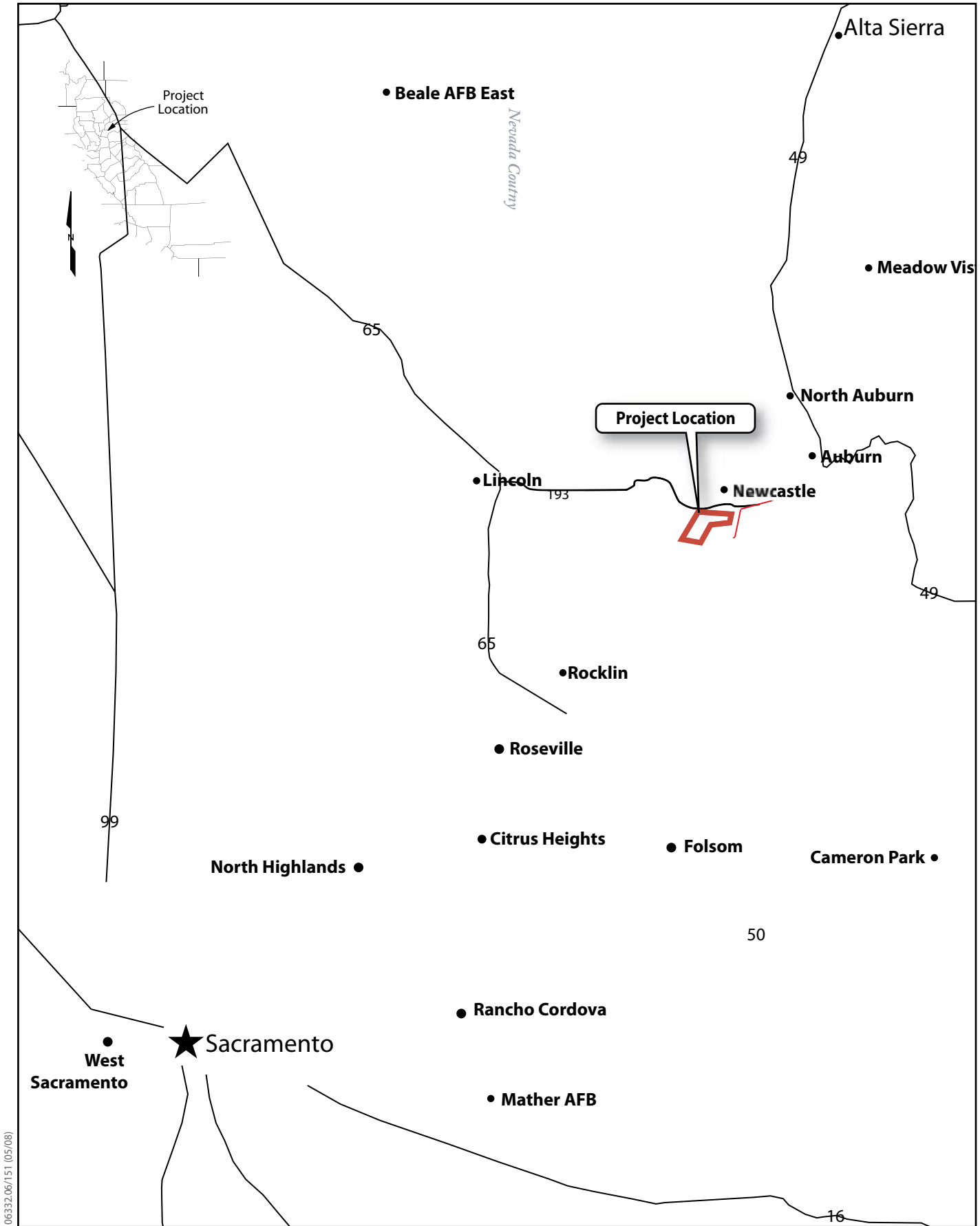
This document was circulated in November 2008 as an Initial Study (IS)/Mitigated Negative Declaration in satisfaction of the requirements of the California Environmental Quality Act (CEQA) (Title 14, California Administrative Code, Section 1400 *et seq.*). As the CEQA lead agency, NSD evaluated the Proposed Project's potential environmental impacts as presented in this document prior to taking action. In addition, the Placer County Local Agency Formation Commission (LAFCO) and SPMUD are acting as responsible agencies under CEQA because of their discretionary authority over the annexation of the NSD service area into the SPMUD service area.

The Proposed Project is also subject to evaluation under the National Environmental Policy Act (NEPA) (42 United States Code [USC] 4321–4347) because it is being funded in part by the U.S. Environmental Protection Agency (EPA). Prior to making further funding decisions for the Proposed Project, the EPA as the federal lead agency must consider the environmental effects of its actions through preparation of a NEPA document. The analysis of environmental effects presented in this document also satisfies the requirements of NEPA and is being circulated as a NEPA Environmental Assessment (EA).

As the lead agency under NEPA, EPA is issuing this EA and an accompanying Findings of No Significant Impact (FONSI) for public review and comment. The finding that the Proposed Project would not result in any adverse effects on the environment is based on the analysis presented in Chapters 3 and 4. As disclosed in those chapters, implementation of the recommended mitigation measures would ensure that the potential impacts would be less than significant. The responsibility for implementing and monitoring mitigation measures lies with local entities.

This document has been prepared to fulfill the requirements of both CEQA and NEPA. This document describes the Proposed Project (Proposed Action under NEPA), the existing environmental setting (before implementation of the Proposed Project), and the potential environmental impacts of the Proposed Project. Chapter 3, Environmental Checklist, identifies the anticipated environmental impacts by topic.

This EA and its associated FONSI will be circulated for a 30-day public and agency review, as required by NEPA. Comments on the EA/FONSI will be evaluated and considered prior to taking action on the Proposed Project.



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**Figure 1-1**  
**Project Vicinity**



# Existing Wastewater Treatment Components

## Newcastle Sanitary District Service Area and Wastewater Flows

The NSD service area covers approximately 470 acres in the unincorporated area of Newcastle in Placer County. NSD serves 220 connections with a total of 285 equivalent dwelling units (EDUs) (MHM 2008).

Based on the projected population reported in the Domenichelli & Associates' *Draft Newcastle Sanitary District Feasibility Study* (2003), the NSD wastewater inflow would increase from approximately 0.10 million gallons per day (mgd) average dry weather flows (adwf) to approximately 0.18 mgd by 2022. The projected wastewater inflows are based on an estimated 3% wastewater flow increase per year for a 20-year period. Currently, the NSD WWTP has a capacity of 0.4 mgd adwf and 0.52 mgd peak wet weather flow (pwwf). Although adwf capacity is sufficient for existing and projected inflows, the pwwf capacity has been exceeded during high stormflow events.

## Wastewater Treatment Facilities

The WWTP facilities consist of four ponds (two treatment ponds [Ponds 1 and 2] and two storage ponds [Ponds 3 and 4]), a spray field pumping and chlorination facility, and a storage building. The facilities are located on a 12-acre site (Figure 1-2). Pond 1 is approximately 2.8 acres, Pond 2 is approximately 1.5 acres, Pond 3 is approximately 3.0 acres, and Pond 4 is approximately 4.0 acres. The area of the spray field is 25.0 acres of which 10 acres are unusable for spray irrigation.

## Wastewater Treatment Process

The general treatment process involves the aeration of the wastewater in Pond 1, followed by oxidation in Pond 2. Ponds 3 and 4 are currently used to store the treated effluent prior to its disposal via spray irrigation. Chlorination of the treated effluent occurs as the water is pumped through an approximately 1,000-foot force main to the spray field.

## Wastewater Disposal Operations

Disposal of the NSD WWTP's treated effluent is performed via spray irrigation to approximately 15 acres of an approximately 25-acre parcel of land that is dedicated for disposal purposes and is located southeast of the NSD WWTP. The treated effluent irrigates grasses grown on the spray field. The remainder of the

land is unsuitable for spray irrigation because of steep slopes or existing vegetation (trees) and is used as a buffer from adjacent land uses.

The spray irrigation system consists of buried distribution pipes with attached sprinkler heads. Excess surface water runoff from the spray field is captured in a perimeter containment channel that directs runoff back to the storage ponds.

Spray irrigation generally occurs year-round except when storm events are likely to occur or have recently occurred. Per a Central Valley Regional Water Quality Control Board (CVRWQCB) discharge regulation, the NSD WWTP must cease spray irrigation activities 48 hours prior to a storm event and must not resume spray irrigation activities until the ground is no longer saturated from the storm event. In spring 2006, NSD experienced increased flows combined with rain of an extended duration. As a result, all the storage ponds reached flood levels and the WWTP was required to irrigate the spray fields during the rain event to prevent overtopping of the ponds.

## Project Objectives/Purpose and Need

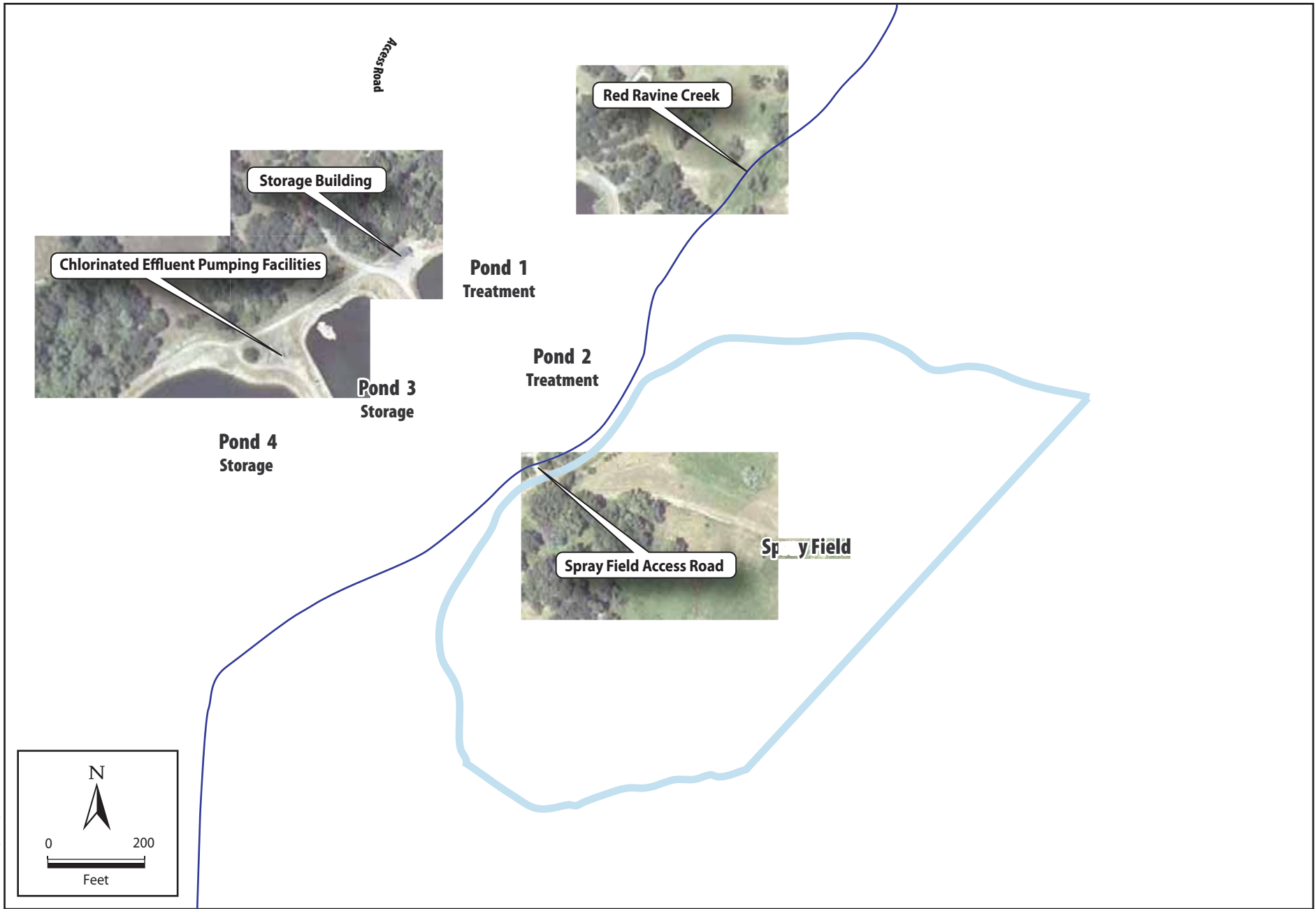
The purpose of the Proposed Project is to decommission the existing NSD WWTP and to contribute to the regionalization of wastewater treatment by annexing the NSD service area into the SPMUD service area and conveying wastewater flows for treatment at the RDCWWTP.

Implementation of the Proposed Project would enable NSD to reduce the risk of environmental damage from the old and inefficient treatment processes and facilities at the NSD WWTP. The current WWTP experiences inflow and infiltration that results in high utilization of the treatment ponds. As mentioned previously, storm events can cause the system to become overburdened and result in operation of the irrigation spray fields during rain events.

By closing the WWTP and routing wastewater flows to SPMUD, NSD would avoid the escalating costs of meeting increasingly strict state-directed water quality discharge requirements. In addition, regionalization of wastewater treatment would take advantage of economies of scales to reduce costs even further. This would enable NSD to avoid creating a financial hardship for the many fixed-income customers in its service area.

Closure of the WWTP would also contribute to the regionalization of wastewater treatment within NSD and southern Placer County. Additional water resources would be made available through the treatment and reuse of wastewater at the RDCWWTP.

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**Figure 1-2**  
**Layout of Existing Facilities**



# Scope and Organization of This Environmental Assessment

The content and format of this document, described below, are designed to meet the requirements of CEQA and NEPA. Where relevant, CEQA terminology is listed first, followed by NEPA terminology.

- Chapter 1, Introduction, identifies the purpose, scope, and terminology of the document and identifies public involvement procedures.
- Chapter 2, Proposed Project and Alternatives, describes the objectives and characteristics of the Proposed Project, identifies alternative projects considered, and identifies the required permits and approvals.
- Chapter 3, Environmental Checklist, presents responses to the CEQA-based environmental checklist questions for each resource topic for the impacts associated with the Proposed Project.
- Chapter 4, Other Considerations, includes a brief analysis of the project alternatives and a discussion of the additional environmental analysis topics required by NEPA.
- Chapter 5, References, identifies all printed references and personal communications cited in this document.
- Chapter 6, List of Preparers, identifies the individuals involved in preparing this document and their areas of technical expertise.





## Proposed Project and Alternatives

### Proposed Project

The Newcastle Wastewater Treatment Plant Closure and Pipeline Project (Proposed Project) includes decommissioning the Newcastle Sanitary District (NSD) Wastewater Treatment Plant (WWTP); construction of a new pipeline, pump station, and equalization storage facilities to convey wastewater flows to the South Placer Municipal Utility District (SPMUD); and annexation of the NDS service area into the SPMUD service area. These elements are described in greater detail below.

### Annexation of the NSD Service Area into the SPMUD Service Area

As part of the Proposed Project, the NSD service area would be annexed into the SPMUD service area (Figure 2-1). The NSD service area includes approximately 470 acres in the unincorporated area of Newcastle in Placer County. NSD serves 220 connections, with a total of 285 equivalent dwelling units (EDUs) (based on SPMUD regional standards). With future infill development, NSD service could expand by approximately 10%. This expansion would occur regardless of the Proposed Project.

### New Pump Station and Storage Facilities

As part of the Proposed Project, new wastewater pump and equalization storage facilities would be constructed on the NSD WWTP site (Figure 2-2) on a concrete pad. The pump station would consist of four pumps, located in two, 12-foot concrete manholes, approximately 10-foot deep near northwest end of Pond 1 and would be constructed on an elevated concrete pad. The pump system would consist of two pumps located in the wet well. Each pump would have a capacity of approximately 125 gallons per minute (gpm).

The pump station would be designed to contain the average dry weather flow (adwf) within the well. Additional capacity may be required during storm events

to accommodate peak wet weather flow (pwwf). It is anticipated that Pond 1 (with a capacity of 3.4 million gallons [mg]) would be used to provide emergency overflow storage capacity although other design options are also being considered, including use of the wet well. Refitting Pond 1 for a storage basin is considered in this analysis because it would result in greater environmental impacts compared with the other options being considered.

The design capacity of the well would be sufficient to prevent the flows from spilling into the equalization storage basin during pump cycle operations. At wastewater inflows greater than the well's capacity, excess wastewater would spill into the storage basin. The storage basin would provide emergency storage for containment during larger storm events or during a potential system failure.

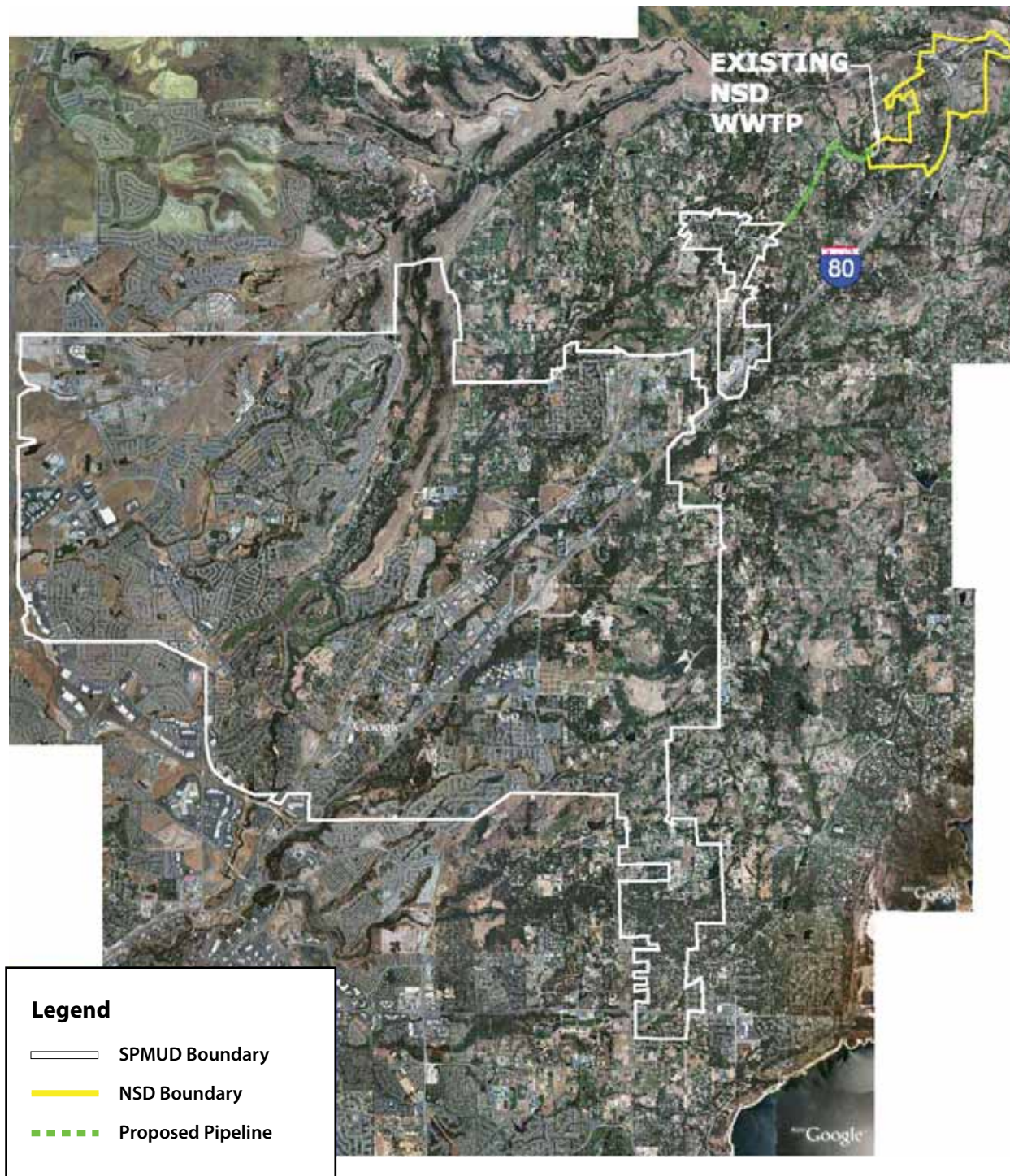
Power may be brought to the facility by overhead or buried cable. Odor control equipment would be provided for at the pump station and discharge utility hole per Placer County and SPMUD regulations. In addition, the existing building would also be left in place where the electrical panel and chlorination facilities would be housed (Figure 2-2).

## Wastewater Conveyance Pipeline

As part of this Proposed Project, a dual pipeline system would be constructed extending approximately 1.5 miles southwest from the NSD WWTP to a connection point with the SPMUD collection system (Figure 2-3). By providing a parallel system, the required velocities (2 feet per second for the 125 gpm flow rate) can be maintained while minimizing pumping head and saving energy. The pipelines would be constructed at least 30 feet from any sensitive receptors (i.e., residences) and would require a 25-foot-wide construction corridor. The majority of the route follows the same right-of-way being considered by the Placer County Water Agency (PCWA) for a large water supply pipeline.

The pipeline would exit the west side of the NSD WWTP, cross open ground and follow small roadways, including Goulart Ranch Road, until intersecting with Taylor Road (Figure 2-3). After reaching Taylor Road, the route would turn southwest within the eastbound lane of Taylor Road and continue for approximately 6,000 feet. At that point, the line would connect to an existing SPMUD trunk sewer stub, which would then convey flows south and west to the Regional Dry Creek Wastewater Treatment Plant (RDCWWTP) in Roseville.

An easement would be required from the WWTP to the dirt road that connects with Goulart Ranch Road. Along the dirt road and Goulart Ranch Road, the pipeline alignment would follow an existing utility easement. Construction along Taylor Road will occur entirely within the County's right-of-way and no additional easements would be required. A maintenance easement of approximately 15 feet would be maintained along the length of the route.



**Legend**

- SPMUD Boundary
- NSD Boundary
- - - Proposed Pipeline

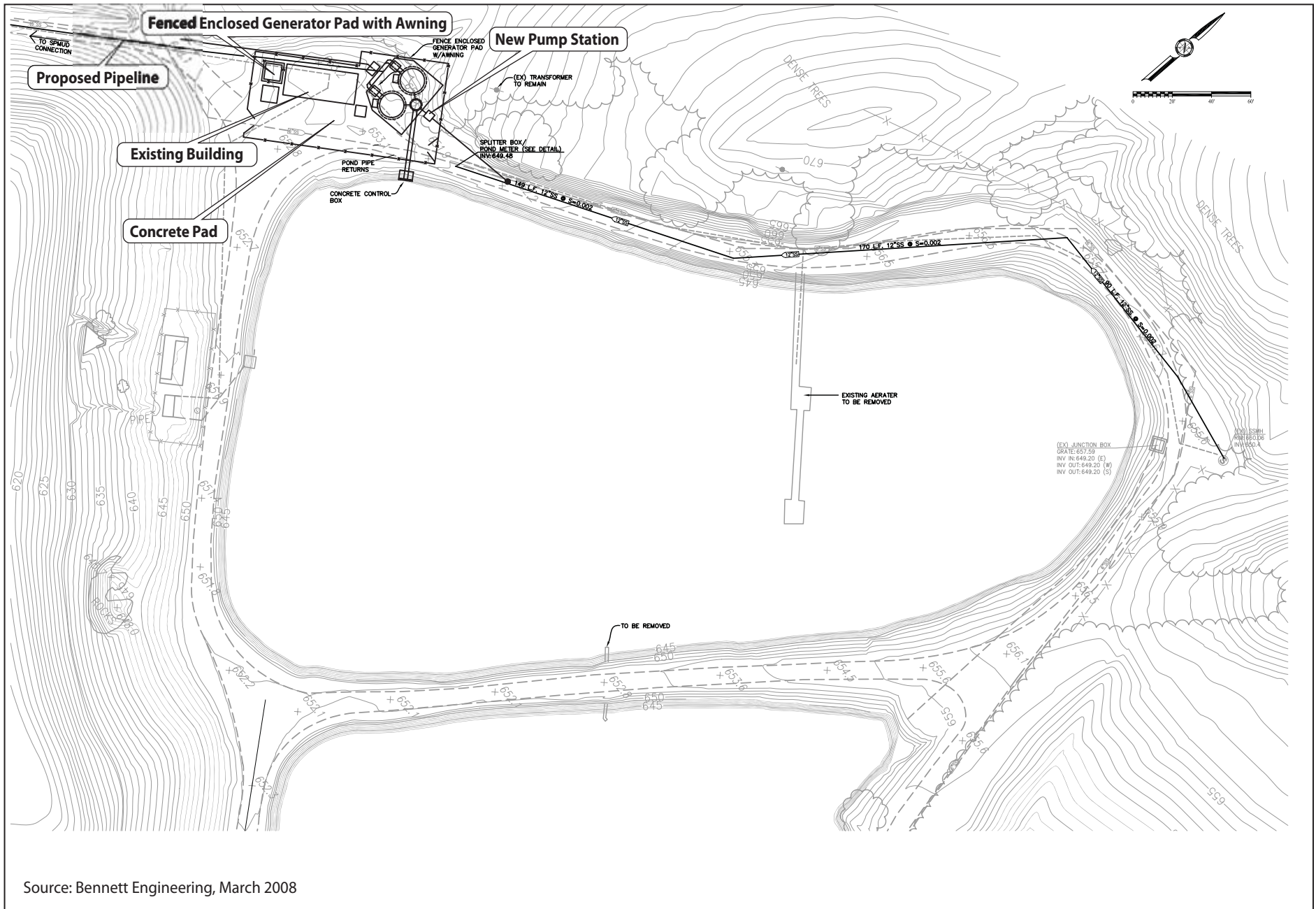
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Source: MHM 2008

**Figure 2-1**  
**Service Area Boundaries**







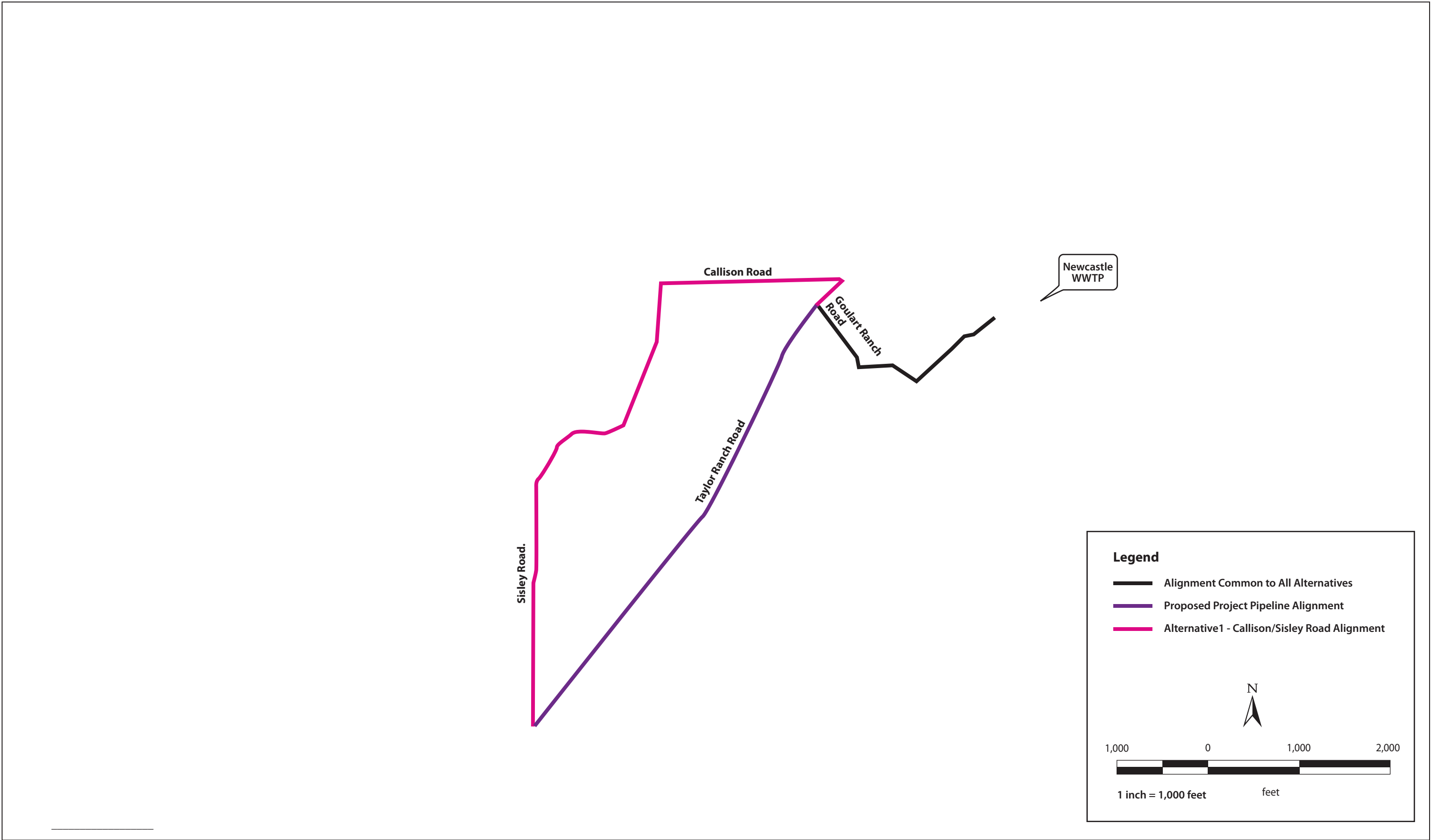
Source: Bennett Engineering, March 2008

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**Figure 2-2**  
**Proposed Facilities**  
**at the Wastewater Treatment Plant**



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**Figure 2-3**  
**Project Alternative Pipeline Alignments**





## Decommissioning of Existing Facilities

As part of the Proposed Project, the existing NSD WWTP would be decommissioned once the pump station and conveyance pipeline became operational. Decommissioning the facilities would involve converting Pond 1 to wet weather storage and removing the chlorination and storage buildings and abandoning the sprinkler head facilities for the spray irrigation. The levees between Ponds 2 and 3 and Ponds 3 and 4 would be breached and the pond contours would be graded to allow storm runoff to again flow to Red Ravine Creek.

Once the new pump station was constructed, flows would be diverted to the new pump station. Pond 1 would be dewatered and used for wet weather storage. Ponds 2, 3, and 4 would also be dewatered. Existing liquids from the ponds would be disposed of through a combination of pumping to the new lift station using spray field pumps, spray irrigation, and trucking off site depending on availability and time of year. Once the ponds were dewatered, the sprinkler head facilities for the spray irrigation would be abandoned and the field would be decommissioned.

## Project Construction

### Construction Schedule

Construction activities associated with the Proposed Project would be expected to occur between summer 2009 and summer 2010. Construction would normally occur between 7:00 a.m. to 7:00 p.m., Monday through Friday. Construction might also occur on Saturdays between 8:00 a.m. and 7:00 p.m. Some nighttime construction might also be required.

### Construction Equipment and Activities

#### Pipelines

##### General Construction Conditions

In most areas, the pipeline would be installed using open cut trenching. Along some portions of the pipeline alignment, some areas of hard bedrock or large boulders may require blasting and/or a large hoe-ram to complete the excavation.

It is anticipated that the pipeline would be installed within existing roadways and/or on road shoulders. Construction activities may require acquisition of a 10-foot temporary construction easement in some areas in addition to the 15-foot maintenance easement.

Approximately four to eight workers would be required to install the pipeline. The pipeline would be installed in the center of the lane on Taylor Road, using a standard open trenching, excavating, and backfilling method. It is anticipated that excavation would be standard backhoe trench construction with depths of 2.5 to 5 feet and widths of 2 feet. Trench backfilling would begin immediately after the pipe was installed in the trenches. Appropriate backfill materials would be used to prevent damage to the pipelines and allow adequate soil compaction. Backfill material would be compacted with appropriate equipment. Once backfilling is complete, pavement repair and pavement restriping would occur. Typical pavement repair would include laying new asphalt over the entire length of the trenches after backfilling and compaction are complete.

Pipeline installation could occur at a rate of up to 400 feet per day in those areas of the route that cross open land or low-use sections of roadways. In more developed areas, the installation rate would be expected to average approximately 100 feet per day. Pipeline construction rates also depend on the number of separate crews constructing along the pipeline. At this time, it is anticipated that at least two crews would be working on the pipeline, with a third crew responsible for tunneling activities.

#### **Open Trench Installation**

In the segment from the WWTP to the dirt road connecting with Goulart Ranch Road, the pipeline would be installed in open trenches, using conventional cut and cover construction techniques. Construction would be confined within a 25-foot-wide (15-foot maintenance easement and 10-foot temporary construction easement as needed) construction zone.

The key steps in this construction process would include utility location, surface clearing, trench excavation, dewatering (if required), shoring, pipe installation, trench backfilling, miscellaneous valve and access installation, pipeline testing, and surface restoration. The primary pieces of construction equipment would include backhoes, compactors, repaving equipment, front-end loaders, tracked excavators, ten-wheel dump trucks, water trucks, forklifts, flat-bed delivery trucks, compressors or jack hammers, and concrete or asphalt delivery trucks.

A backhoe or excavator would be used to excavate the trenches for pipeline placement. For trenches with straight sidewalls more than 3 feet deep, shoring would be required to protect workers from trench wall failure and cave-ins. If shallow groundwater were to be encountered during construction activities, dewatering activities would be required. In the event that groundwater encountered during pipeline construction could not be contained on site or could not be pumped into tank trucks and transported to a disposal facility, the groundwater could be discharged to a surface water body. This would require obtaining a General Order for Dewatering and Other Low Threat Discharges to Surface Water Permit (National Pollutant Discharge Elimination System [NPDES] # CA0083356) from the Central Valley Regional Water Quality Control Board (CVRWQCB).

For purposes of this impact analysis, it is assumed that all excavated soil would be hauled off site and would be replaced by imported fill. In reality, native backfill would be used to the extent feasible and would likely constitute up to 50% or more of the fill material on site. Under the worst case assumption, all soil removed from trenches would be loaded directly into dump trucks and hauled away for disposal per applicable requirements of Placer County. Imported backfill would be delivered to stockpiles near the open trench.

During construction, vertical wall trenches would be temporarily closed at the end of each work day, either by covering with steel trench plates, using backfill material, or installing barricades to restrict access, depending on the conditions of the encroachment permit from Placer County. A temporary pavement patch would be used until final repaving of the affected area occurs, about 2 to 6 months after pipeline installation was complete within a given street segment.

The final phase of pipeline construction would be surface restoration, or repaving where pipe is installed along roadways. Where temporary patching was done, permanent repaving would be the final step. Repaving would be done at one time, after the entire pipe installation was completed or after pipe installation was completed for a particular reach of pipeline. Grasses, shrubs, and trees would be replanted to restore unpaved surfaces. Trees would not be planted directly over the pipeline, in order to prevent root damage to the pipe.

### **Pump Station and Equalization Storage Facilities**

Construction of the pump station and equalization storage facilities would include the use of cranes, backhoes, compaction equipment, and dump trucks.

### **NSD WWTP Decommissioning**

Once the pipelines were in place, the existing WWTP facilities and ponds would be decommissioned and Pond 1 would be converted to storage facilities. Decommissioning would include the use of cranes, backhoes, compaction equipment, and dump trucks. Construction materials and demolition materials would be hauled to appropriate disposal sites as determined by demolition contractors.

# Environmental Commitments

## Blasting

### Environmental Commitment EC-1. Prepare and Implement a Blasting Plan.

Blasting activities may be required for the Proposed Project along some portions of the alignment. As part of the project plans and specifications, NSD would require that the construction contractor prepare and implement a blasting plan. This plan would be coordinated with Placer County Health and Safety Department and Sheriff's Office staff. The plan would include the following components:

- identification of blast officer;
- provision of scaled drawings of blast locations, and neighboring buildings, streets, or other locations that could be inhabited;
- public notification to all potential receptors describing the expected extent of the blasting, notification procedures, lead times, and affected parties;
- description of the transportation, onsite storage, and security of explosives in accordance with local, state and federal regulations;
- identification of minimum acceptable weather conditions for blasting and safety provisions for potential stray current (if electric detonation);
- description of traffic control standards and traffic safety measures (if applicable);
- description of requirements for the provision and use of personal protective equipment;
- identification of minimum standoff distances and description of blast impact zones and procedures for clearing and controlling access to blast danger;
- procedures for handling, setting, wiring, and firing explosives, and for misfires per federal code;
- description of type and quantity of explosives, detonation device, sequence and schedule of blasting rounds, and general method of excavation, lift heights and other characteristics;
- description of methods of matting or covering of blast area to prevent flying rock and excessive air blast pressure;
- description of blast vibration and air blast monitoring program;
- description of dust control measures in compliance with applicable air pollution control regulations (to interface with general construction dust control plan);

- identification of emergency action plan to provide emergency telephone numbers and directions to medical facilities and procedures for action in the event of injury;
- provision of material safety data sheets for each explosive or other hazardous material to be used;
- evidence of licensing, experience, and qualifications of blasters; and
- description of insurance for the blasting work.

The blasting plan would also include the following applicable noise-reducing measures.

- The blasting plan would establish vibration limits in order to protect structures from blasting activities and identify specific monitoring points. At a minimum, a preblast survey would be conducted at any potentially affected structures and underground utilities within 500 feet of a blast area, and at the nearest commercial or residential structure, prior to blasting.
- The blasting plan would include a visual inspection of the structures that could be affected; the documentation of structures by means of photographs, video; and a level survey of the ground floor of structures or the crown of major and critical utility lines. This documentation would be submitted to Placer County and reviewed with the individual owners prior to any blasting operations. NSD and affected property owners would be notified at least 48 hours prior to the visual inspections.
- Vibration and settlement threshold criteria (for example, peak particle velocity of 0.5 inch per second) would be submitted by the blasting contractor to Placer County for review and approval during the design process. If the settlement or vibration criteria are exceeded at any time or if damage is observed at any of the structures or utilities, then blasting would immediately cease and Placer County would be immediately notified. The stability of segmental retaining walls, existing slopes, creek canals, and other structures would be monitored and any evidence of instability resulting from blasting operations would result in immediate termination of blasting. The blasting contractor would modify the blasting procedures or use alternative means of excavating to reduce the vibrations to below the threshold values, prevent further settlement and slope instability, and prevent further damage.
- Air blast overpressure limits would be set and monitoring would be conducted at the property line closest to the blast and at other above-ground structures identified in the blasting plan for vibration monitoring. Air blast overpressure limits would be in accordance with applicable laws and regulations and would be established to prevent damage to adjacent properties and new construction, and to prevent injuries to persons on site and off site.
- Prior to full-scale production blasting, the blasting contractor would conduct a series of test blasts at the sites where blasting is to occur. The tests would start with reduced charge weights and would increase them incrementally to

those of a full-scale production round. Monitoring would be conducted as described in the blasting plan.

- Post-construction monitoring of structures would be performed to identify (and repair if necessary) any damage from blasting vibrations. Any damage would be documented by photography, video, or other means. This documentation would be reviewed with the individual property owners.
- Reports of the results of the blast monitoring would be provided to NSD, Placer County, the local fire department, and owners of any buried utilities on or adjacent to the site within 24 hours following blasting. Reports documenting damage, excessive vibrations, or other impacts would be provided to NSD, Placer County, and affected property owners.

## Traffic Control

### **Environmental Commitment EC-2. Prepare and Implement a Traffic Management Plan.**

The contractor would be required to prepare, submit, and implement a traffic management plan. The plan would include the necessary items and requirements to reduce, to the maximum extent feasible, traffic congestion during construction. The traffic control element of the plan would be coordinated and approved by the Placer County Road Department and the Placer County Sheriff's Office, and would meet their standard traffic control performance criteria.

## Utilities

### **Environmental Commitment EC-3. Stabilize Existing Utilities and Prevent Interruption of Utilities Service.**

Critical existing utilities along the alignment may not be disrupted during construction activities. Existing utilities, such as power poles, sewer and water facilities, natural gas facilities, and others would be stabilized during construction in order to avoid undue service interruption.

Underground utility lines in the project area would potentially include gas pipelines and fiber-optic lines along Taylor Road. The fiber-optic lines are located along the north side of Taylor Road and the gas lines are on the south side of the road. To prevent interruption of these and other below-ground services, detailed surveying and potholing (i.e., drilling to verify the location of utilities) would be performed and subsequent planning to traverse above and/or below existing lines would be done. Relocation of some utilities may be required.



## Staging Areas

### **Environmental Commitment EC-4. Implement Staging Area Restrictions**

At this stage of the project planning and preliminary design process, specific construction staging areas have not been identified. NSD would typically identify these areas as part of the design contract. To avoid significant environmental damage and the need for additional California Environmental Quality Act (CEQA) compliance work, NSD would require that all staging areas be identified and cleared as acceptable by Placer County. The staging areas would be located as close to construction corridors and sites as possible to minimize construction-related traffic disruption. These areas would be used to store pipe, construction equipment, construction employee vehicles, and other construction materials such as gravel, asphalt, backfill material, and excavated soil. The staging areas are expected to be approximately 1 acre in size and would be established in areas that are open and easily accessed by vehicles. Previously disturbed areas with little or no native vegetation would receive priority.

## Solid Waste Disposal

### **Environmental Commitment EC-5. Comply with Solid Waste Disposal Regulations.**

All construction-related solid waste would be disposed of in compliance with applicable California Integrated Waste Management Board and local regulations and at appropriate disposal facilities. The major Placer County landfill is the Western Regional Sanitary Landfill (WRSL) located at the intersection of Fiddymont Road and Athens Avenue, approximately 18 miles from the project area.

## Geotechnical Analysis

### **Environmental Commitment EC-6. Prepare a Geotechnical Report and Implement Report Recommendations.**

As part of their general plan, Placer County requires the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geologic or seismic hazards (i.e., ground shaking, landslides, liquefaction, critically expansive soils, and avalanches). Additionally, Article 15.48 of Chapter 15 of the Placer County Code states that a soil or geologic investigation report should be performed in areas of known or suspected geologic hazards, including landslide hazards and hazards of ground failure stemming from seismically induced ground shaking (Ord. 5407-B § 13, 2006; Ord. 5056-B [part], 2000).



The pump station, storage facilities, and pipelines would be constructed in accordance with recommendations set forth in the geotechnical engineering investigation reports that have been prepared or will be prepared for the Proposed Project and project area (Blackburn 2006 and the geotechnical investigation that is currently underway).

## Seismic Standards

### **Environmental Commitment EC-7. Implement Seismic Standards into Project Design.**

NSD would be required to implement California Building Code Seismic Zone 4, California Building Standards Commission, and Placer County general plan standards into the project design for applicable features to minimize hazards associated with potential fault rupture, ground shaking, and liquefaction.

## Other Disturbance Requirements

### **Environmental Commitment EC-8. Prepare and Implement a Stormwater Pollution Prevention Plan.**

Under the NPDES Phase II Rule, construction activity disturbing 1 acre or more must obtain coverage under the state's General Construction Permit. General Construction Permit applicants are required to prepare a Notice of Intent and a Stormwater Pollution Prevention Plan (SWPPP), and implement and maintain best management practices (BMPs) to avoid adverse effects on receiving water quality as a result of construction activities, including earthwork.

The SWPPP would additionally include a spill prevention and control plan. NSD and/or its contractors would develop and implement a spill prevention and control program to minimize the potential for, and effects of, spills of hazardous, toxic, or petroleum substances during construction activities. The plan would be completed before any construction activities begin. Implementation of this measure would comply with state and federal water quality regulations.

The federal reportable spill quantity for petroleum products, as defined in 40 Code of Federal Regulations [CFR] 110 is any oil spill that 1) violates applicable water quality standards, 2) causes a film or a sheen upon or discoloration of the water surface, or 3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines. If a spill is reportable, the contractor would notify the Placer County Environmental Health Services Department, which has spill response and cleanup ordinances to govern emergency spill response. A written description of reportable releases must be submitted to the CVRWQCB. This submittal must include a description of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.

If an appreciable spill has occurred and results determine that project activities have adversely affected surface or groundwater quality, NSD would be responsible for ensuring that a registered environmental assessor performs a detailed analysis to identify the likely cause of contamination. This analysis would conform to American Society for Testing and Materials standards and would include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, NSD and/or its contractors would select and implement measures to control contamination, with a performance standard that groundwater quality must be returned to baseline conditions. These measures would be subject to approval by Placer County.

### **Environmental Commitment EC-9. Prepare and Implement a Grading and Erosion Control Plan.**

Placer County's grading and erosion control ordinance is intended to control erosion and sedimentation caused by construction activities. A grading permit is typically required for construction-related projects. As part of the permit, the project applicant usually must submit a grading and erosion control plan, vicinity and site maps, and other supplemental information. Standard conditions in the grading permit include a description of BMPs similar to those contained in a SWPPP. Article 15.48 of Chapter 15 of the Placer County Code describes permitting and issues related to grading, erosion, and sediment control. It also describes special restrictions and exemptions.

### **Environmental Commitment EC-10. Incorporate Placer County General Construction Specifications into Project Design.**

Placer County General Construction Specifications contain information on grading, subbases and bases, surfacings and pavements, structures, drainage facilities, right-of-way and traffic control facilities, and materials. These specifications along with those from Placer County's Land Development Manual and applicable land use ordinances would be incorporated into the project design.

## **Permits and Approvals**

The following local, state, and federal agencies may be responsible for issuing permits and approvals that will or may be needed to proceed with the Proposed Project. These include but are not limited to the following:

- **U.S. Environmental Protection Agency.** As federal lead agency for this Proposed Project under the National Environmental Policy Act (NEPA), EPA will use this document to comply with NEPA for its decision on approval of the Proposed Project.

- **Newcastle Sanitary District.** NSD has used this document as an IS/MND for CEQA compliance to consider three discretionary actions:
  - approve the closure of the existing NSD WWTP and construction of the proposed pipeline and pump station on NSD property;
  - request and approve annexation of the NSD service area to SPMUD; and
  - apply to the Placer County Local Agency Formation Commission (LAFCO) to annex the NSD service area to its service area.
- **South Placer Municipal Utility District.** SPMUD will use this document as CEQA compliance to consider two discretionary actions:
  - approve the annexation of NSD service area into the SPMUD service area; and
  - approve connection of the NSD wastewater collection system to the SPMUD system and take over management of this system.
- **Placer County Local Agency Formation Commission.** LAFCO will use the IS/EA as CEQA compliance for its decision on the annexation of the NSD service area to the SPMUD service area.
- **Central Valley Regional Water Quality Control Board.** CVRWQCB has discretionary authority regarding the following permits and approvals.
  - NPDES permit. The U.S. Environmental Protection Agency (EPA) has delegated responsibility for issuance of Clean Water Act (CWA) NPDES permits to the Regional Water Quality Control Boards within California. These permits are required to ensure protection of surface waters from construction and other land-disturbing activity.
  - CWA Section 401 water quality certification. Section 401 requires that the discharge of dredged or fill material into waters of the United States, including wetlands, does not violate state water quality standards. If a CWA Section 404 permit is necessary for the Proposed Project for any impacts on jurisdictional waters, a Section 401 water quality certification also would be necessary to comply with Section 404 permit conditions.
- **Placer County Air Pollution Control District.** The Proposed Project will require a permit for construction.
- **Placer County Improvement Plan Approval.** The Proposed Project will require a permit for utility construction, road restoration, and traffic control grading and drainage work associated with pipeline construction or site grading in Placer County.
- **U.S. Fish and Wildlife Service (FWS) and the California Department of Fish and Game (CDFG).** Consultation is required with these agencies if a project has the potential to take or otherwise harm federally listed or state-protected wildlife and plant species.
- **U.S. Army Corps of Engineers.** The U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged or fill material into waters of the United States, including wetlands, under CWA Section 404.

- California Office of Historic Preservation.** The State Historic Preservation Officer (SHPO) ensures that the Proposed Project complies with the National Historic Preservation Act (NHPA) and other regulations pertinent to the protection of cultural resources.

## Project Alternatives

The EPA and NSD have identified an alternative strategy to meet the Proposed Project objectives and to satisfy the purpose and need for the Proposed Project as described in Chapter 1, Introduction. This alternative is in addition to the No Project Alternative required by CEQA and NEPA. The project alternatives are described below and discussed in greater detail in Chapter 4, Other NEPA Considerations. Alternatives that were previously considered, but eliminated from evaluation are also discussed at the end of this chapter.

### Alternative 1 – No Project/No Action Alternative

Under Alternative 1, the NSD service area would not be annexed into the SPMUD service area; the WWTP would not be decommissioned; and the proposed equalization storage facilities, pump station, and pipelines would not be constructed. Treatment of wastewater using the aeration and oxidation techniques and disposal of treated effluent through spray irrigation would continue.

### Alternative 2 – Callison/Sisley Road Alignment

Under Alternative 2 – Callison/Sisley Road Alignment (Alternative 2), the NSD service area would be annexed into the SPMUD service area and construction of the pump station and storage facilities would be the same as described above for the Proposed Project. Decommissioning of the WWTP facilities would also be the same as under the Proposed Project. Under Alternative 2, the pipeline alignment would follow a different route from Taylor Road (Figure 2-3).

Under Alternative 2, the force main would start from the west side of the WWTP and continue through a small portion of undeveloped land, and traverse west to a small dirt road. The pipeline would then continue along the dirt road, then north along Goulart Ranch Road until it intersects with Taylor Road. This portion of the alignment would be the same as the Proposed Project.

At Taylor Road, the alignment would travel northeast below the eastbound lane of Taylor Road for approximately 300 feet to the intersection with Callison Road. The alignment would proceed along Callison Road for approximately 2,000 feet to the intersection with Sisley Road. From here, the pipelines would travel approximately 8,000 feet south to the SPMUD trunk sewer stub on Taylor Road.

## Alternative Pipeline Alignments Considered but Rejected

The following alternative pipeline routes were also considered as part of the Proposed Project, but were rejected for the reasons discussed below. The alignments rejected from further consideration are shown in Figure 2-4.

### Alignment A – Placer County Water Agency Alignment and Bickford Ranch Connection

Alignment A would travel from the NSD WWTP to Taylor Road along the same route as the Proposed Project and Alternative 2. The alignment would cross Taylor Road near its intersection with Callison Road and follow the Phase II PCWA pipeline alignment. The alignment would travel along the westbound lane of Callison Road for approximately 1,000 feet, before heading north. From Callison Road, the pipeline would travel directly north for approximately 350 feet, then head northwest for 300 feet, north for 500 feet, and northwest to the Bickford Ranch development over 1 mile away.

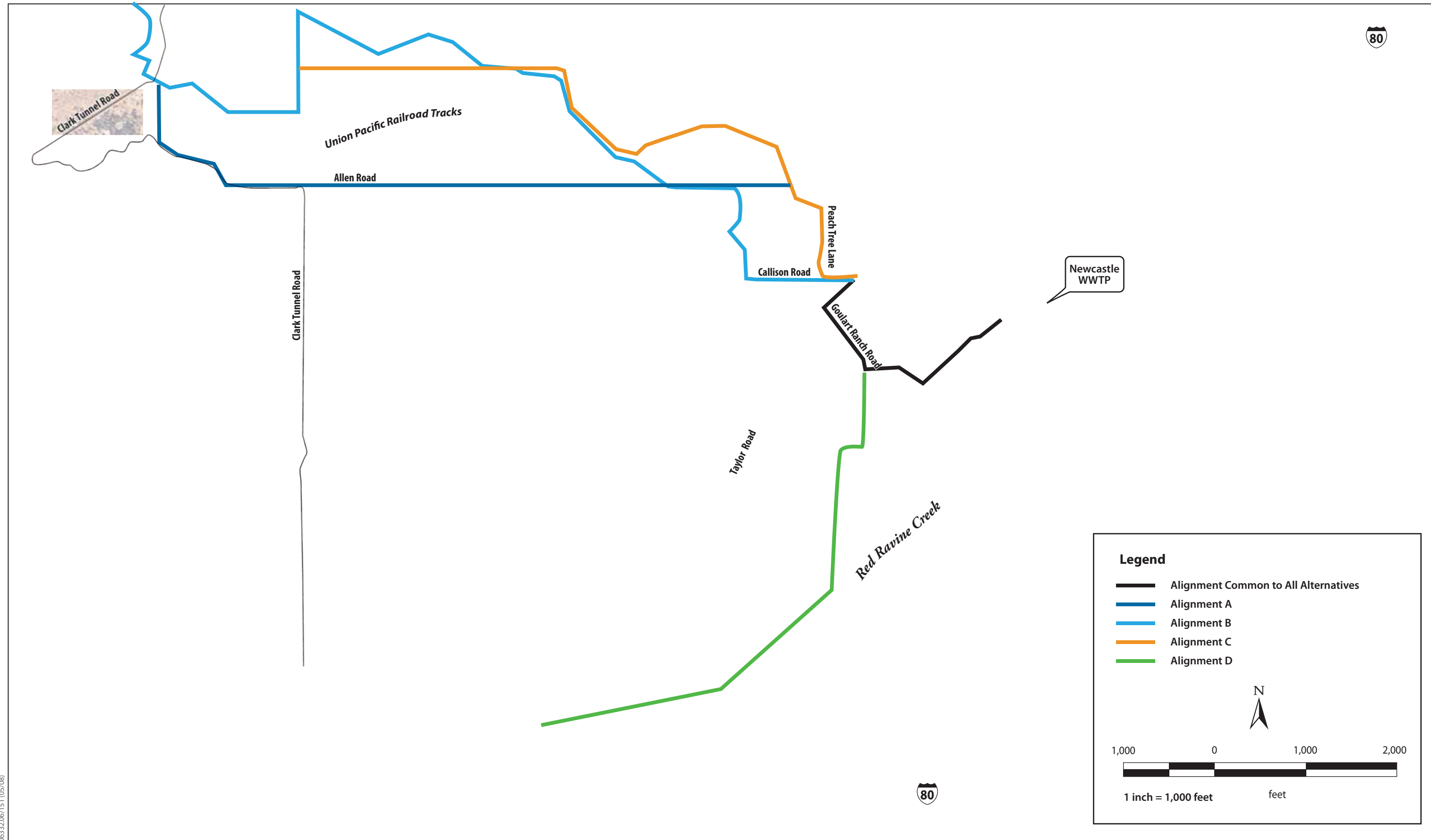
From Callison Road to the Bickford Ranch development site, the proposed pipeline would be constructed in primarily undeveloped lands. Along this alignment, the proposed pipeline would cross Southern Pacific railroad tracks. At the Bickford Ranch development site, the proposed pipeline would be connected to wastewater conveyance pipelines constructed as part of the Bickford Ranch project.

Alignment A was eliminated because of the greater costs associated with pumping water uphill to Bickford Ranch and because the Bickford Ranch development has been put on hold. Without the Bickford Ranch system in place, it would not be possible to connect to an existing treatment system.

### Alignment B – Allen Road with Bickford Ranch Connection

Under Alignment B, the proposed pipeline would travel from the WWTP to Taylor Road along the same alignment as the Proposed Project and Alternative 2. From there, the alignment would proceed west along 300 feet of Callison Road, north along 800 feet of Peach Tree Lane, northwest for 400 feet, and then west for 450 feet until intersecting the Union Pacific railroad tracks. After crossing below the railroad tracks, the proposed pipeline would continue west for 5,500 feet along property lines. The pipeline alignment would travel north to reach Bickford Ranch after crossing the Union Pacific railroad tracks and the Caperton Canal. The total distance from the Taylor Road and Callison Road intersection to Bickford Ranch is approximately 9,750 feet or 1.8 miles.

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**Figure 2-4**  
**Alternative Pipeline Alignments Considered But Rejected**





Alignment B was eliminated because of the narrow right-of-way along Allen Road and the potential disruption to several residences along the road. Impacts on approximately 20 properties along Allen Road and the costs associated with the right-of-way acquisition process make this an unfavorable alternative. Other factors include increased costs associated with pumping wastewater uphill, the need for additional traffic controls, and the potential for costly wetland mitigation associated with impacts on several irrigation turnout ditches created from the PCWA canal. In addition, the Bickford Ranch development has been put on hold. Without the Bickford Ranch system in place, it would not be possible to connect to the Lincoln treatment system.

## Alignment C – Peach Tree Lane with Bickford Ranch Connection

Alignment C was developed as part of the *Draft Newcastle Sanitary District Feasibility Study* (Domenichelli 2003), which was completed prior to the proposal of the PCWA pipeline alignment running from the intersection of Taylor and Callison Road to Bickford Ranch. Alignment C takes the same general path from the WWTP to Taylor Road as the Proposed Project, but rather than following Taylor Road, it travels north along Peach Tree Lane and then through undeveloped land to the connection point with Bickford Ranch.

Alignment C was rejected because of rugged terrain along Peach Tree Lane and the potential impacts on several residences in this vicinity. Other factors include the greater costs associated with pumping water uphill to Bickford Ranch and the fact that the Bickford Ranch development has been put on hold. Without the Bickford Ranch system in place, it would not be possible to connect to the Lincoln treatment system.

## Alignment D – Red Ravine Creek with South Placer Municipal Utility District Connection

Alignment D represents a gravity flow alternative. Alignment D would start from the west side of the NSD WWTP, continue through a small portion of undeveloped land, and traverse west onto a small dirt road. The proposed pipeline would then travel south along Goulart Ranch Road until it reaches Red Ravine Creek. This alignment would follow Red Ravine Creek until it intersects with Taylor Road approximately 3,000 feet southwest of the intersection of Sisley and Taylor Roads to connect to the SPMUD trunk sewer stub on Taylor Road.

This alignment would be about 16,000 feet in length. Because of the costs associated with such a long pipeline, and the environmental and constructability issues associated with constructing the pipeline adjacent to Red Ravine Creek, this alignment was dismissed.





## Chapter 3 Environmental Checklist

- |  |  |
|--|--|
| <b>1. Project Title:</b>                                     | Newcastle Sanitary District Wastewater Treatment Plant Closure and Pipeline Project (Proposed Project)   |
| <b>2. CEQA Lead Agency Name and Address:</b>                 | Newcastle Sanitary District<br>P.O. Box 857<br>Newcastle, CA 95658   |
| <b>3. Contact Person and Phone Number:</b>                   | Ed Sander, (916) 663-3927  |
| <b>4. Project Location:</b>                                  | Newcastle, CA  |
| <b>5. Project Proponent's Name and Address:</b>              | Newcastle Sanitary District<br>P.O. Box 857<br>Newcastle, CA 95658   |
| <b>6. General Plan Designation:</b>                          | Rural Residential  |
| <b>7. Zoning:</b>  | Newcastle Wastewater Treatment Plant:<br>RA-B-100-SP, Residential Agricultural, Building Site with 100,000-square-foot minimum lot area, Specific Plan District<br><br>Pipeline: RA-B-100, Residential Agricultural, Building Site with 100,000-square-foot minimum lot area |
| <b>8. Description of Project:</b>                            | See Chapter 2, Proposed Project and Alternatives   |
| <b>9. Surrounding Land Uses and Setting:</b>                 | Mainly rural residential uses and a transportation corridor.   |
| <b>10. Other Public Agencies whose Approval is Required:</b> | See Chapter 2, Proposed Project and Alternatives   |

**Environmental Factors Potentially Affected:**

The environmental factors checked below would potentially be affected by the Proposed Project (i.e., the Proposed Project would involve 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 and 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 |   |

**Determination:** (to be completed by the lead agency)

On the basis of this initial evaluation:

- I find that the Proposed Project COULD NOT have a significant impact on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that, although the Proposed Project could have a significant impact on the environment, there will not be a significant impact in this case because revisions to the Proposed Project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the Proposed Project MAY have a significant impact on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the Proposed Project MAY have an impact on the environment that is *potentially significant* or *potentially significant unless mitigated* but at least one impact (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and (2) has been addressed by mitigation measures based on the earlier analysis, as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the impacts that remain to be addressed.
- I find that although the Proposed Project could have a significant impact on the environment, because all potentially significant impacts(a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Ed Sander, Treasurer, Board Member, and General Manager  
Printed Name

\_\_\_\_\_  
For

**Evaluation of Environmental Impacts:**

1. A brief explanation is required for all answers except *no impact* answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A *no impact* answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the Proposed Project falls outside a fault rupture zone). A *no impact* answer should be explained if it is based on project-specific factors as well as general standards (e.g., the Proposed Project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is *potentially significant*, *less than significant with mitigation*, or *less than significant*. A *potentially significant* impact determination is appropriate if there is substantial evidence that an impact may be significant. If there are one or more *potentially significant* impact determinations, an Environmental Impact Report (EIR) is required.
4. *Less than significant with mitigation* determination applies when the incorporation of mitigation measures has reduced an impact from *potentially significant* to *less than significant*. The lead agency must describe the mitigation measures and briefly explain how they reduce the impact to a less-than-significant level. (Mitigation measures from Section XVII, Earlier Analyses, may be cross-referenced.)
5. Earlier analyses may be used if, pursuant to tiering, program EIR, or another CEQA process, an impact has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D)]. In this case, a brief discussion should identify the following:
  - (a) **Earlier analysis used.** Identify and state where earlier analyses are available for review.
  - (b) **Impacts adequately addressed.** Identify which impacts from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such impacts were addressed by mitigation measures based on the earlier analysis.
  - (c) **Mitigation measures.** For impacts that are *less than significant with mitigation*, describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the Proposed Project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting information sources: A source list should be attached and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental impacts in whatever format is selected.
9. The explanation of each issue should identify:
  - (a) the significance criteria or threshold, if any, used to evaluate each question; and
  - (b) the mitigation measure identified, if any, to reduce the impact to a less-than-significant level.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>I. AESTHETICS.</b> Would the Proposed Project:				
a. Have a substantial adverse impact 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 historic buildings along a scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Aesthetics

### Environmental Setting

The Proposed Project is located in the foothills of the Sierra Nevada Mountains in southwest Placer County, California, near the community of Newcastle. The terrain consists of gently sloping hills marked with some steep ridges. The land is primarily in residential use with some areas of open space. The project area was historically more rural in nature, but increased development has replaced this aesthetic with a more suburban/urban feel.

The major sources of light and glare in the project vicinity are from residential development and Interstate 80 (I-80) vehicle traffic. Although there are potentially eligible state designated scenic highways in Placer County, none have been identified in the project area (Caltrans 2008).

### Environmental Impacts of the Proposed Project

- a. The topography of the project vicinity consists of rolling hills with views mainly of rural residential areas with scattered trees in the immediate foreground. Although there are generally pleasant views of the hillside in the distance, there are no designated scenic vistas in the area or views that are considered to have significant aesthetic appeal.

The Proposed Project would involve removing the wastewater treatment facilities and constructing a new underground pipeline and would not result in the construction of new facilities that would block views of the surrounding area. The proposed annexation would not result in any

physical changes to the environment and the new pump station would consist of submersible pumps with only a small portion of the facility above ground. The pump station would not be high enough to block views of the surrounding area.

Because of the lack of designated scenic vistas and the fact that the Proposed Project elements would not obstruct any views of the surrounding area, this impact is *less than significant*.

- b. No scenic resources have been identified in the project vicinity. Although there are some potentially eligible scenic highways, none have been so designated. Within the vicinity of the existing wastewater treatment ponds, there are some oaks and other large trees. Along the proposed pipeline alignment, most of the natural vegetation has been removed immediately adjacent to the roadside.

As described in Chapter 2, Proposed Project and Alternatives, vegetation removed during construction of the pipeline would be replanted, including trees, which would be planted outside the pipeline easement in accordance with Placer County's tree ordinance (Chapter 12 Article 12.16). No rock outcroppings or historic buildings would be damaged.

Because of the lack of identified scenic resources in the area and the fact that vegetation would be restored according to the relevant environmental policies, this impact is *less than significant*.

- c. As described above, the visual character in the vicinity of the Proposed Project is mainly rural residential with some areas of open space. There are scattered single family homes and other outbuildings surrounded by trees. The Proposed Project would not introduce substantially different elements into this visual environment.

The pipeline would be underground and not visible once completed and the new pump station would be a small structure with only a portion of the facility located above ground. Demolition and construction activities would be temporary and, once completed, would result in only minor visible changes in the project area.

Because the Proposed Project would not introduce any substantially different or divergent aesthetic elements into the visual environment, this impact is *less than significant*.

- d. The Proposed Project would not result in any new sources of light or glare. The new pump station would be constructed from nonreflective surfaces to minimize glare and no new lighting is proposed as part of the Project. Therefore, there would be no impact.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<p><b>II. AGRICULTURAL RESOURCES.</b> In determining whether impacts on 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. Would the project:</p>				
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 conflict with 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 that, 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"/>

## Agricultural Resources

### Environmental Setting

The zoning in the project area is Residential Agricultural (RA). Land uses in the project area include rural residential uses and various transportation corridors, including I-80. None of the land in the project area is currently in agricultural use, although some agricultural use occurs in the project vicinity.

### Regulatory Setting

#### Farmland Mapping and Monitoring Program

Agricultural lands within the state of California are rated according to soil quality and irrigation status by the Farmland Mapping and Monitoring Program (FMMP). The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. The best quality land is called Prime Farmland, followed by Unique Farmland, Farmland of Statewide Importance, and so on, in decreasing order of importance. The maps are updated every 2 years with the use of aerial photographs, a computer mapping system,



public review, and field reconnaissance. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance has been identified in the project area (Farmland Mapping and Monitoring Program 2008).

## Williamson Act

Agricultural land in the project area may also be subject to the California Land Conservation Act of 1965, more commonly referred to as the Williamson Act. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are lower than normal because they are based on farming and open space uses as opposed to full market value. None of the land in the project area is under contract under the Williamson Act (Fisch pers. comm.).

## Environmental Impacts of the Proposed Project

- a. As described above, none of the land in the project area has been identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance according to the FMMP (Farmland Mapping and Monitoring Program 2008). Therefore, there would be *no impact* related to the loss of conversion of these agricultural land classifications.
- b. The project area is zoned RA for residential agricultural use. This would not change as a result of the Proposed Project. Pipeline construction is included as an allowable use by Placer County zoning ordinance within the RA zones (Placer County 1994). None of the land in the project area is under contract under the Williamson Act (Fisch pers. comm.). Therefore, there would be *no impact* related to zoning or Williamson Act conflicts.
- c. None of the land affected by the Proposed Project is currently in agricultural use and none of the Proposed Project elements would result in the conversion of land such that it could no longer be used for farming in the future. The Proposed Project would involve decommissioning the existing WWTP facilities and constructing the pipeline on land located primarily within existing rights-of-way. Therefore, there would be *no impact* related to the conversion of farmland to nonagricultural uses.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>III. AIR QUALITY.</b> When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Air Quality

### Environmental Setting

#### Regional Climate and Meteorology

The project area is located in the Sacramento Valley Air Basin (SVAB) and is regulated by the Placer County Air Pollution Control District (PCAPCD). The SVAB is ringed by tall mountains: the Coast Range to the west, Cascade Range to the north and Sierra Nevada Range all along the east. Winters are wet and cool, while summers are hot and dry.

Air pollution can be transported into the basin, but on the smoggiest days, air pollution emissions from within the basin are most important. Only the border area to the south receives air pollution inflow, transported from the Bay Area or San Joaquin Valley air basins. On many summer days, a “delta breeze” blows in from the ocean through the Carquinez Strait, toward Sacramento. These winds can transport air pollution from the Bay Area to the SVAB.

The delta breeze turns northward and moves Sacramento's air pollution up toward the north end of the Sacramento Valley and to the east into the Sierra Nevada foothills. On days when wind blows out of the north, Sacramento air pollution can be transported into the San Joaquin Air Basin to the South.

## Criteria Pollutants

The federal and state governments have established ambient air quality standards for the following six criteria pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter smaller than 10 microns or less in diameter (PM<sub>10</sub>), particulate matter smaller than 2.5 microns or less in diameter (PM<sub>2.5</sub>), and lead. Ozone, NO<sub>2</sub>, and particulate matter are generally considered to be regional pollutants, as these pollutants or their precursors affect air quality on a regional scale. Pollutants such as CO, SO<sub>2</sub>, lead, and particulate matter are considered to be local pollutants that tend to accumulate in the air locally. Particulate matter is considered to be a localized pollutant as well as a regional pollutant. Within the project area, ozone, CO, and inhalable particulates (e.g., PM<sub>10</sub>) considered pollutants of concern and are addressed below. Toxic air contaminants (TACs) are also discussed below, although no state or federal ambient air quality standards exist for these pollutants. Brief descriptions of these pollutants are provided below, while a complete summary of state and national ambient air quality standards (CAAQS and NAAQS, respectively) is provided in Table AQ-1.

### Ozone

Ozone is a respiratory irritant that increases susceptibility to respiratory infections. It is also an oxidant that can cause substantial damage to vegetation and other materials. Ozone is a severe eye, nose, and throat irritant. Ozone also attacks synthetic rubber, textiles, plants, and other materials. Ozone causes extensive damage to plants by leaf discoloration and cell damage. Ozone is primarily a summer air pollutant. The ozone precursors, reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>) are mainly emitted by mobile sources and by stationary combustion equipment.

### Carbon Monoxide

CO is a public health concern because it combines readily with hemoglobin and reduces the amount of oxygen transported in the bloodstream. CO can cause health problems such as fatigue, headache, confusion, dizziness, and even death. Motor vehicles are the dominant source of CO emissions in most areas. Data indicate that CO concentrations at most monitoring stations do not approach the state standards; however, CO concentrations in the vicinity of congested intersections and freeways would be expected to be higher than those recorded at the monitoring station. CO concentrations are expected to continue to decline in the SVAB because of existing controls and programs and the continued retirement of older, more polluting vehicles.

**Table AQ-1. Ambient Air Quality Standards Applicable in California**

Pollutant	Symbol	Average Time	Standard (parts per million)		Standard (micrograms per cubic meter)		Violation Criteria	
			California	National	California	National	California	National
Ozone*	O <sub>3</sub>	1 hour	0.09	NA	180	NA	If exceeded	NA
		8 hours	0.070	0.075	137	147	If exceeded	If fourth highest 8-hour concentration in a year, averaged over 3 years, is exceeded at each monitor within an area
Carbon monoxide (Lake Tahoe only)	CO	8 hours	9.0	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year
		1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year
		8 hours	6	NA	7,000	NA	If equaled or exceeded	NA
Nitrogen dioxide	NO <sub>2</sub>	Annual average	0.030	0.053	57	100	If exceeded	If exceeded on more than 1 day per year
		1 hour	0.18	NA	339	NA	If exceeded	NA
Sulfur dioxide	SO <sub>2</sub>	Annual average	NA	0.030	NA	80	NA	If exceeded
		24 hours	0.04	0.14	105	365	If exceeded	If exceeded on more than 1 day per year
		1 hour	0.25	NA	655	NA	If exceeded	NA
Hydrogen sulfide	H <sub>2</sub> S	1 hour	0.03	NA	42	NA	If equaled or exceeded	NA
Vinyl chloride	C <sub>2</sub> H <sub>3</sub> Cl	24 hours	0.01	NA	26	NA	If equaled or exceeded	NA
Inhalable particulate matter	PM10	Annual arithmetic mean	NA	NA	20	NA	NA	NA
		24 hours	NA	NA	50	150	If exceeded	If exceeded on more than 1 day per year
	PM2.5	Annual arithmetic mean	NA	NA	12	15	NA	If 3-year average from single or multiple community-oriented monitors is exceeded
		24 hours	NA	NA	NA	35	NA	If 3-year average of 98 <sup>th</sup> percentile at each population-oriented monitor within an area is exceeded
Sulfate particles	SO <sub>4</sub>	24 hours	NA	NA	25	NA	If equaled or exceeded	NA
Lead particles	Pb	Calendar quarter	NA	NA	NA	1.5	NA	If exceeded no more than 1 day per year
		30-day average	NA	NA	1.5	NA	If equaled or exceeded	NA

Notes: All standards are based on measurements at 25°C and 1 atmosphere pressure.  
National standards shown are the primary (health effects) standards.  
NA = not applicable.

\* The U.S. Environmental Protection Agency recently replaced the 1-hour ozone standard with an 8-hour standard of 0.08 part per million. EPA issued a final rule that revoked the 1-hour standard on June 15, 2005. However, the California 1-hour ozone standard will remain in effect.

Source: California Air Resources Board 2008a

## Inhalable Particulates

Inhalable particulates can damage human health and retard plant growth. Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled. Particulates also reduce visibility and corrode materials. Particulate emissions are generated by a wide variety of sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic and construction equipment, and secondary aerosols formed by reactions in the atmosphere.

## Toxic Air Contaminants

TACs are pollutants that may be expected to result in an increase in mortality or serious illness or that may pose a present or potential hazard to human health. Health impacts include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases that lead to death. Although ambient air quality standards exist for criteria pollutants, no standards exist for TACs. For TACs that are known or suspected carcinogens, the California Air Resources Board (ARB) has consistently found that there are no levels or thresholds below which exposure is risk-free. The TAC of most concern with regards to the Proposed Project is diesel exhaust particulate matter.

## Asbestos

Asbestos is of special concern in Placer County because it occurs naturally in surface deposits of several types of ultramafic rocks (rocks that contain high concentrations of magnesium, iron, and a very small amount of silica). Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading and excavating activities, and surface mining. According to the California Geologic Survey Map of Placer County (Department of Conservation 2006), the project area is not likely to contain naturally occurring asbestos.

## Greenhouse Gases and Climate Change/Global Warming

Global climate change is affected by worldwide greenhouse gas emissions (GHGs). Greenhouse gases in the atmosphere trap infrared radiation emitted from the earth's surface, causing a greenhouse effect. Emissions in excess of naturally occurring GHGs are thought to be responsible for the enhancement of the greenhouse effect and to contribute to what is termed global warming, a trend of unnatural warming of the earth's climate.

Carbon dioxide (CO<sub>2</sub>) and nitrous dioxide (N<sub>2</sub>O) are the two GHGs released in the greatest quantities from mobile sources burning gasoline and diesel fuel. Because of the relatively long life of primary GHGs in the atmosphere, which results in the accumulation and mixing of these gases in the atmosphere over time, their impact on the atmosphere is mostly independent of the point of emission. Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants (such as ozone precursors) and TACs, which are

pollutants of regional and local concern. Worldwide, California is the 12th to 16th largest emitter of CO<sub>2</sub> (California Energy Commission 2006), and is responsible for approximately 2% of the world's CO<sub>2</sub> emissions (California Energy Commission 2005).

Changes in California's climate and ecosystems are occurring at a time when California's population is expected to increase from 34 million to 59 million by the year 2040 (California Energy Commission 2005). As such, the number of people potentially affected by climate change, and the amount of anthropogenic GHG emissions expected under a "business as usual" scenario, are expected to increase.

The PCAPCD has not yet established significance thresholds or guidance for evaluating impacts associated with GHG emissions and their contribution to climate change.

## Attainment Status

The Environmental Protection Agency (EPA) has classified Placer County as a serious nonattainment area for the 8-hour ozone standard. For the CO standard, the EPA has classified the County as a moderate ( $\leq 12.7$  parts per million [ppm]) maintenance area. The EPA has classified the County as an unclassified/attainment area for the PM<sub>10</sub> and PM<sub>2.5</sub> standards.

The ARB has classified Placer County as a serious nonattainment area for the 1-hour ozone standard. For the CO standard, the ARB has classified the County as an attainment area. The ARB has classified the County as a nonattainment area for the PM<sub>10</sub> and PM<sub>2.5</sub> standards.

Placer County attainment status for federal and state ambient air quality standards is presented in Table AQ-2.

**Table AQ-2.** 2006 Placer County Attainment Status for State and Federal Standards

Pollutant	Federal	State
Ozone		
1-Hour	— <sup>a</sup>	Serious nonattainment
8-Hour	Serious nonattainment	— <sup>b</sup>
Carbon Monoxide	Moderate/Maintenance ( $\leq 12.7$ ppm)	Attainment
Particulate Matter		
PM <sub>10</sub>	Unclassified/attainment	Nonattainment
PM <sub>2.5</sub>	Unclassified/attainment	Nonattainment

<sup>a</sup> The U.S. Environmental Protection Agency (EPA) revoked the 1-hour standard on June 15, 2005.

<sup>b</sup> The California Air Resources Board (ARB) approved the 8-hour ozone standard on April 28, 2005 and it became effective on May 17, 2006. The attainment status for the state 8-hour ozone standard will be determined by ARB after review of sufficient monitoring data.

## Monitoring Data

The existing air quality conditions in the project area can be characterized by monitoring data collected in the region. Ozone, CO, PM10, and PM2.5 concentrations are measured at local monitoring stations. These are the pollutants of greatest concentration within the PCAPCD and are the pollutants of most concern from the Proposed Project. The closest monitoring station that measures all these pollutants is located in Roseville on North Sunrise Boulevard. Air quality monitoring data for the last 3 years are presented in Table AQ-3.

**Table AQ-3.** Ambient Air Quality Monitoring Data (2005 -2007) Measured at the Roseville North Sunrise Monitoring Station

Pollutant Standards	2005	2006	2007
<b>Ozone</b>			
Maximum 1-hour concentration (ppm)	0.118	0.121	0.109
Maximum 8-hour concentration (ppm)	0.106	0.097	0.100
Number of days standard exceeded <sup>a</sup>			
NAAQS 1-hour (>0.12 ppm)	0	0	0
CAAQS 1-hour (>0.09 ppm)	13	16	4
NAAQS 8-hour (>0.08 ppm)	9	9	3
<b>Carbon Monoxide (CO)</b>			
Maximum 8-hour concentration (ppm)	1.27	–	–
Number of days standard exceeded <sup>a</sup>			
NAAQS 8-hour ( $\geq 9.0$ ppm)	0	0	0
CAAQS 8-hour ( $\geq 9.0$ ppm)	0	0	0
<b>Particulate Matter (PM10)<sup>b</sup></b>			
National <sup>c</sup> maximum 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	55.0	54.0	43.0
National <sup>c</sup> second-highest 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	40.0	50.0	35.7
State <sup>d</sup> maximum 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	58.0	55.0	45.0
State <sup>d</sup> second-highest 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	42.0	50.0	38.0
National annual average concentration ( $\mu\text{g}/\text{m}^3$ )	19.1	22.0	17.0
State annual average concentration ( $\mu\text{g}/\text{m}^3$ ) <sup>e</sup>	19.6	22.4	17.8
Number of days standard exceeded <sup>a</sup>			
NAAQS 24-hour ( $>150 \mu\text{g}/\text{m}^3$ ) <sup>f</sup>	0	0	0
CAAQS 24-hour ( $>50 \mu\text{g}/\text{m}^3$ ) <sup>f</sup>	5.8	5.8	0
<b>Particulate Matter (PM2.5)</b>			
National <sup>c</sup> maximum 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	51.0	45.0	30.0
National <sup>c</sup> second-highest 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	28.0	36.0	27.0
State <sup>d</sup> maximum 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	59.2	54.7	48.7
State <sup>d</sup> second-highest 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	55.3	51.7	45.7
National annual average concentration ( $\mu\text{g}/\text{m}^3$ )	10.0	10.5	8.4
State annual average concentration ( $\mu\text{g}/\text{m}^3$ ) <sup>e</sup>	10.0	10.5	12.0
Number of days standard exceeded <sup>a</sup>			
NAAQS 24-hour ( $>65 \mu\text{g}/\text{m}^3$ )	0	0	0



Pollutant Standards	2005	2006	2007
Notes: CAAQS = California ambient air quality standards. NAAQS = national ambient air quality standards. – = insufficient data available to determine the value.			
<sup>a</sup> An exceedance is not necessarily a violation.			
<sup>b</sup> Measurements usually are collected every 6 days.			
<sup>c</sup> National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.			
<sup>d</sup> State statistics are based on local conditions data, except in the South Coast Air Basin, for which statistics are based on standard conditions data. In addition, State statistics are based on California approved samplers.			
<sup>e</sup> State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.			
<sup>f</sup> Mathematical estimate of how many days' concentrations would have been measured as higher than the level of the standard had each day been monitored.			
Sources: California Air Resources Board 2008b; U.S. Environmental Protection Agency 2008.			

Table AQ-3 indicates that ozone concentrations periodically exceeded state standards for 1-hour ozone, and national standards for 8-hour ozone. PM10 concentrations occasionally exceeded state standards during this period. There have been no violations of the federal or state CO and PM 2.5 standards for this time period.

## Sensitive Land Uses

For the purposes of this analysis, sensitive land uses are defined as locations where people reside or where the presence of pollutant emissions could adversely affect the use of the land. Typical sensitive receptors include residents, school children, hospital patients, and the elderly.

The area surrounding the project area is generally rural, with scattered residences located throughout the project area. ABC Honey Tree School is located on 1144 Taylor Road, approximately 0.25 mile north of the project site.

## Regulatory Setting

Air quality in the project vicinity is regulated by several jurisdictions, including EPA, ARB, and PCAPCD. These entities, described below, develop rules, regulations, and policies to attain the goals or directives imposed upon them through legislation.

## Federal Regulations

### The Clean Air Act

The Clean Air Act (CAA), enacted in 1963 and amended several times thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The CAA directs EPA to establish ambient air standards for six pollutants: CO, SO<sub>2</sub>, NO<sub>2</sub>, particulate matter, ozone, and lead. The standards are divided into primary and secondary standards. Primary standards are

designed to protect human health, including the health of sensitive populations such as asthmatics, children, and the elderly, within an adequate margin of safety. Secondary standards are designed to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

## Federal Conformity Requirements

The CAA Amendments of 1990 requires that all federally funded projects come from a plan or program that conforms to the appropriate State Implementation Plan (SIP). Federal actions are subject to either the Transportation Conformity Rule (40 Code of Federal Regulations [CFR] 51[T]), which applies to federal highway or transit projects, or the General Conformity Rule (40 CFR 51[W]), which applies to all other federal actions.

## General Conformity Requirements

The purpose of the General Conformity Rule is to ensure that federal actions conform to applicable SIPs so that they do not interfere with strategies employed to attain the NAAQS. The rule applies to federal actions in areas designated as nonattainment areas for any of the six criteria pollutants and in some areas designated as maintenance areas. The rule applies to all federal actions except:

- programs specifically included in a transportation plan or program that is found to conform under the federal transportation conformity rule,
- projects with associated emissions below specified *de minimis* threshold levels, and
- certain other projects that are exempt or presumed to conform.

A general conformity determination would be required if a proposed federal action's total direct and indirect emissions fail to meet any of the following two conditions:

- emissions for each affected pollutant for which the region is classified as a maintenance or nonattainment area for the national standards are below the *de minimis* levels indicated in Tables AQ-4 and AQ-5, and
- emissions for each affected pollutant for which the region is classified as a maintenance or nonattainment area for the national standards are regionally insignificant (total emissions are less than 10% of the area's total emissions inventory for that pollutant).

If any of the two conditions above are not met, then a general conformity determination must be performed to demonstrate that total direct and indirect emissions for each affected pollutant for which the region is classified as a maintenance or nonattainment area for the national standards would conform to the applicable SIP.

However, if the above two conditions are met, then the requirements for general conformity do not apply, as the proposed action is presumed to conform to the



applicable SIP for each affected pollutant. As a result, no further analysis or determination would be required.

**Table AQ-4.** Federal *de minimis* Threshold Levels for Criteria Pollutants in Nonattainment Areas

<b>Pollutant</b>	<b>Emission Rate (Tons per Year)</b>
<b>Ozone (ROG/VOC or NO<sub>x</sub>)</b>	
Serious nonattainment areas	50
<b>Severe nonattainment areas</b>	<b>25</b>
Extreme nonattainment areas	10
Other ozone nonattainment areas outside an ozone transport region <sup>1</sup>	100
Other ozone nonattainment areas inside an ozone transport region <sup>1</sup>	
ROG/VOC	50
NO <sub>x</sub>	100
CO: All nonattainment areas	100
SO <sub>2</sub> or NO <sub>2</sub> : All nonattainment areas	100
<b>PM10</b>	
<b>Moderate nonattainment areas</b>	<b>100</b>
Serious nonattainment areas	70
<b>PM2.5</b>	
Direct emissions	100
SO <sub>2</sub>	100
NO <sub>x</sub> (unless determined not to be a significant precursor)	100
ROG/VOC or ammonia (if determined to be significant precursors)	100
Pb: All nonattainment areas	25
ROG=reactive organic gas; VOC=volatile organic compound; SO <sub>2</sub> = sulfur dioxide; NO <sub>x</sub> =nitrogen oxide; PM10= particulate matter smaller than 10 microns or less in diameter; PM2.5= particulate matter smaller than 2.5 microns or less in diameter; Pb=lead Note: <i>de minimis</i> threshold levels for conformity applicability analysis.	
<sup>1</sup> Ozone Transport Region is comprised of the States of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, the Consolidated Metropolitan Statistical Area that includes the District of Columbia and northern Virginia (Section 184 of the Clean Air Act).	
Bolded text indicates pollutants for which the region is in non-attainment, and a conformity determination must be made.	
Source: 40 CFR 51.853.	

**Table AQ-5.** Federal *de minimis* Threshold Levels for Criteria Pollutants in Maintenance Areas

<b>Pollutant</b>	<b>Emission Rate (Tons per Year)</b>
Ozone (NO <sub>x</sub> , SO <sub>2</sub> or NO <sub>2</sub> )	
All maintenance areas	100
Ozone (ROG/VOC)	
Maintenance areas inside an ozone transport region <sup>1</sup>	50
Maintenance areas outside an ozone transport region <sup>1</sup>	100
<b>CO: All maintenance areas</b>	<b>100</b>
PM10: All maintenance areas	100
PM2.5	
Direct emissions	100
SO <sub>2</sub>	100
NO <sub>x</sub> (unless determined not to be a significant precursor)	100
ROG/VOC or ammonia (if determined to be significant precursors)	100
Pb: All maintenance areas	25

ROG=reactive organic gas; VOC=volatile organic compound; SO<sub>2</sub>= sulfur dioxide; NO<sub>x</sub>=nitrogen oxide; PM10= particulate matter smaller than 10 microns or less in diameter; PM2.5= particulate matter smaller than 2.5 microns or less in diameter; Pb=lead

Note: *de minimis* threshold levels for conformity applicability analysis.

<sup>1</sup> Ozone Transport Region is comprised of the States of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, the Consolidated Metropolitan Statistical Area that includes the District of Columbia and northern Virginia (Section 184 of the Clean Air Act).

Bolded text indicates pollutants for which the region is in non-attainment, and a conformity determination must be made.

Source: 40 CFR 51.853.

Because the Proposed Project is not a federal highway or transit project, it is subject to the general conformity rule. As indicated in Tables AQ-4 and AQ-5, the project area is classified as a severe nonattainment area for the federal 8-hour ozone standard, a moderate nonattainment area for the federal PM10 standard, and a maintenance area for the federal CO standard. Consequently, to fulfill general conformity requirements, an analysis must be undertaken to identify whether the Proposed Project's total emissions of ozone, PM10, and CO are below the applicable *de minimis* levels and are regionally insignificant<sup>1</sup>.

<sup>1</sup> It should be noted that, after June 15, 2005, federal conformity for ozone is based on the 8-hour standard, rather than the 1-hour standard (Stonefield pers. comm.)

## State Regulations

### California Clean Air Act of 1970 (Division 26 of the Health and Safety Code)

The California Clean Air Act (CCAA) establishes CAAQSs that are distinct from, and often times more stringent than the NAAQSs. The ARB regulates the CCAQSs under the CCAA. However, Regional Air Quality Management Districts have the primary responsibility to manage their specific air basins. The CCAA requires the District to achieve and maintain the CAAQSs and NAAQSs in all areas affected by emission sources under its jurisdiction (§ 40001). Furthermore, Section 40716 requires that Districts adopt and implement regulations to reduce or mitigate emissions from indirect and area-wide sources of air pollution. As part of the SVAB, the PCAPCD manages the air quality in Placer County.

## Local Regulations

### Placer County

Placer County's emission thresholds for both construction and operation are shown in Table AQ-4. Based on this guidance, project-related air emissions would have a significant impact if they resulted in concentrations that create either a violation of an ambient air quality standard (as identified in Table AQ-1) or contribute to an existing air quality violation. Table AQ-6 below presents the allowable contaminant generation rates at which emissions are considered to have a significant effect on air quality throughout the PCAPCD (Vintze pers. comm.).

**Table AQ-6.** Placer County Air Pollution Control District Significance Thresholds

	Ozone Precursor Emissions			
	ROG (pounds/day)	NO <sub>x</sub> (pounds/day)	CO (pounds/day)	PM10 (pounds/day)
Construction (and operation)	82	82	550	82

Source: Vintze pers. comm. ROG=reactive organic gas; NO<sub>x</sub>=nitrogen oxide; CO=carbon monoxide; PM10= particulate matter smaller than 10 microns or less in diameter

The PCAPCD has a list of best available mitigation measures for construction projects. These measures are intended to reduce a project's short-term impacts on local and regional air quality. At a minimum, Measures 1 through 10 are required if a project's construction emissions are above the District's significance thresholds of 82 pounds per day, while measures 1, 2, 7, 8, 9, and 11 must be implemented for all projects. These measures are listed in Appendix A.

## Environmental Impacts of the Proposed Project

- a. The region's air quality attainment plans and associated emission inventories are primarily based on projected population growth, employment growth, and vehicle miles traveled (VMT). Population and employment projections are based in part on growth anticipated in regional and community plans. Projects that result in population or employment growth not identified in regional or community plans can result in increases in VMT that were not accounted for during preparation of air quality attainment plans. Projects that result in increases in VMT that are not accounted for in regional attainment plans may have significant adverse effects on the region's ability to attain or maintain state and federal ambient air quality standards.

Implementation of the Proposed Project is not expected to result in an increased growth in population or employment, and would not substantially increase VMT. Since VMT would not increase, implementation of the Proposed Project would have a less-than-significant impact on projected emissions that would have the potential to conflict with or obstruct implementation of the regions' air quality attainment plans. This impact would be *less than significant*.

- b. Although construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content, construction activities associated with the Proposed Project would generate temporary increases in air pollutants. Site disturbance, equipment use, and vehicular trips associated with grading and excavation activities would generate short-term emissions of criteria pollutants from fugitive dust (PM10 and PM2.5) and equipment exhaust (PM10, PM2.5, CO, and NOx), as well as CO2 emissions. The PCAPCD has no thresholds for CO or CO2.

The URBEMIS 2007 (version 9.2.4) model was used to generate estimates of construction emissions. To estimate construction emissions, URBEMIS 2007 analyzes the type of construction equipment used and the duration of the construction period associated with construction of each of the land uses. A list of construction equipment that will likely be used for the Proposed Project was provided by the project engineer. According to the project engineer, there would be a maximum of 0.3 acre disturbed per day, and zero acres would be paved.

It was assumed that all pieces of equipment would operate concurrently for each phase, for 12 hours per day. It was assumed that construction would commence on June 30, 2009, and continue for approximately 15 months. Table AQ-7 indicates the construction schedule and equipment that will be used for each phase. Phases 3 and 4 (mass grading and building construction) may occur concurrently. For the purposes of this assessment, construction activities were divided into distinct categories (i.e., demolition, pump station and equalization facility construction, open trench and jack and bore pipe installation).

**Table AQ-7. Construction Equipment per Phase**

<b>Construction Phase and Timeline</b>	<b>Pieces of Off-Road Equipment</b>
Trenching/Pipeline Installation (June 30, 2009—December 31, 2009)	1 Dump Truck 1 Excavator 1 Off-Highway Truck 1 Paver 1 Plate Compactor 1 Roller 1 Water Truck
Demolition (January 4, 2010—January 5, 2010)	1 Compressor 1 Dump Truck 1 Excavator 1 Forklift 1 Off-Highway Truck 1 Paver 1 Paving Equipment 1 Plate Compactor 1 Roller 2 Loaders 1 Water Truck
Mass Grading (January 6, 2010—September 30, 2010)	1 Dump Truck 1 Excavator 1 Off-Highway Truck 1 Paver 1 Plate Compactor 1 Roller 1 Water Truck
Building Construction (January 6, 2010—September 30, 2010)	1 Crane 1 Dump Truck 1 Excavator 1 Off-Highway Truck 1 Paver 1 Plate Compactor 1 Roller 1 Loader 1 Water Truck

The maximum emissions from each of these anticipated phases of construction were calculated for the types of equipment shown on Table AQ-7. These results are presented in Table AQ-8 for construction activities conducted without mitigation in place. Although each construction phase would individually be below the applicable thresholds, building construction and grading of the ponds would likely occur simultaneously. Therefore, emissions related to these activities should be considered together and would exceed the PCAPCD threshold.

**Table AQ-8.** Maximum Daily Emissions from Construction Activities in Pounds per Day (Unmitigated)

Project Phase	ROG	NOx	CO	PM10	PM2.5	CO2
Pipeline Installation	6.77	53.45	23.74	2.88	2.65	5,231.94
Demolition	10.35	75.02	38.52	6.63	4.8	7533.11
Building Construction	8.37	66.39	28.85	3.59	3.31	6,653.44
Grading of Ponds	9.06	73.82	35.85	9.7	4.65	7272.7
<b>PCAPCD Threshold (pounds/day)</b>	<b>82</b>	<b>82</b>	<b>550</b>	<b>82</b>	<b>NA</b>	<b>NA</b>

Because the threshold for NOx would be exceeded, the use of aqueous diesel fuel, diesel particulate filters, and diesel oxidation catalysts is recommended. The model was rerun with this assumption and the results are presented in Table AQ-9. As shown in Table AQ-9, the mitigated construction emissions would still exceed the PCAPCD threshold for building construction and pond grading combined. Therefore, Mitigation Measures AQ-1, AQ-2, AQ-3, and AQ-4 would be required to make this impact *less than significant*.

**Table AQ-9.** Maximum Daily Emissions from Construction Activities (Mitigated – AQ-3)

Project Phase	ROG	NOx	CO	PM10	PM2.5	CO2
Pipeline Installation	6.77	40.98	32.74	0.51	0.46	5,231.94
Demolition	10.35	56.79	38.52	2.50	1.0	7,533.11
Building Construction	8.37	50.14	28.85	0.52	0.48	6,653.44
Grading of Ponds	9.06	55.82	35.85	1.95	0.81	7,272.78
<b>PCAPCD Threshold (pounds/day)</b>	<b>82</b>	<b>82</b>	<b>550</b>	<b>82</b>	<b>NA</b>	<b>NA</b>

**Mitigation Measure AQ-1. Implement Placer County Air Pollution Control District's Best Available Mitigation Measures 1 through 10.**

1. The applicant shall submit to the District and receive approval of a Construction Emission / Dust Control Plan prior to groundbreaking. This plan must address the minimum Administrative Requirements found in section 300 and 400 of District Rule 228, Fugitive Dust ([www.placer.ca.gov/airpollution/airpolut.htm](http://www.placer.ca.gov/airpollution/airpolut.htm)).

The applicant shall have a pre-construction meeting for grading activities for 20 or more acres to discuss the construction emission/dust control plan with employees and/or contractors and the District is to be invited.

The applicant shall suspend all grading operations when fugitive dusts exceed District Rule 228 Fugitive Dust limitations. An applicant representative, CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate compliance to Rule 228, Fugitive Dust. This requirement for a VEE is for projects grading more than 20 or more acres in size regardless in how many acres are to be disturbed daily.

It is to be noted that fugitive dust is not to exceed 40% opacity and not go beyond property boundary at any time. If lime or other drying agents are utilized to dry out wet grading areas they shall be controlled as to not to exceed District Rule 228 Fugitive Dust limitations.

2. Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours.

An applicant representative, CARB-certified to perform VEE, shall routinely evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement for projects grading more than 20 acres in size regardless in how many acres are to be disturbed daily.

3. The prime contractor shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. The project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site lead. The project shall provide a plan for approval by the District demonstrating that the heavy-duty 50 horsepower or greater) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project-wide fleet-average 20% NO<sub>x</sub> reduction and 45% particulate reduction compared to the most recent CARB fleet average. Acceptable



options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. Contractors can access the Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure.

[http://www.airquality.org/ceqa/Construction\\_Mitigation\\_Calculator.xls](http://www.airquality.org/ceqa/Construction_Mitigation_Calculator.xls)

4. No open burning of removed vegetation during infrastructure improvements.
5. Minimize idling time to 5 minutes for all diesel-power equipment.
6. Use ARB diesel fuel for all diesel-power equipment.
7. Apply water to control dust as needed to prevent dust impacts off site. Operational water truck(s) shall be on site, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off site.
8. Apply approved chemical soil stabilizers, vegetative mats, or other appropriate best management practices to manufacturers' specifications, to all inactive construction areas (previously graded areas that remain inactive for 96 hours).
9. Spread soil binders on unpaved roads and employee or equipment parking areas and wet broom or wash streets if silt is carried over to adjacent public thoroughfares.
10. Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary diesel power generators. If not available, low sulfur fuel is to be used for diesel power generators.

**Mitigation Measure AQ-2. Implement Placer County Air Pollution Control District's Minimum Dust Control Requirements.** The following dust mitigation measures will be initiated at the start and maintained throughout the duration of the construction or grading activity, including any construction or grading for road construction or maintenance.

- Unpaved areas subject to vehicle traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered. In geographic ultramafic rock units, or when naturally occurring asbestos, ultramafic rock, or serpentine is to be disturbed, the cover material shall contain less than 0.25% asbestos as determined using the bulk sampling method for asbestos in Section 502.
- The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust exceeding Ringelmann 2 or visible emissions from crossing the project boundary line.



- Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.
- Prior to any ground disturbance, including grading, excavating, and land clearing, sufficient water must be applied to the area to be disturbed to prevent emitting dust exceeding Ringlemann 2 and to minimize visible emissions from crossing the boundary line.
- Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt, from being released or tracked offsite.
- When wind speeds are high enough to result in dust emissions crossing the boundary line, despite the application of dust mitigation measures, grading and earthmoving operations shall be suspended.
- No trucks are allowed to transport excavated material off site unless the trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments, and loads are either
  - covered with tarps, or
  - wetted and loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.
- In geographic ultramafic rock units, or when naturally-occurring asbestos, ultramafic rock, or serpentine is disturbed, all equipment must be washed down before moving from the property onto a paved public road.
- In geographic ultramafic rock units, or when naturally-occurring asbestos, ultramafic rock, or serpentine is disturbed, upon completion of the project disturbed surfaces shall be stabilized using one or more of the following methods:
  - establishment of a vegetative cover,
  - placement of at least 1 foot of non-asbestos-containing material,
  - paving, or
  - any other measure deemed sufficient to prevent wind speeds of 10 miles per hour or greater from causing visible dust emissions.

**Mitigation Measure AQ-3. Implement the Use of Aqueous Diesel Fuel, Diesel Particulate Filters, and Diesel Oxidation Catalysts.** The use of aqueous diesel fuel, diesel particulate filters, and diesel oxidation catalysts will be used on all pieces of off-road construction equipment in order to reduce emissions of NO<sub>x</sub> and PM.

**Mitigation Measure AQ-4. Implement Measures to Reduce NO<sub>x</sub> Emissions.** In order to reduce emissions of NO<sub>x</sub> below the PCAPCD threshold, the contractor will implement one of the following measures:

- implement all phases of construction sequentially, not concurrently;
- reduce the number of pieces of off-road construction equipment; or,
- reduce the number of hours that equipment is in use from 12 to 8 hours per day.

## Federal Conformity Analysis

Because the Proposed Project would receive federal funding, a general conformity determination must be performed to demonstrate that emissions conform to the applicable SIP. Because the project region is classified as a severe nonattainment area for ozone, a moderate nonattainment area for PM<sub>10</sub>, and a maintenance area for CO (Table AQ-2), this determination must be made for these pollutants. Construction-related emissions for the Proposed Project are summarized in Tables AQ-10 and AQ-11. Tables AQ-10 and AQ-11 indicate that the total yearly emissions from project construction and operation are well below the federal *de minimis* and regionally significant levels for both 2009 and 2010. Consequently, the Proposed Project is found to be a conforming project.

**Table AQ-10.** Proposed Project Emissions for 2009 (tons/year)

Construction Year 2009	ROG	NO <sub>x</sub>	CO	PM <sub>10</sub>
Total Emissions Unmitigated	0.45	3.55	1.58	0.19
Total Emissions Mitigated	0.45	2.73	1.58	0.03
Federal <i>de minimis</i> Threshold Levels	25	25	100	100
Regionally Significant Threshold (10% threshold) <sup>1,2</sup>	963.6	1,211.8	5,770.65	941.7

<sup>1</sup> Source: California Air Resources Board 2008c.

<sup>2</sup> Regionally significant threshold based on 10% of the Placer County's 2006 emissions inventory.

**Table AQ-11.** Project Emissions for 2010 (tons/year)

Construction Year 2010	ROG	NO <sub>x</sub>	CO	PM <sub>10</sub>
Total Emissions Unmitigated	1.68	13.53	6.25	1.28
Total Emissions Mitigated	1.68	10.23	6.25	0.24
Federal <i>de minimis</i> Threshold Levels	25	25	100	100
Regionally Significant Threshold (10% threshold) <sup>1,2</sup>	963.6	1,211.8	5,770.65	941.7

<sup>1</sup> Source: California Air Resources Board 2008c.

<sup>2</sup> Regionally significant threshold based on 10% of the Placer County's 2006 emissions inventory.

- c. The Proposed Project does not include operation of any emission-generating sources that would result in or contribute to long term increases in emissions. However, construction activities associated with implementation of the Proposed Project are expected to contribute to a temporary increase in local levels of criteria pollutants, including ozone-related precursors and particulate matter. Once construction activities have ceased, construction emissions will cease as well. In addition, the PCAPCD considers construction emissions to be cumulatively less than significant. Consequently, this impact is considered *less than significant*.
- d. During construction of the Proposed Project, grading activities have the potential to result in the generation of significant amounts of fugitive dust that could potentially expose sensitive receptors to criteria pollutants. However, as described above, Mitigation Measures AQ-1 and AQ-2 would make this impact *less than significant*.
- e. There is a potential for some objectionable odors to be released during operation of the proposed facilities. However, all pump stations would be constructed with odor-controlling devices. The WWTP ponds would be filled in and all wastewater would be collected and conveyed via an enclosed pipeline system away from the WWTP to the existing SPMUD treatment system.

While no long term generation of emissions would occur as a result of project implementation, construction activities would have the potential to generate construction emissions that may be considered an objectionable odor by some individuals. However, emissions associated with construction activities including diesel exhaust and fuel vapors are expected to occur in the short term and generation of objectionable odors affecting a substantial number of people is not expected to occur as part of grading activities associated with construction of the drainage improvements. Therefore, this impact is considered *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>IV. BIOLOGICAL RESOURCES.</b> Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input 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 U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

# Biological Resources

## Environmental Setting

### Project Vicinity

Land uses surrounding the project area are predominantly rural residential and agricultural. The rural residences occur on parcels typically less than 5 acres in size, which are vegetated with a combination of natural, agricultural, and ornamental vegetation. Natural upland vegetation is dominated by a mix of interior live oak (*Quercus wislizeni*), blue oak (*Q. douglassii*), valley oak (*Q. lobata*), foothill pine (*Pinus sabiniana*), California buckeye (*Aesculus californica*), toyon (*Heteromeles arbutifolia*), and coyote brush (*Baccharis pilularis*). The understory in these natural areas is dominated by nonnative grasses and herbs such as ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), wild oat (*Avena* sp.), dogtail (*Cynosurus echinatus*), and yellow star-thistle (*Centaurea solstitialis*).

The agricultural areas in the project vicinity consist of small fruit orchards and irrigated pastures occurring in association with rural residences. Several of these parcels also contain small ponds that appear to have been historically used for agricultural purposes, but now serve as aesthetic landscaping features.

In addition to rural residential and agricultural land uses, the landscape in the vicinity of the Proposed Project also consists of several streams and associated riparian areas. The riparian areas are dominated by willows (*Salix* spp.), Fremont cottonwood (*Populus fremontii*), and Himalayan blackberry (*Rubus discolor*). These streams appear to have been historically ephemeral to intermittent streams that now flow year round as a result of extensive irrigation and the presence of numerous ponds in the watershed.

The main stream in the project area is Red Ravine Creek, which is a tributary to Secret Ravine Creek. Secret Ravine has been identified as having spawning habitat for Central Valley fall-run Chinook salmon and Central Valley steelhead and has been designated by the National Marine Fisheries Service (NMFS) as critical habitat for Central Valley steelhead. Although Secret Ravine does provide some spawning areas for steelhead and Chinook salmon (ECORP 2003), it has numerous partial barriers in the way of beaver dams. Chinook salmon and steelhead are unable to migrate over the beaver dams at low flows (Jones & Stokes 2005). In addition, Red Ravine Creek is too narrow to be suitable habitat for steelhead or Chinook salmon. Based on the relative distance from the Dry Creek system (approximately 8 channel miles), and the occurrence of numerous impediments along Red Ravine Creek, including metal culverts crossing under Taylor Road, the presence of anadromous fish species along this portion of the proposed alignment is highly unlikely (ESA 2005).

## Project Site

### Wastewater Treatment Plant

The WWTP is situated at approximately 650 feet above mean sea level in the Sierra Nevada foothills between the towns of Newcastle and Penryn. The WWTP was constructed in the upper reaches of Red Ravine Creek, which resulted in the realignment of a portion of the Red Ravine channel. The channel currently runs along the southeastern boundary of the WWTP and eventually rejoins the natural channel to the south of the WWTP. At this point, Red Ravine Creek also joins another unnamed drainage that runs along the southwestern boundary of the WWTP.

The WWTP is surrounded by a mix of riparian and oak woodland. Dominant tree species include interior live oak, valley oak, red willow, arroyo willow, and Fremont cottonwood. Understory vegetation is dominated by Himalayan blackberry, coyote brush, and various nonnative grasses. Open areas around the perimeter of the ponds consist of nonnative annual grasses, dominated by wild oat, ripgut brome, and soft chess.

The WWTP ponds have steep banks vegetated primarily with nonnative annual grasses. The ponds are mostly open water with some floating vegetation consisting of duck weed (*Lemna* sp.) and algae. A drainage ditch in the northwest portion of the WWTP site appears to have been constructed to capture runoff from two small intermittent drainages that flow toward the WWTP from the northwest. The drainage ditch was observed to have saturated soils and was dominated by rushes (*Juncus* sp.), cattails (*Typha* sp.), and nutsedge (*Cyperus* sp.). It flows southwest into a culvert that eventually daylight into the unnamed drainage ditch that runs along the southwest boundary of the WWTP.

The WWTP ponds provide habitat for bullfrogs (*Rana catesbiana*), Pacific tree frogs (*Pseudacris regilla*), western pond turtle (*Actinemys marmorata*), waterfowl, and wading birds. These ponds may also provide habitat for the federally threatened California red-legged frog (*Rana aurora draytonii*). Species observed using the ponds during a reconnaissance-level survey conducted on August 29, 2008, included bullfrogs, three unidentified turtles, mallards (*Anas platyrhynchos*), and great blue heron (*Ardea herodias*). The upland portions of the WWTP consist of previously described woodlands and nonnative grassland. The woodland portions of the site provide habitat for various wildlife species, including nesting birds and raptors. The nonnative grasslands provide limited wildlife habitat because these areas appear to be periodically manipulated by grading and mowing. No mammal burrows were observed within the open grassland areas of the WWTP. Upland wildlife species observed within the WWTP and vicinity during the reconnaissance-level survey (August 29, 2008) included western fence lizard (*Sceloporus occidentalis*), killdeer (*Charadrius vociferus*), scrub jay (*Aphelocoma californica*), and mourning dove (*Zenaidura macroura*). Evidence of visitation by mammals included several mammal trails and what appeared to be coyote scat.



## Pipeline Alignment

The proposed pipeline alignment would begin at the WWTP and run across relatively undisturbed ground prior to connecting with a private gravel road and then to Goulart Ranch Road. Immediately after exiting the WWTP property, the pipeline would cross the aforementioned unnamed drainage that runs along the southwest border of the WWTP. This drainage is approximately 3 feet in width with a bed consisting of silt and sand, and was observed to have flowing water approximately 3 inches in depth at the time of the August field survey. The banks of the unnamed drainage feature consist of riparian vegetation dominated by willows, cottonwoods, live oaks, and Himalayan blackberry.

The proposed pipeline alignment then passes through interior live oak woodlands prior to joining the gravel/dirt drive off of Goulart Ranch Road. The pipeline would continue north onto Goulart Ranch Road to Taylor Road. The riparian and oak woodlands along this portion of the proposed pipeline alignment provide habitat for nesting birds and raptors. No wildlife, nests, or burrows were observed during the reconnaissance-level survey of these areas.

The proposed pipeline alignment then continues south along the Taylor Road right-of-way to its terminus at the intersection of Taylor and Sisley Roads. Vegetation along the proposed pipeline alignment is similar to that described above for the general project area. It consists of a mix of natural, agricultural, and ornamental vegetation. An unnamed perennial channel flows to the southeast under Taylor Road. This feature is heavily vegetated with riparian vegetation and was observed to have flowing water at the time of the field survey. This feature is a tributary to Red Ravine Creek.

## Special-Status Species

For the purpose of this Initial Study, special-status species are defined as:

- species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) (Title 50, CFR, Section 17.12 for listed plants, 50 CFR 17.11 for listed animals, and various notices in the *Federal Register* [FR] for proposed species);
- species that are candidates for possible future listing as threatened or endangered under ESA (67 FR 40657, June 13, 2002);
- species that are federal species of concern (i.e., former U.S. Fish and Wildlife Service (FWS) C1 or C2 candidates);
- species that are listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (Title 14, California Code of Regulations, Section 670.5);
- plants listed as rare under the California Native Plant Protection Act of 1977 (California Fish and Game Code, Section 1900 *et seq.*);
- plants considered by California Native Plant Society (CNPS) to be “rare, threatened, or endangered in California”;



- species that meet the definitions of rare or endangered under the State CEQA Guidelines, Section 15380; and
- animals fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

## Methods

An ICF Jones & Stokes biologist reviewed existing information and conducted a field reconnaissance survey on August 29, 2008, to identify special status and non-special status biological resources associated with the Proposed Project. The following information was reviewed:

- California Natural Diversity Database (CNDDDB) records of the Rocklin, Lincoln, Gold Hill, Auburn, Pilot Hill, Roseville, Citrus Heights, Folsom, and Clarksville U.S. Geological Survey (USGS) 7.5-minute quadrangles (California Natural Diversity Database 2008);
- California Native Plant Society 2008 online *Inventory of Rare and Endangered Plants of California* (California Native Plant Society 2008);
- FWS list of endangered, threatened, and proposed species for the Rocklin, CA quadrangle obtained from the FWS website (U.S. Fish and Wildlife Service 2008);
- Placer County General Plan (adopted 1994);
- published and unpublished reports; and
- ICF Jones & Stokes file information.

The results of the CNDDDB search are presented in Table B-1 of Appendix B. Table B-1 lists species that have the potential to occur in the project area. This information was used to refine the list of special-status species and other sensitive biological resources that would likely be found in the project area as summarized below.

## Special-Status Plants

Four of the plant species listed in Table B-1 of Appendix B were determined to have a moderate potential to occur in the project area because the project area is within the species' range, records of occurrences are within 10 miles of the project area, and suitable habitat for the species is present. These species are listed below.

- Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)
- Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*)
- Butte County fritillary (*Fritillaria eastwoodiae*)
- Oval-leaved viburnum (*Viburnum ellipticum*)

The other special-status plant species listed in Table B-1 that have been identified to be within 10 miles of the project area have specific microhabitat requirements that are not present in the project area (e.g., gabbro or serpentinite soils). Therefore, they are not considered likely to be found in the project area.

### Special-Status Wildlife

Sixteen of the wildlife species listed in Table B-1 of Appendix B were identified as having the potential to occur in the region. This assessment was based on a review of the existing information, including CNDDDB records, the FWS special-status species list, and knowledge of the project area. Following the reconnaissance-level field survey and based on existing habitat conditions, this list was further refined to exclude eight of the species. These eight species were determined to have a low potential to occur in the project area and thus would not likely be significantly affected by the Proposed Project.

The eight species with a moderate to high potential to occur within the project area include the following:

- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). One elderberry shrub, which represents habitat for this species, was identified approximately 20 feet east of Taylor Road.
- California red-legged frog (*Rana aurora draytonii*). California red-legged frogs may occur in the numerous ponds in the project area and vicinity.
- Western pond turtle (*Actinemys marmorata*). Unidentified turtles were observed basking in WWTP Pond 4. Pond turtles may also occur in the numerous ponds in the project vicinity.
- Tricolored blackbird (*Agelaius tricolor*). Blackberry thickets in the project area provide potential nesting habitat for this species.
- White-tailed kite (*Elanus leucurus*). Riparian woodlands in the project area provide potential nesting habitat for this species.
- Purple martin (*Progne subis*). Riparian woodlands in the project area provide potential nesting habitat for this species.
- Pallid bat (*Antrozous pallidus*). Woodlands and open areas in the project area provide potential roosting and foraging habitat, respectively.
- Townsend's big-eared bat (*Corynorhinus townsendii*). Woodlands and open areas in the project area provide potential roosting and foraging habitat, respectively.

Other special-status wildlife species that have been identified to be within 10 miles of the project area have specific habitat requirements that are not present in the project area (e.g., vernal pools, emergent marshes, open grasslands).

## Other Protected Species

Non-special-status migratory birds and raptors have the potential to nest in trees and shrubs throughout and adjacent to the project area. Although these species are not considered special-status wildlife species, their occupied nests and eggs are protected by California Fish and Game Code Sections 3503 and 3503.5 and the Migratory Bird Treaty Act (MBTA) (50 CFR 10 and 21).

## Waters of the United States

Potential waters of the United States that could be affected by the Proposed Project include Red Ravine Creek, two unnamed tributaries to Red Ravine Creek, and a drainage ditch along Taylor Road. These features have well-defined bed and banks and clearly defined ordinary high water marks. They are connected to Secret Ravine, a tributary to Dry Creek. Dry Creek eventually flows into the Sacramento River, a navigable waterway. Therefore, the drainage features identified in the project area would be considered waters of the United States by the U.S. Army Corps of Engineers.

## Regulatory Setting

An overview of the laws and regulations that influence the management of biological resources in the project area is provided below. Although many of these regulations may not apply to the Proposed Project if the resources in question are avoided, they are discussed here to provide context in determining which biological resources are considered sensitive for the purposes of the Proposed Project and to discuss the potential impacts of the Proposed Project on these resources.

## Federal Regulations

### Federal Endangered Species Act

FWS has jurisdiction over plants, wildlife, and non-anadromous fish species listed as threatened or endangered under the federal ESA. Section 9 of the ESA protects listed species from take, which is broadly defined as actions to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” For actions involving a federal agency in which a listed species could be affected, the federal agency must consult with FWS in accordance with Section 7 of the ESA. FWS issues a biological opinion and, if the project does not jeopardize the continued existence of the listed species, issues an incidental take permit. Because the Proposed Project has the potential to result in take of federally listed species (valley elderberry longhorn beetle and California red-legged frog), the EPA has initiated consultation with the FWS.

## Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 United States Code [USC] 703) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703, 50 CFR 21, 50 CFR 10). FWS is responsible for overseeing compliance with MBTA, and the U.S. Department of Agriculture's Animal Damage Control Officer makes recommendations on related animal protection issues. The Proposed Project has the potential to affect migratory birds regulated by the MBTA.

## Clean Water Act

The federal Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The Proposed Project has the potential to affect waters regulated by the CWA. For more information concerning water quality, see the Hydrology and Water Quality section of this document.

## Invasive Species

An invasive species is defined as a species that is (1) nonnative (or alien) to the ecosystem under consideration and (2) whose introduction causes or is likely to cause economic or environmental harm to human health. Executive Order 13112 (February 3, 1999) charges that each federal agency whose actions may affect the status of invasive species will, to the extent practicable and permitted by law, address invasive species concerns.

The California Department of Food and Agriculture maintains a list of noxious weeds and advises the County Agricultural Commissioners on how to address noxious weed species. A-rated weeds are subject to eradication, containment, rejection, or other holding action at the state and county level. B-rated weeds are subject to eradication, containment, control, or other holding action at the discretion of the County Agricultural Commissioner. C-rated weeds are subject to action to retard their spread outside of nurseries at the discretion of the County Agricultural Commissioner. The introduction of invasive species can occur through various means, including construction activities that could be used as part of the Proposed Project.

## State Regulations

### California Endangered Species Act

California implemented CESA in 1984 to prohibit the take of endangered and threatened species. Under CESA, take is defined as an activity that would directly or indirectly kill an individual of a species, but the definition does not include harm or harassment, nor does it include habitat. California Department of Fish and Game (DFG) administers CESA and authorizes take through either Section 2080.1 (for species listed under ESA and CESA) or Section 2081 agreements (except for species designated as fully protected). Regarding rare plant species, CESA defers to the California Native Plant Protection Act of 1977, which prohibits importing rare and endangered plants into California, taking rare and endangered plants, and selling rare and endangered plants. The Proposed Project has the potential to affect special status species regulated by the CESA.

### California Fish and Game Code

#### Fully Protected Species

The California Fish and Game Code provides protection from take for a variety of species, referred to as fully protected species. Section 5050 lists fully protected amphibians and reptiles; Section 3515 lists fully protected fish; Section 3511 lists fully protected birds; and Section 4700 lists fully protected mammals. The California Fish and Game Code defines take as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Except for take related to scientific research, all take of fully protected species is prohibited, and DFG cannot issue take permits for fully protected species.

#### Streambed Alteration

DFG regulates activities that would interfere with the natural flow of, or substantially alter the channel, bed, or bank of, a lake, river, or stream. Such activities are regulated under California Fish and Game Code Sections 1600–1616 and require a streambed alteration agreement permit. Requirements to protect the integrity of biological resources and water quality are often conditions of streambed alteration agreements. Conditions that DFG may require include avoidance or minimization of vegetation removal, use of standard erosion control measures, limitations on the use of heavy equipment, limitations on work periods to avoid impacts on fisheries and wildlife resources, and requirements to restore degraded sites or compensate for permanent habitat losses. The Proposed Project has the potential to remove riparian habitat that would require a streambed alteration agreement.

#### Protection of Birds and Raptors

Section 3503 of the California Fish and Game Code prohibits the killing of birds and/or the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and/or the destruction of raptor nests. Typical violations include

destruction of active bird and raptor nests as a result of tree removal, and failure of nesting attempts (loss of eggs and/or young) as a result of disturbance of nesting pairs caused by nearby human activity. Consultation with DFG is required if nesting birds would be affected by construction activities from implementation of the Proposed Project.

### **Porter-Cologne Water Quality Act**

Water Code Section 13260 requires “any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements).” Under the Porter-Cologne Water Quality Act, the term ‘waters of the state’ is defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” California retains authority to regulate discharges of waste into any waters of the state, regardless of whether the U.S. Army Corps of Engineers has concurrent jurisdiction under Section 404 of the CWA.

## **Local Regulations**

### **Placer County General Plan**

The Natural Resources Element of the Placer County General Plan (2005a) contains several goals and policies addressing biological resource concerns on a County-wide basis. The applicable goals are described below.

#### **Natural Resources Element**

##### ***Water Resources***

**Goal 6.A:** To protect and enhance the natural qualities of Placer County’s streams, creeks, and groundwater.

##### ***Wetland and Riparian Areas***

**Goal 6.B:** To protect wetland communities and related riparian areas throughout Placer County as valuable resources.

##### ***Fish and Wildlife Habitat***

**Goal 6.C:** To protect, restore, and enhance habitats that support fish and wildlife species so as to maintain populations at viable levels.

##### ***Vegetation***

**Goal 6.D:** To preserve and protect the valuable vegetation resources of Placer County.



## Placer County Tree Preservation Ordinance

Placer County's tree preservation ordinance (Placer County Ordinance 12.16) requires a tree permit for most projects prior to the removal of any tree. A tree, as defined by the ordinance, is a tall woody plant native to California, with a single main stem or trunk at least 6 inches diameter at breast height (dbh), or a multiple trunk with an aggregate of at least 10 inches dbh. Foothill pine (*Pinus sabiniana*) is exempt from the ordinance.

## Environmental Impacts of the Proposed Project

- a. The Proposed Project could have a potentially significant impact, either directly or through habitat modifications, on four special-status plant species (big-scale balsamroot, Brandegee's clarkia, Butte County fritillary, and oval-leaved viburnum ) and eight special-status wildlife species (valley elderberry longhorn beetle, California red-legged frog, western pond turtle, tri-colored blackbird, white-tailed kite, purple martin, pallid bat, and Townsend's big-eared bat). These potential impacts are discussed below.

### Potential Impacts on Special-Status Plants

The Proposed Project, specifically the construction of the pipeline along the segment from the WWTP to Goulart Ranch Road and the breaching and recontouring of WWTP Ponds 2, 3, and 4, could potentially affect, either directly or indirectly through habitat modifications, special-status plant species. Impacts would include the disturbance or the direct removal of the plants during construction-related activities, such as grading, trenching, clearing, placing fill material, movement of construction vehicles, the creation of temporary construction staging areas and temporary access roads, and construction of pipelines. Because the Proposed Project has the potential to result in substantial adverse effects, either directly or through habitat modifications, on a special-status plant species, this impact would be considered a potentially significant impact. However, implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3 would make this impact *less than significant*.

**Mitigation Measure BIO-1: Conduct Focused Surveys for Special-Status Plant Species.** A qualified botanist will conduct a botanical survey for the following potentially occurring special-status plant species during the appropriate blooming season prior to initial ground disturbance to determine their presence or absence in the project area. As stated previously, the following species have the potential to occur in the area:

- Big-scale balsamroot – March through June
- Brandegee's clarkia – May through July
- Butte County fritillary – March through May
- Oval-leaved viburnum – May through June



**Mitigation Measure BIO-2: Avoid and Minimize Impacts on Special-Status Plant Species.** If the special status-status plant species are present in the project area, the biologist will implement the following measures to avoid or minimize impacts on special-status plant species.

- Redesign or modify the project to avoid direct and indirect impacts on special-status plant species, if feasible.
- Protect special-status plant species in and near the project area by installing environmentally sensitive area fencing (orange construction barrier fencing) around special-status plant populations. The environmentally sensitive area fencing will be installed at least 20 feet from the edge of the population where feasible. Where special-status plant populations are located in wetlands, silt fencing will also be installed. The location of the fencing will be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.

**Mitigation Measure BIO-3: Compensate for Impacts on Special-Status Plant Species.** If avoidance is not feasible, NSD will compensate for the loss of area occupied by special-status plants. NSD will coordinate with the appropriate resource agencies and local experts to determine whether transplantation of special-status plant species is feasible. If the agencies concur that it is a feasible mitigation measure, NSD will retain a qualified restoration ecologist to work closely with resource agency specialists and knowledgeable individuals to identify a transplantation area and ensure that the area can be managed and protected in perpetuity. Transplantation of the plants that would be affected by the Proposed Project would involve 1) identifying a suitable transplant site, 2) moving the plant material to the transplant site, and 3) monitoring the transplant sites to document recruitment and ensure survival. The restoration ecologist will develop a detailed transplantation and monitoring plan that provides information on:

- coordination efforts with agencies and knowledgeable individuals;
- methods for collecting plant material from the affected populations;
- storage and transplantation methods;
- planting plan and specifications (including planting locations and densities and irrigation system, if needed);
- measurable success criteria that can be achieved within a 5-year period;
- monitoring and reporting methods and schedule;
- funding source and responsible party; and
- adaptive management measures to ensure that the desired success criteria are achieved.

The transplantation populations will be monitored to document the survival and recruitment rates over a period of time established through consultation with the resource agencies, but not less than 5 years. The populations would be monitored annually to document success rates and identify remedial actions and ensure transplantation success. The detailed transplant and monitoring plan would provide a specific monitoring protocol and documentation process. A copy of the annual monitoring reports and the final monitoring report would be provided to the appropriate agencies for their review.

### Potential Impacts on Valley Elderberry Longhorn Beetle

Construction of the Proposed Project could potentially indirectly affect the federally threatened valley elderberry longhorn beetle. The life cycle of this beetle is dependent on elderberry shrubs (*Sambucus* sp.). One elderberry shrub with several suitable stems (those greater than 1 inch in diameter at ground level) was observed approximately 20 feet to the east of Taylor Road. One potential exit hole was observed. This shrub would not be directly affected by the construction of the pipeline along Taylor Road; however, the valley elderberry longhorn beetle could be considered indirectly affected if construction occurs within 100 feet of the shrub.

Potential direct and indirect effects on valley elderberry longhorn beetle or its habitat would be considered significant because the Proposed Project could result in substantial adverse effect, either directly or through habitat modifications, on a special-status plant species. The implementation of Mitigation Measures BIO-4 and BIO-5 would make this impact *less than significant*.

**Mitigation Measure BIO-4: Conduct a Biological Resources Education Program for Construction Crews.** Before any work, including grading, occurs in the construction area, a qualified biologist will conduct mandatory environmental education program for construction personnel about federally listed species that could potentially in the project area (valley elderberry longhorn beetle and California red-legged frog). The environmental education program will include a description, representative photographs, and legal status of each federally listed species; terms and conditions of the biological opinion; and the penalties for not complying with biological mitigation requirements. Proof of this instruction will be kept on file with NSD.

The program will emphasize the need to protect water quality and the importance of implementing the conservation measures included in this BA. The biologist will review the measures that must be implemented to protect water quality and general restrictions and guidelines that must be followed by all construction personnel to avoid or reduce effects on federally listed species during project implementation. The resident inspector will be responsible for ensuring that construction personnel adhere to the guidelines and restrictions. If new construction personnel are added to the project, the crew foreman will ensure that the personnel receive the mandatory training

before starting work. Restrictions and guidelines that must be followed by construction personnel are listed below.

- The contractor will clearly delineate the project boundaries and prohibit any off-road construction traffic outside these boundaries.
- Project-related vehicles and construction equipment will restrict off-road travel to the designated construction area.
- The contractor will provide closed garbage containers for the disposal of all food-related trash items (e.g., wrappers, cans, bottles, food scraps). All garbage will be removed daily from the project site. Construction personnel will not feed or otherwise attract fish or wildlife to the action area.
- To prevent possible resource damage from hazardous materials such as motor oil or gasoline, construction personnel will not service vehicles or construction equipment outside designated staging areas.
- Any worker who inadvertently injures or kills a federally listed species or finds one dead, injured, or entrapped will immediately report the incident to the resident inspector. The resident inspector will immediately notify NSD which will provide verbal notification to the USFWS Endangered Species Office in Sacramento, California, and to the local California Department of Fish and Game (DFG) warden or biologist within 3 working days of the incident. NSD will follow up with written notification to USFWS and DFG within 5 working days of the incident.

**Mitigation Measure BIO-5: Implement Conservation Measures for Valley Elderberry Longhorn Beetle.** Implement avoidance, minimization, and mitigation measures for indirect impacts on valley elderberry longhorn beetle according to FWS guidance in *Conservation Guidelines for Valley Elderberry Longhorn Beetle* (1999). These measures would include the following:

**Avoid and Minimize Impacts on Elderberry Shrub(s).** For elderberry shrubs found in the project area or within 100 feet of the construction disturbance area, the biologist will stake the locations of elderberry shrubs and shrub clusters before construction begins. Orange exclusion fencing will be installed around each elderberry shrub and shrub cluster.

Wherever feasible, effects on elderberry shrubs shall be avoided or minimized. Avoidance and minimization efforts shall be performed according to the FWS's *Conservation Guidelines for Valley Elderberry Longhorn Beetle* (U.S. Fish and Wildlife Service 1999). If elderberry shrubs with one or more stems measuring 1 inch or more in diameter at ground level, or shrubs with visible evidence of exit holes, are located within or adjacent to proposed construction disturbance area, the following actions shall be implemented to obtain complete avoidance:

- Install exclusion fencing around each elderberry shrub and shrub cluster.

- Avoid disturbance to valley elderberry longhorn beetle by establishing and maintaining, to the maximum extent feasible, a 20-foot buffer around elderberry shrubs identified as suitable habitat.
- Fence and flag all buffer areas and place signs along the edge of the avoidance area, as described in the valley elderberry longhorn beetle compensation guidelines.

**Consult with FWS and Implement Required Measures.** Because construction disturbance would occur within the 100 foot buffer, consultation with the FWS will be required to determine appropriate avoidance, minimization, and compensation for unavoidable impacts. Based on the valley elderberry longhorn beetle conservation guidelines, compensation may include transplanting elderberry shrubs, planting additional elderberry and associated plant species within an FWS approved on- or off-site mitigation area, or purchasing valley elderberry longhorn beetle mitigation credits at a FWS-approved mitigation bank (U.S. Fish and Wildlife Service 1999).

### Potential Impacts on California Red-Legged Frog

Construction of the Proposed Project could potentially affect the federally threatened California red-legged frog. The project area occurs within the historic range of the species and there are numerous aquatic features within 1 mile that represent suitable habitat for this species. The WWTP ponds also represent potential aquatic habitat for California red-legged frog, and Red Ravine Creek and its tributaries represent potential dispersal habitat. Upland habitat within the project area also represents refuge and dispersal habitat for the California red-legged frog. The nearest recorded occurrence is 9 miles southeast of the project area (California Natural Diversity Database 2008). Dewatering the treatment ponds and the temporary disturbance to upland habitat, loss of individual California red-legged frogs, and the disruption of movement during the breeding season could result in the reduction of the local population. Therefore, this impact would be considered potentially significant.

Because the Proposed Project is being funded in part by the EPA and has the potential to affect special status species, the EPA is consulting on special status species, including the CRLF with the FWS through Section 7 of the ESA. Along with the implementation of Mitigation Measures BIO-6 and BIO-7, any measures identified by the FWS during the formal consultation process would make these impacts *less than significant*.

**Mitigation Measure BIO-6: Determine Whether California Red-Legged Frogs Occur in the Project Area.** A California red-legged frog site assessment will be prepared concurrently with the biological assessment to support consultation with the FWS in satisfaction of the requirements of the ESA. The site assessment will be prepared in accordance with FWS' *Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog—August 2005* in all suitable aquatic habitat and surrounding areas. This document will assist FWS in determining if suitable

habitat for California red-legged frog does occur in the project area and if protocol surveys would be required.

It can either be assumed that California red-legged frogs are present or protocol-level surveys can be conducted to determine presence or absence. If protocol-level surveys are pursued, they must conform to FWS guidelines. The guidelines recommend that up to eight surveys be conducted to determine the presence of California red-legged frog in the project area. Two day surveys and four night surveys during the breeding season (April 15 through June 30 for the Sierra Nevada); and one day and one night survey during the non-breeding season (July 1 through September 30) are recommended. Each survey must take place at least 7 days apart and at least one survey must be conducted prior to August 15. The survey period must be over a minimum period of 6 weeks. If California red-legged frogs are identified at any time during the survey, no additional surveys will be necessary. Any California red-legged frog identified during the survey will be mapped and documented as part of the public record.

If the presence of California red-legged frogs or if frogs are identified during protocol-level surveys, take authorization will be sought from FWS through Section 7 consultation prior to the start of construction activities. NSD will ensure that the mitigation required through Section 7 consultation will be implemented. This would include the implementation of Mitigation Measure BIO-7 in addition to any other requirements specified by FWS.

**Mitigation Measure BIO-7: Avoid And Minimize Impacts on California Red-Legged Frogs During Pipeline Construction.** If California red-legged frogs are determined or assumed to be present, NSD or its contractor will implement the following measures before and during construction activities occurring within suitable habitat to avoid, minimize, and mitigate for both direct and indirect impacts on California red-legged frogs. Specific compensation for the loss of aquatic habitat, if required, will be determined during Section 7 consultation with FWS. FWS may determine that additional avoidance and minimization measures are necessary during the Section 7 consultation process.

**General construction considerations:**

- If frogs are found at any time during project work, construction will stop and FWS will be contacted immediately for further guidance.
- The project proponent will submit to FWS the name and credentials of a biologist or team of biologists that will monitor the project for California red-legged frog. Review and approval must occur at least 15 days prior to the onset of construction activities. Minimum credentials include a biologist who has completed at least 4 years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the California red-legged frog well as common amphibians known to occur in area. Once approved, said biologist, or team of biologists, will be referred to as the FWS -approved biological monitor for the project.



- Staging areas as well as fueling and maintenance activities will be located a minimum of 100 feet from riparian or aquatic habitats. The project proponent will prepare a spill prevention and cleanup plan.
- Best Management Practices will be implemented to protect water quality and control erosion.
- Environmental awareness training will be given to construction personnel by a FWS -approved biologist to brief them on how to recognize California red-legged frogs. In the absence of the FWS-approved biological monitor, environmental training pamphlets will also be available onsite for use by environmentally-trained leads in training new personnel. Construction personnel will also be informed that if a California red-legged frog is encountered in the work area, construction will cease, and FWS will be called for guidance before any construction activities are resumed.
- Pipeline installation:
  - All trenches created for pipeline installation will be filled in within the same day they are created.
  - In the event that trenches remain open overnight, NSD will either install exclusion fencing (defined as sediment fencing 18 to 24 inches high buried at least 6 inches into the ground) around the open area or cover the trench to reduce the likelihood of California red-legged frogs entering the trench. Prior to filling the trenches, the FWS-approved biological monitor or environmentally-trained lead will check for frogs. If any frogs are located within the trench, the FWS-approved biological monitor and FWS will immediately be contacted for guidance.
  - Pipeline installation will be conducted during the dry season. The dry season is defined generally as that time between April 15th and the first qualifying rain event on or after October 15th, defined as a frontal precipitation of more than 0.5 inch for 24 hours as reported by the nearest weather station.
  - If installation of pipeline along the alignment is conducted outside of the dry season, the FWS-approved biological monitor will survey the area for California red-legged frogs and remain onsite for all construction activities.
- WWTP Pond Dewatering and Recontouring:
  - If feasible, dewatering will occur in early fall, so as to avoid affecting breeding habitat. A FWS approved biological monitor will be placed on site just prior to and shortly after the ponds drawdown to determine whether frogs are present. If California red-legged frogs are present, FWS will be notified. During the dewatering, frogs and other wildlife should be allowed to passively disperse to nearby aquatic and upland habitat outside of the WWTP. Due to the steepness of the banks of Ponds 1 and 2, escape ramps will be placed in the ponds as they draw down to allow frogs and other wildlife to escape. Ramps will consist of wide boards or plywood and will be placed at angles sufficient enough

for animals to climb up. Ramps will be monitored daily to ensure that they remain in place. Shortly after the ponds are dewatered and the area is surveyed and cleared by a biologist, exclusion fencing will be placed up around the perimeter of the WWTP to prevent frogs and other wildlife from re-entering the site.

## Potential Impacts on Western Pond Turtle

Construction of the Proposed Project could potentially affect western pond turtles. The WWTP ponds and adjacent uplands provide suitable habitat for this species. Three unidentified turtles were observed in WWTP Pond 4 on August 29, 2008. The dewatering and recontouring of the WWTP ponds and the construction of the pipeline along the common alignment could result in the loss of habitat and the loss of individual turtles, which is considered to be a potentially significant impact. The implementation of Mitigation Measure BIO-8 would make this impact *less than significant*.

### Mitigation Measure BIO-8: Avoid and Minimize Construction-Related Impacts on Western Pond Turtle.

#### Pipeline Construction:

Forty-eight hours prior to pipeline construction, a preconstruction survey of the project area will be conducted by a biological monitor to ensure that no western pond turtles are present. If turtles are observed on or within 50 feet of the proposed work area during the preconstruction survey, the monitor will remain on site during all ground disturbances to ensure that no turtles are injured or killed by such activities.

Since it is known that western pond turtles occur in the vicinity and possibly in the WWTP ponds, biological monitors should also survey for potential nest sites within the WWTP and common alignment. If nests are found, the biological monitor will contact DFG to devise an avoidance or relocation plan.

#### WWTP Pond Dewatering:

If feasible, dewatering will occur in the fall. Prior to dewatering, DFG will be consulted to devise a plan for relocating stranded turtles and other wildlife that do not disperse on their own. A biological monitor will be placed on site just prior to and shortly after the ponds drawdown to determine whether turtles and other wildlife are stranded and require relocation. During the dewatering, turtles and other wildlife should be allowed to passively disperse to nearby aquatic and upland habitat outside of the WWTP. Shortly after the ponds are dewatered and the area is surveyed and cleared by a biologist, exclusion fencing will be placed up around the perimeter of the WWTP to prevent turtles and other wildlife from re-entering the site.



## Potential Impacts on Nesting Special-Status Birds and Non-Special-Status Migratory Birds

Construction activities such as tree and shrub removal and trimming, excavation, and grading within oak and riparian woodlands could result in direct impacts on nesting habitat for tricolored blackbirds, white-tailed kites, purple martins, as well as nesting habitat for a number of common migratory birds and raptors. Removing or causing the abandonment of active nests (with eggs or young) violates California Fish and Game Code 3503 and 3503.5 and the MBTA and would be considered significant. Implementation of Mitigation Measure BIO-9 would make this impact *less than significant*.

**Mitigation Measure BIO-9: Conduct Tree and Shrub Trimming and Removal Activities during the Non-breeding Season for Tricolored Blackbird, White-Tailed Kite, Purple Martin, and Non-Special-Status Migratory Birds and Raptors, or Retain a Qualified Biologist to Conduct a Nesting Bird Survey before Tree and Shrub Removal Activities.** To avoid removing any active special-status species or other non-special status bird and raptor nests, tree and shrub trimming and removal activities will be conducted during the non-breeding season for these species (generally between August 16 and February 28).

If tree and shrub trimming and removal activities are conducted during nesting season (generally between March 1 and August 15), a preconstruction survey will be conducted by a qualified biologist retained by NSD to determine if there are active nests present. The survey will be conducted no more than 14 days prior to construction. If the biologist determines that the area surveyed does not contain any active nests, then trimming and removal activities can commence without any further mitigation.

If an active migratory bird or raptor nest is discovered during the nesting survey, a no-disturbance buffer will be established around the nest to avoid disturbance or destruction of the nest. The distance around the no-disturbance buffer will be determined by the biologist in coordination with DFG and will depend on the level of noise or construction activity, the level of ambient noise in the vicinity of the nest, and line-of-sight between the nest and disturbance. The no-disturbance buffer will remain in place until after the nesting season (March 1 through August 15) or until the biologist determines that the young have fledged.

## Potential Impacts on Pallid Bats and Townsend's Big-Eared Bats

Construction activities such as tree removal and trimming, excavation, and grading in oak and riparian woodlands could result in direct impacts on special status roosting bats. Implementation of Mitigation Measure BIO-10 would make these impacts *less than significant*.

**Mitigation Measure BIO-10: Implement Avoidance and Minimization Measures for Impacts on Bats.** Prior to construction, the project proponent will conduct a pre-construction survey one week prior to the start of construction at dusk, when bats would be expected to be present and active. This survey will be conducted by a wildlife biologist qualified to identify potential roosting locations and the species of bats using these roosts. If no special status species bats are roosting, then no further mitigation is required.

If special status bat species, e.g., roosting bats, are present, then prior to construction the project proponent will provide for a replacement roosting facility in the form of either a bat house or several bat boxes on site. The wildlife biologist who conducted the pre-construction surveys will recommend appropriate bat exclusion devices (i.e., light weight polypropylene netting (<1/6-inch mesh), plastic sheeting, tube-type excluders, etc.) that will be installed at identified roosts to prevent roosting bats from entering prior to impacts on these areas.

- a. Implementation of the Proposed Project would have the potential to both permanently and temporarily affect riparian habitat. Construction of the pipeline alignment would likely require the removal of riparian vegetation along the unnamed drainage crossing between the WWTP and Goulart Ranch Road. The recontouring of Pond 4 could result in the removal of riparian vegetation along the perimeter of the pond. Grading for the construction of the proposed pump station and storage facilities would impact riparian vegetation associated with one of the aforementioned intermittent streams. These impacts would be potentially significant; however implementation of Mitigation Measure BIO-11 would make these impacts *less than significant*.

**Mitigation Measure BIO-11: Avoid, Minimize, and Mitigate for Impacts on Riparian Habitat.** Prior to project construction, NSD or its contractor will retain a certified arborist to conduct a survey of any riparian habitat to be affected. A list of plant species, if any that would be affected will be made to determine species to be used for any revegetation efforts.

If the final plans indicate that riparian habitat is to be affected, NSD will consult with DFG to determine whether a Streambed Alteration Agreement is necessary and implement the required mitigation measures. These measures may include:

- replanting removed trees at a minimum ratio of 1:1 based on the number and sizes of riparian trees directly affected by construction. Trees planted for mitigation should be of the same species affected by project construction and should be planted on site or off site as feasible.
- developing and implementing an oak mitigation and monitoring program, if required.
- installing orange construction fencing around the drip line of riparian trees that can be avoided to minimize soil compaction and direct damage to trunks and branches by construction machinery.

- a. Potential waters of the United States within the project area include Red Ravine and the various drainages described above. However, it is not anticipated that the Proposed Project would affect any waters of the United States. Because implementation of the Proposed Project is not expected to affect any jurisdictional waters, this impact would be *less than significant*.
- b. The Proposed Project would not interfere substantially with the movement of any native resident or migratory species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. There would be *no impact*.
- c. Construction of the Proposed Project would require the removal of trees that could be protected by Placer County's tree ordinance. This would occur as a result of constructing the pipeline in the segment from the WWTP to Goulart Ranch Road, when recontouring the drainage ponds, and possibly when constructing the concrete pad. Implementation of Mitigation Measures BIO-11, BIO-12, and BIO-13 would make this impact *less than significant*.

**Mitigation Measure BIO-12: Minimize Potential for the Long-Term Loss of Mixed Riparian Forest.** To the extent possible, NSD will minimize the potential for the long-term loss of riparian vegetation by trimming vegetation rather than removing entire shrubs. Shrubs that need to be trimmed will be cut at least 1 foot above ground level to leave the root systems intact and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary within the construction zone. Cutting will be allowed only for shrubs (all trees will be avoided) in areas that do not provide habitat for sensitive species. Disturbance or removal of vegetation will not exceed the minimum necessary to complete operations. Using hand tools (e.g., clippers, chain saw), trees may be trimmed to the extent necessary to gain access to the work sites. All cleared material/vegetation will be removed out of the riparian/stream zone. Orange construction fencing will be installed around the drip line to minimize soil compaction and direct damage to trunks and branches by construction machinery, to the extent feasible.

**Mitigation Measure BIO-13: Compensate for Disturbance of Mixed Riparian Forest.** NSD will retain a certified arborist to survey trees to be removed to determine which trees would require mitigation under the County's tree ordinance. Trees within the construction area should be measured and their dbh recorded for determination of mitigation requirements.

Per the County's tree ordinance, removed trees will be mitigated at a minimum ratio of 1:1 based on the number and sizes of trees directly affected by construction. Options for mitigation include the following measures.

- Planting trees of the same species on- site or off site as feasible. In addition, an oak mitigation and monitoring program will be developed

and implemented for the replanted trees and approved by the appropriate agencies; or

- NSD will purchase mitigation bank credits at a locally approved bank or contribute funds to the National Fish and Wildlife Foundation in-lieu fee program. NSD will provide written evidence to the resource agencies that compensation has been established through the purchase of mitigation credits. The amount to be paid will be the fee that is in effect at the time the fee is paid.
- a. No conflicts with any adopted habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans are known at this time. Therefore, there would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>V. CULTURAL RESOURCES.</b> Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 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 Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Cultural Resources

### Environmental Setting

Cultural resources typically are considered to be prehistoric archaeological resources, historic archaeological resources, and ethnographic resources. Under CEQA, paleontological resources are also considered under Section V of the checklist. These resources as they relate to the Proposed Project area are discussed below.

#### Prehistory Context

Prehistoric archaeological resources are physical properties that result from human activities that predate European contact with native peoples in America. Native Americans may have lived in the Central Valley of California for more than 10,000 years. Two sites near Sacramento (CA-Sac-370 and CA-Sac-379) have been dated by stratigraphic positions from between 12,000 and 18,000 years old (Moratto 1984:82-85; 99-102). Although the earliest prehistory of the Sacramento Valley area is not well known, circumstantial evidence points to human occupation there since the beginning of the Holocene (11,000 Before Present [BP] to Present Day). No known archeological resources have been identified in the Proposed Project area.

#### Ethnography

Ethnographic resources include sites, areas, and materials important to Native Americans for religious, spiritual, or traditional uses. The Proposed Project lies

within the ethnographic territory of the Nisenan, also referred to as the Southern Maidu (Kroeber 1925). Nisenan territory included the drainages of the Yuba, Bear, and American Rivers, as well as the lower drainages of the Feather River. This territory was bordered on the west by the Wintu, who occupied the valley floor west of the Sacramento River. To the east were the Washoe, surrounding Lake Tahoe. To the north and south were the Maidu and Miwok, respectively.

## Historical Context

Historical archaeological resources consist of the physical remains (unoccupied ruins) of structures or built objects that result from the work of European Americans. No historical resources were identified in the Proposed Project area.

Earliest European contact with the Nisenan probably occurred during the Moraga expedition into the Sacramento Valley in 1808. Subsequent visits to the area were made by American fur trappers such as Jedediah Strong Smith. One consequence of these visits was the introduction of malaria, which in 1833 resulted in a massive epidemic that killed from 50 to 75% of the Nisenan population (Cook 1955). In 1839, John Sutter established the first permanent European American settlement in the Sacramento Valley at Sutter's Fort in what is now the city of Sacramento.

Settlement of the Sacramento Valley area by ranchers and farmers developed slowly through the 1840s until the discovery of gold in the Mother Lode. The influx of tens of thousands of miners and related commercial enterprises and settlers into the area initiated the American period in California history and drastically altered the early Nisenan culture (Beals 1933). Gold discoveries in the 1850s and 1860s in Auburn Ravine and Secret Ravine resulted in dramatic growth in Placer County. By 1859, lots were being sold in the new town of Lincoln, established as the northern terminus of the California Central Railroad (Gudde 1969).

## Paleontological Resources

Paleontology is defined as a science dealing with the life of past geological periods as known from fossil remains. Paleontological resources include fossil remains, as well as fossil localities and formations that have produced fossil material in other nearby areas. These resources can be important educational resources for the reasons mentioned, and are nonrenewable once destroyed. CEQA offers protection for these sensitive resources and requires that they be addressed during the EIR process.

A search of the University of California Museum of Paleontology collections database did not identify any evidence of significant paleontological resources in the project area. However, 30 paleontological resources have been recovered in Placer County with the closest discovery 20 miles east of the project area.



## Methodology

Efforts to locate cultural resources in the project area entailed conducting a records search, contacting the Native American Heritage Commission and Native American representatives, consulting with historical societies, and conducting a cultural resources survey on August 29, 2008.

On August 14, 2008, ICF Jones & Stokes conducted a records search at the North Central Information Center (NCIC), California Historical Resources Information System. The NCIC's maps of previous cultural resource studies and records were consulted, and the locations were mapped on 7.5-minute topographic maps. In addition to the maps of previous studies and recorded cultural resources, the following sources at the NCIC were consulted:

- California Historical Landmarks (California Department of Parks and Recreation 1996).
- The California Inventory of Historic Resources (California Department of Parks and Recreation 1976).
- The National Register of Historic Properties (National Park Service 2008).
- The California Register of Historical Resources (California State Register of Historical Resources 2008).
- The California Points of Historical Interest inventory (1992 and updates).
- *Historical, Architectural, and Archaeological Resources of Placer County, California* (Ogden Environmental and Energy Services Co. 1992).
- The Directory of Properties in the Historical Resources Inventory (California State Office of Historic Preservation 2003a).
- The Archaeological Determinations of Eligibility for Placer County (California State Office of Historic Preservation 2003b).

On August 18, 2008, ICF Jones & Stokes staff requested the Native American Heritage Commission to consult its sacred lands file and provide a list of potentially interested Native American representatives for the project area. Contact letters describing the project area and location were sent to the Native American representatives on August 22, 2008. In addition, letters requesting information regarding historic resources in the project area were sent to the Placer County Historical Society and the Placer County Museum. To date, no responses have been received.

## Regulatory Setting

### Federal Regulations

As mentioned in Chapter 1, Introduction, the Proposed Project would be funded in part by the EPA. Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of their



undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, Protection of Historic Properties, can be found in 36 CFR Part 800.

The goal of the Section 106 review process is to consider sites that are determined to be eligible for listing on the National Register of Historic Places. The criteria for determining National Register eligibility are found in 36 CFR Part 60. Recent amendments to the NHPA (1986 and 1992) and subsequent revisions to the implementation regulations have strengthened the provisions for Native American consultation and participation in the Section 106 review process. To this end, a cultural resources inventory report has been prepared (ICF Jones & Stokes 2008). The California State Historic Preservation Officer has reviewed the cultural resources inventory report and concurred with the findings that there are no significant cultural resources within the project area (Donaldson pers. comm.).

## State Regulations

CEQA requires that lead agencies determine whether projects may have a significant impact on archaeological and historical resources. This determination applies to those resources that meet significance criteria, qualifying them as "unique," "important," listed on the California Register of Historical Resources, or eligible for listing. If the agency determines that a project may have a significant impact on a significant resource, the project is determined to have a significant impact on the environment, and these impacts must be addressed. If a cultural resource is found not to be significant under the qualifying criteria, it need not be considered further in the planning process.

CEQA emphasizes avoidance of archaeological and historical resources as the preferred means of reducing potentially significant impacts. If avoidance is not feasible, an excavation program or some other form of mitigation must be developed to mitigate the impacts.

## Environmental Impacts of the Proposed Project

- a. There are no historical resources in the project area as defined in Section 15064.5. Therefore, there would be *no impact*.
- b. No unique archaeological resources as defined in Section 15064.5 are known to be located in the project area. There is a possibility, however, of unanticipated and accidental archaeological discoveries during ground-disturbing project-related activities. Any unanticipated and accidental archaeological discoveries during project implementation have the potential to affect unique archaeological resources. Implementation of Mitigation Measure CR-1 would reduce this impact to *less than significant*.

**Mitigation Measure CR-1. Stop Work if Cultural Resources are Identified and Incorporate Appropriate Measures.** If any prehistoric or

historic artifacts, or other indications of archaeological resources are found once project construction is underway, all work in the immediate vicinity must stop and NSD will be immediately notified. An archaeologist meeting the Secretary of Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, will be retained to evaluate the finds and recommend appropriate mitigation measures for the inadvertently discovered cultural resources. These measures will be implemented to ensure that the impacts on these resources would be *less than significant*.

- a. A search of the database at the University of the California Museum of Paleontology did not identify any formally documented paleontological sites within or near the project area. However, there is a possibility of unanticipated and accidental paleontological discoveries during ground-disturbing project-related activities. Unanticipated and accidental paleontological discoveries during project implementation have the potential to affect significant paleontological resources. Implementation of CR-2 will reduce this impact to *less than significant*.

**Mitigation Measure CR-2. Stop Work if Paleontological Resources are Identified and Incorporate Appropriate Measures.** If any paleontological resources (i.e., fossils) are found once project construction is underway, all work in the immediate vicinity must stop and NSD will be immediately notified. A qualified paleontologist will be retained to evaluate the find and recommend appropriate mitigation measures for the inadvertently discovered paleontological resources. These measures will be implemented to ensure that the impacts on these resources would be *less than significant*.

- a. No known human remains are located in the project area; therefore, no impacts are expected. However, it is possible that construction activities could result in the discovery of human remains. This would be considered a potentially significant impact. Implementation of Mitigation Measure CR-3 would reduce this impact to *less than significant*.

**Mitigation Measure CR-3. Stop Work if Human Remains are Found and Implement Appropriate Measures.** If human remains are discovered, all work must stop in the immediate vicinity of the find and the County Coroner must be notified, according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and procedures outlined in §15064.5(d) and (e) will be followed.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>VI. GEOLOGY AND SOILS.</b> Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. 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"/>
2. Strong seismic groundshaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. 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 an onsite or offsite 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 (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

# Geology

## Environmental Setting

### Regional Geology and Topography

The project area is located in the Sierra Nevada geomorphic province. The Sierra Nevada is a strongly asymmetric mountain range with a long gentle western slope and a high and steep eastern escarpment. It averages 50 to 80 miles wide, and it runs through eastern California for more than 400 miles—from the Mojave Desert on the south to the Cascade Range and the Modoc Plateau on the north (Bateman and Wahrhaftig 1966).

### Geology and Topography of the Project Area

The project area is located in the foothills of the Sierra Nevada range, near Newcastle, California. The physiography of the foothills in this region is generally believed to be the result of plutonic (igneous) intrusions, localized volcanism, and deposition from ancient rivers and streams (Schaffer 1997). Within the project area, the lithology consists of Mesozoic dioritic rocks (quartz diorite and diorite), with a local mantle of thin alluvium in areas (Wagner et al. 1987).

Elevations range from approximately 500 to 800 feet. Topography is variable, ranging from nearly level to steep.

### Soils in the Project Area

The soils in the project area have been mapped by the U.S. Department of Agriculture, Soil Conservation Service (now called the Natural Resources Conservation Service [NRCS]) and are described in the Soil Survey of Placer County, California, Western Part (Rogers 1980). Soil information is also available at the NRCS' Web Soil Survey (Natural Resources Conservation Service 2007). The soil series mapped in the project area are mainly Caperton series, but include areas of rock outcrop complex. Other soils mapped in the project area include the Andregg and Sierra series. These soils generally have a rapid runoff rate and a severe hazard of erosion (Natural Resources Conservation Service 2007). Soil types generally correspond to topography, with ridges having larger, coarser materials, and swales and flatter areas having smaller, finer materials. Soil map units in the project area exhibit low to moderate hazard for corrosion of steel pipes. Soil map units in the project area do not exhibit any shrink-swell characteristics (i.e., they are not expansive).

Caperton soils are gravelly coarse sandy loam or coarse sandy loam and have less than 18 percent clay (Natural Resources Conservation Service 2001a). Caperton

soils are on uplands. They formed in material weathered from coarse-grained acid igneous rock, mainly granodiorite and quartz diorite. Elevations are 200 to 1,500 feet. Caperton soils are somewhat excessively drained, with medium to rapid runoff and moderately rapid permeability. Andregg soils are similar to Caperton soils, but are 24 to 40 inches deep (Natural Resources Conservation Service 2001b).

Sierra soils consist of coarse sandy loam subtended at 8 inches by heavy loam and clay, and are 40 to 80 inches deep (Natural Resources Conservation Service 2001c). These soils are well-drained and exhibit slow to rapid runoff, with moderately slow permeability. Sierra soils occur on gently sloping to very steep relief along the western footslopes of the Sierra Nevada Mountains at elevations of 200 to 3,500 feet. The soils formed in residuum from granitic rocks.

### **Liquefaction**

Liquefaction is a phenomenon in which the strength and stiffness of unconsolidated sediments are reduced by earthquake shaking or other rapid loading. Based on the sediment characteristics of the soils, the nonsaturated nature of the soils, and the low ground-shaking hazard in the vicinity, liquefaction hazard is expected to be low for most of the project area.

## **Seismic Conditions**

Seismic hazards include earthquake fault ground rupture and ground shaking (primary hazards); and liquefaction and earthquake-induced slope failure (secondary hazards). These hazards are described below.

The project area is not located in a region of the United States that is considered seismically active. However, the region is part of the Foothills Fault System and earthquakes have occurred in the vicinity of the project area in the past and may be expected to occur again in the near future. Scientists have recently discovered that the foothills have active faults and are currently mapping these faults.

### **Surface Rupture and Faulting**

There are no recognized active faults within a 20-mile radius of the project area (Hart and Bryant 1997; International Conference of Building Officials 1997; Jennings 1994). Accordingly, there are no faults in an Alquist-Priolo Earthquake Fault Zone (Hart and Bryant 1997). The purpose of the Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) is to regulate development near active faults to mitigate the hazard of surface rupture.

The project area, however, is located in the Foothills fault system. The Foothills fault system runs from about Oroville in the north to east of Fresno in the south and is a complex series of northwest-trending faults that are related to the Sierra Nevada uplift. It has not been mapped by the California Geological Survey (CGS) as an independent seismogenic source in developing the seismic hazard maps for California.

Several pre-Quaternary faults associated with this system are located within a 20-mile radius of the project area, including the Spenceville, Deadman, Maidu, and Gillis Hill faults, and the Bear Mountains, Melones, and Wolf Creek fault zones (Higgins and Clinkenbeard 2006). None of these faults or fault zones are in Alquist-Priolo Earthquake Fault Zones (Hart and Bryant 1997). Of all the faults described above, the Deadman fault is closest to the project area, located within a few miles of it.

According to the U.S. Geological Survey (USGS), the most recent fault movements at the Spenceville fault, located approximately 4 miles northeast of the project area, occurred around 100,000 years ago (U.S. Geological Survey 1996). Earthquake activity occurs more recently, with numerous shaking occurrences every year along the major fault zones. These quakes are capable of producing a magnitude (M) of M 6.5 (U.S. Geological Survey 1996).

### **Ground-Shaking Hazard**

The project area is located in a region of California characterized by a relatively low ground-shaking hazard. Based on a probabilistic seismic hazard map that depicts the peak horizontal ground acceleration values exceeded at a 10% probability in 50 years (California Geological Survey 2006; Cao et al. 2003), the probabilistic peak horizontal ground acceleration values in the Proposed Project area range from 0.1 to 0.2g, where 1 g equals the force of gravity, thus indicating that the ground-shaking hazard in the project area is low. Farther to the east and west, the ground-shaking hazard increases, coinciding with the increase in abundance of associated faults and fault complexes (California Geological Survey 2002; Cao et al. 2003).

The project area is located in Uniform Building Code (UBC) Seismic Hazard Zone 3. The Zone 3 designation indicates earthquakes in the region have the potential to make standing difficult and to cause stucco and some masonry walls to fall. The UBC recognizes no active seismic source in the project area vicinity (International Conference of Building Officials 1997).

### **Seismically-Induced Ground Failure and General Slope Stability**

The existing potential for seismically-induced landslides in the project area is expected to be low because of the low potential for seismic events. Other types of gravitational landslides, however, may occur because of the variable topography and localized steepness. A review of aerial photographs and site reconnaissance determined that the project area is not located in a landslide runoff zone.

## **Naturally-Occurring Asbestos Risk**

Asbestos is classified as a known human carcinogen by state, federal, and international agencies. State and federal health officials consider all types of asbestos to be hazardous. Information on the health effects of asbestos can be



found in the *Toxicological Profile for Asbestos* by the Agency for Toxic Substances and Disease Control (2001).

Naturally-occurring asbestos (NOA) can form in several types of geologic settings depending on the rock types and geologic history of an area (Higgins and Clinkenbeard 2006). Although dozens of chrysotile asbestos and amphibole asbestos mines and prospects have been identified in Placer County, the closest mapped areas of NOA are located 2 or 3 miles east and northeast of the project area (Higgins and Clinkenbeard 2006). The project area's geology primarily consists of granitic rock, which is not suitable to the formation of NOA. These rocks typically show little or no metamorphism, and are relatively undeformed.

## Regulatory Setting

### Federal Regulations

#### Clean Water Act 402 and National Pollutant Discharge Elimination System

The CWA is discussed in detail in the Hydrology and Water Quality section of this document. However, because CWA Section 402 is directly relevant to excavation, additional information is provided below.

Amendments to the CWA in 1987 added Section 402p, which establishes a framework for regulating municipal and industrial stormwater discharges under National Pollutant Discharge Elimination System (NPDES) program. The EPA has delegated to the State Water Resources Control Board (SWRCB) the authority for the NPDES program in California, which is implemented by the state's nine regional water quality control boards. Under the NPDES Phase II Rule, construction activity disturbing 1 acre or more must obtain coverage under the state's General Construction Permit. General Construction Permit applicants are required to prepare a Notice of Intent and a SWPPP and implement and maintain BMPs to avoid adverse effects on receiving water quality as a result of construction activities, including earthwork.

### State Regulations

#### Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Act (Public Resources Code [PRC] 2621 *et seq.*), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (Earthquake Fault Zones). It also defines criteria for identifying active faults,



giving legal weight to terms such as “active,” and establishes a process for reviewing building proposals in and adjacent to Earthquake Fault Zones.

### **Seismic Hazard Mapping Act**

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC 2690–2699.6) is intended to reduce damage resulting from earthquakes. The Seismic Hazards Mapping Act addresses earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites in Seismic Hazard Zones until appropriate site-specific geologic or geotechnical investigations have been carried out, and measures to reduce potential damage have been incorporated into the development plans.

### **2007 California Building Standards Code**

The State of California’s minimum standards for structural design and construction are given in the California Building Standards Code (CBSC) (California Code of Regulations Title 24). The CBSC is based on the UBC (International Code Council 1997), which is used widely throughout United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for California conditions with numerous, more detailed or more stringent regulations<sup>2</sup>. The CBSC requires that “classification of the soil at each building site be determined when required by the building official” and that “the classification will be based on observation and any necessary test of the materials disclosed by borings or excavations.” In addition, the CBSC states that “the soil classification and design-bearing capacity will be shown on the (building) plans, unless the foundation conforms to specified requirements.” The CBSC provides standards for various aspects of construction, including excavation, grading, and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss.

## **Local Regulations**

### **Geotechnical Investigations**

As part of the Placer County General Plan (Placer County 2005a), the County requires the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards. Additionally, Article 15.48 of Chapter 15 of the Placer County Code states a soil

<sup>2</sup> Local jurisdictions have the right/responsibility to adopt building codes, and they can choose to use the Uniform Building Code (UBC), California Building Code (CBC), or something similar, although certain aspects of the project would be required to comply with all provisions of the California Building Standards Commission.

or geologic investigation report should be performed in areas of known or suspected geological hazards, including landslide hazards and hazards of ground failure stemming from seismically induced ground shaking (Ord. 5407-B § 13, 2006; Ord. 5056-B [part], 2000).

One geotechnical report has been prepared along Ophir Road/Taylor Road (Blackburn 2006) and another is currently being prepared for the area near the WWTP. The results of the completed geotechnical study are discussed below. The results of the study currently underway will also be considered during final design and incorporated into the construction specifications.

### **Local Grading and Erosion Control Ordinances**

Article 15.48 of Chapter 15 of the Placer County Code describes permitting and issues related to grading, erosion, and sediment control. It also describes special restrictions and exemptions. A grading permit will be required for the Proposed Project. As part of the permit, the project proponent must submit a grading and erosion control plan, vicinity and site maps, and other supplemental information. Standard conditions in the grading permit include a description of BMPs similar to those contained in a SWPPP.

### **Local Construction Specifications**

Placer County General Construction Specifications (Placer County 2005b) contain information on grading, subbases and bases, surfacings and pavements, structures, drainage facilities, right-of-way and traffic control facilities, and materials.

### **Placer County General Plan**

Section 1 of the Placer County General Plan requires that erosion and sediment control measures be in place for all ground-disturbing construction projects that occur on hillsides or adjacent to waterways (Placer County 2005a). Additionally, goals, policies, and implementation programs of the Health and Safety section (Section 8) of the Placer County General Plan (Placer County 2005a) that are aimed at reducing the seismic risk to people and property and applicable to the Proposed Project are described below. Any substantial conflict between the Proposed Project and these goals, policies, and implementation programs would constitute a significant impact.

### **Seismic and Geological Hazards Goals and Policies**

*Goal 8.A:* To minimize the loss of life, injury, and property damage due to seismic and geological hazards.

*Policy 8.A.1.* The County will require the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards (i.e., ground shaking, landslides, liquefaction, critically expansive soils, avalanche).

*Policy 8.A.9.* The County will require that the location and/or design of any new buildings, facilities, or other development in areas subject to earthquake activity minimize exposure to danger from fault rupture or creep.

*Policy 8.A.10.* The County will require that new structures permitted in areas of high liquefaction potential be sited, designed, and constructed to minimize the dangers from damage due to earthquake-induced liquefaction.

## Environmental Impacts of the Proposed Project

- a.1. The project area is not traversed by any recognized active faults. The implementation of Environmental Commitments EC-6, Prepare a Geotechnical Report and Implement Report Recommendations; EC-7, Implement Seismic Design Standards into Project Design, and EC-10, Incorporate Placer County General Construction Specifications into Project Design, would ensure that the potential for any damage associated with earthquakes or fault ruptures is less than significant. These commitments ensure that the recommendations made in the geotechnical reports (Blackburn 2006 and the ongoing geotechnical investigations) and the UBC Seismic Zone 3, UBC and/or CBSC, and Placer County General Plan standards will be incorporated into the project design. Therefore, this impact would be *less than significant*.
- a.2. The probabilistic peak horizontal ground acceleration values in the project area range from 0.1 to 0.2g, where 1 g equals the force of gravity, thus indicating that the ground-shaking hazard in the project area is low. The implementation of Environmental Commitments EC-6, EC-7, and EC-10 would ensure that the risk of damage from secondary ground shaking would be *less than significant*.
- a.3. As discussed above, the liquefaction hazard in the project area is low. The implementation of Environmental Commitments, EC-6, EC-7, and EC-10 would ensure that the pipeline is constructed in a manner to minimize potential damage or hazard associated with the risk of liquefaction. Therefore, this impact would be *less than significant*.
- a.4. The potential for seismically-induced landslides is relatively low because of the lack of active faults or fault zones in the project area. The hilly terrain may slightly increase the potential for other gravitational landslides; however, based on a review of aerial photographs and site reconnaissance, the project area is not located in a landslide runout zone. Furthermore, implementation of Environmental Commitments, EC-6, EC-7, and EC-10 would ensure that this impact would be *less than significant*.
- b. Implementation of the Proposed Project would have the potential to result in increased soil erosion and the loss of topsoil through the removal of the upper layer of soil during construction, the use of heavy construction equipment, and the removal and placement of fill (during pipeline construction and filling the treatment ponds). However, implementation of

Environmental Commitments EC-7, EC-8, Prepare and Implement a Stormwater Pollution Prevention Plan, EC-9, Prepare and Implement a Grading and Erosion Control Plan, and EC-10, would ensure that this impact is *less than significant*. Potential impacts related to water quality are addressed further in the Hydrology and Water Quality section of this document.

- c. As discussed above, the potential for seismically-induced and/or gravitational landslides, or the possibility of other geological hazards, is relatively low because of the lack of active faults or fault zones throughout the project area. In addition, the soils in the project area were determined to have a low potential for liquefaction and are not considered to be unstable. Implementation of Environmental Commitments EC-6, EC-7, and EC-10 would ensure that this impact is *less than significant*.
- d. Because of the low clay content, soil map units in the project area do not exhibit any shrink-swell characteristics (i.e., they are not expansive). Soils are not considered to be expansive as defined in Table 18-1-B of the UBC or by the geotechnical study that has been conducted in the project area (Blackburn 2006). Implementation of Environmental Commitments EC-6, EC-7, and EC-10 would ensure that any potential issues related to soil instability would be *less than significant*.
- e. No septic systems are proposed as part of the Project. Implementation of the Proposed Project would result in connection with an existing treatment system in the SPMUD service area. There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>VII. HAZARDS AND HAZARDOUS MATERIALS.</b> Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or involve handling 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 checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and 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 within the vicinity of a private airstrip and 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 checked="" type="checkbox"/>	<input type="checkbox"/>
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Hazards and Hazardous Materials

## Environmental Setting

There are no known hazardous materials sites in the project vicinity. However, implementation of the Proposed Project would require the use of small quantities of hazardous materials, including petroleum and other chemicals, to operate and maintain construction equipment.

## Regulatory Setting

### Federal Regulations

Hazardous materials in the project area are subject to applicable federal regulations, including the Resource Conservation Act and the Comprehensive Environmental Response, Compensation, and Liability Act. Other applicable federal regulations are contained primarily in CFR Titles 29, 40, and 49.

### State Regulations

California regulations are as stringent as or more stringent than federal regulations. The EPA has granted the State of California primary oversight responsibility for administering and enforcing hazardous waste management programs. State regulations require planning and management to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human and environmental health.

## Environmental Impacts of the Proposed Project

- a., b. Construction of the Proposed Project would involve the use of heavy equipment and small quantities of hazardous materials. Potentially hazardous materials would include petroleum and other chemicals used to operate and maintain construction equipment. The Proposed Project could also create a hazard to the public or the environment from accidental spills or other reasonably foreseeable upset.

As described in Chapter 2, Proposed Project and Alternatives, environmental commitments would be implemented as part of the Proposed Project. Several of these environmental commitments address the handling of hazardous materials and the protocol for addressing spills, including Environmental Commitments EC-1 and EC-8. Although there is a potential for risks associated with the handling and accidental spills of hazardous materials, with implementation of the environmental commitments this impact would be *less than significant*.

- c. The ABC Honeytree Preschool is located within 0.25 mile of the project area. Although construction of the Proposed Project has the potential to



involve the use of small amounts of hazardous materials as described above, none of these materials would be used in the immediate vicinity of the school and would not pose a significant threat to a school. Furthermore, implementation of Environmental Commitments EC-1 and EC-8 ensure that this impact would be *less than significant*.

- d. The project area is not located on a Superfund or other National Priority List site, and therefore would not pose a significant hazard to the public or the environment through exposure to such sites. There would be *no impact*.
- e., f. The Proposed Project is not located in the planning area for an airport, nor would the Proposed Project create any hazards or obstructions for airport traffic. In addition, the project area is not located within 2 miles of any private airstrips. Therefore, there would be *no impact*.
- g. Construction traffic could potentially impede the safe passage of emergency service providers within the project area. For example, construction vehicles or activities could block access routes in the event of an emergency. With implementation of Environmental Commitment EC-2, Prepare and Implement a Traffic Management Plan, this impact would be *less than significant*.
- h. The land in the immediate vicinity of the Proposed Project mainly consists of forested land with scattered residences. Wildfires present a high risk in this area during the dry summer months. The presence of construction vehicles and increased traffic and the use of construction equipment could temporarily increase the risk of fire hazard. Implementation of Mitigation Measure HAZ-1 would ensure this impact would be *less than significant*.

**Mitigation Measure HAZ-1. Implement Fire Hazard Control**

**Measures.** NSD will consult with the Newcastle Fire Protection District and implement the required safety measures.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact	
<b>VIII. HYDROLOGY AND WATER QUALITY.</b>					
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in 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 checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?	<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 the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Create or contribute runoff water that 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.	Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j.	Contribute to inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

# Hydrology and Water Quality

## Environmental Setting

### Surface Water

The major surface water feature in the vicinity of the Proposed Project is Red Ravine Creek. Surface water from the project area flows to Red Ravine Creek during substantial storm events. Red Ravine Creek is a tributary to Secret Ravine, Miners Ravine, and Dry Creek, which is tributary to the Sacramento River. None of these tributaries are on the CWA Section 303d list for impaired water bodies. Only the Sacramento River is listed for being impaired from mercury and unknown toxicity from Knights Landing to the Delta (State Water Resources Control Board 2006). There are no designated wild or scenic rivers in the project area.

### Groundwater

The project area overlies the Sacramento Valley Groundwater Basin, North American Subbasin as defined by the California Department of Water Resources (DWR). The groundwater in the North American Subbasin is generally good with areas of marginal quality (California Department of Water Resources 2006). The basin boundaries extend from the Feather River to the west, the Bear River to the north, the Sacramento River to the south, and the Sierra Nevada foothills to the east. The basin is approximately 548 square miles and lies beneath the Counties of Sutter, Placer, and Sacramento (California Department of Water Resources 2006).

### Flooding

The Federal Emergency Management Agency (FEMA) delineates 100-year floodplains and publishes the information on Flood Insurance Rate Maps. According to FEMA, the proposed project is located within Zone 'X', which is defined as an area outside of the 500-year floodplain (FEMA 1998).

## Regulatory Setting

### Federal Regulations

#### Clean Water Act

Important applicable sections of the federal CWA (33 USC 1251–1376) are identified below.

- Sections 303 and 304 provide water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for any federal permit that proposes an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of CWA. Certification is provided by the Regional Water Quality Control Board (RWQCB).
- Section 402 establishes the NPDES permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is administered by the RWQCB.

## State Regulations

### Porter-Cologne Water Quality Act

The State of California's Porter-Cologne Water Quality Control Act (California Water Code, Section 13000 *et seq.*) provides the basis for water quality regulation in California. This Act requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. Based on the report, the RWQCBs issue waste discharge requirements to minimize the effect of the discharge.

## Local Regulations

Placer County Code, Chapter 13 Public, Article 13.20 Sewage Lagoons, 13.20.060 Design Parameters and Limitations, includes requirements and design standards that waste treatment facilities must adhere to when designing sewage detention basins or sewage lagoons. Placer County has regulations pertaining to the placement of sewer pipe lines. The regulation states that sewer lines cannot be located within 50 feet of residential wells.

Under Placer County Codes Chapter 13, Article 13.12, Section 13.12.050 Variances, Placer County could make an exemption to a code if the Proposed Project could not meet the County's requirements. Application for variances would be filed and processed with the engineer and environmental health officer.

## Environmental Impacts of the Proposed Project

- a., f. Under existing conditions, the Newcastle WWTP has the potential to violate its wastewater discharge requirements during high storm flow events if wastewater overflows the treatment ponds and discharges to nearby surface waters. Implementation of the Proposed Project would address this impact. As described in Chapter 2, Proposed Project and Alternatives, the pump station would be designed to contain the average dry weather flow (adwf) within the well and would use the storage capacity of Pond 1 to contain the peak wet weather flow (pwwf). The design capacity of the well would be sufficient to prevent the need to use an emergency overflow basin during pump cycle operations.

However, at wastewater inflows greater than the well's capacity, the Proposed Project has been designed so that excess wastewater would spill into the storage basin (Pond 1 or another suitable structure). Detaining wastewater in the storage basin could result in potential contamination of groundwater supplies if wastewater migrated into the groundwater. Implementation of Mitigation Measures HYD-1 will ensure that regardless of the design that is chosen, the storage basin will be constructed to minimize the risk of groundwater and surface water contamination. If the design incorporates a detention basin or lagoon, implementation of HYD-2 will further ensure that this impact would be *less than significant*.

**Mitigation Measure HYD-1: Design the Wastewater Storage Basin to Protect Groundwater and Surface Water Sources.** The design for the storage basin will include a layer that is impenetrable to water movement from wastewater stored in the basin to the groundwater aquifer below. This layer will ensure that the known constituents of the sewage waste will not migrate to the groundwater aquifer below the basin.

If the storage basin is a detention basin or lagoon, design and construction of this component will comply with the Placer County Code relating to the construction of detention basins or lagoons. The ordinance states that lagoons must be sealed, as approved by the environmental health division, to reduce permeability  $1 \times 10^{-6}$  centimeter per second or slower, as determined by a testing laboratory recognized as competent in soil mechanics. Percolation must not be considered in the hydraulic balance calculations for lagoons. Additionally, lagoons or detention basins must be protected from runoff, water intrusion, and migrating subterranean water intrusion by diversion ditches and filter drains.

**Mitigation Measure HYD-2: Continue to Monitor the Groundwater Using the Existing Monitoring Wells.** According to Placer County Code, groundwater monitoring is required for wastewater treatment facilities that detain wastewater on site or apply wastewater to land for the purposes of disposal. As part of this measure, groundwater would continue to be monitored if required and any violations and consequences would be assessed by the Central Valley Regional Water Quality Control Board.

In addition, construction activities also have the potential to affect water quality. For example, earth-disturbing activities, including open trenching for the pipeline and grading for the pump station, would result in soil disturbance that could temporarily increase the hazard of erosion and sedimentation. Maintenance of construction equipment would require the use of hazardous materials such as gasoline, engine oil, and concrete, which could contaminate runoff and surface waters in the project area vicinity.

Discharge of sediment or hazardous materials into surface waters during construction could result in violation of certain water quality standards. Implementation of Environmental Commitment EC-8, Prepare and Implement a Stormwater Pollution Prevention Plan, and EC-9, Prepare and Implement a Grading and Erosion Control Plan, would ensure that construction-related impacts would be less than significant.

- b. Implementation of the Proposed Project would not include construction of new groundwater wells or any other activities that would require the withdrawal of groundwater from the aquifer. The Proposed Project would have a positive impact on groundwater recharge by decommissioning the storage ponds and taking out the impenetrable layers that currently restrict the downward movement of water in the lagoon areas and increasing the amount of recharge potential. Therefore, this impact would be *less than significant*.
- c., d. The Proposed Project would make topographic changes to the existing landscape, but would not involve the alteration or change in course of a stream or river. Pre-project contours along the pipeline would be restored to the original grade after construction to direct drainage towards Red Ravine. The placement of fill in the existing treatment ponds (Ponds 2, 3, and 4) has the potential to result in changes in topography; however, the topography of the ponds would be restored to mimic natural drainage contours. Based on the existing and planned topography of the site, these changes are not anticipated to result in significant impacts related to storm flow, drainage, or flooding potential.

Implementation of the Proposed Project would result in an overall beneficial impact on Red Ravine Creek by eliminating wastewater overflows into Red Ravine Creek. For these reasons, these impacts would be *less than significant*.

- e. No large impervious areas are planned as part of the Proposed Project and natural contours would be restored to allow stormwater to flow along natural drainage patterns. As mentioned above, any potential impacts related to stormwater quality would be minimized through implementation of EC-8 and EC-9.

The Proposed Project would eliminate the risk of wastewater overflowing the treatment system during storm events. For these reasons, this impact would be *less than significant*.

- g., h. The Proposed Project would not result in the placement of housing within a 100-year flood hazard area. The Proposed Project would not expose people to loss, injury, or death involving flooding. These impacts would be *less than significant*.
- i. The Proposed Project would not expose people or structures to a significant risk from flooding. The project area would be located outside of the 100-year floodplain. The pump station and emergency storage basin would be designed to handle high storm flow in the wastewater system so that overflow events would be prevented. Implementation of EC-6 and EC-7 would ensure that geotechnical and seismic conditions were considered in the design of the pump station, pipeline, and storage basin to minimize impacts that could occur from system failure. For these reasons, this impact would be *less than significant*.

- j. Implementation of the Proposed Project would not contribute to inundation by a seiche, tsunami, or mudflow. The project area is not near a large body of water such as a lake or bay. A mudslide is not likely to occur because of the soil types present in the area and the relatively small area that would be displaced for the construction of the pipeline. Therefore, there would be ***no impact***.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>IX. LAND USE AND PLANNING.</b> Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, 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"/>

## Land Use Planning

### Environmental Setting

The Proposed Project is located in an area that is designated for rural residential use by the Placer County General Plan (Placer County 1994). The Proposed Project would affect parcels located within existing road rights-of-way or parcels that are zoned RA-B-100. This zoning designation stands for residential agricultural use with a 100,000-square-foot minimum lot area for building sites. Pipelines are an allowable use within both the rights-of-way and the RA zoning designation.

The surrounding land uses are primarily residential with some open space. The site of the WWTP is located near Red Ravine Creek and is primarily surrounded by trees. The project area is covered by Phase 1 of the Placer County Conservation Plan (PCCP). The PCCP is intended to address the impacts associated primarily with unincorporated growth in west Placer County and growth associated with the build-out of Lincoln's updated General Plan.

### Environmental Impacts of the Proposed Project

- a. Implementation of the Proposed Project would not result in the physical division of an established community. Elements to be constructed as part of the Proposed Project would occur within existing public roadways and intersections and would not require the displacement or relocation of any housing structures. Therefore, there would be *no impact*.



- b. The Proposed Project components have been designed to improve and expand wastewater treatment facilities in the project area, as documented in Chapter 2, Proposed Project and Alternatives. The Proposed Project is consistent with the land use goals and policies of the adopted Placer County General Plan and is consistent with the zoning of the affected parcels. Transference of the NSD service area to the SPMUD service area would require approvals by SPMUD and Placer County Local Agency Formation Commission (LAFCO) and would be consistent with applicable land use plans and ordinances. There would be *no impact*.
  
- c. The project area falls within the PCCP area. The PCCP includes a program designed to ensure the continued conservation of threatened and endangered species in Placer County and to resolve potential conflicts between otherwise lawful urban development activities and the conservation of threatened and endangered species on non-federal land in Placer County. Because of the nature of the Proposed Project and its construction primarily within existing public roadways, the Proposed Project would not conflict with the objectives of the PCCP. There would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>X. MINERAL RESOURCES.</b> Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Mineral Resources

### Environmental Setting

Placer County is named after the placer mining method, which was used for extracting gold. The County was once the location of nearly 200 placer and lode mines, four of which (Alabama, Highway 40, Mary Len, and Sicily Mines) are located less than 3 miles from the project area (U.S. Geological Survey 2008). Hoffman Mine, currently in operation, is located approximately 20 miles east of the project area. No mineral resources are currently mapped within the project area.

### Regulatory Setting

#### Placer County General Plan

No applicable general plan (including the Placer County General Plan), specific plan, or any other land plan indicates that there are mineral resources of value or importance in the project area.

#### Surface Mining and Reclamation Act of 1975

The State Office of Mine Reclamation’s Surface Mining and Reclamation Act of 1975 (SMARA) encourages the preservation of minerals, but grants exemption to earthwork when necessary to the construction of projects. Land within the Proposed Project is considered compatible with mining, but no mineral resources are mapped within these areas (California Department of Conservation 2007).

US EPA ARCHIVE DOCUMENT

## Title 30

The U.S. Bureau of Mine's jurisdiction to regulate mineral resources and claims is established in 30 USC. Title 30 also establishes national mining and minerals policy, creates provisions for the designation of mineral lands and resources, and creates standards for the control of environmental impacts of mining.

### Environmental Impacts of the Proposed Project

- a, b. Because the project area does not contain any significant mineral resources, the Proposed Project would have *no impact* on mineral resources.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>XI. NOISE.</b>	Would the project:				
a.	Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Noise

### Environmental Setting

This section includes a description of the terminology and concepts related to noise, blasting, and vibration impacts that are considered in the analysis. This section also includes a discussion of the existing environmental conditions related to noise-sensitive receptors and ambient conditions found in rural areas such as the project vicinity.

### Noise Terminology

*Sound:* A physical disturbance in a medium (e.g., air) which, when transmitted by pressure waves, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

*Noise*: Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

*Decibel (dB)*: A dimensionless unit of sound power or intensity that is equal to the logarithmic ratio of a squared sound pressure amplitude to a reference sound pressure level (20 micropascals).

*A-Weighted Decibel Level (dBA)*: An overall frequency-weighted sound level that approximates the frequency response of the human ear.

*C-Weighted Decibel Level (dBC)*: An overall frequency-weighted sound level with a relatively small amount of attenuation at both low and high frequencies. C-weighting is used primarily to measure high amplitude sound levels with low frequency content, such as those produced by blasting.

*Maximum Sound Level ( $L_{max}$ )*: The maximum sound level measured during a specified measurement period.

*Equivalent Sound Level ( $L_{eq}$ )*: A level of steady-state noise which would have the same energy as that of the fluctuating levels of a stated measurement period. The  $L_{eq}$  can be thought of as a representation of the average sound energy occurring over a specified period which places more emphasis on high noise levels than a simple arithmetic average.

*Sound Exposure Level (SEL)*: The logarithm of the ratio of a given time integral of squared frequency-weighted sound pressure level to the product of the reference sound pressure level (20 micropascals) and the reference duration of 1 second.

In general, human sound perception is such that a change in sound level of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as the doubling or halving of the sound level.

## Blasting and Ground Vibration

The two primary environmental impacts of blasting are airblast and groundborne vibration. An airblast is an air overpressure in the form of a propagating wave, caused by the energy released during an explosion. If the receiver is close enough to the blast, the overpressure can be felt as the pressure front of the airblast passes. The accompanying booming sound lasts for only a few seconds. The explosive charges used in construction are typically wholly contained in the ground, resulting in an airblast with a Hertz (Hz) frequency below about 250 cycles per second.

Because an airblast lasts for only a few seconds, use of  $L_{eq}$  to describe blast noise is inappropriate. Airblast is properly measured and described as a linear peak air overpressure (i.e., an increase above atmospheric pressure) in pounds per square inch (psi). Modern blast monitoring equipment is also capable of measuring peak overpressure data in terms of unweighted dB. Decibels, as used to describe airblast, should not be confused with or compared to dBA, which are commonly

used to describe relatively steady-state noise levels. An airblast with a peak overpressure of 130 dB can be described as being mildly unpleasant, whereas exposure to jet aircraft noise at a level of 130 dBA would be painful and deafening.

In addition to an airblast, blasting creates seismic waves that radiate along the surface of the earth and downward into the earth. These surface waves can be felt as ground vibration. Ground vibration can result in impacts ranging from a mild annoyance to damage of structures. Varying geology and distance from the blast will result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes will decrease with increasing distance.

As seismic waves travel outward from a blast, they excite the particles of rock and soil through which they pass and cause them to oscillate. The actual distance that these particles move is usually only a few ten-thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as the peak particle velocity (ppv).

Human response to blast vibration and airblast is difficult to quantify. Vibration and airblast can be felt or heard well below the levels that produce any damage to structures. The duration of the event has an effect on human response, as does blast frequency. Blast events are relatively short, on the order of several seconds for sequentially delayed blasts. Generally, as blast duration and vibration frequency increase, the potential for adverse human response increases. Studies have shown that a few blasts of longer duration will produce a less adverse human response than short blasts that occur more often.

Table NOI-1 summarizes the average human response to vibration and airblast that may be anticipated when a person is at rest in quiet surroundings. If the person is engaged in any type of physical activity, the level required for the responses indicated are increased considerably.

It is important to understand that the forgoing text describes the responses of average individuals. Individual responses can fall anywhere within the full range of the human response spectrum. At one extreme are those people who receive some tangible benefit from the blasting operation and probably would not be disturbed by any level of vibration and airblast, as long as it does not damage their property. At the opposite extreme are people who would be disturbed by even barely detectable vibration or airblast. Individuals at either of these two extremes were not considered in the listing of average human response or in the impact conclusions that follow.

**Table NOI-1.** Human Response to Airblast and Ground Vibration from Blasting

<b>Response</b>	<b>Ground Vibration Range ppv (inches per second)</b>	<b>Airblast Range (dB)</b>
Barely perceptible to distinctly perceptible	0.02 - 0.10	50 – 70
Distinctly perceptible to strongly perceptible	0.10 - 0.50	70 – 90
Strongly perceptible to mildly unpleasant	0.50 - 1.00	90 – 120
Mildly unpleasant to distinctly unpleasant	1.00 - 2.00	120 – 140
Distinctly unpleasant to intolerable	2.00 - 10.00	140 – 170

Source: Caltrans 2004

## Noise-Sensitive Uses

Noise-sensitive land uses in the project area include residences, a preschool, and a church. The nearest sensitive receptor is a residence located approximately 45 feet from the proposed pipeline alignment. Many other residences are located approximately 50 to 150 feet and up from the proposed pipeline alignment. ABC Honeytree, a preschool, is located approximately 1,100 feet from the proposed pipeline alignment and the New Hope Church is located approximately 575 feet from the proposed pipeline alignment.

## Noise Conditions

Existing ambient sound levels in the project area can be considered typical of a rural environment. Sources of noise in the area come primarily from traffic along local 2-lane roadways. These sound levels typically range from 40 to 50 dBA on private residential properties.

## Assumptions

### Construction Noise

The types of equipment that would be used to construct the proposed pipeline include asphalt/concrete trucks, backhoes, compactors, compressors, 10-wheel dump trucks, tracked excavators, forklifts, front-end loaders, jackhammers, paving equipment, flat-bed delivery trucks (pickup trucks), and water trucks. The types of equipment that would be used to construct the new pump station and equalization storage facilities include backhoes, compaction equipment, cranes, and dump trucks. This equipment would also be used to decommission the existing NSD WWTP and sprayer facilities.

Table NOI-2 presents the typical noise emission levels for the construction equipment listed above based on a worst-case scenario including several pieces of the loudest equipment (running simultaneously). This includes the typical measured A-weighted  $L_{max}$  noise levels that would occur at a 50-foot distance from the construction site. Table NOI-2 also includes the acoustical use factor,



which is the fraction of time that the equipment would typically be in use over a 1-hour period. This information was used to conduct the analysis of potential noise impacts as described below under Environmental Impacts of the Proposed Project.

**Table NOI-2.** Typical Construction Noise Emission Levels & Usage

Equipment	Acoustical Use Factor	Typical Noise Level ( $L_{max}$ ) <sup>1</sup>
Asphalt/Concrete Truck <sup>2</sup>	40%	76
Backhoe	40%	78
Compactor	20%	83
Compressor	40%	78
Crane	16%	81
Dump Truck	40%	76
Excavator	40%	81
Forklift <sup>3</sup>	40%	75
Front-End Loader	40%	79
Jackhammer	20%	89
Paver	50%	77
Pickup Truck	40%	75
Roller	20%	80
Water Truck <sup>2</sup>	40%	76

Source: Federal Highway Administration 2006

<sup>1</sup> dBA, A-weighted decibel level (measured at 50 feet)

<sup>2</sup> Based on data for dump truck

<sup>3</sup> Based on data for pickup truck

## Operational Noise

The only operational noise that would be generated by the Proposed Project would come from the new pump station. The two proposed wet well pumps would be used primarily in the winter season to pump wastewater intermittently, and would each have a capacity of approximately 125 gallons per minute. A 90-horsepower diesel-powered generator with 1,800 revolutions per minute would power both pumps. The pumps would be located 20 feet below the surface and the generator would be located at the surface. Accordingly, the generator would be the main source of noise at this location. Without mitigation, the generator (when running) is projected to produce an hourly  $L_{eq}$  of 64 dBA at the nearest receptor of 300 feet.

## Regulatory Setting

### Local Regulations

#### Noise

Noise is typically regulated at the local level. Because Newcastle is an unincorporated area, it is regulated by Placer County. The County has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise-sensitive land uses. The County noise ordinance is the primary enforcement tool for operation of locally regulated noise sources such as mechanical equipment and construction activity.

Article 9.36 of the Placer County Code stipulates that noise-sensitive land uses may not be exposed to exterior noise levels exceeding the ambient sound level by 5 dB or the sound level performance standards in Table NOI-3, whichever is greater.

**Table NOI-3.** Placer County Sound Level Performance Standards

Noise Level Descriptor	Daytime <sup>b</sup> (7:00 a.m.–10:00 p.m.)	Nighttime <sup>b</sup> (10:00 p.m.–7:00 a.m.)
Hourly (dBA, L <sub>eq</sub> )	55 dBA	45 dBA
Maximum level (dBA, L <sub>max</sub> )	70 dBA	65 dBA

<sup>a</sup> The noise standard will be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards will be applied on the receiving side of noise barriers or other property line noise mitigation measures.

<sup>b</sup> Each noise level standard specified will be reduced by 5 dB for single-tone noises, or noise consisting primarily of speech or music.

Noise associated with construction activities occurring between 6:00 a.m. and 8:00 p.m. Monday through Friday, and between 8:00 a.m. and 8:00 p.m. Saturday and Sunday, is exempted from the provisions of the Placer County noise ordinance. In addition, the ordinance requires that construction equipment be fitted with factory-installed muffling devices.

#### Blasting

Noise regulations associated with blasting are subject to Section 9.A.4 of the Placer County General Plan, which states that “Single event impulsive noise levels produced by... blasting will not exceed a peak linear overpressure of 122 dB, or a C-weighted Sound Exposure Level (SEL) of 98 dBC. These standards will be applied at the property line of a receiving land use” (Placer County 2005a).

Placer County does not have criteria for vibration impacts from blasting. However, the U.S. Bureau of Mines Report of Investigations 8507 (Siskind et al. 1980) contains blasting-level criteria that can be appropriately applied to keep ground vibration well below levels that might cause damage to neighboring

structures. At low-vibration frequencies, velocities of ground vibration are restricted to low levels. As vibration frequency increases, higher velocities are allowed up to a maximum of 2 inches per second. The distribution of explosives, distance from the blast, and the nature of the transmitting medium (soil and rock) between the blast site and the affected structure all play a part in determining the dominant frequency of the blast vibration. Timing between the detonation of charges also affects the frequency, but only in relatively close proximity to the blast.

## Environmental Impacts of the Proposed Project

- a. The Proposed Project would result in the potential to exceed noise standards related to construction activities, blasting, and project operations. Noise related to project operations is discussed under Checklist Item C. Construction and blasting noise are discussed below.

### Construction Noise

As long as the general construction activities (as defined by Placer County's noise ordinance) occur between 6:00 a.m. and 8:00 p.m., Monday through Friday, and between 8:00 a.m. and 8:00 p.m. on Saturdays, there would be no noise impact related to general construction activities. This is because construction noise is exempt from Placer County's noise threshold. However, if general construction activities were to occur outside of these hours, there would be a potential for significant noise impacts to occur.

Based on the loudest equipment that could be used, construction noise was modeled at the nearest sensitive receptor using Roadway Construction Noise Model 1.0 Software (Federal Highway Administration 2006). The nearest noise-sensitive receptor would occur along Taylor Road (within 45 feet of the proposed pipeline alignment) and could potentially be affected by construction noise. Based on noise modeling,  $L_{eq}$  and  $L_{max}$  levels were predicted to reach 87 and 90 dBA, respectively. As mentioned above, if construction were to occur outside of the exempt hours, noise levels would be in violation of the Placer County noise ordinance. Therefore, construction noise associated with nighttime activity would be potentially significant. In the event that nighttime construction occurred, the following mitigation measures would be implemented to reduce this impact to *less than significant*.

**Mitigation Measure NOI-1: Employ Noise-Reducing Construction Practices to Comply with the Placer County Noise Ordinance.** NSD will ensure that noise-reducing construction practices are implemented so that construction noise does not exceed applicable noise control standards as discussed above. The project contractor will prepare a noise control plan that will identify feasible measures that can be employed to reduce construction noise. These may include but are not limited to the measures listed below:

- scheduling substantial noise-generating activity during daytime hours where feasible;

- requiring that all construction equipment powered by gasoline or diesel engines have sound-control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation;
- prohibiting gasoline or diesel engines from having unmuffled exhaust;
- locating noise-generating equipment as far as practical from noise-sensitive uses;
- using noise-reducing enclosures around noise-generating equipment;
- placing temporary barriers between noise sources and noise-sensitive land uses or taking advantage of existing barrier features (terrain, structures, edge of trench) to block sound transmission; and
- prohibiting use of backup alarms and providing an alternate warning system, such as a flagger or radar-based alarm, that is compliant with state regulations.

**Mitigation Measure NOI-2: Disseminate Essential Information to Residences and Implement a Complaint and Response Tracking Program.** NSD will notify residents within 1,000 feet of the construction areas of the construction schedule in writing before construction commences. This notification will include a description of the activity that will occur, measures that the contractor will take to control noise, and specific information as to when blasting will occur. NSD will designate a noise disturbance coordinator who will be responsible for responding to complaints regarding construction noise. The coordinator will determine the cause of the complaint and will ensure that reasonable measures are implemented to correct the problem when feasible. A contact telephone number for the noise disturbance coordinator will be conspicuously posted on construction site fences and will be included in the written notification of the construction schedule sent to nearby residents.

## Blasting Noise

Noise and vibration generated by blasting is a complex function of the charge size, charge depth, hole size, degree of confinement, initiation methods, spatial distribution of charges, and other factors. This information is typically decided during the construction phase. To provide a general indication of the potential for airblast and vibration impacts from blasting, airblast and vibration levels have been estimated using methods recommended by Caltrans (2004), assuming a 100-pound charge and average normal confinement of the charge. No blasting is proposed during nighttime hours.

Table NOI-4 presents estimated airblast and ground vibration values as a function of distance based on these assumptions.

**Table NOI-4.** Estimated Airblast and Ground Vibration Levels

Distance (feet)	Peak Particle Velocity Under Average Normal Confinement (inches/second)	Probable Peak Air Overpressure (dB)
100	2.5	136
250	0.58	127
500	0.19	120
750	0.1	115
1,000	0.063	112
1,250	0.044	110
1,500	0.033	108
2,000	0.021	105

Source: Caltrans 2004

As mentioned in the Regulatory Setting section, the Placer County General Plan limits noise from blasting to 122 dB, or a C-weighted SEL of 98 dBC. The results in Table NOI-4 indicate that receptors within 500 feet may be exposed to airblast levels that exceed acceptable specified by Placer County. With the implementation of Mitigation Measures NOI-2 (see above), Environmental Commitment EC-1, Implement Blasting Noise Control Program, and Mitigation Measure NOI-3, this impact would be *less than significant*.

**Mitigation Measure NOI-3. Implement Modifications and Additions to Environmental Commitment-1.** In addition to the measures listed in EC-1, NSD will make the following listed changes and additions:

- The blasting plan has established a vibration limit of 0.5 in/s ppv in order to protect structures from blasting activities and identify specific monitoring points. At a minimum, a pre-blast survey will be conducted at any potentially affected structures and underground utilities within 1,000 feet of a blast area, and at the nearest commercial or residential structure, prior to blasting.
- Air blast overpressure limits have been set and monitoring will be conducted at the property line closest to the blast and at other above-ground structures identified in the blasting plan for vibration monitoring. Air blast overpressure limits will be in accordance with applicable laws and regulations and will be established to prevent damage to adjacent properties and new construction, and to prevent injuries to persons on site and off site. If the noise criteria set forth by the County is at any time exceeded, then blasting will immediately cease and Placer County will be immediately notified.
- The contractor shall use blasting seismographs containing three channels that record in three mutually perpendicular axes and which have a fourth channel for recording airblast. The frequency response of the instrumentation shall be from 2 to 250 Hz, with a minimum sampling rate of 1,000 samples per second per channel.

- Airblast and vibration monitoring shall take place at the nearest off-construction site residential property line or other occupied structure. If vibration levels are expected to be lower than those required to trigger the seismograph at that location, or if permission cannot be obtained to record at that location, recording shall be accomplished at some closer site in line with the structure. Specific locations and distances where airblast and vibration are measured shall be documented in detail along with measured airblast and vibration amplitudes.
- b. As discussed above, blasting may be required as part of the Proposed Project. Blasting activities have the potential to adversely affect structures and near-by utilities, including but not limited to houses and other buildings, wells, tunnels, and pipelines. The operation of heavy equipment may also generate localized groundborne vibration that could be perceptible at residences or other sensitive land uses close to this activity.

The results in Table NOI-4 indicate that ground vibration from a 100-pound charge could exceed the U.S. Bureau of Mines standard for potential damage of 0.5 inch/second within about 275 feet of the blast. This impact is therefore considered to be potentially significant. With the implementation of Mitigation Measure NOI-2 (see above) and EC-1, this impact would be *less than significant*.

- c. The only permanent noise-generating component of the Proposed Project is the new pump station that would be located near the southwest corner of the emergency storage basin (Pond 1). The pump station would be located approximately 300 feet away from a sensitive receptor located on Irish Lane and, as described above, is projected to produce an hourly  $L_{eq}$  of 64 dBA at the nearest receptor of 300 feet. Although the generator would only run infrequently under emergency conditions when the electric power to the pump station was cut, this would exceed the Placer County noise ordinance standard of  $L_{eq}$  45 dBA at night.

Unless otherwise deemed an exception under Placer County Code Section 9.36.080, Exceptions, implementation of Mitigation Measure NOI-4, would be required to reduce this impact to *less than significant*.

**Mitigation Measure NOI-4: Employ Noise-Reducing Design Measures at the New Pump Station Site.** NSD will ensure that the pump facility is designed such that noise does not exceed the Placer County noise ordinance standards at the nearest residence. Measures that can be used to reduce noise to acceptable levels include but are not limited to those listed below.

- Employ a natural gas-driven engine.
  - Construct an enclosure around the generator.
- d. In addition to noise related to general construction activities discussed above, truck hauling would be required to remove soil, demolished materials, and sludge from the project area. It is proposed that materials



would be hauled along Irish Lane and Taylor Road and it is anticipated that 700 loads (1,400 truck trips) could occur over several days. Assuming hauling occurs over a 3-day period with 12-hour work days, an average of about 40 trucks per hour would pass along this route. Assuming trucks traveling at 25 miles per hour, the Federal Highway Administration Traffic Noise Model indicates that truck noise could be as high as  $L_{eq}$  62 dBA at 50 feet. Although trucks traveling within the public right-of-way are not subject to the Placer County noise ordinance, this result indicates that truck hauling could result in a substantial increase in noise over several days. Trucking noise that is limited to daytime is not considered significant because it would only occur over several days. However, noise from trucking that occurs at night could be potentially significant. With implementation of Mitigation Measure NOI-5, this impact would be *less than significant*.

**Mitigation Measure NOI-5: Limit Truck Hauling Activities to Daytime Hours.** The project contractor will limit truck-hauling activities to the hours between 6:00 a.m. and 8:00 p.m. Monday through Friday, and between 8:00 a.m. and 8:00 p.m. Saturday. No hauling will occur on Sundays.

- e., f. The Proposed Project would not be located within an airport land use plan area or within 2 miles of a public airport or a private airstrip. Therefore, there would be *no impact*.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>XII. POPULATION AND HOUSING.</b> Would the project:				
a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Population and Housing

### Environmental Setting

The town of Newcastle is an unincorporated community within Placer County. As an unincorporated place, no census data are gathered for that specific location by the U.S. Census Bureau; however, data are available for the zip code that includes Newcastle, 95658. According to the U.S. Census Bureau, there were 6,095 people living in the zip code area at the time of the 2000 census (U.S. Census Bureau 2000).

There are a few residences scattered in the project area along Taylor Road. In general, there are very few residences in the vicinity of the WWTP. Housing in the project area is low density and of a rural character.

### Environmental Impacts of the Proposed Project

- a. The Proposed Project would not directly or indirectly induce population growth because it does not include the construction of new homes or businesses or represent an increase in infrastructure capacity that would remove any obstacles to growth. Although the Proposed Project does include the construction of new pipeline, the pipeline would not result in an increase the system’s existing wastewater treatment capacity.

As noted in Chapter 2, Proposed Project and Alternatives, the average dry weather flows (adwf) are expected to increase to 0.18 million gallons per day (mgd) by 2022 (Domenichelli 2003). The existing capacity of the

treatment system is 0.4 mgd adwf. Therefore, construction of the new pipeline would not result in any changes that would provide for future growth compared with existing conditions. There would be *no impact*.

- b.,c. The Proposed Project involves the annexation of the NSD service area into the SPMUD service area, the removal of the existing WWTP facilities, and the construction of a new pipeline and support structures. The Proposed Project would not result in the displacement of housing or people. Therefore, there would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>XIII. PUBLIC SERVICES.</b> Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following 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 checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>

## Public Services

### Environmental Setting

The project area falls within the jurisdiction of the Newcastle Fire Protection District, which covers 39 square miles of commercial, residential, and wildland properties. The District operates two stations; one full time and the second during the day only. Law enforcement services in the project area are provided by the Placer County Sheriff's Department and the California Highway Patrol.

The project area is served by the Newcastle and Ophir Elementary School Districts. The Newcastle Elementary School is located within 1 mile of the project area. The Ophir Elementary School is located approximately 3 miles to the northeast. Del Oro and Placer High Schools also serve the project area. Del Oro High School is located approximately 3 miles south of the project area and the Placer High School is located in Auburn approximately 5 miles to the northeast. The ABC Honeytree Preschool is located approximately 1,100 feet from the Proposed Project along Taylor Road.

There are no parks or other public facilities located in the project area. The nearest recreational areas are located several miles away in Auburn.

## Environmental Impacts of the Proposed Project

- a. As discussed above, the Proposed Project would not result in growth inducement compared to existing conditions; therefore, the Proposed Project would not result in an increase in the demand for public services in the project area or a decrease in service ratios or service response times.

Construction of the Proposed Project would have the potential to result in conflict with emergency vehicles if the location of construction equipment or road closures resulted in blocking traffic. However, with the implementation of Environmental Commitment EC-8, Prepare and Implement Traffic Management Plan, this impact would be *less than significant*. Impacts related to traffic are discussed in greater detail under Transportation and Traffic, below.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>XIV. RECREATION.</b> Would the project:				
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 type="checkbox"/>	<input checked="" 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"/>

## Recreation

### Environmental Setting

There are no neighborhood or regional parks or other recreational facilities in the immediate project area. The closest recreation area is the Auburn State Recreation Area, which is 5 miles northeast of the project area.

### Environmental Impacts of the Proposed Project

- a. The Proposed Project involves the annexation of the NSD service area into the SPMUD service area, closure of the Newcastle WWTP, and construction of new pipeline and supporting facilities. As discussed above, growth inducement would not occur as a result of the Proposed Project. There would not be any changes that would result in additional use of recreational facilities and accelerated deterioration. Therefore, there would be *no impact*.
- b. The Proposed Project does not include the construction of new recreational facilities or require the expansion of existing recreational facilities. Therefore, there would be *no impact*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>XV. TRANSPORTATION and TRAFFIC.</b> Would the project:				
a. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause, either individually or cumulatively, exceedance of a level-of-service standard 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. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

## Transportation and Traffic

### Environmental Setting

The project area is located southwest of Newcastle in Placer County. I-80 provides regional access to the WWTP, and Highway 193 is located just to the northwest. The WWTP is located just east of Goulart Ranch Road and is accessed by a private gravel roadway.

The proposed pipeline alignment would exit the west side of the WWTP, cross open ground and follow a small unpaved roadway to Goulart Ranch Road. From

there, the proposed pipeline alignment would intersect Taylor Road (Figure 2-3), turn southwest in the eastbound lane of Taylor Road, and continues for approximately 6,000 feet. At that point, the proposed pipeline alignment would connect to an existing SPMUD trunk sewer stub, which would then convey flows south and west to the Regional Dry Creek Wastewater Treatment Plant (RDCWWTP). A 25-foot-wide construction easement would be used to place the pipeline within the right-of-way. A maintenance easement of approximately 15 feet would be maintained along the length of the route.

## Environmental Impacts of the Proposed Project

- a., b. Construction-related traffic would temporarily increase traffic volumes on local roadways in the project area and could potentially result in traffic delays. In order to decommission the treatment ponds, the existing sludge would need to be removed. Approximately 500 truck trips over several days would be required to remove the sludge. The excavation for the new pipeline will require an additional 200 truck trips for removal of material, also over the course of a few days.

During construction, one lane of traffic would remain open at all times except during brief periods when blasting would require shutting down both lanes. Implementation of Environmental Commitment EC-2, Prepare and Implement a Traffic Management Plan, would ensure that construction-related traffic impacts would be *less than significant*.

Operation of the Proposed Project would not result in any changes to existing traffic patterns or an increase in traffic congestion. Therefore, these impacts would be *less than significant*.

- c. The closest airfield to the project area is the Auburn Airfield, 10 miles away. The Proposed Project would not construct any structures that would require a change to existing air traffic patterns. There would be *no impact*.
- d. The Proposed Project would not construct or permanently modify any roadways. There would be *no impact*.
- e. The Proposed Project could have a temporary impact on access for emergency vehicles. However, implementation of Environmental Commitment EC-2, Prepare and Implement a Traffic Management Plan, would reduce this impact to a *less than significant* level.
- f. Parking capacity would not be affected by the Proposed Project. Temporary lane or shoulder closures would be implemented as part of the traffic control plan and access to existing parking areas would not be prevented. The Proposed Project would have *no impact*.
- g. The Proposed Project would not cause a permanent change in transportation routes, including those for alternative transportation. Therefore, the Proposed Project would not conflict with adopted policies, plans, or programs supporting alternative transportation. There would be *no impact*. Temporary traffic impacts are discussed under Checklist Item a, above.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact	
<b>XVI. UTILITIES AND SERVICE SYSTEMS.</b>					
Would the project:					
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be 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 serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Utilities and Service Systems

### Environmental Setting

The NSD service area comprises approximately 470 acres in the unincorporated area of Newcastle in Placer County. The NSD serves 220 connections, with a total of 285 equivalent dwelling units (based on SPMUD regional standards).

As described in Chapter 2, Proposed Project and Alternatives, the NSD service area will be annexed into SPMUD's service area prior to operation of the

proposed pipeline. After implementation of the Proposed Project, wastewater flows that had been previously treated at the NSD WWTP will be under the jurisdiction of SPMUD and will be routed via the SPMUD collection system to the RDCWWTP for treatment and discharge to Dry Creek. The basis for treating wastewater flows at the RDCWWTP comes from the Joint Exercise of Powers Agreement for the South Placer Wastewater Authority (South Placer Wastewater Authority 2000) executed by the City of Roseville, SPMUD, and Placer County in October 2000.

The potential environmental impacts associated with the operation of the RDCWWTP were analyzed under the Roseville Regional Wastewater Treatment Service Area Master Plan Draft EIR (ESA 1996). The RDCWWTP is currently permitted to discharge 18 mgd into Dry Creek per its NPDES permit. A recent study conducted by CH2MHill (2008), found that the RDCWWTP currently discharges approximately 10.3 mgd into Dry Creek and has an internal capacity to treat an additional 1.2 mgd.

The major Placer County landfill is the Western Regional Sanitary Landfill, located at the intersection of Fiddymont Road and Athens Avenue, approximately 18 miles from the project area.

## Regulatory Setting

### California Integrated Waste Management Act

The Integrated Waste Management Act (known as AB 939) was passed into law in 1989. Enactment of AB 939 established the California Integrated Waste Management Board (CIWMB), and set forth aggressive solid waste diversion requirements. Under AB 939, every city and county in California is required to reduce the volume of waste sent to landfills by 50%, through recycling, reuse, composting, and other means. AB 939 requires counties to prepare a Countywide Integrated Waste Management Plan (CIWMP). An adequate CIWMP contains a summary plan that includes goals and objectives, and summarizes waste management issues and problems identified in the incorporated and unincorporated areas of the county. The CIWMP identifies waste management programs and infrastructure, summarizes information about existing and proposed solid waste facilities, and provides an overview of specific steps that will be taken to achieve the goals outlined in the components of the CIWMP.

## Environmental Impacts of the Proposed Project

- a. Under existing conditions, the Newcastle WWTP has the potential to exceed waste discharge requirements during high storm flow events. Increased wastewater flow coupled with increase stormwater runoff, has resulted in exceedance of peak wet weather flow capacity of the WWTP. Under the Proposed Project, potential impacts from occasional overflows

would no longer occur. There would be *no impact*. The potential impacts associated with construction and water quality are discussed below.

- b., e. The Proposed Project would involve annexation of the NSD service area into the SPMUD service area, closing the existing NSD WWTP, and constructing a new wastewater pipeline. After implementation of the Proposed Project, wastewater flows currently treated at the NSD WWTP would be directed to the DCWWTP. Currently, the DCWWTP is permitted to discharge up to 18 mgd into Dry Creek. As mentioned previously, it is estimated that the DCWWTP has an internal capacity to treat up to 11.5 mgd and currently treats approximately 10.3 mgd. Therefore, the DCWWTP has approximately 1.2 mgd capacity remaining. As mentioned in Chapter 1, Introduction, it is estimated NSD's flows will approach 0.18 mgd by 2022. Therefore, no new or expanded facilities would need to be constructed. The environmental impacts of wastewater treatment at the RDCWWTP were addressed in the 1996 Master Plan (ESA 1996) and no additional environmental analysis would be required. Therefore, these impacts would be *less than significant*.
- c. The Proposed Project would require filling the existing wastewater treatment ponds and regrading the contours. However, the contours would be designed to match the existing drainage patterns and allow stormwater drainage to flow towards the existing drainage channels. Therefore, the impact would be *less than significant*.
- d. Operation of the Proposed Project would not require the use of water. Construction water would be supplied by Placer County Water Agency and accessed through a fire hydrant. Because of the small amount of water needed during construction, there would be *no impact* associated with the demand for water.
- f. The Proposed Project would be served by the Western Regional Sanitary Landfill. The landfill has sufficient permitted capacity to accommodate the Proposed Project's solid waste disposal needs and is not expected to reach capacity until 2036 (Western Placer Waste Management Authority 2008). There would be *no impact*.
- g. As noted in Chapter 2, Proposed Project and Alternatives, implementation of Environmental Commitment EC-5 would ensure compliance with all applicable solid waste regulations. Under EC-5, all construction-related solid waste would be disposed of in compliance with applicable California Integrated Waste Management Board and local regulations and at appropriate disposal facilities. Compliance with California state solid waste regulations would ensure compliance with the applicable local regulations. Therefore, implementation of EC-5 would ensure that this impact would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<b>XVII. MANDATORY FINDINGS OF SIGNIFICANCE.</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, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Mandatory Findings of Significance

- a., c. With implementation of the mitigation measures provided in this document, the Proposed Project is not expected to have a significant adverse impact on the habitat of any plant or animal species or humans. Furthermore, the Proposed Project would not substantially degrade the environment or reduce the level of an endangered or otherwise important plant or animal population below self-sustaining levels. This impact is considered less than significant with incorporation of the proposed mitigation measures.
- b. Implementation of the proposed mitigation measures would reduce impacts to less-than-significant levels. Because no impact is considered to be individually significant, there would be no contribution to a significant cumulative effect. Therefore, this impact is less than significant with incorporation of the proposed mitigation measures.



## **Introduction**

As mentioned in Chapter 1, Introduction, the Newcastle Sanitary District Wastewater Treatment Plant Closure and Pipeline Project (Proposed Project) is being funded in part by the U.S. Environmental Protection Agency (EPA). Prior to making further funding decisions, EPA is required to complete environmental documentation to satisfy the requirements of the National Environmental Policy Act (NEPA). This EA/FONSI has been completed in satisfaction of the requirements of NEPA. Chapter 4 includes a discussion of other considerations relevant to the requirements of NEPA, including a discussion of the potential environmental impacts of the project alternatives, socioeconomic effects, and environmental justice.

## **Analysis of the Alternatives**

### **Alternative 1 – No Project/No Action Alternative**

#### **Introduction**

Under Alternative 1, the Newcastle Sanitary District (NSD) service area would not be annexed into the South Placer Municipal Utility District (SPMUD) service area; the wastewater treatment plant (WWTP) would not be decommissioned; and the proposed equalization storage facilities, pump station, and pipelines would not be constructed. Treatment of wastewater using the aeration and oxidation techniques and disposal of treated effluent through spray irrigation would continue.

None of the impacts associated with decommissioning or construction activities described in Chapter 3, Environmental Checklist, would occur as a result of Alternative 1. However, because the WWTP would continue to operate without sufficient peak wet weather flow (pwwf) capacity, it is likely that the water quality impacts described below would continue to occur as a result of this alternative.

## Water Quality

Alternative 1 has the potential to result in the violation of water quality standards and waste discharge requirements. As described in Chapter 1, Introduction, the existing treatment facility does not contain adequate pwwf capacity. During high storm flow events, this could result in the discharge of treated wastewater into nearby storm drainages.

## Alternative 2 – Callison/Sisley Road Alignment

### Introduction

Similar to the Proposed Project, implementation of Alternative 2 would result in potential environmental impacts associated with decommissioning the WWTP and constructing the proposed pipeline. These impacts would be similar to those described in Chapter 3, Environmental Checklist, for the Proposed Project, except that the Alternative 2 pipeline would follow a different alignment after reaching Taylor Road (Figure 2-3).

The Alternative 2 alignment would share the same route as the Proposed Project from the WWTP to Taylor Road. At this point rather than continuing south along Taylor Road, the Alternative 2 alignment would turn northeast along Taylor Road to the intersection with Callison Road. It would then travel west along Callison Road to Sisley Road, and south along Sisley Road to the same connection point as the Proposed Project with the existing SPMUD collection system (Figure 2-3).

The potential environmental impacts that would occur as a result of constructing the pipeline under Alternative 2 would be similar to those of the Proposed Project for most of environmental resources. This is because, although the Alternative 2 pipeline would follow a different route, the nature of most of the impacts is specific to the type of construction activity, which would be the same regardless of the alignment. However, there is a potential for unique resources or sensitive receptors located along the Alternative 2 alignment to be affected by the location of the pipeline. The potential impacts related to those resources that may differ along the alternative pipeline alignment are discussed below.

### Air Quality

The potential for the exposure of sensitive receptors to pollutant concentrations or objectionable odors would be slightly higher under Alternative 2 compared with the Proposed Project. This is because the nearest sensitive receptors would be located closer to the proposed construction corridor under Alternative 2 than under the Proposed Project.



## Biological Resources

The vegetation along the Alternative 2 pipeline alignment is similar to that described for the general project area and the Proposed Project. It consists of a mix of natural, agricultural, and ornamental vegetation. There are also roadside drainage ditches running along portions of both sides of Callison Road. These ditches appear to capture and convey road runoff to drainages to the south of Callison Road. A cement-lined irrigation canal runs along Sisley Road and eventually crosses beneath it. A pond was observed immediately east of Sisley Road. This engineered feature is surrounded by riparian vegetation and has emergent cattails along its margins. Although there are slight differences in the vegetation and habitat along the Alternative 2 alignment, the potential impacts on habitat and special status species would be similar to those under the Proposed Project.

No elderberry shrubs were observed along the Alternative 2 alignment; therefore, similar to Alternative 1, there would be no potential impacts on valley elderberry longhorn beetle under Alternative 2.

## Cultural Resources

Four potential cultural resource sites were identified along the Alternative 2 pipeline alignment. These include Callison Road itself, an old storage building along Sisley Road, an aqueduct, and several palm trees. Therefore, the potential to affect known historical resources would be greater under Alternative 2 than under the Proposed Project or Alternative 1 (No Project Alternative). Although the likelihood would be low, there is also the potential to affect archaeological resources that may be located along the Alternative 2 alignment. This potential is similar to that under the Proposed Project.

## Noise

The nearest noise-sensitive receptors to the Alternative 2 alignment are about 40 feet from Sisley Road and 20 feet from Callison Road. Because construction under Alternative 2 would potentially be located closer to sensitive noise receptors compared to the Proposed Project, impacts related to ground vibration and temporary increases in ambient noise would be slighter greater. The remaining impacts under Alternative 2 would be the same as under the Proposed Project.

## Socioeconomics

The Proposed Project and Alternative 2 would result in the closure of the WWTP and the construction of a new pipeline to route wastewater flows from the 220 connections (285 Equivalent Dwelling Units [EDUs]) served by the NSD, to SPMUD. In addition, the NSD service area would be annexed to SPMUD.

The regionalization of wastewater treatment in southern Placer County that would be allowed under the Proposed Project and Alternative 2 would provide a higher level of service to all NSD rate payers and would reduce future maintenance costs by taking advantage of economies of scale associated with combining the two sanitary systems. The Proposed Project and Alternative 2 would also result in additional water resources available through the treatment and reuse of wastewater.

Under Alternative 1, these benefits would not be realized and it is anticipated that rate increases would likely occur related to upgrades that would be required at the WWTP. These rate increases could result in financial hardships on the largely fixed income population in the project area.

## Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, requires that a federal agency analyze the effects of a proposed action to ensure that it does not disproportionately affect low-income or minority populations. Incorporation of environmental justice principles throughout the planning and decision-making processes implements the principles of NEPA, Title VI of the Civil Rights Act, and the Uniform Relocation Act.

As discussed in Chapter 3, Environmental Checklist, and above in the analysis of Alternatives, the Proposed Project and Alternative 2 are not expected to result in any potentially significant impacts that could not be mitigated to a less-than-significant level. Therefore, none of these impacts would disproportionately affect minority or low-income populations. As mentioned in the discussion of Socioeconomics, Alternative 1 could result in financial hardship on service users because costly upgrades would be needed to ensure the WWTP could comply with its waste discharge requirements.

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## Introduction

Table 6-1 lists the project team members responsible for the preparation of this Environmental Assessment for the Newcastle Sanitary District Wastewater Treatment Plant Closure and Pipeline Project.

**Table 6-1.** Newcastle Sanitary District Wastewater Closure and Pipeline Project Environmental Assessment Preparers

<b>Name/Title/Affiliation</b>	<b>Project Role</b>
Mike Rushton	Project Director
Kim Marcotte	Project Manager
Lindsay Christensen	Air Quality
John Howe	Biologist
Jacob Collins	Water Quality Specialist
Nate Martin	Water Quality Specialist /Hydrologist
Joshua Carmen	Noise Specialist
Tina Pitsenberger	Cultural Resources
Heather Arndt Anderson	Environmental Specialist
Ted Gresh	Environmental Specialist
Sacha Selim	GIS Specialist
Deborah Bartley	Graphic Design
Laura Cooper	Technical Editor
Manomi Fernando	Document Production
Kate Walsh	Document Production



Appendix A

**Placer County Air Pollution Control District  
Best Available Mitigation Measures for  
Construction Projects**



## Appendix A. Placer County Air Pollution Control District Best Available Mitigation Measures for Construction Projects

### Introduction

These measures are intended to reduce a projects' short-term air quality impacts on local and regional air quality. Mitigation Measures 1-10 are required at a minimum if a projects' construction emissions are above the District's significance thresholds of 82 pounds per day, while measures 1, 2, 7, 8, 9, and 11 shall be implemented for all projects.

### Mitigation Measures

1. The applicant shall submit to the District and receive approval of a Construction Emission / Dust Control Plan prior to groundbreaking. This plan must address the minimum Administrative Requirements found in section 300 and 400 of District Rule 228, Fugitive Dust ([www.placer.ca.gov/airpollution/airpolut.htm](http://www.placer.ca.gov/airpollution/airpolut.htm)).

The applicant shall have a pre-construction meeting for grading activities for 20 or more acres to discuss the construction emission/dust control plan with employees and/or contractors and the District is to be invited.

The applicant shall suspend all grading operations when fugitive dusts exceed District Rule 228 Fugitive Dust limitations. An applicant representative, CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate compliance to Rule 228, Fugitive Dust. This requirement for a VEE is for projects grading more than 20 or more acres in size regardless in how many acres are to be disturbed daily.

It is to be noted that fugitive dust is not to exceed 40% opacity (#2 on the Ringlemann Chart) and not go beyond property boundary at any time. If lime or other drying agents are utilized to dry out wet grading areas they shall be controlled as to not to exceed District Rule 228 Fugitive Dust limitations.

2. Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours.

An applicant representative, ARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement for projects grading more than 20 acres in size regardless in how many acres are to be disturbed daily.

3. The prime contractor shall submit to the District a comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. The project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The project shall provide a plan for approval by the District demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. Contractors can access the Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure. [http://www.airquality.org/ceqa/Construction\\_Mitigation\\_Calculator.xls](http://www.airquality.org/ceqa/Construction_Mitigation_Calculator.xls)
4. No open burning of removed vegetation during infrastructure improvements.
5. Minimize idling time to 5 minutes for all diesel-power equipment.
6. Use ARB diesel fuel for all diesel-power equipment.
7. Apply water to control dust as needed to prevent dust impacts offsite. Operational water truck(s), shall be onsite, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site.
8. Apply approved chemical soil stabilizers, vegetative mats, or other appropriate best management practices to manufacturers specifications, to all-inactive construction areas (previously graded areas which remain inactive for 96 hours).
9. Spread soil binders on unpaved roads and employee/equipment parking areas and wet broom or wash streets if silt is carried over to adjacent public thoroughfares.
10. Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary diesel power generators. If not available, low sulfur fuel is to be used for diesel power generators.
11. Install wheel washers or wash all trucks and equipment leaving the site.
12. Employ construction activity management techniques, such as: reducing the number of pieces used simultaneously; increasing the distance



between emission sources; reducing or changing the hours of construction; and scheduling activity during off-peak hours.

13. Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service.
14. If the project site is in an area known to contain naturally occurring asbestos (NOA), the applicant will be required to comply with the Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, And Surface Mining Operations. Submit plan to District per asbestos ATCM.

In addition, in 2008 the PCAPCD adopted Rule 228, Fugitive dust, which addresses fugitive dust generated by construction and grading activities. The following measures are required for all projects, found in sections 300 and 400 of Rule 228:

- **Visible Emissions not Allowed Beyond Boundary Line:** A person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area (including disturbance as a result of the raising and/or keeping of animals or by vehicle use), such that the presence of such dust remains visible in the atmosphere beyond the boundary line of the emission source).
- **Visible Emissions from Active Operations:** In addition to the requirements of Rule 202, Visible Emissions, a person shall not cause or allow fugitive dust generated by active operations, an open storage pile, or a disturbed surface area, such that the fugitive dust is of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke as dark or darker in shade as that designated as No. 2 on the Ringlemann Chart (i.e. 40% opacity), as published by the United States Bureau of Mines.
- **Track-Out on to Paved Public Roadways:** Visible roadway dust as a result of active operations, spillage from transport trucks, and the track-out of bulk material onto public paved roadways shall be minimized and removed.
  - The track-out of bulk material onto public paved roadways as a result of operations, or erosion, shall be minimized by the use of track-out and erosion control, minimization, and preventative measures, and removed within one hour from adjacent streets such material anytime track-out extends for a cumulative distance of greater than 50 feet onto any paved public road during active operations.
  - All visible roadway dust tracked-out upon public paved roadways as a result of active operations shall be removed at the conclusion of each work day when active operations cease, or every twenty-four (24) hours for continuous operations. Wet sweeping or a HEPA filter equipped vacuum device shall be used for roadway dust removal.
  - Any material tracked-out, or carried by erosion, and clean-up water, shall be prevented from entering waterways or storm water inlets as required to comply water quality control requirements.

- Track-out control in geographic ultramafic rock units or in identified naturally occurring asbestos, serpentine, or ultramafic rock areas, shall comply with the requirements of the California Air Resources Board's Asbestos Airborne Toxic Control Measure or Construction, Grading, Quarrying, and Surface Mining Operations.
- **Minimum Dust Control Requirements:** The following dust mitigation measures are to be initiated at the start and maintained throughout the duration of the construction or grading activity, including any construction or grading for road construction or maintenance.
  - Unpaved areas subject to vehicle traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered. In geographic ultramafic rock units, or when naturally occurring asbestos, ultramafic rock, or serpentine is to be disturbed, the cover material shall contain less than 0.25 percent asbestos as determined using the bulk sampling method for asbestos in Section 502.
  - The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust exceeding Ringelmann 2 or visible emissions from crossing the project boundary line.
  - Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.
  - Prior to any ground disturbance, including grading, excavating, and land clearing, sufficient water must be applied to the area to be disturbed to prevent emitting dust exceeding Ringelmann 2 and to minimize visible emissions from crossing the boundary line.
  - Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt, from being released or tracked offsite.
  - When wind speeds are high enough to result in dust emissions crossing the boundary line, despite the application of dust mitigation measures, grading and earthmoving operations shall be suspended.
  - No trucks are allowed to transport excavated material off-site unless the trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments, and loads are either
    - Covered with tarps; or,
    - Wetted and loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.
  - In geographic ultramafic rock units, or when naturally-occurring asbestos, ultramafic rock, or serpentine is disturbed, all equipment must be washed down before moving from the property onto a paved public road.

- In geographic ultramafic rock units, or when naturally-occurring asbestos, ultramafic rock, or serpentine is disturbed, upon completion of the project disturbed surfaces shall be stabilized using one or more of the following methods:
  - Establishment of a vegetative cover;
  - Placement of at least one (1.0) foot of non-asbestos-containing material;
  - Paving;
  - Any other measure deemed sufficient to prevent wind speeds of ten (10) miles per hour or greater from causing visible dust emissions.
- **Wind Driven Fugitive Dust Control:** A person shall take action(s), such as surface stabilization, establishment of a vegetative cover, or paving, to minimize wind-driven dust from inactive disturbed surface areas.



Appendix B

**Special-Status Species Identified as Having  
the Potential to Occur in the Project Area**



**Table B-1.** Special-Status Species Identified as Having the Potential to Occur in the Project Area

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
<b>Plants</b>				
Jepson's onion <i>Allium jepsonii</i>	--/--/1B.2	Occurs in the northern and central Sierra Nevada foothills	Occurs in chaparral, cismontane woodlands, and lower montane coniferous forests on serpentine or volcanic soils between 300-1320 meters elevation. Blooming period: April-August.	<b>No.</b> There are no soils suitable for this species in the project area
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	--/--/1B.2	Occurs in the Sierra Nevada foothills, Sacramento Valley, and San Francisco Bay Area	Occurs in cismontane woodland, valley and foothill grasslands between 90-1400 meters elevation. Blooming period: March-June.	<b>Moderate.</b> Suitable habitat exists within the project area and there is a recorded occurrence approximately 4 miles southeast of the project area, which is from 1957 (California Natural Diversity Database 2008).
Stebbin's morning-glory <i>Calystegia stebbinsii</i>	E/E/1B.1	Northern Sierra Nevada foothills with reported occurrences in El Dorado and Nevada Counties	Occurs on gabbroic or serpentine soils in chaparral openings, cismontane woodland between 185 and 730 meters elevation. Blooming period: April-July	<b>No.</b> There are no soils suitable for this species in the project area
Pine Hill ceanothus <i>Ceanothus roderickii</i>	E/R/1B.2	Known from approximately ten occurrences in western El Dorado County	Occurs in chaparral, cismontane woodland on serpentine or gabbroic soils between 260-630 meters elevation. Blooming period: April-June	<b>No.</b> There are no soils suitable for this species in the project area
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	--/--/1B.2	Occurs in the northern and central Sierra Nevada foothills	Occurs in chaparral, cismontane woodland, and lower montane coniferous forest on gabbroic or serpentine soils between 245-1170 meters. Blooming period: May-June.	<b>No.</b> There are no soils suitable for this species in the project area
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>brandegeae</i>	-/--/1B.2	Occurs in the northern Sierra Nevada foothills.	Chaparral, cismontaine woodland, often on roadcuts between 73 and 915 meters elevation. Blooming period: May-July	<b>Moderate.</b> Suitable habitat exists within the project area and there are several recorded occurrences within 5 miles of the project area (California Natural Diversity Database 2008).



Table B-1. Continued

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
Hispid bird's-beak <i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	--/--/1B.1	Widespread but spotty in Sacramento and San Joaquin Valleys and Coast Ranges	Alkaline or saline flats in alkali meadow, iodine bush scrub, and alkali grassland between 1–155 meters elevation. Blooming period: June – September.	<b>No.</b> No suitable habitat exists within the project area.
Dwarf downingia <i>Downingia humilis</i>	--/--/2.2	Central Valley from Stanislaus County to Butte County	Vernal pools and swales between 1–445 meters elevation. Blooming period: March – May.	<b>No.</b> No suitable habitat exists within the project area or vicinity.
Pine Hill flannelbush <i>Fremontodendron decumbens</i>	E/R/1B.2	Pine Hill area in El Dorado County, Grass Valley vicinity in Nevada County, Yuba County	Rocky gabbro or serpentinite soils in chaparral, cismontane woodland between 425 and 760 meters elevation. Blooming period: April–July	<b>No.</b> There are no soils suitable for this species in the project area
Butte County fritillary <i>Fritillaria eastwoodiae</i>	--/3.2	Sierra Nevada foothills from Shasta to El Dorado Counties	Chaparral, cismontane woodland, and openings in lower montane coniferous forest. Sometimes on serpentine between 50 and 1500 meters elevation. Blooming period: March–May	<b>Moderate.</b> Suitable habitat exists within the project area. Nearest recorded occurrence is approximately 6 miles northeast of the project area (California Natural Diversity Database 2008).
El Dorado bedstraw <i>Galium californicum</i> ssp. <i>sierrae</i>	E/R/1B.2	Known from a limited number of occurrences in western El Dorado County.	Occurs in chaparral, cismontane woodland, lower montane coniferous forest on gabbroic soils between 100 – 585 meters elevation. Blooming period: May – June.	<b>No.</b> There are no soils suitable for this species in the project area
Bogg's Lake hedge-hyssop <i>Gratiola heterosepala</i>	--/E/1B.2	Occurs in the inner north Coast Range, central Sierra Nevada foothills, Sacramento Valley, and the Modoc Plateau.	Vernal pools and margins of seasonally receding ponds and lakes between 10 – 2375 meters elevation. Blooming period: April – August.	<b>No.</b> There is no habitat for this species in the project area. Manmade ponds in the project vicinity do not represent suitable habitat for this species due to their perennial nature.

Table B-1. Continued

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
Bisbee Peak rush-rose <i>Helianthemum suffrutescens</i>	--/--/3.2	Occurs in the central and northern Sierra Nevada foothills.	Occurs in chaparral, often in serpentine, gabbroic, or Ione soils between 45 - 840 meters. Blooming period: April – June.	<b>No.</b> There are no soils suitable for this species in the project area
Ahart’s dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	--/--/1B.2	Occurs in the Sacramento Valley, northern San Joaquin Valley, and northern Sierra Nevada foothills.	Occurs in vernal pools between 50–100 meters elevation. Blooming period: March–May.	<b>No.</b> No suitable habitat exists within the project area or vicinity.
Red Bluff dwarf rush <i>Juncus leiospermus</i> var. <i>leiospermus</i>	--/--/1B.1	Occurs in the Central Valley from Red Bluff (Tehama County) south to Merced County	Vernal pools, ephemeral drainages, and seasonal seeps in grassland, oak woodland, and chaparral between 35–1020 meters elevation. Blooming period: March–May.	<b>No.</b> No suitable habitat exists within the project area or vicinity.
Legenere <i>Legenere limosa</i>	--/--/1B.1	Primarily in the lower Sacramento Valley in Lake and Solano Counties; San Joaquin Valley in Stanislaus County; San Mateo County in the Santa Cruz Mountains	Seasonally saturated habitat, such as vernal pools, swales, drainages, marsh edges, and riverbanks between 1–880 meters elevation. Blooming period: April–June.	<b>No.</b> No suitable habitat exists within the project area or vicinity.
Pincushion navarretia <i>Navarretia myersii</i> ssp. <i>myersii</i>	--/--/1B.1	Occurs in the central Sierra Nevada foothills and Central Valley	Occurs in vernal pools, which are often acidic between 20–330 meters elevation. Blooming period: May.	<b>No.</b> No suitable habitat exists within the project area or vicinity.
Sacramento Orcutt grass <i>Orcuttia viscida</i>	E/E/1B.1	Occurs in Sacramento County.	Occurs in vernal pools between 30–100 meters elevation. Blooming period: April–July.	<b>No.</b> No suitable habitat exists within the project area or vicinity.
Layne’s ragwort <i>Packera layneae</i>	T/R/1B.2	Occurs in the northern Sierra Nevada foothills.	Occurs in chaparral and cismontane woodland on serpentine or gabbroic soils between 200–1000 meters elevation. Blooming period: April–August.	<b>No.</b> There are no soils suitable for this species in the project area

Table B-1. Continued

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	E/E/1B.1	Eastern side of Sacramento-San Joaquin Valleys	Rocky, bare areas along rolling hills in open grasslands and grasslands at the margins of blue oak woodland; usually with willow, well drained, fine textured soils on Mima mounds between 15–150 meters elevation. Blooming period: March–April.	<b>No.</b> No suitable habitat exists within the project area. Soils in the project area are not suitable for this species. Nearest recorded occurrence is approximately 10 miles southeast of the project area (California Natural Diversity Database 2008).
Sanford's arrowhead <i>Sagittaria sanfordii</i>	--/--/1B.2	Widespread but infrequent; Del Norte, Fresno, Sacramento, Santa Barbara, and Ventura Counties	Sloughs and sluggish streams with silty or muddy substrate; associated with emergent marsh vegetation between 0–650 meters. Blooming period: May–October.	<b>No.</b> Marginally suitable habitat exists in the vicinity of the project area but not within the project area. The nearest recorded occurrence is more than 10 miles south of the project area (California Natural Diversity Database 2008).
Oval-leaved viburnum <i>Viburnum ellipticum</i>	--/--/2.3	Occurs in northwestern California, northern and central Sierra Nevada foothills, and San Francisco Bay area.	Occurs in chaparral, cismontane woodland, lower montane coniferous forest between 215–1400 meters elevation. Blooming period: May–June.	<b>Moderate.</b> Suitable habitat exists in the project area. The nearest recorded occurrence is approximately 9 miles northeast of the project area (California Natural Diversity Database 2008).
El Dorado County mule ears <i>Wyethia reticulata</i>	--/--/1B.2	Occurs in El Dorado County, in northern Sierra Nevada foothills.	Found in chaparral, cismontane woodland, lower montane coniferous forest on clay or gabbroic soils between 185–630 meters elevation. Blooming period: 185–630 meters elevation.	<b>No.</b> There are no soils suitable for this species in the project area
<b>Invertebrates</b>				
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>		Central Valley; central and south Coast Ranges from Tehama County to Santa Barbara County; isolated populations also in Riverside County	Common in vernal pools; also found in sandstone rock outcrop pools	<b>No.</b> No suitable habitat exists within the project area or vicinity.

Table B-1. Continued

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T/--	Riparian and oak woodland habitats below 3,000 feet throughout the Central Valley and surrounding foothills	Riparian and oak savanna habitats with elderberry shrubs, which are the host plant	<b>Moderate.</b> Potential habitat for this species in the form of one elderberry shrub was observed to the east of Taylor Road along the proposed pipeline alignment. The nearest recorded occurrence for this species is approximately 5 miles south of the project area (California Natural Diversity Database 2008).
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>		Great Central Valley and the Sacramento River Delta to the east side of San Francisco Bay, California	Vernal pools and ephemeral stock ponds	<b>No.</b> No suitable habitat exists within the project area or vicinity.
<b>Fish</b>				
Delta smelt <i>Hypomesus transpacificus</i>	T/T	Are found only from the Suisun Bay upstream through the Delta in Contra Costa, San Joaquin, Sacramento, Solano, and Yolo Counties.	Are found in euryhaline waters of the Delta. Spawn in tidally influenced backwater sloughs and channel edgewaters	<b>No.</b> No suitable habitat exists within the project area or vicinity.
Central Valley steelhead <i>Oncorhynchus mykiss</i>	T/--	Sacramento and San Joaquin River and their tributaries.	An anadromous fish that spawns and spends a portions of its life in inland streams, typically maturing in the open ocean.	<b>No.</b> Red Ravine and its tributaries do not provide suitable habitat for anadromous fish. Species is known to spawn in larger streams in the vicinity of the project area.
Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	T/T	Sacramento and San Joaquin River and their tributaries.	An anadromous fish that spawns and spends a portions of its life in inland streams, typically maturing in the open ocean.	<b>No.</b> Red Ravine and its tributaries do not provide suitable habitat for anadromous fish. Spring-run Chinook are not known to spawn in the vicinity of the project area.
Winter-run Chinook salmon, Sacramento River <i>Oncorhynchus tshawytscha</i>	E/E	Sacramento River and its tributaries.	An anadromous fish that spawns and spends a portions of its life in inland streams, typically maturing in the open ocean.	<b>No.</b> Red Ravine and its tributaries do not provide suitable habitat for anadromous fish. Winter-run Chinook are not known to spawn in the vicinity of the project area.

Table B-1. Continued

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
<b>Amphibians</b>				
California red-legged frog <i>Rana aurora draytonii</i>	T/SSC	Historic range extended along the coast from the vicinity of Point Reyes National Seashore in Marin County, and inland from Shasta County south to Baja California. Current known distribution is along the coast from Marin County south to Los Angeles County (with inland populations in San Bernardino and Riverside Counties), the inner Coast Range from Tehama County south to eastern San Luis Obispo County, and in the Sierra Nevada from Butte County south to Tuolumne County.	Permanent and semi-permanent aquatic habitats, such as creeks and coldwater ponds, with emergent and submergent vegetation and riparian species along the edges; may estivate in rodent burrows or cracks during dry periods	<b>Moderate.</b> Suitable habitat is present within the project area. Nearest recorded occurrence is approximately 9 miles southeast of the project area (California Natural Diversity Database 2008).
Foothill yellow-legged frog <i>Rana boylei</i>	--/SSC	Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet	Creeks or rivers in woodlands or forests with rock and gravel substrate and low overhanging vegetation along the edge; usually found near riffles with rocks and sunny banks nearby instream pools for breeding and refuge.	<b>Low.</b> Streams in project area are not suitable habitat for this species in that they lack open areas for basking and pools for breeding and refugia. The nearest recorded occurrence is more than 10 miles northeast of the project area (California Natural Diversity Database 2008).
Western spadefoot toad <i>Spea hammondi</i>		Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California	Willow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.	<b>No.</b> No vernal pool habitat occurs within the project area or vicinity and streams in the project area are atypical for this species.

Table B-1. Continued

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
<b>Reptile</b>				
Western pond turtle <i>Actinemys marmorata</i>	--/SSC	The western pond turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries.	Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests	<b>High.</b> Suitable habitat is present within the project area. Unidentified turtles were observed in WWTP pond #4. Nearest recorded occurrence is approximately 4 miles northwest of the project area (California Natural Diversity Database 2008).
California horned lizard <i>Phrynosoma coronatum frontale</i>	--/SSC	Sacramento Valley, including foothills, south to southern California; Coast Ranges south of Sonoma County; below 4,000 feet in northern California	Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging	<b>Low.</b> Suitable habitat is present in the vicinity of the project area but not in the immediate project area. There are no recorded occurrences of this species within 10 miles (California Natural Diversity Database 2008).
Giant garter snake <i>Thamnophis gigas</i>	T/T	Central Valley from Fresno north to the Gridley/Sutter Buttes area; has been extirpated from areas south of Fresno	Sloughs, canals, and other small waterways where there is a prey base of small fish and amphibians; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter	<b>No.</b> No suitable habitat within the project area and this area is outside of the current and historic distribution of this species.
<b>Birds</b>				
Tricolored blackbird (nesting colony) <i>Agelaius tricolor</i>	--/SSC	Largely endemic to California; permanent residents in the Central Valley from Butte County to Kern County; at scattered coastal locations from Marin County south to San Diego County; breeds at scattered locations in Lake, Sonoma, and Solano Counties; rare nester in	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields; nesting habitat must be large enough to support 50 pairs; probably requires water at or near the nesting colony; requires large foraging areas, including marshes, pastures,	<b>Moderate.</b> Suitable habitat is present in project area. Nearest recorded occurrence is approximately 9 miles southwest of the project area (California Natural Diversity Database 2008).

Table B-1. Continued

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
		Siskiyou, Modoc, and Lassen Counties	agricultural wetlands, dairies, and feedlots, where insect prey is abundant	
Grasshopper sparrow <i>Ammodramus savannarum</i>	--/SSC	Summer resident and breeder in foothills and lowlands west of the Cascade-Sierra Nevada crest.	Occurs in dry, dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches. Nests in slight depressions in dense grasslands.	<b>Low.</b> There is limited habitat for this species in the project area. There are no occurrences of this species within 10 miles of the project area (California Natural Diversity Database 2008).
Burrowing owl (burrow sites and some wintering sites) <i>Athene cucularia</i>	--/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast	Rodent burrows in sparse grassland, desert, and agricultural habitats	<b>Low.</b> There is limited habitat for this species in the project area. Species is more common in more open habitats than occur within the project area. No burrows were identified in the project area. The nearest recorded occurrence of this species is approximately 11 miles southwest of the project area (California Natural Diversity Database 2008).
Ferruginous hawk (wintering) <i>Buteo regalis</i>	--/SSC	Winters in the Central Valley and Sierra Nevada and Coast Range foothills.	Occurs in open grasslands with perch sites.	<b>Low.</b> There is limited habitat for this species in the project area. Species is more common in more open habitats than occur within the project area. There are no recorded occurrences of this species within 10 miles of the project area (California Natural Diversity Database 2008).
Swainson's hawk (nesting) <i>Buteo swainsoni</i>	--/T	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley; the state's highest nesting densities occur near Davis and Woodland, Yolo County	Nests in small stands of oaks or cottonwoods in or near open riparian habitats; forages in grasslands, irrigated pastures, and grain fields adjacent to nest locations.	<b>Low.</b> No preferred nesting habitat for this species in the project area. The nearest suitable foraging habitat (large grasslands, pastures, and grain fields) for this species is approximately 8 miles to the west near the town of Lincoln. There are



Table B-1. Continued

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
White-tailed kite (nesting) <i>Elanus leucurus</i>	--/FP	Lowland areas west of Sierra Nevada from head of Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging	no recorded occurrences of this species within 10 miles of the project area (California Natural Diversity Database 2008).  <b>Moderate.</b> There is suitable nesting habitat for this species in the project area and suitable foraging habitat within the vicinity of the project area. The nearest recorded occurrence of this species is approximately 1.5 miles west of the project area (California Natural Diversity Database 2008).
Bald eagle <i>Haliaeetus leucocephalus</i>	D/E	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin; reintroduced into central coast; winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean	<b>No.</b> No suitable nesting or foraging habitat is present in the project area. The nearest recorded occurrence is approximately 5 miles southeast of the project area on Folsom Reservoir (California Natural Diversity Database 2008).
Loggerhead shrike (nesting) <i>Lanius ludovicianus</i>	--/SSC	Found in grasslands and agricultural areas throughout lowlands and foothills of California.	Prefers open habitats with scattered shrubs, trees, posts, fences, and other perches. Nests in densely-foliaged shrub or tree.	<b>Low.</b> Project area is within species range but does not provide preferred habitat for this species. There are no recorded occurrences within 10 miles of the project area (California Natural Diversity Database 2008).

Table B-1. Continued

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
California black rail <i>Laterallus jamaicensis coturniculus</i>	--/T	Permanent resident in the San Francisco Bay and east-ward through the Delta into Sacramento and San Joaquin Counties; small populations in Marin, Santa Cruz, San Luis Obispo, Orange, Riverside, and Imperial Counties	Tidal salt marshes associated with heavy growth of pickleweed; also occurs in brackish marshes or freshwater marshes at low elevations	<b>Low.</b> No suitable habitat within the project area; however there is suitable habitat in the general vicinity of the project area. The nearest reported occurrence is approximately 4 miles southwest of the project area (California Natural Diversity Database 2008).
Purple martin <i>Progne subis</i>	--/SSC	Coastal mountains south to San Luis Obispo County, west slope of the Sierra Nevada, and northern Sierra and Cascade ranges. Absent from the Central Valley except in Sacramento. Isolated, local populations in southern California	Nests in abandoned woodpecker holes in oaks, cottonwoods, and other deciduous trees in a variety of wooded and riparian habitats. Also nests in vertical drainage holes under elevated freeways and highway bridges	<b>Moderate.</b> There is suitable nesting habitat for this species within the project area; however there are no recorded occurrences within 10 miles of the project area (California Natural Diversity Database 2008).
Bank swallow <i>Riparia riparia</i>	--/T	Occurs along the Sacramento River from Tehama County to Sacramento County, along the Feather and lower American Rivers, in the Owens Valley; and in the plains east of the Cascade Range in Modoc, Lassen, and northern Siskiyou Counties. Small populations near the coast from San Francisco County to Monterey County	Nests in bluffs or banks, usually adjacent to water, where the soil consists of sand or sandy loam	<b>No.</b> No suitable habitat within the project area. There are no recorded occurrences within 10 miles of the project area (California Natural Diversity Database 2008).

Table B-1. Continued

Common and Scientific Name	Status <sup>a</sup> Fed/State/Other	Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
<b>Mammals</b>				
Pallid bat <i>Antrozous pallidus</i>	--/--/SSC	Throughout California, primarily at lower elevations and mid-elevations	Occurs in a variety of habitats from desert to coniferous forest; most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California. Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Use caves, crevices, mines, and hollow trees for roosting.	<b>Moderate.</b> There is suitable habitat for this species in the project area. The nearest recorded occurrence for this species is more than 10 miles south of the project area (California Natural Diversity Database 2008).
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--/SSC	Widespread throughout California.	Roosts in caves, tunnels, mines, crevices, hollow trees, and buildings; usually near water.	<b>Moderate.</b> There is suitable habitat within the project area. The nearest recorded occurrence for this species is approximately 1.5 miles northwest of the project area (California Natural Diversity Database 2008).

<sup>a</sup> Status definitions:

**Federal**

- E = listed as endangered under the federal Endangered Species Act (ESA)
- T = listed as threatened under the federal Endangered Species Act (ESA)
- D = de-listed
- = no listing

**State**

- E = listed as endangered under the California Endangered Species Act
- T = listed as threatened under the California Endangered Species Act
- R = listed as rare under the California Endangered Species Act
- SSC = species of special concern in California
- FP = fully protected under the California Fish and Game Code
- = no listing

**California Native Plant Society (CNPS)**

- 1B = List 1B species: rare, threatened, or endangered in California and elsewhere
- 2 = List 2 species: rare, threatened, or endangered in California, but more common elsewhere
- 3 = List 3 species: plants about which more information is needed to determine their status

**Threat Code Extensions:**

- .1 = seriously endangered in California (over 80% of occurrences threatened-high degree and immediacy of threat).
- .2 = fairly endangered in California (20-80% occurrences threatened).

**Table B-1.** Continued

- <sup>b</sup> Under petition for federal listing under the ESA. Species under petition are required to be actively considered by USFWS for elevation to proposed endangered or threatened status.
- The determinations of the potential for each species to occur are generally based on the following criteria:
- Low: The project area is within the species range and suitable habitat for the species occurs in the project vicinity, but was not identified in the project area.
- Moderate: The project area is within the species range and suitable habitat for the species is present in the project area, however there are no records for the species in the project vicinity.
- High: The project area is within the species range and suitable habitat for the species is present in the project area, and there are one or more records of the species in the project vicinity or the species was observed in the project area or in the project vicinity.