

**Initial Study and
Mitigated Negative Declaration**

**CLEAR CREEK COMMUNITY SERVICES DISTRICT
WATER SYSTEM IMPROVEMENT PROJECT**

**SRF# 1800512-001C
SCH#**

Prepared by:



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Public Draft
Initial Study and Mitigated Negative Declaration
Clear Creek Community Services District
Water System Improvement Project
SRF# 1800512-001C

Prepared for:

Clear Creek Community Services District
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June 2021

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- A Botanical Survey Report and Map of Alder Buckhorn Locations
- B Mitigation Monitoring and Reporting Program (to be included in Final IS)



1.0 INTRODUCTION

The Clear Creek Community Services District (CCCSD) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to provide the public, responsible agencies, and trustee agencies with information about the potential environmental effects of construction and operation of the proposed Clear Creek Community Services District, Water System Improvement Project (Proposed Project). The Proposed Project and its location are described in depth in Chapter 2. This document was prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) of 1970 (as amended) and the CEQA Guidelines (14 California Code of Regulations [CCR] § 15000 et seq.).

1.1 Intent and Scope of this Document

This IS/MND has been prepared in accordance with CEQA, under which the Proposed Project is evaluated at a project level (CEQA Guidelines § 15378). The CCCSD, as the Lead Agency under CEQA, would consider the Proposed Project's potential environmental impacts when considering whether to approve the project. This IS/MND is an informational document to be used in the planning and decision-making process for the Proposed Project and does not recommend approval or denial of the Proposed Project. The site plans for the Proposed Project included in this IS/MND are conceptual. The CCCSD anticipates that the final design for the Proposed Project would include some modifications to these conceptual plans, and the environmental analysis has been developed with conservative assumptions to accommodate some level of modification. This IS/MND describes the Proposed Project; its environmental setting, including existing conditions and regulatory setting, as necessary; and the potential environmental impacts of the Proposed Project on or with regard to the topics on the CEQA Initial Study checklist, in Chapter 3.

1.2 Public Involvement Process

Public disclosure and dialogue are priorities under CEQA. CEQA Guidelines §15073 and §15105(b) require that the lead agency designate a period during the IS/MND process when the public and other agencies can provide comments on the potential impacts of the Proposed Project. Accordingly, the CCCSD is now circulating this document for a 30- day public and agency review period.

All comments received before 5:00 p.m. from the date identified for closure of the public comment period in the Notice of Intent would be considered by the CCCSD during its deliberations on whether to approve the Proposed Project. To provide input on this project, please send comments to the following contact:



Clear Creek Community Services District
P.O. Box 833
Westwood, CA 96123
Attn: Nicolette Moroney, General Manager
(530) 256-3096
cccsdwater@frontiernet.net

1.3 Organization of this Document

This IS/MND contains the following components:

- **Chapter 1, Introduction**, provides a brief description of the intent and scope of this IS/MND, the public involvement process under CEQA, and the organization of and terminology used in this IS/MND.
- **Chapter 2, Project Description**, describes the Proposed Project, including its objectives, the project site where the Proposed Project would be constructed, the construction approach and activities, operation-related activities, and related permits and approvals.
- **Chapter 3, Environmental Checklist**, presents the environmental checklist used to assess the Proposed Project's potential environmental effects, which is based on the model provided in Appendix G of the CEQA Guidelines. This chapter also includes a brief environmental setting description for each resource topic and identifies the Proposed Project's anticipated environmental impacts, as well as any mitigation measures that would be required to reduce potentially significant impacts to a less-than-significant level.
- **Chapter 4, References**, provides a bibliography of printed references, websites, and personal communications used in preparing this IS/MND.
- **Appendices:**
 - Appendix A. Special Status Plant Survey
 - Appendix B. Mitigation Monitoring and Reporting Program, (to be added in Final IS)



2.0 PROJECT DESCRIPTION

2.1 Background and Need for the Project

The Clear Creek Community Services District (CCCSD or District) is a small community services district that provides potable water to 166 active service connections and serves a population of approximately 400 residents in Lassen County northeast of Lake Almanor, as shown in Figures 1 and 2. CCCSD currently supplies water from a spring classified as a groundwater source. The Proposed Project site is shown on Figure 3 and includes the entirety of the District's service area. The 1.14 square mile (approximately 730-acre) service area lies approximately 5,000 feet above mean sea level (MSL).

The CCCSD owns and operates the potable water system, built in 1957, which includes a spring house, an eight-inch steel gravity pipeline to convey water from the spring house to the pump station cistern, a pump house/pump station with emergency generator, a 5,000 gallon hydropneumatic tank to maintain pressure to the system, and a distribution system composed of 2- to 8-inch galvanized steel pipe, polyvinyl chloride (PVC) pipe, and asbestos cement (AC) pipe. The system has one main pressure zone and a current storage capacity of less than 5,000 gallons. The system is currently unmetered. The spring house, supply line, and pump station are in the north-eastern part of the service area, north of the residential community (See Figure 3).

CCCSD has been experiencing positive total coliform (TC) readings within their distribution system. The District has received eight TC violations since 2006, and many are believed to be due to the aging distribution system. Samples taken from repaired and removed distribution piping show extensive corrosion. Contamination has been limited to the distribution system with no violations at the spring source on record. The spring house, gravity line, pump station, and distribution system have met their useful service lives and have a greater risk of contamination due to the aging system. The current system does not provide adequate storage to meet maximum daily demand (MDD) or fire flow, and fire hydrant spacing does not comply with the Lassen County Fire Code requirements. Water quality issues have been limited to TC violations within the distribution system. CCCSD staff and State Division of Drinking Water (DDW) inspection reports concur that these violations are mainly due to the age of the system. DDW inspection reports have urged the District to move towards total replacement of the aging system.

The spring house was originally constructed in 1956. Various improvements have been made over the years to increase the security of the structure including installation of a fence with locking gate and replacement of the original wooden hatch with an aluminum hatch and



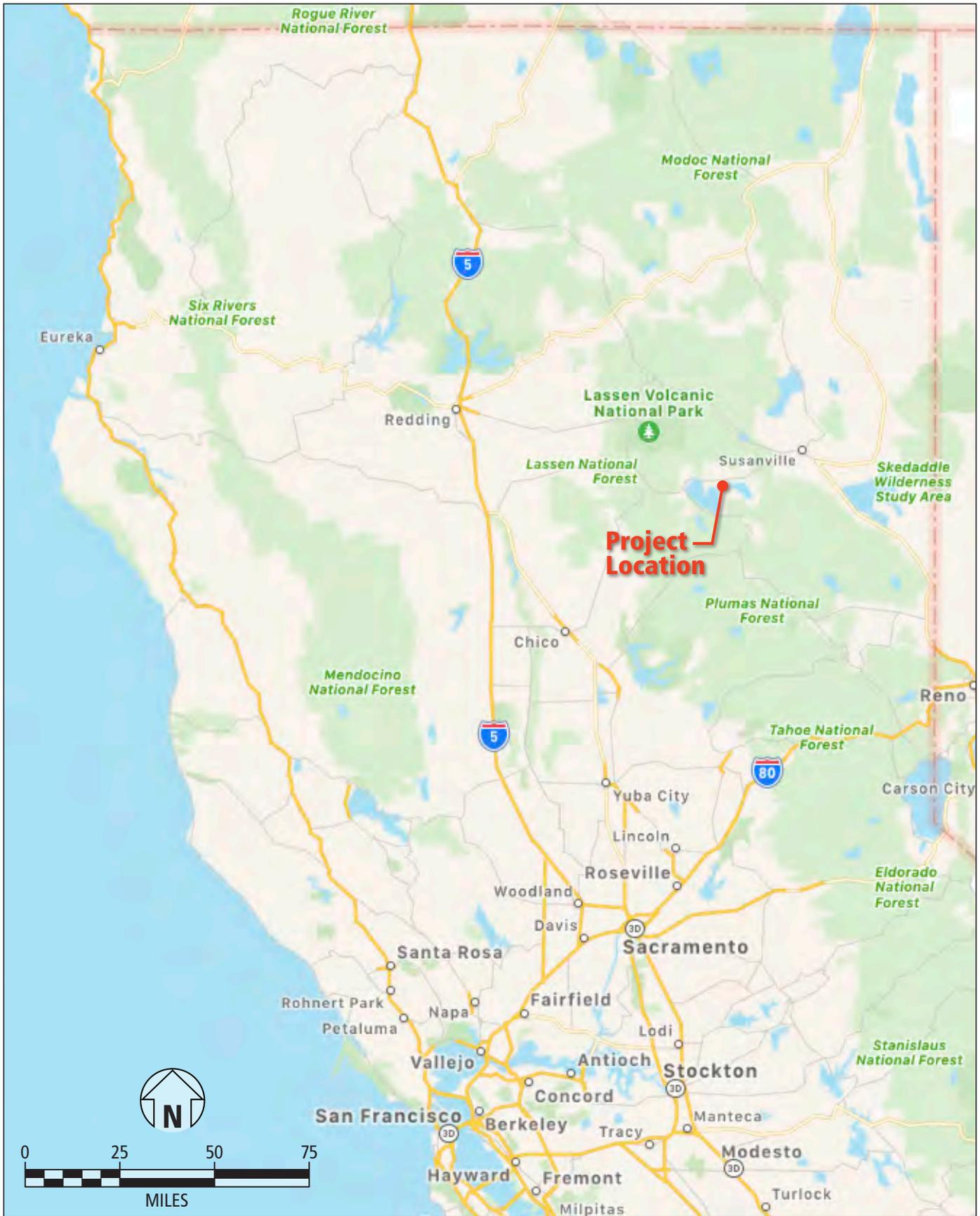


Figure 1
Regional Location

Source: Grasseti Environmental and TomTom Maps



Figure 2
Project Location

Source: Grasseti Environmental and TomTom Maps

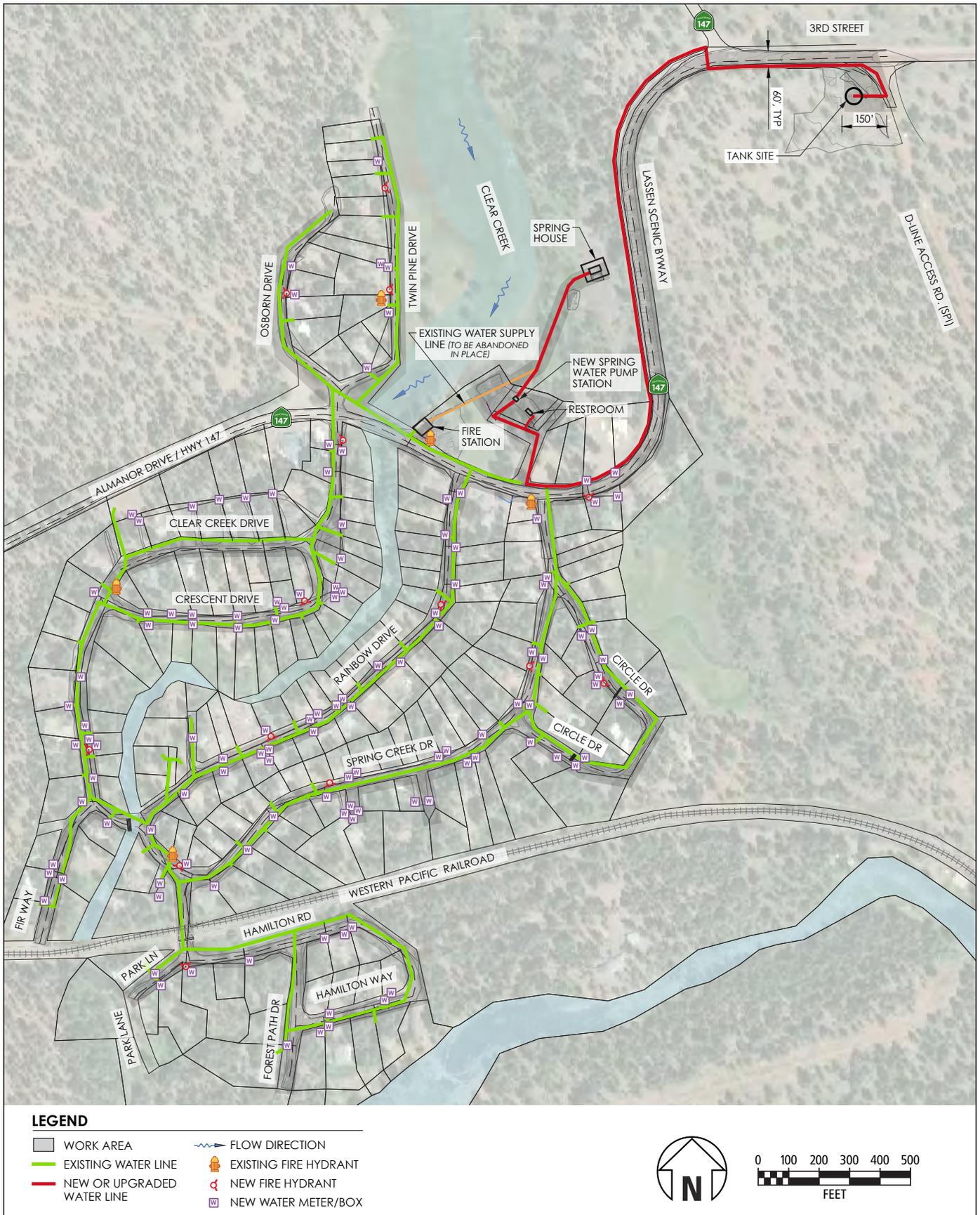


Figure 3
 CCCSD Existing and Proposed Water Supply Infrastructure

Source: Grasseti Environmental and PACE Engineering

alarm. However, the weathered condition of the existing spring house puts the source water at risk for contamination by vectors such as bats and rodents.

The current system storage is limited to the 5,000-gallon hydropneumatic tank, which is approximately 50% full of water and would be consumed within about one hour on an average day. The lack of adequate storage places the District at risk for severe water supply outage and imminent threat to public health and safety. It also does not provide adequate fire flow capacity.

The tank was constructed in 1950, and there are no records of its interior coating being inspected, repaired, or maintained. Typical paint system life ranges from 10 to 20 years depending on paint system and maintenance. If the interior of the tank has not been recoated, the steel walls would likely have become exposed to water, and corrosion would have occurred increasing the potential for tank failure. The District has discussed open inspection of the hydropneumatic tank; however, no action has been taken due to this being the sole source for water. PACE's experience with similar tanks leads us to assume that the tank has reached its useful service life and should be decommissioned as soon as possible.

A new water storage tank with a total storage capacity of 390,000 gallons is recommended to meet the Maximum Daily Demand MDD of 300,000 gallons plus 10% growth plus fire flow of 60,000 gallons.

2.2 Project Purpose and Objectives

The project's objectives are to upgrade the system to provide adequate fire flow, hydrant spacing, and alleviate distribution-system water quality problems. In order to achieve these objectives, the District is proposing the following.

- Rehabilitation of the existing spring house.
- Rehabilitation and replacement of the supply pipe.
- Construction of a new pump station.
- Construction of a new 390,000-gallon storage tank.
- Construction of approximately 3,000 feet of 12-inch water main, 35 fire hydrants, and 166 new meters.

The proposed improvements would conform to Chapter 16, California Waterworks Standards, Code of Regulations, Title 22. These regulations address quantity of supply, source capacity, reservoir design, system pressure, water mains, flushing, valves, and other distribution appurtenances.



2.3 Project Location and Setting

The Proposed Project is located in the small community of Clear Creek, CA in unincorporated eastern Lassen County (see Figure 1). The community is about 2.5 miles west of the town of Westwood, between Lake Almanor and Mountain Meadows Reservoir. Clear Creek is a small rural residential community along State Route (SR) 147. Land uses in the area are a mix of rural residential, forestry, and open space. Several commercial buildings and one large church exist in the project area. Most of the commercial spaces were either vacant or used for other purposes.

The Proposed Project area consists of a new water tank site, the existing spring house and new pump station sites, and the new customer meters and fire hydrants area. It also includes the pipe corridors connecting the intake pipeline to the new pump station and connecting the new pump station to the new storage tank. The 0.35-acre tank site is in a forested area about 1000 feet east of the spring house, adjacent to Third Street, just past the SR 147 turnoff. The existing pump station is located inside the Clear Creek Volunteer Fire Department fire station, adjacent to Clear Creek Park (See Figure 4). Due to the complex topography near the spring house and the limited access to the site, a new pump station would be constructed on a 1200-square foot site about 800 feet south of the spring house at the Lassen County Clear Creek Park and Highway 147, where there is safe access year-round for construction and ongoing facility operation. The Lassen County Parks Department has expressed their willingness to provide an easement on the park property for construction of a new pump station and water lines.

The District distribution area is a mostly developed single-family residential subdivision with paved internal roadways. About 34 of the 200 lots in this subdivision are undeveloped.

2.4 Proposed Project Characteristics

The Proposed Project involves the construction of a new water storage tank, a new pump station (with emergency generator), upgrades to the existing spring house, and new water meters and fire hydrants in the service area. In summary, the project components would be:

- Rehabilitation of the existing spring house.
- Replacement of approximately 64 feet of 8-inch pipe of the exposed portion of the supply pipe from the spring house to underground pipe section.
- Slip lining approximately 310 feet of buried 8-inch pipe from the new exposed pipe to the elbow.
- Installation of approximately 120 feet of 10-inch pipe from the slip-lined section to the new pump station.



- Construction of a new pump station with two canned, vertical turbine pumps and a new emergency generator and propane tank.
- Installation of approximately 3,000 feet of 12-inch pipe from the new pump station to the new storage tank.
- Construction of a new 390,000-gallon storage tank.
- Installation of 35 dry-barrel fire hydrants with isolation valves.
- Installation of 166 water meters, boxes, and appurtenances, complete.
- Decommission existing hydropneumatic tank, pumps, and cistern under the fire station.

These Proposed Project elements are discussed in detail below and shown on Figures 3 and 4.

2.4.1 Water Storage Tank

A parcel east of the existing spring house has been selected as the tank site (see Figure 3). The parcel is located on the ridge to the east of the community and would provide adequate static water pressure without the need of a booster pump station, provided an adequately sized distribution system is installed. The District has recently purchased the 0.35-acre tank site property from Sierra Pacific Industries (SPI), and would acquire a pipeline and access easement along an existing SPI access road.

The District would construct a 390,000-gallon welded steel water-storage tank (45 ft. diameter x 35 ft. height) would be constructed to meet both maximum daily demand (plus 10%) and required fire flow storage. The tank site would be fenced and accessed by a locked gate, and the fenced area would include a 15-foot access road around the tank. A fire hydrant would be included at the site to provide fire protection for the tank and surrounding area. No lighting would be installed at the tank site. The tank would be painted a neutral color to better blend in with the surrounding forest.

Construction storage/laydown area for the tank and pipeline would be provided on the tank site.

2.4.2 New Fire Hydrants and Water Meters

Thirty-five new fire hydrants and 166 new water meters would be installed in the Clear Creek residential area south of SR 147. The new fire hydrants would be installed in compliance with State Fire Standards and include shut-off valves for each hydrant assembly to aid in future maintenance. Excavations for the water meters would be 4 feet by 4 feet by 4 feet, and fire hydrant excavations would be 4 feet wide by 4 feet deep by 6 feet long.



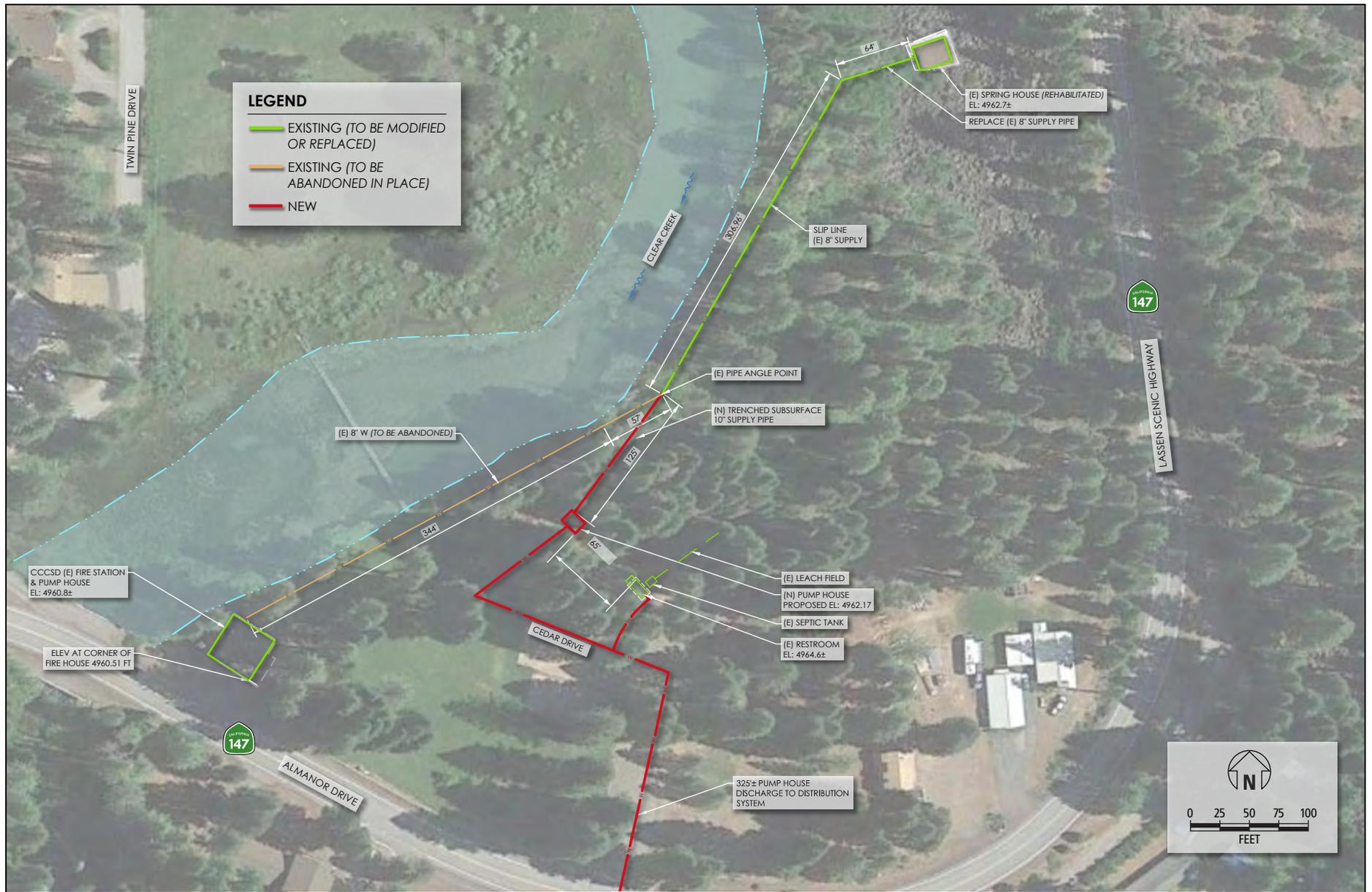


Figure 4
Proposed New Supply Pipeline Alignment

Source: Grasseti Environmental and PACE Engineering

At some point in the future, improvements may be made to the distribution system pipelines. Such improvements are not currently proposed and are therefore not considered part of this project.

2.4.3 Spring House Rehabilitation

The Proposed Project would continue to utilize the spring as a water source and includes rehabilitation of the existing spring house. Construction materials would be carried in by hand or helicopter so as not to damage the riparian habitat.

2.4.4 New Pump Station

Due to the complex topography near the spring house and the limited access to the site, the Project proposes a new pump station to be located south of the spring house within the Lassen County Clear Creek Park near Highway 147, where there is safe access year-round for construction and ongoing facility operation. The Lassen County Parks Service has expressed their willingness to provide an easement on the park property for construction of a new pump station.

The proposed pump station would be an approximately 12-foot by 16-foot concrete-block building housing two 15-horsepower vertical turbine pumps with flow-paced chemical (sodium hypochlorite) metering. If noise issues are a concern, then a submersible pump installation would be considered. Another 12 x 16-foot concrete pad with an emergency generator and propane tank would be located directly behind the pump station. This pad would include security/safety fencing. Up to 50 gallons of sodium hypochlorite would be stored on the site, for water treatment. A motion-sensing light would be installed near the pump station entrance.

A new propane-powered emergency generator and propane tank would be constructed on a 12x16-foot concrete pad adjacent to the new pump station. The generator and propane tank would be fenced to prevent issues with unauthorized access.

2.4.5 New Spring Water Supply Line

Because of its age, the spring supply pipe needs to be rehabilitated or replaced to reduce the risk of contamination. The existing 8-inch steel spring water supply line is approximately 770 feet in length and has an elevation drop of approximately 6 feet from the spring to the existing pump house cistern. The first 64 feet of intake pipe leaving the cistern is located exposed in the creek channel. The pipe then travels approximately 307 feet underground to the



community park, where there is one angle point before travelling approximately 400 feet to the pump station cistern located under the fire station.

Rehabilitation of the pipe in the channel using slip lining or some other means is impractical from a construction staging standpoint. It is proposed to replace the exposed pipe in-kind and thereby minimize impact to the riparian habitat. Construction plans call for a similar surface-mounted installation with the replacement pipe carried in by hand or flown in by helicopter along with other construction materials.

Replacement of the pipe from the channel to the new pump station needs to consider the riparian habitat and boulder field near the spring house. Open trench installation of a new pipe is considered infeasible because of the riparian habitat and the alignment is covered with boulders. Therefore the project proposes slip-lining much of the existing pipeline. Slip lining technology utilizes the existing pipe as a structural casing which is then lined with a new synthetic liner.

This approach would involve replacement of approximately 64 feet of new 8-inch pipe of the exposed portion of the supply pipe from the spring house to underground pipe section. The approximately 310 feet of buried 8-inch pipe from the new exposed pipe to the elbow would be slip lined (a liner would be pulled through the existing pipe). Open pits about 4-feet wide by 6-feet long by 4-feet deep would be required below the spring house and at the angle point in Clear Creek Park to connect the new pipeline. The upper pit would be located in the wetland habitat bordering the spring house and work would occur within the stream that flows from the springhouse into Dry Creek to replace that pipe segment; this process would likely involve temporary sand-bagging and dewatering the stream during construction activities. Approximately 120 feet of new 10-inch pipe would be installed in a trench from the slip-lined section to the new pump station in Clear Creek Park.

New Pipeline from Pump Station to Water Tank. Approximately 3,000 feet of 12-inch pipe would be buried on the outboard slope of the road from the new pump house to the new storage tank. This pipe crossing to the new tank would be either bored under Third Street or installed via an open trench, depending on Caltrans requirements. The portion of the pipeline along Third Street would be located on the roadway shoulder to the extent feasible, and would be constructed using an open trench method. This method would also be used to connect from the roadway to the new pump station.



2.5 Construction

2.5.1 Construction Sequence

Construction of the Proposed Project is anticipated to last for approximately 18 months, beginning in Summer 2023, with winter work halts as required by snow and weather conditions. Construction activities would occur Monday through Friday between 7:00 a.m. and 6:00 p.m.

There would be five distinct construction tasks in the proposed project:

- Distribution system meter replacement = 33 working days
- Spring House Rehabilitation = 30 working days
- Water Storage Tank Construction = 190 working days
- Pump House Construction = 108 working days
- Spring Water Supply Line Replacement = 30 working days

2.5.2 Staging Areas

It is anticipated that the north-east section of the Clear Creek park will be utilized as a staging area. This area is paved and receives very limited use because adequate parking exists closer to the main park area to the south.

2.5.3 Easements

The District currently has easements for the spring house, the spring water supply line, and the distribution system. A new easement will be required for the pump house and piping improvements to be constructed in the Clear Creek park.

2.5.4 Construction Equipment and Workers

The main pieces of equipment that may be used are as follows:

- track-mounted excavator
- end dump truck
- flat-bed delivery truck
- concrete truck
- backhoe
- compactor
- front-end loader
- water truck



Approximately twelve construction workers (3 crews of 4) could be utilized at any given time during construction.

2.5.5 Construction Fencing

The construction areas at the water tank and pump station sites, as well as at laydown areas and any boring pits, would be temporarily fenced for safety and security purposes. The tank site would also be permanently fenced after construction of the tank.

2.6 Best Management Practices

The Proposed Project construction would include a range of environmental commitments, otherwise known as best management practices (BMPs), to avoid adverse effects on people and the environment. BMPs are developed to address anticipated effects from various construction activities and would be implemented pre-construction, during construction, and post-construction, as specified in Table 1.

TABLE 1
Best Management Practices to be Implemented for the Proposed Project

Number	Title	BMP Description
BMP-1	Best Management Practices for Construction Air Quality	The contractor would use construction equipment that minimizes air emissions as required by law. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
BMP-2	Best Management Practices for Construction Emissions, Including Fugitive Dust Emissions	Implementation of construction BMPs to limit construction emissions, particularly fugitive dust emissions, as follows: <ul style="list-style-type: none"> • All exposed areas of bare soil should be watered as required to minimize fugitive dust emissions. • All haul trucks transporting soil, sand, or other loose material off-site should be covered or maintain at least two feet of free board space. Any haul trucks traveling along freeways or major roadways should be covered. • All visible mud or dirt track-out onto adjacent public roads should be removed using wet power-vacuum street sweepers at least once per day. The use of dry power sweeping should be prohibited.



Number	Title	BMP Description
BMP-3	Best Management Practices for Sediment Control	<ul style="list-style-type: none"> • All vehicle speeds on unpaved roads should be limited to 15 miles per hour (mph) or as posted. • Idling times should be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13 CCR § 2485). Clear signage regarding this requirement should be provided for construction workers at all access points. • All construction equipment should be maintained and properly tuned in accordance with manufacturer's specifications. All equipment should be checked by a qualified mechanic and determined to be running in proper condition before it is operated at the construction site. <p>The Proposed Project would implement these measures as required.</p> <p>Site specific BMPs to control sediments during construction activities, which may include but not be limited to:</p> <ul style="list-style-type: none"> • Install, implement, and maintain BMPs consistent with the California Storm Water Quality Association Best Management Practice Handbook (California Storm Water Quality Association [CASQA] 2015) or equivalent to minimize the discharge of pollutants. • Prepare a Stormwater Pollution Protection Plan. • Implement practices to reduce erosion of exposed soil, including stabilization of soil stockpiles, watering for dust control, establishment of perimeter silt fences, and/or placement of fiber rolls. • Minimize soil disturbance area. • Implement other practices to maintain water quality, including use of silt fences, stabilized construction entrances, and storm-drain inlet protection. • Where feasible, limit construction to dry periods. • Revegetate disturbed areas. <p>BMPs would be regularly monitored for effectiveness using appropriate methods (visual observation, sampling) at appropriate</p>



Number	Title	BMP Description
BMP-4	Best Management Practices for Hazardous Materials	<p>intervals (e.g., daily or weekly) and corrected immediately if determined to not be effective.</p> <p>Site-specific hazardous materials BMPs during construction activities, which may include but not be limited to:</p> <ul style="list-style-type: none"> • Develop (before initiation of construction activities) and implement (during construction and operational activities) a spill prevention and emergency response plan to handle potential spills of fuel or other pollutants. • Install, implement, and maintain BMPs consistent with the California Storm Water Quality Association Best Management Practice Handbook (CASQA 2015) or equivalent to minimize the discharge of pollutants to the MS4s, consistent with the requirements of the construction site stormwater and hazardous materials control requirements of the County of Lassen, in compliance with applicable RWQCB Orders. • Implement practices to minimize the contact of construction materials, equipment, and maintenance supplies with stormwater. • Limit fueling and other activities involving hazardous materials to designated areas only; provide drip pans under equipment and conduct daily checks of vehicle condition. • Require the proper disposal of trash and any other construction-related waste. • Ensure, through the enforcement of contractual obligations, that all contractors transport, store, handle, and dispose of construction-related hazardous materials consistent with relevant regulations and guidelines, including those recommended and enforced by Caltrans; the RWQCB; the County; and the applicable fire department. <p>Recommendations may include minimizing the amount of hazardous materials/waste stored on-site at any one time, transporting and storing materials in appropriate and approved containers, maintaining required clearances, and handling materials with applicable federal, state, and/or local regulatory agency protocols. In addition, all precautions</p>



Number

Title

BMP Description

required by the County of Lassen, would be taken to ensure that no hazardous materials enter any storm drainages.

BMPs would be regularly monitored for effectiveness using appropriate methods (visual observation, sampling) at appropriate intervals (e.g., daily or weekly) and corrected immediately if determined to not be effective.



3.0 ENVIRONMENTAL CHECKLIST

3.1 Summary of Project Information

1. Project Title: Clear Creek Community Services District Water System Improvement Project
2. Lead Agency Name and Address:
Clear Creek Community Services District
P.O. Box 833
Westwood, CA 96123
3. Contact Person, Email, and Phone Number:
Nicolette Moroney, General Manager
(530) 256-3096
cccsdwater@frontiernet.net
4. Project Location: The Proposed Project is located in the small community of Clear Creek, CA in unincorporated eastern Lassen County (see Figure 1). Clear Creek is a small residential community along State Route (SR) 147. The community is about 2.5 miles west of the town of Westwood, between Lake Almanor and Mountain Meadows Reservoir.
5. Property Owner(s):
Tank Site, Spring House Site and Distribution System: Clear Creek Community Services District; Pump Station Site – Lassen County
6. General Plan Designation:
Tank Site: Extensive Agriculture; Pump Station Site: Planned Development Residential
Transmission Line: Extensive Agriculture and Planned Development Residential
Distribution System: Commercial, Low Density Residential, and Planned Development Residential.
7. Zoning: Tank Site: Timber Production Zone (T-P-Z); Pump Station Site: Planned Community (P-C); Transmission Line: Timber Production Zone (T-P-Z) and Planned Community (P-C); Distribution System: Retail Business District (C-1), Upland Conservation/Resource Management District (U-C-2) Single-Family Residential (R-1-8), and Planned Unit Development (P-U-D).



8. Project Description: See Chapter 2, Project Description.
9. Surrounding Land Uses and Setting: Land uses in the area are a mix of residential, forest, and open space. The project area includes about 160 houses and a church along the highway, in a rural residential setting. A large Lassen County Park (Clear Creek Park) is just north of the residential community.
10. Other Public Agencies Whose Approval or Input may be Needed:
 - California Regional Water Quality Control Board, Region 6 (NPDES Permit for water discharge; SWPPP)
 - California Department of Transportation, District 2 (Encroachment Permit for pipelines in State Highway easement)
 - Lassen County Department of Environmental Health Authority to Construct (emergency generator permit), CERS account to register diesel fuel storage at new pump station.
 - State Water Resources Control Board – Division of Drinking Water (Review and comment on proposed project and permit to operate)
 - California Department of Fish and Wildlife- Streambed Alteration Agreement
 - US Army Corps of Engineers – Clean Water Act Section 404 Authorization
 - California Regional Water Quality Control Board, Clean Water Act Section 401 Certification
11. Have California Native American tribes, that are traditionally and culturally affiliated with the Proposed Project area, requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

Project notification letters and invitations to consult were sent by certified mail on to the three tribes who are traditionally and culturally affiliated with the project area and are on the State Water Board's (Assembly Bill [AB] 52) list. Subsequent to the initial letters, email and phone follow-up contacts were made to interested parties. Mr. Ron Morales of the Honey Lake Maidu responded and had several contacts with Dr. Nathan Stevens of the Sacramento State Archaeological Research Center. Mr. Morales stressed the cultural sensitivity of the project area and asked that a Native American monitor of his choosing be present for all ground-disturbing work. This consultation is discussed further in the Tribal Cultural Resources section of the Initial Study.



3.2 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Proposed Project as indicated by the checklists and responses contained on the following pages:

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture & Forest Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology & Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology & Water Quality |
| <input type="checkbox"/> Land Use & Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population & Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation & Traffic | <input checked="" type="checkbox"/> Tribal Cultural Resources | <input type="checkbox"/> Utilities & Services Systems |
| <input type="checkbox"/> Wildfire Hazards | <input type="checkbox"/> Energy | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

3.3 Determination

On the basis of this initial evaluation:

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

Nicolette Moroney
Signature

5/31/2021
Date

Printed Name: Nicolette Moroney, General Manager



3.4 Evaluation of Environmental Impacts

The following checklist is formatted consistent with CEQA Guidelines, Appendix G. A “***no impact***” response indicates that the project would not result in an environmental impact in a particular area of interest, either because the resource is not present, or the project does not have the potential to cause an effect on the resource.

A “***less than significant***” response indicates that, while there may be potential for an environmental impact, the significance of the impact would not exceed established thresholds and/or that there are standard procedures or regulations in place that would apply to the project and hence no mitigation is required.

Responses that indicated that the impact of the project would be “***less than significant with mitigation***” mean that, although there is the potential for a significant impact, feasible mitigation measures would become conditions of approval for the project if it receives approval by the City Planning Commission.

A “***potentially significant impact***” response indicates that the impact would exceed established thresholds and that the impact could not be avoided by utilizing standard operating procedures and regulations, program requirements, or design features incorporated into the project or that additional analysis is required in an EIR.

Public comments on this Initial Study should focus on the accuracy and completeness of the analysis contained herein.



3.4.1 Aesthetics

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Background

The Proposed Project area’s visual character is characterized by a mix of rural residential, forest, open water and meadows (see Figures 4 through 8). The overall area includes views of meadows, hills, creeks, and mountains. The Clear Creek community is in a low-lying area surrounded by higher ridges.



The proposed tank site, which is adjacent to Third Street, is visible from Third Street as a sparsely forested and shrub-covered area. The pump station site is visible from the County's Clear Creek Park as part of an open area behind the restroom building. The pipelines would be underground under roadways and forested areas. The springhouse is in a secluded area surrounded by trees and large boulders.

SR 147 is named the Lassen Scenic Byway, however there are no State-designated Scenic Highways in the County. Portions of SR 36, SR 89, SR70 are mapped as eligible for designation as a State Scenic Highway, however SR147 is not mapped as eligible¹.

Figure 4: View of Tank Site Looking Southeast from Third Street



¹ http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/ Accessed May 8, 2018.



Figure 5: View of Proposed Tank Site Looking Northwest from Third Street



Figure 6: View of Proposed Pump Station Site in Clear Creek Park



Figure 7: View towards Clear Creek Park from Twin Pines Drive



Figure 8: View of Existing Pump House from South



Discussion

a. Scenic Vista - *Less than Significant Impact with Mitigation.* The proposed new water tank, which would be approximately 35 feet high and 45 feet in diameter and set back from Third Street about 50 feet, would be partially shielded in views from the roadway by existing trees and shrubs. However, due to the tank's size and proximity to Third Street, it would still be prominent in views from that roadway. This impact could be *potentially significant*. The Proposed Project would plant additional trees along the roadway frontage of the tank site, and the tank would be painted a neutral color to shield and reduce potential visual impacts of views of the tank from motorists (See Mitigation Measure AES-1, below).

Although the pump station building would be visually unobtrusive and in a lightly used area of the County Park, its location in the park would somewhat diminish views from some of public use areas of the park.

With the proposed mitigation measures, these impacts would be reduced to *less than significant*.

b. Scenic Highway – *Less Than Significant Impact.* As discussed above, SR 147 is not designated as a state or Lassen County Scenic Highway. The Proposed Project would remove a few large trees from the tank site. Pump station and access road construction would require removal of up to five large trees from the site (See Figure 6). Rock outcroppings near the spring house would not be affected by the project. Visual quality of the pump station site area would be altered with the proposed tree removal and pump station and access road construction. However, this would affect a small area (less than 1,000 sq. ft.) of the overall park and would not be visible from the highway, so would be considered a less-than-significant impact. Because none of the roadways in the project vicinity are designated Scenic Highways, the Proposed Project would have a *less-than-significant* impact on their visual resources.

c. Visual Quality – *Less than Significant Impact with Mitigation.* As described in Item a), above, impact on the proposed project on visual quality of the area would be *less than significant* with mitigation.

d. Light and Glare – *Less than Significant Impact.* The project would include motion-activated security lighting at the entrance to the pump station. The location of this light away from nearby residences, and the lack of nighttime use of the park would minimize this impact. No other exterior lighting is proposed. Therefore, the proposed project would have a *less-than-significant* impact on light and glare.



Mitigation Measures

Mitigation Measure AES-1: The project applicant shall install screening trees to augment existing trees along the tank site's Third Street frontage to assure that the views of the proposed tank are screened in views from the roadway. New trees or shrubs shall also be planted adjacent to the pump station to screen views of the pump station from the pond area to the west. Species on the tank site shall be selected that are appropriate to the local climate and grow to a minimum of 30 feet in height. Lower trees or shrubs may be planted near the pump station. Trees shall be located for optimal screening potential. Trees and shrubs shall be irrigated as necessary and monitored for mortality for two years. Any dead trees shall be replaced.



3.4.2 Agriculture and Forest Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 on the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zone Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Background

The tank site is open land designated for timber preserve use, and not in agricultural use. The tank site is sparsely forested, while the pumping station site is in a County Park. The transmission pipeline alignment is mostly on private lands adjacent to the County Park, and have limited forestry potential. The distribution system is in a rural residential community. Lassen County farmlands are not mapped by the California Farmland Mapping Program, California Important Farmland Finder (accessed March 8, 2017). The Proposed Project site is not in agricultural use and is not under a California Land Conservation (Williamson Act) Contract.

Discussion

a, b. Farmland, Williamson Act - *No Impact*. There are no mapped agricultural lands in the Project area or on the Project site. Therefore, the Proposed Project would have no impact on conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program because no such designated lands are mapped on the corridor. No portions of the site are under a Williamson Act Contract. Therefore, the Proposed Project would result in ***no impact*** on farmland, land zoned for agricultural use, and Williamson Act Contracts.

c. Conflict with Forest Land Zoning – *No Impact*. The project would be permitted under the Project Site’s zoning and General Plan designations²; no rezoning would be necessary. (See Section 3.4.10, Land Use and Planning, for additional discussion). Therefore it would not conflict with any forest land zoning.

d. Forest Lands – *Less than Significant Impact*. Less than half an acre of sparsely forested forest land would be taken out of potential production as a result of the project. This impact would be ***less than significant*** in the context of the hundreds of thousands of acres of forest lands in the region.

e. Conversion of Farmland – *No Impact*. The Proposed Project would not involve changes in the existing environment that could result in conversion of Farmland to a non-agricultural use. The Proposed Project would result in ***no impact*** on conversion of Farmland to non-agricultural use.

² Water infrastructure is exempted from local zoning ordinance requirements per California Government Code, Section 53091(e).



3.4.3 Air Quality

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Background

The Clear Creek Community Services District (CCCSD) Water System Improvement Project (Project) site lies just east of the Plumas-Lassen county line and just south of State Route 36 in southwestern Lassen County, which is part of California’s Northeast Plateau Air Basin (NPAB) (CARB, Air Basins). According to the Lassen County General Plan, the major air pollutant emissions in Lassen County come from motor vehicles, lumber mills, wood burning stoves, wildfires, prescribed fires, fugitive dust from unimproved roads and sparsely vegetated or unvegetated lands, including dry lakebeds, and agricultural activities, such as plowing and agricultural waste burning.

The US Environmental Protection Agency (EPA) and California Air Resources Board (CARB) have established national ambient air quality standards and California ambient air



quality standards, respectively. The most important pollutants so regulated are: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and particulate matter (PM) (i.e., in two size classes - PM less than 10 microns in diameter [PM₁₀] and PM less than 2.5 microns in diameter [PM_{2.5}]). The pollutants of greatest concern in California (and locally) are ozone, PM₁₀, and PM_{2.5}. The CARB has retained regulatory authority over mobile pollutant sources in the state, but has delegated much of the responsibility for control over stationary pollutant sources to local agencies, which in Lassen County is the Lassen County Air Pollution Control District (LCAPCD).

The CARB maintains numerous air quality monitoring stations located throughout the state that continually measure the ambient concentrations of major air pollutants. The coverage afforded by such stations in the northeast parts of the state is rather sparse. In fact, there are no permanent monitoring stations in the NPAB or Lassen County. The closest monitoring station to the Project site is in Chester in Plumas County about 5 miles west of the Project site. Only PM is monitored in Chester with violations of the federal PM_{2.5} standard noted in recent years, as shown in Table AQ-1.

Table AQ-1: Local Ambient Air Quality Monitoring Data Summary

POLLUTANT	AMBIENT STANDARD	MAXIMUM CONCENTRATIONS MEASURED/DAYS STANDARDS EXCEEDED		
		2016	2017	2018
PM_{2.5} – Chester (1st Avenue)				
Maximum 24-hour concentration (µg/m ³)	35	33.2	38.5	57.8
# Days federal standard exceeded		na	na	na
Notes: ppm = parts per million. na = data not available Bold= exceedance Source: CARB, iADAM: Air Quality Data Statistics https://www.arb.ca.gov/adam/				

Because of the relative sparsity of monitoring stations/data in northern California, many of its counties (including Lassen) are unclassified with respect to attainment of federal standards, although Butte County in the Sacramento Valley southwest of Lassen County is a “marginal” nonattainment area for ozone, and Plumas County adjacent to and south of Lassen County is a “moderate” nonattainment area for PM_{2.5}. (EPA, Nonattainment Areas for Criteria Pollutants).



The larger California Air Districts have established their own analytical methodologies and significance thresholds for CEQA air quality analysis within their jurisdictions. But there are no CEQA methodological guidelines or significance thresholds from the LCAPCD for projects in Lassen County. Thus, Project impacts from fugitive dust during construction were evaluated based on Project compliance with Lassen County APCD dust control requirements (Rule 4:18 Fugitive Dust Emissions). Project impacts from construction equipment exhaust emissions were evaluated based on comparison with EPA *de minimis* emission thresholds.

Discussion

A and b. Air Quality Planning, Standards, Cumulative Non-Attainment - *Less Than Significant with Mitigation.*

Upgrading the existing potable water supply system serving the approximately 400 residents of the CCCSD in Lassen County would not have the potential to substantially affect County housing, employment, population or transportation projections, which are the bases of the emission inventories and control strategies of the NPAB and County air quality attainment/maintenance plans. The Project would maintain air quality standards in the NPAB and would not significantly impede attainment of the air quality goals of the State's other air basins. Thus, the Project would not conflict with or obstruct implementation of applicable air quality plans.

The Project would comply with the federal Clean Air Act by not causing or contributing to violations of federal ambient air quality standards. As indicators of compliance with these standards, the EPA's General Conformity Rule (EPA General Conformity) specifies *de minimis* emission thresholds (EPA, General Conformity *De Minimis* Tables) for ozone and its precursors (i.e., volatile organic compounds [VOC] and nitrogen oxides [NO_x]) and the other major criteria pollutants. As shown in Table AQ-2, Project construction and operational emissions are less than the *de minimis* thresholds for all major criteria pollutants. Thus, the Project would be in conformity with California's State Implementation Plan (SIP) for attainment of federal air quality standards and would not make cumulatively considerable contributions to the NPAB ambient ozone or particulate matter levels.

Construction of the Project's new water supply and distribution system would generate temporary emissions of fugitive dust from equipment and material movement. To limit the generation of fugitive dust, which together with particulate emissions from construction equipment exhaust could



Table AQ-2: Project Emissions and Comparisons with EPA *De Minimis* Thresholds (tons/year)

Pollutant	Lassen County Federal Attainment Status ^a	Lassen County <i>De Minimis</i> Threshold ^b	Project Construction Emissions ^c	Net Project Operational Emissions
Ozone (O ₃) ^d	Attainment/ Unclassified	100	2.3	0
Oxides of Nitrogen (NO _x)	Attainment/ Unclassified	100	2.1	0
Reactive Organic Gases (ROG)	----	50	0.2	0
Volatile Organics (VOCs) ^e	----	50	0.2	0
Particulate Matter (PM _{2.5})	Attainment/ Unclassified	100	0.1	0
Particulate Matter (PM ₁₀)	Attainment/ Unclassified	100	0.1	0
Carbon Monoxide (CO)	Attainment/ Unclassified	100	2.0	0
Sulfur Dioxide (SO ₂)	Attainment/ Unclassified	100	<0.1	0
Lead (Pb)	Attainment/ Unclassified	25	0	0

Emission estimates assume project construction equipment with California-average emitting engines during the year 2020 construction phases.

^a Source: EPA, Nonattainment Areas for Criteria Pollutants (Green Book) <https://www.epa.gov/green-book>

^b Source: EPA, General Conformity De Minimis Tables <https://www.epa.gov/general-conformity/de-minimis-tables>

^c Emissions from construction equipment were calculated using the CalEEMod Model, Version 2016.3.2.

^d Ozone is not directly emitted but is formed from its precursors, NO_x and ROG. Thus, ozone emissions were taken to be the sum of the two precursors.

^e VOCs are similar to ROGs but are not directly calculated by CalEEMod. However, for their effect on ozone formation, VOC emissions were assumed to be equivalent to ROG emissions.



expose nearby residences (local sensitive receptors) to elevated PM₁₀ and PM_{2.5} levels during project construction, construction best management practices shall be implemented as specified in Mitigation Measure AQ-1.

After Project construction is complete, the operational air pollutant emissions associated with the rebuilt water distribution system would be similar to those of the old system. Thus, the Project's operational air pollutant emissions would be *less than significant*.

d. Sensitive Receptors - Less Than Significant.

The greatest potential for adverse Project ambient pollutant impacts would be from the exposure of the Clear Creek residential receptors to the PM₁₀ and PM_{2.5} emitted by the diesel-powered equipment during Project construction. But the potential for significant health impacts from project particulate emissions is low because of the relatively large Project site area (i.e., the Clear Creek developed area extends over about 75 acres) over which the particulate emissions would be spread and the relatively short time span over which the emissions would occur. Thus, particulate emissions would disperse during transport from active construction areas to the sensitive receptors and *no significant* adverse health impacts would be expected to the Clear Creek residents.

e. Odors – Less Than Significant Impact.

The Project construction fleet would operate over a relatively large Project site area (i.e., estimated at about 75 acres for the entire subdivision) and not be close to any particular residence in the subdivision for more than a few days. Thus, any perceptible odor impacts from construction equipment exhaust to the local residents would be transitory as the locus of construction activity moves around the Project site during construction. Therefore, odor impacts associated with Project construction would be *less than significant*.

Mitigation Measures

Mitigation Measure AQ-1: In accordance with LCAPCD Rule 4:18 (Fugitive Dust Emissions), reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:

- Covering open bodied trucks when used for transportation materials likely to give rise to airborne dust.
- Installation and use of hoods, fans, and other fabric filters to enclose and vent the handling of dusty materials. Containment methods may be employed during sandblasting and other similar operations.



- The application of asphalt, oil, water or suitable chemicals to dirt roads, material stockpiles, land clearing, excavation, grading or other surfaces which can give rise to airborne dusts.
- The prompt removal of earth or other material from paved streets onto which earth or other material for earth moving equipment, erosion by water, or other means has been deposited.



3.4.4 Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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, 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 (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>



- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Results in a conversion of Oak Woodlands that would have a significant effect on the environment | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
-

Background

Introduction

Two reconnaissance-level biological resources surveys have been conducted on the project site. The first was conducted on May 22, 2018 by Northgate Environmental Management biologist Josh Phillips. The second, follow-up survey was conducted on September 1, 2020 by Vollmar Natural Lands Consulting senior biologists Cassie Pinnell and Jake Schweitzer. The surveys served to describe the habitat types occurring on the project site, identify areas on the site containing potentially jurisdictional wetlands/waters, and to evaluate the potential of special-status plant and wildlife species to occur based on an analysis of onsite habitats, known home ranges and/or distribution of target species, and other biological characteristics. A focused survey for special-status plants was also conducted on June 18, 2018; the survey was timed to correspond with the blooming period of regionally occurring special-status plant species associated with the elevation and habitat types occurring on the project site.

All available project information was also reviewed, including (1) project design documents; (2) commercially available aerial photography of the project site and surrounding area; (3) the California Natural Diversity Database (CNDDDB); (4) the United States Fish and Wildlife Service Information for Planning and Consultation (IPaC), (5) California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants; (6) GIS stream and wetland data; and (7) critical habitat maps.



General Habitat Description

The project site is in southwestern Lassen County, within the Cascade Mountain Ranges geomorphic province of northeastern California. This is a rugged, high-elevation region that is dominated by volcanic peaks and plateaus and associated volcanic rocks. The site is on a minor plateau just north of Little Dyer Mountain and northeast of Lake Almanor, within an area mapped by the U.S. Geological Survey (USGS) as basalt volcanic rocks, though andesitic volcanic rocks are also mapped in the vicinity just south of the study area (USGS 2007). Farther south, granite becomes more prevalent within the Sierra Nevada Mountain Ranges. Soil units mapped in the project site include Redriver-Woodwest-Wafla complex (89% of the study area), Swainow-Almanor complex (6%), and Mountmed loam (5%). All of these are well-drained alluvium or colluvium derived from the local volcanic rocks, and generally feature a high content of gravel (USDA 2018).

Climate in the vicinity of the study area is characteristic of high elevation interior California. Elevation ranges from 4,940 to 5,070 feet, where precipitation is relatively high and temperatures are relatively low in comparison with lower elevation areas (e.g., the Sacramento Valley south of the region). Mean annual precipitation in the vicinity of the project site is 36 inches, with the highest amount of precipitation occurring in February (6.5 inches), and the lowest amount occurring in August (0.23 inches). Precipitation occurs as various forms of snow and sleet as well as rain during winter months. The mean temperature for the project area is 46 degrees Fahrenheit, with the coldest mean temperatures occurring during the month of January (31.6° F), and the warmest during July (64.7° F).

Onsite Plant Communities

Plant communities within and surrounding the project site are primarily influenced by geology and associated soil types, as well as by the climatic regime in the region. The site is mapped within the High Cascade Range Subregion (CaRH) by the Jepson Herbarium (2012), and primarily as Sierran Mixed Conifer by the California Department of Forestry and Fire Protection (FRAP 2002). The CaRH is described in the Jepson Manual (2012) as generally occurring above 1,640 feet (500 meters), and consisting primarily of ponderosa pine (*Pinus ponderosa*), montane fir/pine, and lodgepole pine (*Pinus contorta*) forests, with treeless alpine vegetation on Mount Shasta and Lassen Peak (ibid).

The project site includes areas within Clear Creek Park; undeveloped areas north of the park containing the existing springhouse; the proposed tank site located on undeveloped land northeast of Clear Creek Park; the roadway and shoulder between Clear Creek Park and the tank site; and roadways within residential areas of Clear Creek, south and west of Clear Creek Park.



Dominant trees observed within upland habitats of the project site, such as at the pump station site, tank site and along the road shoulder include ponderosa pine and white fir (*Abies concolor*). The shrub stratum in these areas (excluding residential areas) consist of a wide variety of species, including green leaf manzanita (*Arctostaphylos patula*), snow bush (*Ceanothus cordulatus*), Mahala mat (*C. prostratus* var. *prostratus*), service berry (*Amelanchier alnifolia* var. *pumila*), and Ribes species (especially wax current - *R. cereum* var. *cereum*).

Within Clear Creek Park and the area between the Park and springhouse to the north, are upland areas and large areas containing wetland-associated vegetation. Trees and shrubs observed within low-lying wetland areas, primarily along the lake margins at the northern edge of Clear Creek Park, include lodgepole pine, Douglas' spiraea (*Spiraea douglasii*), Lemmon's willow (*Salix lemmonii*), and scattered service berry. Dominant herbaceous plants occurring within upland habitats in this general area include starry false lily of the valley (*Maianthemum stellatum*), western bracken fern (*Pteridium aquilinum* var. *pubescens*), Poa species (e.g., pine bluegrass [*Poa secunda*]), and opposite leaved tarweed (*Hemizonella minima*). Upland habitats within the landscaped portion of the park consisted primarily of turf grass and associated weedy forbs, such as annual blue grass (*Poa annua*), common dandelion (*Taraxacum officinale* ssp. *officinale*), and white clover (*Trifolium repens*). Herbs observed within the wetland habitat north of the park include California corn lily (*Veratrum californicum* var. *californicum*) along with a variety of rushes (*Juncus* spp.) and sedges (*Carex* spp.). Along the northeastern edge of the wetlands is a boulder field that surrounds the springhouse, which is underlain by a high water-table. Plants documented in this area include a sparse mix of facultative wetland shrubs and upland forbs that have colonized the limited soil between the boulders. Species observed include Douglas' spiraea, Lemmon's willow, western bracken fern, pine bluegrass, and the weedy woolly mullein (*Verbascum thapsus*).

Portions of the project site within residential areas are characterized by paved roads, gravel and dirt driveways, fir and pine trees, sparse roadside vegetation, and landscaped areas. Dry Creek and a tributary to the Creek pass through this portion of the project site (via culverts) at five locations. At the time of site visits, flowing water was present at the creek crossings and riparian and wetland vegetation was present.



Discussion

a. Special-Status Species

Special-Status Plants

For the purposes of this report, special-status plants include those species that are state or federally listed as Rare, Threatened or Endangered; federal candidates for listing; proposed for state or federal listing; or identified by the CNPS Inventory of Rare and Endangered Plants of California (CNPS Inventory) as Rank 1, 2, 3, or 4 species.

Nearly all of the special-status plant taxa documented in the vicinity of the project site are associated with what CNPS classifies as “Lower Montane Coniferous Forest” (a synonym for Sierran Mixed Conifer) or as wetland types such as “Meadows and Seeps,” “Bogs and Fens,” and “Marshes and Swamps” (CNPS 2018). A smaller number of taxa known from the region are more associated with “Chaparral,” “Great Basin Scrub,” and/or higher elevation montane habitats that do not occur on the project site.

A majority of the project site encompasses Lower Montane Coniferous Forest, which is present throughout all areas except the landscaped park area and the wetland areas surrounding the lake north of the park. The wetland areas within the project site most closely conform to the Meadows and Seeps or the Marshes and Swamps habitats. Most of the wetland areas are dominated by trees and shrubs that form Swamp habitat, though localized areas support herbaceous plants more characteristic of meadow/seep habitats. The northeastern-edge of the project site is a more open form of Lower Montane Coniferous Forest which supports a number of shrubs that are associated with Chaparral and/or Great Basin Scrub, including manzanitas, ceanothus, and antelope bush (*Purshia tridentata*). However, this area is much more likely to support special-status plants of the “forest” habitat type noted above, since the shrubs are rather scattered and form more of an understory than a scrub plant community. With the exception of the landscaped park and its immediate surroundings, residential areas, and along stretches of the roadside habitats, plant communities within the project site are relatively undisturbed and support a clear dominance of native plant species. In addition, there are localized areas of unique soils, including areas with exceptionally high gravel content as well as acidic, saturated soils. These and other areas within the project provide suitable habitat for special-status plants known from the region.





Figure 9
Documented Special-Status Species – Clear Creek, Lassen County

Source: California Natural Diversity Database

A focused survey for special-status plants was conducted on June 18, 2018, timed to correspond with the blooming period of regionally occurring special-status plant species associated with the elevation and habitat types occurring on the project site. No federal or state listed special-status plant species were observed during the survey, but two CNPS listed species (considered to be of special-status under CEQA) were documented on or adjacent to the project site.

Western campion (*Silene occidentalis* ssp. *occidentalis*) is a CNPS List 4.3 species. CRPR List 4.3 indicates a watch list, plants of limited distribution or infrequent throughout a broader area in California and their status should be monitored regularly. This plant was found in the northeast corner of Wilson Way in the open forested area adjacent to the paved road. The small population consists of approximately 10 plants. These plants can be avoided by constructing within the paved road (as planned), but in the absence of avoidance measures, these plants could be inadvertently disturbed during construction activities. Therefore, impacts to western campion are ***potentially significant but mitigable*** through implementation of Mitigation Measures BIO-1, and 2, below.

Alder buckthorn (*Rhamnus alnifolia*) is a CNPS List 2B.2 species. CNPS List 2B.2 indicates plants that are rare, threatened or endangered in California but common elsewhere. Several alder buckthorn shrubs are present along the west side of the trail leading through the Clear Creek Park wetlands on the way to the springhouse (See Appendix A). These shrubs can be avoided as slip-lining would be used to avoid impacting the area in which the plants occur. However, in the absence of avoidance measures, these plants could be inadvertently disturbed during construction activities. Therefore, impacts to alder buckthorn are ***potentially significant but mitigable*** through implementation of Mitigation Measures BIO-1, and 2, below.

Special-Status Wildlife

For the purpose of this evaluation, special-status wildlife species include those taxa listed or proposed for listing as Threatened or Endangered under the federal or state Endangered Species Acts, state or federal candidates for listing, state Species of Special Concern, state Fully Protected Species, federal Birds of Conservation Concern, and other species included on the California Department of Fish and Wildlife (CDFW) Special Animals List.³

³ The CDFW maintains a Special Animals List. “Special Animals” is a general term that refers to all of the taxa the CNDDDB is interested in tracking, regardless of their legal or protection status. The CDFW considers the taxa on this list to be those of greatest conservation need.



A review of the CNDDDB was conducted to identify special-status species documented in the project region; the review included the project quadrangle (i.e., Westwood West) and the surrounding eight USGS 7.5-minute quadrangles. Figure 9 shows the special-status wildlife species documented in the surrounding area (i.e., within approximately 5 miles of the project site). These and other special-status wildlife species known from the project region are identified in Table BIO-1, along with their regulatory status, habitat requirements, and an evaluation of their potential to occur on or near the project site.

Table BIO-1: Special-Status Species Known from the Project Region

Common Name/Scientific Name	Status	General Habitat Description	Potential to Occur on Project Site
<i>Amphibians</i>			
Sierra Nevada yellow-legged frog <i>Rana sierrae</i>	FE ST	The more well-known habitats used for breeding are deep lakes, at least in the central and southern Sierra (Knapp and Matthews 2000, Knapp et al. 2003). However, the taxon also breeds in other habitats including streams and wet meadows, particularly in the northern parts of its range. Always encountered within a few feet of water. The scope and scale of fish stocking activities over the last century has effectively replaced Sierra Nevada yellow-legged frogs from much of their native habitat.	Potential (Low): Aquatic habitats on and bordering the project site are stocked with trout – numerous large trout were observed during the field survey. The presence of large trout greatly reduces or eliminates the potential of the species to occur within onsite habitats. Based on the CNDDDB, the closest documented occurrence of the species is approximately 9 miles west of the project site; this occurrence was documented in 1975. The next closest documented occurrence is from the Plumas National Forest, approximately 13 miles south of the project site.



Common Name/Scientific Name	Status	General Habitat Description	Potential to Occur on Project Site
Cascades frog <i>Rana cascadae</i>	SCE CSC	Montane aquatic habitats such as mountain lakes, small streams, and ponds in meadows; open coniferous forests. Standing water required for reproduction. Hibernates in mud on the bottom of lakes and ponds during the winter.	Potential (Low): Aquatic habitats on and bordering the project site are stocked with trout – numerous large trout were observed during the field survey. The presence of large trout greatly reduces or eliminates the potential of the species to occur within onsite habitats. Based on the CNDDDB, the closest occurrence of the species is approximately 9 miles west of the project site; this occurrence was documented in 1934. The next closest documented occurrence is from approximately 10 miles southwest of the project site; this occurrence was documented in 1960.
Southern long-toed salamander <i>Ambystoma macrodactylum sigillatum</i>	CSC	Breeds primarily in temporary ponds. Aquatic larvae occur in ponds and lakes. Outside of breeding season adults are terrestrial and associated with underground burrows of mammals and moist areas under logs and rocks.	Potential (Low): Aquatic habitats on and bordering the project site are stocked with trout – numerous large trout were observed during the field survey. The presence of large trout greatly reduces or eliminates the potential of the species to occur within onsite habitats. However, if the species breeds in the project vicinity (within an unknown seasonal pond), the species could occur on the project site.



<i>Birds</i>			
Black-backed woodpecker <i>Picoides arcticus</i>	SA	Recently burned coniferous forest, areas with dense standing dead trees, and less commonly in unburned forests.	Potential: Low quality habitat due scarcity of standing dead trees, but the species could nest in the project area.
Lewis's woodpecker <i>Melanerpes lewis</i>	BCC	Suitable habitat includes open, deciduous and conifer habitats with brushy understory, and scattered snags and live trees for nesting and perching. Uses logged and burned areas.	Potential: Habitat survey revealed suitable forest habitat for nesting and perching. The closest CNDDDB observation is approximately 18 miles southwest of the project area.
Cassin's finch <i>Carpodacus cassinii</i>	BCC	Hardwood forest, conifer forests, mixed forests, hardwood woodlands, shrubland/chapparral.	Potential: Suitable nesting habitat present. Publicly available citizen science data from the eBird platform indicates 12 potential occurrences at nearby Clear Creek Park, most recently in 2015.
Osprey <i>Pandion haliaetus</i>	SA	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Potential: Suitable nesting habitat present and numerous documented nesting occurrences in the project area.
Bald eagle <i>Haliaeetus leucocephalus</i>	SE CFP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Potential: Suitable nesting habitat present and documented nesting occurrences in surrounding areas. The nearest documented occurrence was approximately 2.4 miles southeast from the project area.



Northern goshawk <i>Accipiter gentilis</i>	CSC	Within, and in vicinity of, coniferous forest. Uses old nests and maintains alternate sites. Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.	Potential: Known from project area and suitable nesting habitat present.
Greater sandhill crane <i>Antigone canadensis tabida</i>	ST CFP	Nests in wetland habitats in northeastern California; winters in the Central Valley. Prefers grain fields within 4 miles of a shallow body of water used as a communal roost site; irrigated pasture used as loafing sites.	Not Expected: While the species is known to nest in the area, onsite wetland habitats are not expected to be used for nesting because they are either within or bordering Clear Creek Park (which is actively used for recreation) or because they are in the rocky area bordering the springhouse.
Willow flycatcher <i>Empidonax traillii</i>	BCC SE	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2000-8000 ft elevation.	Potential: Known from project region and suitable nesting habitat present in onsite/adjacent riparian and wetland habitats.
<i>Insects</i>			
Obscure bumble bee <i>Bombus caliginosus</i>	SA	Coastal areas from Santa Barbara county to north to Washington state. Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.	Potential: Some suitable habitat present and documented in the project area; however, the only occurrence record for the species in the area is from 1958 (CNDDDB).



Western bumblebee <i>Bombus occidentalis</i>	SA SCE	A variety of habitats, often uses small mammal burrows.	Potential: Some suitable habitat present and documented in the project area.
Amphibious caddisfly <i>Desmona bethula</i>	SA	Mostly small, first order streams in open, wet meadows. Also found in beaver ponds and second order streams.	Potential (Low): Lower quality habitat as Dry Creek is not first order stream, and the creek adjacent to the springhouse is in a rocky area and is not within a meadow. However, there is a documented occurrence of the species from the vicinity of Dry Creek Lake, but the accuracy of the occurrence is given as 1-mile. This occurrence (CNDDDB) was documented in 1948 from a location identified as Almanor Hatchery (Plumas County).
<i>Mammals</i>			
Pallid bat <i>Antrozous pallidus</i>	CSC	Variety of habitats, but most common in open dry lands with rocky areas for roosting. Prefers rocky outcrops, cliffs, and crevices with access to open habitat for foraging.	Potential: Springhouse provides potential roosting habitat.
Long-legged myotis <i>Myotis volans</i>	SA	Most common in woodland and forest habitats above 4000 ft. Trees are important day roosts; caves and mines are night roosts. Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.	Potential: Springhouse provides potential roosting habitat.



Silver-haired bat <i>Lasionycteris noctivagans</i>	SA	Primarily a coastal and montane forest dweller, feeding over streams, ponds and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	Potential: Springhouse provides potential roosting habitat.
Sierra Nevada mountain beaver <i>Aplodontia rufa californica</i>	CSC	Dense growth of small deciduous trees and shrubs, wet soil, and abundance of forbs in the Sierra Nevada & east slope. Needs dense understory for food and cover. Burrows into soft soil. Needs abundant supply of water.	Potential: May occur onsite or in adjacent aquatic habitats.
Fisher (Northern California/Southern Oregon DPS) <i>Pekania pennanti</i>	CSC	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Potential (Low): The project site is located in residential and nearby areas, which limits the potential of this elusive species to occur. However, species is known from the area and some potential habitat is present on the project site.
North American porcupine <i>Erethizon dorsatum</i>	SA	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.	Potential (Low): The project site is located in residential and nearby areas, which limits the potential of this elusive species to occur. However, species is known from the area and some potential habitat is present on the project site.



		Wide variety of coniferous and mixed woodland habitat.	
California wolverine <i>Gulo gulo</i>	FPT ST	Found in the north coast mountains and the Sierra Nevada. Found in a wide variety of high elevation habitats.	Potential (Low): The project site is located in residential and nearby areas, which limits the potential of this elusive species to occur. However, species is known from the area and some potential habitat is present on the project site. A CNDDDB observation from 1976 occurred 13 miles north of the project area.
Sierra Nevada red fox <i>Vulpes vulpes necator</i>	FC ST	Found in a variety of habitats from wet meadows to forested areas. Use dense vegetation and rocky areas for cover and den sites. Prefer forests interspersed with meadows or alpine fell-fields.	Potential (Low): The project site is located in residential and nearby areas, which limits the potential of this elusive species to occur. However, species is known from the area and some potential habitat is present on the project site.

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed Threatened (FPT); USFWS Bird of Conservation Concern (BCC); State Endangered (SE); State Threatened (ST); State Candidate Endangered (SCE); State Candidate Threatened (SCT); California Species of Special Concern (CSC); California Fully Protected (CFP); CDFW Special Animals List (SA)

Amphibians

As summarized in Table BIO-1, Sierra Nevada yellow-legged frog, Cascades frog, and southern long-toed salamander are considered to have a low potential to occur on the project site due to marginal habitat conditions. The portions of Dry Creek (including the pond at Clear Creek Park) and its tributaries on or adjacent to the project site provide aquatic habitat. However, the Creek is stocked with trout and numerous large trout were observed during the 2018 field survey. The scope and scale of fish stocking activities over the last century has effectively replaced Sierra Nevada yellow-legged frogs from much of their native habitat, and isolated remaining populations from each other.⁴ Fish stocking activities have had similar

⁴ https://www.fws.gov/sacramento/es_species/Accounts/Amphibians-Reptiles/sn_yellow_legged_frog/



effects on other native amphibians that evolved in generally fishless habitats. Given that aquatic habitats on and adjacent to the project site are stocked and support trout, it is considered unlikely that Sierra Nevada yellow-legged frog, Cascades frog, or southern long-toed salamander occur.

The proposed project has been designed to minimize impacts to aquatic habitat. To limit the construction impacts associated with the new spring water supply line on the relatively undisturbed land between the proposed pump station and the spring house, the spring water would be conveyed to the new station by a new 8-inch pipe installed partially by replacing the existing exposed portion of the supply pipe, and slip-lining the remaining buried section. However, a slip-lining pit would need to be located in the wetland habitat bordering the spring house and work would occur within the stream that flows from the springhouse into Dry Creek to replace that pipe segment. This process would likely involve dewatering the stream during construction activities. While the potential occurrence of special-status amphibians is considered to be low, given that dewatering activities could be necessary, and that work would be conducted in the stream bed, impacts to the above special-status amphibians are considered *potentially significant but mitigable* through implementation of Mitigation Measures BIO-1, 3, and 7, below.

Special-status bird species, including black-backed woodpecker, Lewis's woodpecker, Cassin's finch, osprey, bald eagle, northern goshawk, and willow flycatcher could nest on or near the project site. It should also be noted that the active nests of most native bird species are protected by the Migratory Bird Treaty Act (16 U.S.C. 704) and the California Fish and Game Code (Section 3503); numerous common bird species could nest on the project site or in areas that would be subject to elevated noise levels during construction. It is expected that tree removal will be restricted to the proposed tank site location plus one tree to be removed for the new pump station, but elevated noise-levels during construction may also disrupt nesting on or near the project site. Therefore, given the potential for special-status or otherwise protected active bird nests to be removed or disturbed, related impacts are *potentially significant but mitigable* through implementation of Mitigation Measures BIO-1, 5, and 7, below.

Special-status insects, including obscure bumblebee, western bumblebee, and amphibious caddisfly have some potential to occur on the project site. Potential habitat disturbance to these species would be minimal, given that the new water pipelines would be installed within or bordering paved roads and that slip-lining would be used to minimize habitat disturbance associated with installing the new spring water supply line. Given the low sensitivity status of



these species (included on Special Animals List, but no formal listing status), that there are no recent documented occurrences of these species in the area, and the limited amount of disturbance to potential habitat, related impacts are considered *less than significant*.

Special-status bats, including species such as pallid bat, long-legged myotis, and silver-haired bat, have potential to roost in the springhouse. The wood siding of the roof structure is warped and cracked providing access points for bats. Therefore, in the absence of avoidance measures, the proposed improvements to the spring house could result in harm to roosting bats and related impacts are *potentially significant but mitigable* through implementation of Mitigation Measures BIO-1 and 6, below.

Fisher, North American porcupine, California wolverine, and Sierra Nevada red fox have low potential to occur on undeveloped portions of the project site. The project site is located in residential and nearby areas, which limits the potential of these rare and elusive species to occur. However, these species are known from the area and some potential habitat is present on the project site in areas surrounding the springhouse and on the tank site. Therefore, in the absence of avoidance measures, impacts to these species are *potentially significant but mitigable* through implementation of Mitigation Measures BIO-1, 4, and 7, below.

Sierra Nevada mountain beaver may occur in Dry Creek and its tributaries. The potential for the proposed project to harm the species is considered low because disturbance of suitable habitat would be limited; slip-lining would be used to minimize habitat disturbance associated with installing the new spring water supply line and for creek crossings. However, as construction activities would occur within or near suitable habitat, related impacts are *potentially significant but mitigable* through implementation of Mitigation Measures BIO-1, 3, 4, and 7, below.

b. Riparian or Other Sensitive Habitats

Wetlands, creeks, streams, and permanent and intermittent drainages are subject to the jurisdiction of the U.S. Army Corps of Engineers (ACOE) under Section 404 of the Federal Clean Water Act (CWA). The California Department of Fish and Wildlife (CDFW) also generally has jurisdiction over creeks, streams, and drainages, together with other aquatic features that provide an existing fish and wildlife resource pursuant to Sections 1602-1603 of the California Fish and Game Code. CDFW jurisdiction extends to the edge of any associated riparian vegetation. Creeks and wetlands are also subject to regulation of the Regional Water Quality Control Board (RWQCB) under both the federal CWA and the State of California's Porter-Cologne Water Quality Control Act (California Water Code, Division 7).



There are extensive areas of riparian and wetland habitat in areas surrounding the springhouse, including a stream between the springhouse and Dry Creek (see Figure 10). There is also a large meadow containing wetlands bordering Twin Pines Drive. The onsite riparian and wetland habitats are considered sensitive habitats and are expected to fall under the jurisdiction of the CDFW, ACOE, and RWQCB. A formal jurisdictional delineation was conducted by Vollmar Natural Lands Consulting senior biologist Jake Schweitzer on September 1, 2020. The wetland area surrounding the springhouse and the wetlands bordering Twin Pines Drive were mapped in that delineation. The delineation report has been submitted to the Corps for their review and approval. It should be noted that all delineation results are preliminary until approved by the ACOE.

As described above, the proposed project has been designed to minimize impacts to sensitive and jurisdictional habitats to the extent feasible. The pump station and tank site are outside of any mapped wetland areas. However, one of the slip-lining pits would need to be located in the wetland habitat bordering the spring house, and surface pipe replacement work would occur within the stream that flows from the springhouse into Dry Creek. This process would likely involve dewatering the stream during construction activities. Given the above, construction activities would be required within, beneath, and adjacent to sensitive and jurisdictional habitats and related impacts are considered ***significant but mitigable*** through implementation of Mitigation Measures BIO-8, 9 and 10, below.

c. Wetlands

Potential impacts to jurisdictional wetlands are discussed above (see b. Riparian and Sensitive Habitats), would be ***significant but mitigable*** through implementation of Mitigation Measures BIO-8, 9, and 10, below.

d. Wildlife Corridors

Wildlife corridors are described as pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or manmade obstacles such as urbanization. The proposed project includes two new above-ground structures, the water tank and pump station; both of these structures would be surrounded by undeveloped land, and therefore, would not substantially interfere with local or regional wildlife movement. The remainder of the project components would be installed beneath the surface, and therefore, also would not interfere with local or regional wildlife movement. Therefore, the proposed project would not create a barrier or otherwise interfere with a wildlife movement corridor and related impacts would be ***less than significant***.





Figure 10

Potential Jurisdictional Wetlands & Other Waters – Clear Creek, Lassen County

Source: California Dept. of Fish & Wildlife

e. Local Policies/Ordinances

The proposed project would not conflict with a local policy or ordinance protecting biological resources. Therefore it would have *no impact* with respect to plan/policy compliance

f. Habitat Conservation Plan/Natural Communities Conservation Plan

The project site is not part of or near an existing Habitat Conservation Plan or Natural Communities Conservation Plan or any other local, regional, or state habitat conservation plan. Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, *no impact* would occur.

Mitigation Measures

General Measure

Mitigation BIO-1: Before any construction activities begin on the project, a qualified biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the sensitive habitats on and bordering the project site; the two special-status plant species present and their general locations; the special-status amphibians, birds, and mammals with potential to occur and their habitat; the measures that are being implemented to protect the species as they relate to the project; measures to take if special-status wildlife species are observed; and the boundaries within which the project may be accomplished.

Measures to Protect Special-Status Plant Species

Mitigation BIO-2: The onsite/adjacent populations of western campion and alder buckthorn shall be avoided during construction activities; this is possible because both populations are outside the required area of disturbance. During the training session for the construction team (see BIO-1), the boundaries within which the project construction activities may occur shall be specified and clearly marked (i.e. with orange construction fencing), and shall exclude the areas where these special-status plant populations occur.

Measures to Protect Special-Status Wildlife and Habitat

Mitigation BIO-3: A qualified biologist shall be onsite for any required dewatering activities. The biologist shall conduct a clearance survey of the dewatering area immediately prior to dewatering and when dewatering has been completed. Any wildlife species encountered during the survey or during dewatering activities shall be relocated in accordance with accepted protocols and agency authorizations.



Mitigation BIO-4: Prior to the commencement of construction activities at the springhouse and at the tank site, a clearance survey for dens of special-status mammal species shall be conducted by a qualified biologist. Active dens of special-status species shall be avoided, unless authorized by the appropriate State or Federal natural resources regulatory agency.

Mitigation BIO-5: If construction activities would commence anytime during the nesting/breeding season of native bird species potentially nesting near the site (typically February through August in the project region), a pre-construction survey for nesting birds shall be conducted by a qualified biologist within two weeks of the commencement of construction activities.

- If active nests are found in areas that could be directly affected or are within 200 feet of construction and would be subject to prolonged construction-related noise, a no-disturbance buffer zone shall be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them shall be determined considering factors such as the following:
 - Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity;
 - Distance and amount of vegetation or other screening between the construction site and the nest; and
 - Sensitivity of individual nesting species and behaviors of the nesting birds.

Mitigation BIO-6: Prior to the commencement of construction activities in the springhouse, a qualified bat biologist shall conduct a habitat assessment of the structure. The habitat assessment should be conducted enough in advance of construction (3 to 6 months) to ensure that any required bat exclusion measures can be conducted during seasonal periods of bat activity and when bats are not hibernating or maternity roosts would not be present. If no signs of day roosting activity are observed, no further actions will be required. If bats or signs of day roosting bats are observed, a qualified bat biologist shall prepare and implement specific recommendations for humane eviction, to be conducted during seasonal periods of bat activity if required.

Mitigation BIO-7: As required because the project has a federal nexus, consultation shall be conducted with the U.S. Fish and Wildlife Service (USFWS) prior to the commencement of construction activities. In addition to the avoidance measures required by this Initial Study, all measures required by the USFWS to protect federally listed species shall be implemented. Similarly, the project will require a Streambed Alteration Agreement (SAA) from the CDFW;



the SAA must be obtained prior to the commencement of construction. In addition to the avoidance measures required by this Initial Study, all measures required by SAA to protect wildlife species shall be implemented.

Measures to Protect Sensitive and Jurisdictional Habitats

Mitigation BIO-8: Prior to the commencement of construction, the project applicant shall the formal jurisdictional delineation previously conducted for the site verified by the US Army Corps of Engineers. Based on the verified delineation, project-related disturbance to jurisdictional habitats shall be minimized to the extent feasible.

Mitigation BIO-9: Prior to the commencement of construction activities, the project applicant will obtain any required agreements/certifications/permits from the CDFW, RWQCB, and ACOE. The project applicant will implement all conditions of any required agreements/certifications/permits. At a minimum, and as expected to be required the following measures shall be implemented:

- A restoration plan shall be prepared and implemented to ensure that no net loss of wetland or riparian habitat occurs and that all temporarily disturbed jurisdictional/sensitive habitats are restored.
- A qualified monitor is present while slip-lining occurs beneath creeks and wetlands (see Mitigation BIO-7).

Mitigation BIO-10: Before, during and after construction activities, the project shall implement measures to minimize the discharge of pollutants to surface waters. These involve installation, implementation, and maintenance of BMPs consistent with the California Storm Water Quality Association Best Management Practice Handbook (California Storm Water Quality Association [CASQA] 2015) or equivalent to minimize the discharge of pollutants, including, but not limited to:

- Implement practices to reduce erosion of exposed soil, including stabilization of soil stockpiles, watering for dust control, establishment of perimeter silt fences, and/or placement of fiber rolls;
- Implement practices to reduce erosion of exposed soil, including stabilization of soil stockpiles, watering for dust control, establishment of perimeter silt fences, and/or placement of fiber rolls;
- Where feasible, limit construction to dry periods; and
- Revegetate disturbed areas.



3.4.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Background

The California State University, Sacramento Archaeological Research Center (ARC) defined the archaeological Area of Potential Effects (APE), conducted a California Historic Resources Information System (CHRIS) records search, initiated Native American consultation, and conducted an archaeological survey of the Proposed Project area. The results of this investigation are summarized herein and detailed in a confidential report (on file at the State Water Resources Control Board’s offices) (Slowik et al. 2018).

Regulatory Environment

Because federal funds may be involved, compliance with cultural resources requirements of Section 106 of the National Historic Preservation Act of 1966 (Section 106) is required in addition to the requirements of CEQA. Section 106 requires the identification of “historic properties,” those cultural resources that are eligible for the National Register of Historic Places (NRHP), and to assess any potential adverse effects to such properties. Similarly, under CEQA, cultural resources that are eligible for the California Register (“historical resources”) must be given consideration in the CEQA process. Both Section 106 and CEQA have somewhat different requirements for consultation with Native Americans.



Area of Potential Effect (APE)

The archaeological Area of Potential Effects (APE), comprising approximately 25 acres, was defined based on detailed maps provided in the Preliminary Engineering Report (Pace Engineering 2017) showing the proposed water system upgrades (see Appendix A). The horizontal extent of the APE encompasses all areas of water main, fire hydrant, and meter installations along existing roadways in the CSD. Other work includes restoration of the existing spring house, abandoning the district's cistern and pump system currently located in the local fire station, and constructing the new water storage tank and pump station with new tie-ins to the spring house. The open trenching for the new water line is estimated at two feet wide by four feet deep. Site preparations for the new water tank (150'x150') and the new pump station (30'x30') include grading no more than one foot in depth.

Records Search

Prior to the archaeological survey, the ARC requested a California Historic Resources Information System (CHRIS) records search from the Northeast Information Center, California State University, Chico (IC File No. D17-109). This records search, dated July 11, 2017, indicated that three previous cultural resource studies have been conducted in portions of the project APE. Another seven surveys and three archaeological overviews have been conducted within a half-mile radius of the project area.

A total of 10 previously documented resources were identified in the records search. Only one of these occurs within the APE, an unverified portion of the Lassen Emigrant Trail (P-18-002763) presumably located under the current alignment of State Route 147. The remaining resources are outside the APE.

Native American Communications

At the onset of the project (6/21/2017), a Sacred Lands File and Native American Contact list was requested from the Native American Heritage Commission (see Appendix C). The Sacred Lands File search returned negative results and a list of 15 individuals was produced to contact. Initial informational emails with preliminary project information were sent on August 10, 2017. Next, letters dated August 17, 2017 were sent to each of the contacts by certified mail describing the proposed project, the results of the records search, and an APE map. Subsequent to the initial letters, email and phone follow-up contacts were made to interested parties.



Two replies were received from these contacts. Darrel Cruz with the Washoe Tribe of Nevada and California emailed a response on August 10, 2017 saying that he would defer to the Greenville Rancheria Maidu. Another response was received from Ron Morales, Chairperson of the Honey Lake Maidu. In two phone calls to the project archaeologist (on August 10 and September 25, 2017), Mr. Morales discussed the cultural sensitivity of the project area and requested continued information sharing about the project.

After project plans were solidified, the project archaeologist called Mr. Morales and arranged for an in-field meeting. This meeting between took place in Clear Creek on May 21, 2018. During the course of this meeting, the project archaeologist and Mr. Morales walked and drove nearly the entire project APE and discussed potential impacts and sensitive areas. Mr. Morales again stressed the cultural sensitivity of the project area and asked that a Native American monitor of his choosing be present for all ground-disturbing work. Details of all contacts with Native Americans made to date are included in the confidential cultural resources report (Slowik et al. 2018). It should be noted that revised project plans since 2017 have reduced the areas of surface and sub-surface disturbance.

Field Investigation

The field investigation consisted of a pedestrian survey of the entire project APE. Roads along the public streets were inspected on foot by a crew member walking on each side, examining the graded road surface and adjacent landscaped residential lots. Archaeologists paid special attention to all areas of exposed soil, carefully examining them for artifacts, bones, or other potential culturally significant material. Ground visibility was generally low throughout the project area. With the exception of the area directly adjacent to Clear Creek, the entirety of the APE consists of paved roads. Beyond the paved surfaces, roadway edges consisted of imported gravels offering the highest level of ground visibility. Nearly all of the APE has been disturbed by past roadway and residential construction.

Discussion

a. Historical Resources – *No Impact.*

Two new potentially historic resources were identified during the survey. The first of these (CC-Site-01) is the spring house located along the escarpment on the east side of Clear Creek, at the northern end of the APE. The structure, built in 1956, consists of a single gable roof, sitting directly atop a poured concrete and fieldstone foundation. Improvements have been made to the structure over the years, including installation of a protective chain link fence, and new composite asphalt shingles. The spring has served as the primary water source for the district since its construction.



CC-Site-02 is the mid-century volunteer fire house located at 666 975 State Route 147. The exact year of construction is unknown, but the building is at least 62 years old as it is depicted on the 1956 edition 15' Chester, CA USGS quadrangle and a 1955 APN map adapted for water district use. The building has presumably been added on to in the intervening years as it displays two enclosed areas on differing foundations (half slab/ half raised concrete) with a central breezeway covered by an asymmetrical gable roof. In addition to the fire station, the building also houses the water districts in-ground concrete cistern and pumps.

Under CEQA, adverse effects to “historical resources” must be considered. Resources that are considered “historical resources” include those listed in the California Register of Historical Resources, or in a local register of historical resources. Neither of these apply to resources in the present project area.

The term “historical resource” is also used to describe resources that are eligible for listing in the California Register of Historical Resources according to the following criteria:

- (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- (B) Is associated with the lives of persons important in our past;
- (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (D) Has yielded, or may be likely to yield, information important in prehistory or history.

Given that both CC-Site-01 and -02 lack direct associations with historic persons or archaeological deposits their potential eligibility lies with criteria A or C.

Relevant historic contexts to apply these criteria to include chronological (early exploration [1848-1890], and economic development of Lassen County [1890-1950]) and technological themes (innovations in architecture, resource extraction, and transportation).

Both of the resources post-date the defining periods of Lassen county history, and display utilitarian versions of mid-century minimalist architecture that prevailed across California in the post-war years. Given the ubiquity of architectural form and lack of association with one of the defining historical themes it is recommended that both CC-Site-01 and -02 be considered ineligible for listing on the California Register of Historical Resources. In sum, a



finding of no historic resources affected is recommended for this project, and *no impact* would result.

b, c. Archaeological Resources and Human Remains – *Potentially Significant but Mitigable.*

No archaeological resources or human remains were found in the project area. The archaeological survey of the CSD was unable to relocate any portions of the previously recorded Lassen Emigrant Trail (P-18-002763). The portion of this linear resource in the project area is likely within the current alignment of State Route 147 and therefore would not be affected by the current project. However, it is possible that unknown, unforeseen archaeological resources could be encountered by the project. Mitigation Measures CUL-1 and CUL-2 would reduce this unlikely but potentially significant impact to a *less-than-significant* level.

Mitigation Measures

Mitigation CUL-1: If previously unknown archaeological resources are discovered during construction, work must be halted within 100 feet of the find until a qualified archaeologist meeting the Secretary of the Interior’s Standards for archaeologists (62 Code of Federal Regulations [CFR]33708) visits the site and assesses the significance of the resource. The federal agency official (State Water Board) must follow 36 CFR 800.13(b)(3) and notify the State Historic Preservation Officer (SHPO), tribes, and Advisory Council on Historic Preservation (ACHP) within 48 hours of discovery. Work may continue on other parts of the Proposed Project while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 [f]). After the assessment is completed, the archaeologist shall submit a report describing the significance of the discovery with cultural resource management recommendations. If the find is determined to be an historical or unique archaeological resource/historic property, time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available.

Should significant archaeological resources/historic properties be found, the resources shall be treated in compliance with Public Resources Code (PRC), Section 21083.2 and 36 Code of Federal Regulation, Section 800.6. If the Proposed Project can be modified to accommodate avoidance, preservation of the site is the preferred alternative. Data recovery of the damaged portion of the site also shall be performed pursuant to PRC, Section 21083.2(d).

Mitigation CUL-2: If human remains are encountered during construction activities, Section 7050.5 of the California Health and Safety Code and Public Resource Code, Section 5097.98 must be followed. To comply with these regulations, once project-related ground disturbance



begins and if there is accidental discovery of human remains, the following steps shall be taken:

- There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Coroner's Office is contacted to determine if the remains are Native American and if an investigation into cause of death is required.
- If the coroner determines the remains are Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant (MLD).
- The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC, Section 5097.98.



3.4.6. Energy

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?				X
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

Discussion

a. Wasteful or un necessary consumption of energy –*No Impact.*

The Project would not result in wasteful, inefficient, or unnecessary consumption of energy, because it would include a number of energy efficiency features. The proposed system upgrades would reduce system leakage and increase pumping efficiency, thereby reducing potential energy use. Therefore, *no impact* would occur.

b. Conflict with a plan for renewable energy or energy efficiency – *No Impact.*

The proposed Project would not involve any construction or otherwise affect plans for renewable energy or energy conservation. *No impact* would occur.



3.4.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to California Geologic Survey Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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| 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 waste water disposal systems where sewers are not available for the disposal of waste water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Background

A geotechnical evaluation of the tank site was conducted by KC Engineering Consultants on May 16, 2018 (KC Engineering 2018). The findings of that evaluation are summarized below. The underlying geology of the transmission line and pump station have not yet been evaluated, but are likely to be generally similar to the tank site, but with greater depths to bedrock and different surface deposits.

Geology

According to the geotechnical study, geologic deposits underlying the tank site are undifferentiated Pleistocene volcanic rocks from the early Quaternary period. These contain variable thicknesses of medium-grained olive basalt. Weathering produces boulders and cobbles in red soil.

Two borings at the proposed tank site found subsurface conditions consisting of coarse-grained native soil with cobbles and boulders, underlain by basalt bedrock. The subsurface soils consist of 0.5 to 1.5 feet of wet and loose silty sand with gravel and organics, underlain by 3 to 3.5 feet of moist and loose silty sand with gravel. The surface sandy soil is underlain by moist and loose silty gravel and sand to approximately 14 feet below the ground surface, which is underlain by moderately weathered basalt bedrock. Oversized material consisting of cobbles and boulders up to three feet in diameter were encountered at the site surface and in both bores.



Seismicity

The site is not located within an Alquist-Priolo Earthquake Fault Zone and there are no known faults crossing the site. The nearest active faults to the tank site are the Indian Valley, Honey Lake, and Hat Creek-McArthur-Mayfield faults, located about 13 miles south, 26.2 miles east, and 27.8 miles north of the site, respectively. The project site is in a seismically active region and strong earthquake-related ground shaking should be expected during the project lifetime.

Discussion

a. i. Fault Rupture – *No Impact.*

The project site is not within an Alquist-Priolo Earthquake Fault Zone and no fault traces cross the project area (KC Engineering 2018); therefore, the project would have **no impact**.

a. ii, iii. Ground Shaking, Ground Failure - *Less than Significant with Mitigation.*

As described above, the project site would be subject to strong ground shaking in a major earthquake in the region. The tank and pump station would be designed to withstand the anticipated ground motions and accelerations. The project geotechnical report specifies design criteria that would apply to the tank, as well as foundation design to assure that the tank and supporting foundations and ground would not fail in a major earthquake. Mitigation GEO-1 would assure that these recommendations are implemented.

a. iv. Landslides – *Less. Than Significant.*

The proposed tank and pump station sites on nearly level land. Therefore the possibility of seismically induced landslides affecting those features is low and the impact would be ***less than significant***.

b. Soil Erosion - *Less than Significant Impact.*

Soil erosion hazards could occur during construction, especially during tank excavation and trenching, and prior to replacement of soils and revegetation. Soil exposed by grading and trenching activities could be subject to erosion if exposed to heavy rain. The project applicant would be required to create and implement an erosion control plan prior to the start of grading activities, as described in BMP-3 in the Project Description. Soil erosion and/or loss of topsoil during construction and grading activities would be avoided using this BMP and therefore be ***less than significant***.



c. Unstable Soil - *Less than Significant with Mitigation.*

The tank and pump station sites are not known to be underlain by unstable soils. Tank site soils have been tested for liquefaction potential and, based on the data obtained and noted criteria, the project geotechnical report determined liquefaction to be unlikely at that site. The tank site also could be subject to differential settlement. Therefore the project geotechnical report proposes that five feet of native soils be removed and replaced with engineered fill. The report also specifies tank foundation design criteria and methods that would eliminate ground settlement hazards, which shall be implemented as part of the Project (KC Engineering 2018). The pump station also would be designed to resist liquefaction and settlement hazards. New pipelines would be constructed so as to either be isolated from, or resist hazards associated with unstable soils. Potential soil hazards to the proposed Project facilities would be reduced to a *less-than-significant* level with the incorporation of Mitigation GEO-1.

d. Expansive Soil - *Less than Significant Impact.*

Tank site soils have been tested for expansion potential and determined to have a low soil expansion potential (KC Engineering 2018). Pump station site soils would be tested for expansion potential before construction and remediated as necessary. Any unsuitable soils would not be used and would be replaced by suitable imported fills. Therefore, this impact would be *less than significant*.

e. Inadequate Soils for Disposal - *No Impact.*

The project would not include the installation of septic tanks or alternative wastewater disposal systems and would therefore have *no impact* on soils related to septic tanks or alternative wastewater disposal systems.

f. Unique Geologic or Paleontological Resources – *No Impact.*

There are no paleontological resources in the site's thin volcanic soils. No unique geologic resources occur on the site so *no impact* would occur.

Mitigation Measures

Mitigation GEO-1: The project shall incorporate all recommendations in the KC Engineering Geotechnical Exploration report (KC Engineering 2018). KC Engineering's foundation design guidelines, including preliminary recommended design values for both vertical and lateral loads, recommendations for site earthwork, prescriptive code values for use in seismic ground-shaking mitigation, foundation design, concrete mix designs, and



construction observation shall be implemented as specified in their Geotechnical Exploration Report. The pump station foundations and building shall be designed to appropriate seismic and ground settlement hazards. New pipelines shall be designed and installed to resist anticipates ground movement in an earthquake, as well as potential settlement. Compatibility of foundation and grading plans with KC Engineering’s preliminary recommendations for the tank and foundation design shall be verified by plan reviews when drawings become available.



3.4.8 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Background

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), ozone, and water vapor.

While the presence of the primary GHGs in the atmosphere are naturally occurring, CO₂, CH₄, and N₂O are also emitted from human activities, accelerating the rate at which these compounds occur within earth’s atmosphere. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. Greenhouse gases are typically reported in units of “carbon dioxide-equivalents” (CO₂e).

There is international scientific consensus that human-caused increases in GHGs have and would continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.



California Air Resources Board (CARB) estimated that in 2011 California produced 448 million gross metric tons of CO₂e, or about 535 million U.S. tons. CARB found that transportation is the source of 37.6 percent of the state's GHG emissions, followed by industrial sources at 20.8 percent and electricity generation (both in-state and out-of-state) at 19.3 percent. Commercial and residential fuel use (primarily for heating) accounted for 10.1 percent of GHG emissions.

Assembly Bill 32, the California Global Warming Solutions Act of 2006, required the CARB to lower GHG emissions to 1990 levels by 2020 - a 25 percent reduction statewide, with mandatory caps for significant emissions sources. AB 32 directed CARB to develop discrete early actions to reduce GHG while also preparing a scoping plan (i.e., the Climate Change Scoping Plan) in order to identify how best to reach the 2020 limit.

Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard (LCFS), the California Appliance Energy Efficiency regulations, the California Renewable Energy Portfolio standard, changes in the motor vehicle corporate average fuel economy (CAFE) standards, and other early-action measures that would ensure the state is on target to achieve the GHG emissions reduction goals of AB 32.

Discussion

a. Generate greenhouse gas emissions – *Less than Significant Impact.*

The CalEEMod (California Emissions Estimator Model, Version 2016.3.2) model was used to quantify GHG emissions associated with Project construction activities. The Project's estimated construction GHG emissions are 438 metric tons of CO₂e. Since the Project would replace an existing drinking water source and distribution system with another equivalent source and distribution system serving the same population, there would be no net new operational GHG emissions, a *less-than-significant* impact

b. Conflict with an applicable plan – *Less than Significant Impact.*

By providing a replacement water source and distribution system for the existing residents of the Clear Creek community, the Project would not conflict with the goals of AB 32. Thus, the Project would not conflict with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions and, thus, would have a *less-than-significant* impact.



3.4.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Background

The site is primarily in park, forest, and rural residential land uses. Historically, much of the Project Area was used for forestry. No industrial or commercial land uses that could have resulted in soil contamination are known to have existing in the Project area.

Discussion

a. Hazardous Materials Transport – *Less than Significant Impact.*

The Proposed Project is a potable water storage and distribution system that would not involve the routine transport of substantial quantities of hazardous materials. Small quantities (up to 50-gallon drums) of sodium hypochlorite (similar to household bleach) would be transported to the site by truck, typically less than once a month, as is currently occurring at the existing Fire Station pump station. Neither of these routine activities would create a substantial hazard to the public. Therefore, this impact would be *less than significant*.

b. Hazardous Materials Accidental Release - *Less than Significant Impact.*

The Proposed Project construction may involve the use of equipment, fuels, solvents, welding equipment, and other sources of potentially hazardous materials. BMP-4 in the Project Description, which is incorporated into the project, includes measures to minimize the risk of release of hazardous materials, and contamination of soil or groundwater by any such releases. This BMP would ensure that the potential impact of release of construction-related hazardous materials would be *less than significant*.

The sodium hypochlorite, if accidentally released from the 50-gallon drums, could cause eye and throat burning sensations to on-site workers and nearby residents. Because the drums would be handled only by trained personnel, quantities involved would be small, and any spills would be contained in the pump-house, this impact would be *less than significant*.



c. Hazardous Materials Emissions – *No Impact.*

Please see discussion of hazardous materials proposed for use on the site under Item b, above. The nearest public schools to the project site are in the town of Westwood, about 2.5 miles northeast of the tank site. Religious classes are taught at the Latter Day Saints Church, about 1000 feet west of the tank site. At these distances, the project would have no potential to pose a hazard to these schools, and ***no impact*** would result.

d. Hazardous Site List – *No Impact.*

The project site is not on or near a hazardous materials site listed pursuant to Government Code Section 65962.5, commonly called the “Cortese List”⁵). There are no listed hazardous sites in the Clear Creek area. Therefore, there would be ***no impact***.

e. Airport Hazards - *No Impact.*

The closest public use airport to the Project site is Rogers Field, just southwest of Chester, approximately 8 miles west of the Project site. Therefore, the project would not affect or be affected by public airport uses and ***no impact*** would result.

f. Emergency Response Plan - *No Impact.*

The project is a small water system improvement that would not interfere with any roadways or other emergency access-ways. As described in the Project Description, the new pipes would be located so as not to affect any roadways. Therefore, ***no impact*** would result.

g. Wildland Fires – *Less than Significant Impact.*

The project site is located adjacent to a highway and a developed rural residential area. The entire Project Area is mapped as a Very High Fire Severity Zone (Cal Fire, Fire and Resource Assessment Program, Lassen County Fire Hazard Severity Zone Map, adopted November 7, 2007). The project itself is a water tank, pump station, and improved distribution/fire hydrant system, which would have no potential adverse effect on wildfires, and would improve fire-fighting capabilities in the Clear Creek community. The tank and pump station sites would be cleared of flammable vegetation as part of the Project. Therefore, the Proposed Project would not expose people or structures to any increased risks associated with wildland fires, and a ***less-than-significant*** impact would result.

⁵<https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=clear+creek%2C+lassen+county>, accessed May 9, 2018



3.4.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<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 which would: <ul style="list-style-type: none"> • result in substantial erosion or siltation on- or off-site? • substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site; • create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or • impede or redirect flood flows? 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



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| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Background

Flood Hazards

The Proposed Project area is mapped by FEMA as not within an identified flood hazard area⁶.

Drainage

The project area is drained by Dry Creek, which flows through the Clear Creek community to Hamilton Creek, just south of Clear Creek. Both streams are mapped as perennial. The tank site is on a ridge, well above the creeks. The pumping station site is near Dry Creek, which flows through Lassen County’s Clear Creek Park.

Water Quality

Water quality in the area streams is likely good, given the forested watersheds and minimal development in the watershed.

Discussion

a and e. Water Quality Standards – *Less than Significant Impact.*

Construction of the Proposed Project water tank and pump station, as well as associated grading and excavation activities, may result in temporary impacts to surface water quality. The Proposed Project grading and construction activities could affect the water quality of storm water surface runoff. After construction, the undeveloped portions of the construction sites would revegetate naturally and erosion potential would be similar to at present.

⁶ Federal Emergency Management Agency, *Flood Insurance Rate Map, Lassen County, CA, and Incorporated Areas*, Panel 2125D, Map Number 06035C2125D, September 3, 2010.



To address the issue of changes in surface water quality as a result of development and construction activities, the federal government implemented the National Pollution Discharge Elimination System (NPDES). NPDES is an amendment of the federal Clean Water Act from 1987 that mandates that each population center obtain a permit to discharge stormwater. The limits vary by category of industry and are based on a level of treatment that uses the best available technology. Storm water that would be discharged from the site during construction activity would be subject to regulation under the NPDES program. The State Water Board is responsible for establishing water quality standards statewide and designates the Central Valley Regional Water Quality Control Board (SARWQCB - Region 5), for regulation of discharges of wastes and runoff in this area.

The Proposed Project would not disturb more than one acre of land and therefore would not be subject to the statewide Construction General Permit. It would be required to comply with the RWQCB, Central Valley Region's NPDES Permit (CVRWQCB Order No. R5-2016-0076-01; NPDES Oder No. CAG 995002). The CCCSD and/or its contractor would prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) for project construction.

The project would temporarily dewater/divert the stream below the springhouse during construction in and adjacent to the channel. This would avoid potential erosion and sedimentation impacts in that stream. Impacts associated with this dewatering would be further reduced by conditions to be applied by the State Department of Fish and Wildlife via their Streambed Alteration Agreement, as well as the US Army Corps of Engineers Clean Water Act Section 404 permit.

The BMPs described in Chapter 2, Project Description, requiring implementation of adequate erosion control, spill prevention, and other construction BMPs to protect groundwater and surface water quality, would assure that this impact would be *less than significant*.

b, e. Groundwater Supplies and Management – *Less than Significant Impact*.

The Proposed Project would continue use of the existing spring, but no increase in use is anticipated due to the project. Therefore it would not alter the overall draft of local groundwater, and would have a *less-than-significant* impact to local groundwater supplies and groundwater management.

c. Drainage - *Less than Significant Impact*.

The new project facilities would be out of the flood plain and would not affect any drainages. Runoff would be minimally increased from the minor increase in impervious surfaces due to the new tank and pump station. Therefore, the project's impacts on flooding, polluted runoff,



and capacity of existing and planned drainage from drainage alterations would be *less than significant*.

d. Flooding Resulting in Pollutants – *No Impact*.

As described in the Background section above, the Project site is not within a mapped 100-year flood hazard zone. The Proposed Project would not alter flood waters, impede flows, or create any other potential any flood hazards, including those resulting in pollutants. Therefore *no impacts* would occur.

e. Tsunami, Seiche, or Mudflow - *No Impact*.

The Project site is well inland from coastal areas subject to tsunamis and is not subject to that hazard. It is not adjacent to a large, enclosed body of water subject to seiche hazards. There are no slopes with deep soils or geologic conditions near the site that would be potential sources of mudflow hazards. Therefore, there would be *no impacts* from seiches, tsunamis, or mudflows.



3.4.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

Background

The Proposed Project site is located in the unincorporated community of Clear Creek, a rural residential community adjacent to SR 147 in Lassen County. Clear Creek extends both north and south of SR147, however the vast majority of the community is south of the highway. Several commercial buildings and one large church exist in the project area. Most of the commercial spaces were either vacant or used for other purposes. Forested lands abut much of the residential area to the east and west. A railroad track runs through the lower part of the Clear Creek residential area, and the Feather River abuts the area to the south.

The pump station site is on an unused area adjacent to a restroom building within the Clear Creek County Park. It is 100-200 feet west of a residence, and an equal distance north of a fire station. Landscaped park facilities, including benches and picnic areas, lie just west and south of the site, beyond the restroom building.



The tank site is in a partially forested area immediately south of Third Street. Areas to the south and west of the tank site are in forestry use. A turnout and unpaved logging road about the eastern side of the tank site.

The spring house and transmission pipeline area between the spring house and the pump station are on privately owned forested lands with some marshy areas. The pipeline route from the pump station to the tank would be in the roadway or existing unpaved shoulder of Third Street and SR 147.

The distribution line areas are in a rural residential community, with small roadways and several bridged creek crossings.

The Lassen County General Plan's 2014-2019 Housing Element (Lassen County, 2014) identifies a maximum theoretical buildout of 134 additional units, and a realistic maximum buildout of 101 new units. However, that Element (p. 59) notes that only 46 more units could be developed on lands within the existing CCCSD service area.

The project site is designated as follows:

General Plan:

Tank Site: Extensive Agriculture

Pump Station Site: Planned Development Residential

Transmission Line: Extensive Agriculture and Planned Development Residential

Distribution System: Commercial, Low Density Residential, and Planned Development Residential.

Zoning:

Tank Site: Timber Production Zone (T-P-Z)

Pump Station Site: Planned Community (P-C)

Transmission Line: Timber Production Zone (T-P-Z) and Planned Community (P-C)

Distribution System: Retail Business District (C-1), Upland Conservation/Resource Management District (U-C-2) Single-Family Residential (R-1-8), and Planned Unit Development (P-U-D).

Discussion

a. Division of Community – *No Impact.*

The tank site would be north and east of the served Clear Creek community; this site is in forested lands away from the residential portion of Clear. The pumping station would occupy a small, undeveloped area of Clear Creek Park. The project would not divide the community.



The pipelines would be under or adjacent to existing roadways and/or bored under forested/grassland/wetland areas, and would not adversely affect the community.

The Proposed Project would not increase water supplies, which are limited by the spring flow. It would only serve existing served areas and would not include any service extensions. Therefore, it would not induce growth beyond the estimated 46 additional hookups within the existing service area and already included in the Housing Element. The provision of a safer water source and improved fire flows would benefit the existing community. There would be *no impact*.

b. Plan Conflict – *No Impact*.

Water infrastructure is exempted from local zoning ordinance requirements per California Government Code, Section 53091(e). Therefore, the Proposed Project would have *no impact* with respect to consistency with plans and policies.

c. Habitat Plan Conflict - *No Impact*.

The Proposed Project area does not fall within a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There would be *no impact* on such plans.



3.4.12 Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>

Background

There are no known mineral resources on the site. The Natural Resources Element of the Lassen County General Plan does not identify any mineral resources in the vicinity of the project (Lassen County, 2000).

Discussion

a. and b. Mineral Resources - *No Impact*. The site contains no known mineral resources. Therefore, it would have *no impact* from the project.



3.4.13 Noise

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of substantial temporary or permanent noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive ground-born vibration or ground-born noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Background

Environmental Setting

Noise is defined as unwanted sound. Sound is created when vibrating objects produce pressure variations that move rapidly outward into the surrounding air. The more powerful the pressure variations, the louder the sound perceived by a listener. The decibel (dB) is the standard measure of loudness relative to the human threshold of perception. Noise is a sound or series of sounds that are intrusive, objectionable or disruptive to daily life. Many factors influence how a sound is perceived and whether it is considered disturbing to a listener; these include the physical characteristics of sound (e.g., loudness, pitch, duration, etc.) and other factors relating to the situation of the listener (e.g., the time of day when it occurs, the acuity of a listener’s hearing, the activity of the listener during exposure, etc.). Environmental noise has many documented undesirable effects on human health and welfare, either psychological (e.g., annoyance and speech interference) or physiological (e.g., hearing impairment and sleep disturbance).



In Lassen County, noise is generated by numerous and widespread sources, including mobile (i.e., on-road motor vehicles, trains, aircraft), stationary (i.e., industrial plants, agricultural activity), and construction sources. When such sources are strong enough or close enough, they affect noise-sensitive receptors such as residences, schools, and hospitals.

Motor vehicle traffic along State Route 147, which passes through the existing Clear Creek residential subdivision, is the strongest local source of noise.

Regulatory Setting

A prime goal of the Lassen County General Plan Noise Element is “to protect the citizens of Lassen County from the harmful and annoying effects of exposure to excessive noise.” To this end, the Noise Element requires that noise levels in areas of the County containing noise-sensitive uses be kept “within acceptable limits.” The Noise Element contains quantitative *Land Use Compatibility Standards for Community Noise Environments* (Figure 4 on Page 23 of the Noise Element), which for residential uses defines as “Normally Acceptable” a 24-hour average noise level of 60 dB or less. Also, the Noise Element requires that noise created by stationary sources associated with new projects or developments be controlled so as not to exceed the performance standards (as shown in Table NOISE-1) as measured at any affected residential or other noise-sensitive land use near the sources.

Table NOISE-1: Noise Level Performance Standards for New Projects and Developments			
		Exterior Noise Level Standards (dB)	
Category	Cumulative Number of Minutes in any One-Hour Time Period	Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)
1	30	50	40
2	15	55	45
3	5	60	50
4	1	65	55
5	0	70	60

Source: Lassen County Noise Element, Table III, page 19.



Discussion

a. Exposure to Substantial Noise Increases – *Less than Significant with Mitigation.*

The residential uses on the Project site (which is coterminous with the CCCSD service area) are the prime noise-sensitive receptors that could be affected by the Project. A number of the existing on-site residential parcels front State Route 147. For these parcels, existing noise levels at residential buildings close to State Route 147 could exceed the County's Normally Acceptable levels due to motor vehicle traffic. But existing daily average noise levels at all other on-site residential receptors are very likely in the Normally Acceptable range because of the rural nature of the surrounding lands.

Construction equipment/activity is widely recognized as a major noise source and for its potential to cause substantial disturbance when a construction site is located near noise-sensitive receptors (e.g., residential areas, schools, hospitals/nursing homes, public parks, etc.). During the Project's water meter and fire hydrant construction, equipment may sometimes be operating within 50 feet of each existing homes for a few days at a time. Considering that the maximum noise impact to any individual home in the CCCSD service area would be a few days at most, temporary voluntary shifts by residents to less-affected outdoor spaces, or to indoor rooms not facing the construction activity could be accommodated without substantial inconvenience until Project construction is complete.

Also, with implementation of Mitigation NOISE-2, hours of construction would be restricted, and other measures would be undertaken to reduce Project construction noise impacts. Thus, construction noise impacts would be *less than significant*.

There would be no Project-related motor vehicle traffic increases and consequently no traffic noise increase. The new water distribution pipelines would be buried below ground level and so would have no operational noise emissions. Thus, pre- and post-Project noise levels in/near the Project area would remain within Normally Acceptable limits.

The Project would install an emergency generator, water pumps, and water treatment devices on a parcel in the Clear Creek Park site. Noise emissions from the emergency generator would be limited to occasional, short-term, daytime testing periods, and noise levels from the pumps/treatment plant would be limited to comply with County performance standards (see Table NOISE-1 above) at the closest residential uses, as guaranteed by the implementation of Mitigation NOISE-1, below. The new pump station pump would generate noise; however it would be located inside a building and would be located distant from any residences, so would not significantly affect nearby residents. The Project Engineering Reports that, should pump



noise be problematic, the proposed above-ground pumps could be replaced with submersible pumps to reduce that noise. Therefore, the operational noise impacts from Proposed Project operation meet all County standards and would be *less than significant with mitigation*.

b. Excessive Vibration Noise Levels - *Less Than Significant*.

The Lassen County Noise Element does not include any recommended vibration assessment methodologies, impact standards or reduction strategies. Standards developed by the Federal Transit Administration (FTA) (2006) are most commonly applied to this sort of project and were used in assessing vibration impacts. According to the FTA, limiting vibration levels to 94 vibration decibels (VdB - the common measure of vibration magnitude - similar to dB for noise) or less would avoid structural damage to wood and masonry buildings (which are typical of residential structures in Anza), while limiting vibration levels to 80 VdB or less at residential locations would avoid significant annoyance to the occupants.

All construction equipment has the potential for causing structural damage and/or annoyance if the construction activity too often comes too close to vibration-sensitive receptors. Heavily loaded trucks or tracked earth-moving equipment, which would be a part of the Proposed Project construction fleet, could pose a damage/annoyance threat if they would regularly and often come within 25 feet of a vibration-sensitive receptor during construction. Most of the existing homes in the pipeline corridor set back by more than this distance from the pipeline route centerlines or from the site chosen for the water well/treatment/storage facilities. The potential for damage/annoyance would be further lessened by the relatively short duration of the Project pipeline construction activity near any particular home along the distribution pipeline routes, a few days at most in the vicinity of any particular residence over the 6-month Project construction period. Thus, the Project's construction vibration impact severity on site residents would be *less than significant*.

c. Private Airport Noise - *No Impact*.

There are no private airfields near the site. Therefore, *no impact* would result.

Mitigation Measures

Mitigation NOISE-1: The construction contractor shall implement the following noise restrictions during the water treatment plant storage equipment installation activities:

- Operation of the proposed emergency generator shall be restricted to occasional, daytime (i.e., between the hours of 9 a.m. and 6 p.m.), short-term (i.e., no longer than



30 minutes) testing periods with a frequency of not more than once per week over a year.

- Noise measurements shall be undertaken post-construction and, if warranted, noise attenuation measures (e.g., enclosures, barriers, noise mufflers, etc.) shall be implemented for the on-site generator/pumps/treatment machinery to limit resultant noise to the levels required by the Noise Element (see Table NOISE-1 above).

Mitigation NOISE-2: The construction contractor shall implement the following measures during the Proposed Project construction activities:

- Provide enclosures and noise mufflers for stationary equipment, shrouding or shielding for impact tools, and barriers around particularly noisy activity areas on the site.
- Use quietest type of construction equipment whenever possible, particularly air compressors.
- Provide sound-control devices on equipment no less effective than those provided by the manufacturer.
- Locate stationary equipment, material stockpiles, and vehicle staging areas as far as practicable from sensitive receptors.
- Prohibit unnecessary idling of internal combustion engines.
- Require applicable construction-related vehicles and equipment to use designated truck routes when entering/leaving the site.
- Designate a noise (and vibration) disturbance coordinator at the Lead Agency who shall be responsible for responding to complaints about noise (and vibration) during construction. The telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site. Copies of the project purpose, description and construction schedule shall also be distributed to the residences in/near the CCCSD service area.
- Limit project construction activity to weekday hours between 7 a.m. and 6 p.m. and prohibit construction during weekends and County-observed holidays.



3.4.14 Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a. Population Growth - *Less than Significant Impact.* The Proposed Project would replace an existing water supply well that has excessive levels of nitrate with a non-contaminated supply. It also would upgrade water supply storage and distribution systems, and add fire hydrants to the residential area, which should permit the Fire Department to better serve any new development. The Proposed Project would allow the remaining undeveloped lots in the Clear Creek community to develop over time. These residential parcels are zoned for development in the County General Plan, and the small amount of growth that may result from the Proposed Project would not substantially alter the community. In addition, because the development is permitted and anticipated in the County’s General Plan, improvement of the substandard water system would be considered growth accommodating rather than growth inducing. Therefore, the Proposed Project’s effect on growth inducement would be *less than significant*.

b. Displace Housing— *No Impact.* The Proposed Project site contains no housing, and the Proposed Project would not displace any housing or people. There would be *no impact*.



3.4.15 Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities? The construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Background

Fire Protection: Fire protection services for the Proposed Project site are provided by the Clear Creek Volunteer Fire Protection District, with a station adjacent to the proposed pump station site on Highway 147 adjacent to Clear Creek Park in Clear Creek. CalFire also provides fire protection services to the project area. CalFire has stations at Third and Greenwood Streets in Westwood and at 463-220 County Road 21, at Lake Almanor, and about three miles east and five miles west of the Proposed Project site, respectively.

Police Protection: Police services for the Proposed Project site are provided by the Lassen County Sherriff’s Department, which has a station at 206 Third Street, in Westwood, about 3 miles east of the Proposed Project site.

Schools: The public schools closest to the Proposed Project site are Westwood High School, Horizon High Continuation School, Westwood Charter School, and Fletcher Walker Elementary School all of which are in the Westwood Unified School District, in Westwood,



about 3 miles east of the Proposed Project site; and Lake Almanor Christian School, located about four miles west of the Proposed Project site.

Parks: Clear Creek Park, a large County-owned community park with a play field, picnic areas, bathrooms, basketball courts, horseshoe courts, and a large pond, is located on and adjacent to the proposed pump station site.

Discussion

i) Fire Protection. *Less than Significant Impact.*

No new fire protection services would be required as a result of the Proposed Project. In the long-term (post construction), the Proposed Project would improve fire safety because it would upgrade currently deficient fire flows in the service area. In the short-term (construction period), operation of power tools and equipment during Proposed Project construction could provide an ignition source and increase fire risk on the vegetated tank site. However, that site would be cleared of vegetation in the first development phase. Storage of flammable materials (e.g., fuel) during Proposed Project construction could also increase fire risk. However, Proposed Project construction activities would follow the requirements for fire safety during construction contained in the California Fire Code that are applicable to outdoor areas. Adherence to the applicable requirements of the California Fire Code would ensure that potential fire risk during Proposed Project construction would be *less than significant*.

ii) Police Protection. *No Impact.*

The Proposed Project would have no potential to increase demand on police protection services because it would not result in any substantial new development and its construction would not bring substantial numbers of people to the area.

iii) Schools. *No Impact.*

The Proposed Project would have no direct potential to increase demand on school services because it would not directly result in any new residential development and its construction would not bring new permanent residents to the area. Indirect impacts would be minimal, as water supply is not a constraint to development in the area.

iv) Parks. *Less than Significant Impact.*

The Proposed Project construction would have a minor impact to Clear Creek Park because the proposed pumping station would occupy a small portion of the Park site, to the west of the existing restrooms. The station would be small and located away from the main park public



use area, so the impact in park facilities is expected to be **less than significant**. In addition, areas of the park near the pumping station and pipeline alignment would be closed to the public during construction. This short-term, temporary impact would not affect most of the park public use areas, and would be limited to a single building season. Therefore this impact would be *less than significant*.

v) Other Public Facilities. *No Impact.*

The Proposed Project would not affect other public facilities by increasing demand beyond anticipated levels. It would improve water supplies available for domestic use. There would be *no impact*.



3.4.16 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Background

Lassen County’s Clear Creek Park, a community park, is located just north of Highway 147, in the Proposed Project service area. Clear Creek Park has a play field, picnic areas, bathrooms, basketball courts, horseshoe courts, and a large pond along Clear Creek,

Discussion

a. Increase Park Usage – *Less than Significant Impact.*

The Proposed Project would not impact the use of Clear Creek Park because the pump station would be constructed on a small area of the park that is not heavily used. There are no developed park or recreational facilities on this portion of the park property, and the pump station would occupy a small, undeveloped/unused area of the overall park, so the impact would be *less than significant*.

b. Impact of New or Expanded Recreational Facilities - *No Impact.*

The Proposed Project would not include the construction or expansion of any recreational facilities, so *no impact* would occur.



3.4.17 Transportation and Traffic

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit roadways, pedestrian and bicycle facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Background:

The Proposed Project site is accessed regionally via SR 147. The tank site would be accessed via a driveway directly off of Third Street, the main route between Clear Creek and Westwood. Pump station access will be via a gravel road. The water distribution system area is accessed via minor paved streets including Spring Creek Drive, Rainbow Drive, Crescent Drive, Clear Creek Drive, and Circle Drive.

Discussion:

a. Conflict with an Applicable Plan Regarding Effectiveness of Circulation System - *Less Than Significant.*

During construction, the Proposed Project would generate fewer than 20 daily vehicular trips, mostly from construction workers and materials and equipment delivery trucks. The Proposed Project would not generate any additional traffic after construction. This level of additional



trips would not materially affect traffic on SR 147, Third Street, or any local streets. The Proposed Project would not conflict with Lassen County policies supporting alternative transportation. It would neither generate demand nor alter any existing or proposed alternative transportation (bus, bike, or pedestrian) routes. Therefore, the impact would be *less than significant*.

b. CEQA Guidelines Section 15064.3, subdivision (b), Vehicle Miles Traveled – No Impact.

The project would have no effect on motor vehicle use or vehicle miles traveled, other than a few additional daily trips during construction, which is exempt from VMT reduction requirements. Therefore it would have *no impact*.

c. Design Hazards - No Impact.

The Proposed Project would not create any hazards due to design features on the adjacent street system. As noted in Item a, above, a small number of additional truck trips would occur during construction, with no new trips after construction. Trucks regularly use SR 147, and the Proposed Project traffic would not substantially alter truck traffic. Therefore, the project would have *no impact* to traffic safety.

d. Emergency Access – Less than Significant Impact.

The Proposed Project construction may require temporary closure of portions of the minor streets in the distribution service area when pipes are being installed. Project pipeline crossings of SR 147 would be coordinated with Caltrans and bored under the roadway to minimize traffic disruption. Similarly, pipeline construction in the shoulder of Third Street and SR 147 would be coordinated with the County and Caltrans to minimize any lane closures or traffic hazards. The project also would include a traffic control plan for work along these roadways. However, the Proposed Project construction would be designed and staged so as to assure that emergency access would still be available to the service area. Any partial road closures would be augmented by traffic control (i.e. flag people) to permit continued access. The Project's impacts to emergency access would therefore be *less than significant*.



3.4.18 Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Background

At the onset of the project (6/21/2017), a Sacred Lands File and Native American Contact list request was submitted to the Native American Heritage Commission. The Sacred Lands File search returned negative results and a list of 15 individuals was produced to contact. Initial



informational emails with preliminary project information were sent on August 10, 2017. Next, letters dated August 17, 2017 were sent to each of the contacts by certified mail describing the proposed project, the results of the records search, and an APE map. Subsequent to the initial letters, email and phone follow-up contacts were made to interested parties.

Mr. Ron Morales of the Honey Lake Maidu responded and had several contacts with Dr. Nathan Stevens of the Sacramento State Archaeological Research Center. Mr. Morales stressed the cultural sensitivity of the project area and asked that a Native American monitor of his choosing be present for all ground-disturbing work. Details of all contacts with Native Americans made to date are included in the confidential cultural resources report (Slowik et al. 2018).

Discussion

a. Tribal Cultural Resources - *Less Than Significant Impact with Mitigation.*

Within the Proposed Project area, the presence of tribal cultural resources was disclosed through Native American communication. Mr. Ron Morales requests that a Native American monitor of his choosing be present for all ground-disturbing work. He would also like to be sent hard copies of all reports dealing with cultural resources or tribal cultural resources related to this project. This impact is *potentially significant but mitigable* with implementation of mitigation TCR-1, below.

Mitigation Measures

Mitigation TCR-1: Ron Morales of the Honey Lake Maidu (530) 257-3275 shall be contacted prior to any ground disturbing activities. A Native American monitor with specific knowledge of the Clear Creek area should be present for all ground-disturbing activities in the project area.



3.4.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Background

There are no utilities at the proposed tank or pump station sites, however water and power utilities exist in adjacent roadways and parcels. No sanitary sewers exist in the Proposed Project area, which is served by septic systems.

Discussion

a. Required New, Expanded, or Relocated Public Utilities and Service Facility – *No Impact.*

No sewage or wastewater treatment plants currently exist in Clear Creek. The Proposed Project would reduce the amount of pollutants in the water supply system, thereby reducing impacts on any potential future wastewater treatment. Portable toilets would be used to provide restroom facilities for project workers during the construction period. Proposed Project construction would not affect any existing septic systems, and would comply with California Department of Public Health regulations for separation of water and sewer lines. Any new development facilitated by the removal of water-supply constraints would be required to show adequate wastewater disposal. The project would have no or minimal effect on storm water drainage, electric power, natural gas, or telecommunications facilities. Therefore, the Proposed Project would have *no impact* on this utility infrastructure.

b. Water Supplies - *Less than Significant Impact.*

The Proposed Project would consume small amounts of water for dust control during construction. After construction, the Proposed Project would replace the existing well water domestic supply with a new and upgraded supply system consisting of spring box improvements, a new water storage water tank, a new pump station, and a new water distribution system. The design water demand criteria for the new system are based on conservative past usage records. Future water usage under the new system would be comparable to future usage if the existing system were retained. Therefore, the Proposed Project would have a *less-than-significant* impact on water supplies.

c. Wastewater Service - *No Impact.*

Please see response to item a, above. The Proposed Project would not generate any additional wastewater. Therefore, *no impact* would occur.

d. Landfill Capacity – *Less than Significant Impact.* The Proposed Project would generate small amounts of construction wastes that would be removed from the site by the project contractor. This would not substantially affect landfill capacity in the area. Excavated clean



on-site soils would also be considered suitable for reuse in structural fills or as on-site backfill. Therefore, this impact would be *less than significant*.

e. Solid Waste Statutes and Regulations – *No Impact*.

As described in item f, above, the Proposed Project would generate relatively small quantities of solid waste during and after construction. Excavated soils would be suitable for reuse as fill off-site or as backfill on-site. Therefore, the Proposed Project would comply with federal, state, and local statutes and regulations related to solid waste and have *no impact* with respect to those regulations.



3.4.20. Wildfire Hazards

<p>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:</p>	<p>Potentially Significant Impact</p>	<p>Less Than Significant with Mitigation</p>	<p>Less Than Significant Impact</p>	<p>No Impact</p>
<p>a) Substantially impair an adopted emergency response plan or emergency evacuation plan?</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>
<p>b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>
<p>c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>
<p>d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>



Discussion

a, b, c) Impair emergency response; expose occupants to wildfire spread or pollutants; require structures that exacerbate fire risks; expose people to flooding and landslide risks – *No Impact*.

The Proposed Project would substantially increase water supply storage capacity and would add 35 fire hydrants to the existing Clear Creek residential area, both of which would improve the ability to fight wildfires in the area. Therefore, it would have *no impact* with respect to wildfire hazards.



3.4.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Discussion

a) ***Less than Significant with Mitigation.*** As discussed in the Biology Section of this document, with the incorporation of mitigation measures, the Proposed Project would not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal. Similarly, the Proposed Project's potential impacts to cultural resources would be mitigated to a less-than-significant level. Mitigation measures have been included to reduce the impacts to biological resources and potential unidentified cultural resources to a ***less-than-significant*** level.

b) ***Less Than Significant Impact.*** Cumulative impacts of the project and other planned, approved, or reasonably foreseeable projects have been assessed in this Initial Study. The County's Housing Element states that the CSD serves approximately 154 units on 152 lots, with a service population of about 300 residents. According to County permit records (as of 2014), no residential units had been permitted in the Clear Creek community since 2009. The project area (CCCSO service area) includes 10 undeveloped single-family home lots and one large (approx. 30 acres) lot designated for Planned Unit Development, however much of that lot is outside of the CCCSO service area. The Element states that with current facilities, the CSD could serve approximately 46 additional households. The proposed project would not expand the District's service area nor would it increase water supply, which is limited by the spring's production.

The relatively limited development associated with the project and the potential eventual development of the 46 additional units would significantly affect traffic, air quality, and other environmental resources. Additionally, no development of these parcels is proposed at this time, nor would the project induce any additional development. Therefore the project's contribution to cumulative impacts to the environment would be ***less than significant***.

c) ***Less than Significant Impact.*** As discussed in the Hazards and Hazardous Materials section, the project would follow all laws and regulations involving the use and transport of hazardous materials and would not cause potential health risks to the public. The project's reduction in coliform in the drinking water and improvement in fire suppression flows would reduce existing health risks to the served population. It would have a ***less-than-significant*** impact on human health.



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APPENDIX A
BOTANICAL SURVEY REPORT AND
MAP OF ALDER BUCKHORN LOCATIONS



Clear Creek Water System Improvement Project Botanical Survey

INTRODUCTION AND GENERAL HABITAT DESCRIPTION

A botanical survey was conducted on June 18, 2018 for special-status plants for the Clear Creek Water System Improvement Project. The project is located in Clear Creek, a small community located in Lassen County, northeast of Lake Almanor and is located on the USGS Westwood West 7.5-minute topographic quad. The study area is in southwestern Lassen County, within the Cascade Mountain Ranges geomorphic province of northeastern California. This is a rugged, high-elevation region that is dominated by volcanic peaks and plateaus and associated volcanic rocks. The site is on a minor plateau just north of Little Dyer Mountain and northeast of Lake Almanor, within an area mapped by the U.S. Geological Survey (USGS) as basalt volcanic rocks, though andesitic volcanic rocks are also mapped in the vicinity just south of the study area (USGS 2007). Farther south, granite becomes more prevalent within the Sierra Nevada Mountain Ranges. Soil units mapped in the study area include Redriver-Woodwest-Wafla complex (89% of the study area), Swainow-Almanor complex (6%), and Mountmed loam (5%). All of these are well-drained alluvium or colluvium derived from the local volcanic rocks, and generally feature a high content of gravel. While Mountmed loam features an essentially neutral pH, the other two units are fairly acidic, with a pH of 6.3 (USDA 2018).

Climate in the vicinity of the study area is characteristic of high elevation interior California. Elevation ranges from 4,940 to 5,070 feet (1,506 to 1,545 meters) (USGS 1997), such that precipitation is relatively high and temperatures are relatively low in comparison with lower elevation areas (e.g., the Sacramento Valley south of the region). Mean annual precipitation in the vicinity of the study area is 36 inches (914 millimeters), with the highest amount of precipitation occurring in February (6.5 inches/165mm), and the lowest amount occurring in August (0.23 inches/5.8mm) (ibid). Precipitation occurs as various forms of snow and sleet as well as rain during winter months. The mean temperature for the study area is 46 degree Fahrenheit (7° Celsius), with the coldest mean

temperatures occurring during the month of January (31.6° F/-0.2° C), and the warmest during July (64.7° F/18.2° C). The local climate is likely moderated by Lake Almanor, one of the largest lakes in California.

PLANT COMMUNITIES

Plant communities within and surrounding the study area are primarily influenced by geology and associated soil types as well as by the climatic regime in the region. The site is mapped within the High Cascade Range Subregion (CaRH) by the Jepson Herbarium (2012), and as primarily as Sierran Mixed Conifer by the California Department of Forestry and Fire Protection (FRAP 2002). The CaRH is described in the Jepson Manual (2012) as generally occurring above 1,640 feet (500 meters), and consisting primarily of ponderosa pine (*Pinus ponderosa*), montane fir/pine, and lodgepole pine (*Pinus contorta* ssp. *murrayana*) forests, with treeless alpine vegetation on Mount Shasta and Lassen Peak (ibid).

Dominant trees observed within upland habitats of the study area include ponderosa pine and white fir (*Abies concolor*). The shrub stratum in these areas consist of a wide variety of species, including green leaf manzanita (*Arctostaphylos patula*), mountain whitethorn (*Ceanothus cordulatus*), Mahala mat (*C. prostratus* var. *prostratus*), Utah service- berry (*Amelanchier utahensis*), and *Ribes* species (especially wax current - *R. cereum* var. *cereum*). Trees and shrubs observed within low-lying wetland areas, primarily along the lake margins at the northern edge of Clear Creek Park, include lodgepole pine, Douglas' spiraea (*Spiraea douglasii*), Lemmon's willow (*Salix lemmonii*), and scattered service berry. Dominant herbaceous plants occurring within upland habitats include star-flowered false Solomon's seal (*Maianthemum stellatum*), western bracken fern (*Pteridium aquilinum* var. *pubescens*), *Poa* species (e.g., rush-leaved bluegrass [*Poa secunda* ssp. *juncifolia*]), and opposite leaved tarweed (*Hemizonella minima*). Upland habitats within the landscaped portion of the park consisted primarily of turf grass and associated weedy forbs, such as annual blue grass (*Poa annua*), common dandelion (*Taraxacum officinale*), and white clover (*Trifolium repens*). Herbs observed within the wetland habitat north of the park include California corn- lily (*Veratrum californicum* var. *californicum*) along with a variety of rushes (*Juncus* spp.) and sedges (*Carex* spp.). Along the northeastern edge of the wetlands is a boulder field that surrounds the pump

house, which is underlain by a high water table. Plants documented in this area include a sparse mix of facultative wetland shrubs and upland forbs that have colonized the limited soil between the boulders. Species observed include Douglas' Spiraea, Lemmon's willow, western bracken fern, rush-leaved bluegrass, and the weedy woolly mullein (*Verbascum thapsus*).

POTENTIAL FOR SPECIAL-STATUS PLANTS

Nearly all of the special-status plant taxa documented in the vicinity of the study are associated with what CNPS classifies as "Lower Montane Coniferous Forest" (a synonym for Sierran Mixed Conifer) or as wetland types such as "Meadows and Seeps," "Bogs and Fens," and "Marshes and Swamps" (CNPS 2018). A smaller number of taxa known from the region are more associated with "Chaparral," "Great Basin Scrub," and/or higher elevation montane habitats that do not occur in the study area.

A majority of the study area encompasses Lower Montane Coniferous Forest, which is present throughout all areas except the landscaped park area and the wetland areas surrounding the lake north of the park. The wetland areas within the study area most closely conform to the Meadows and Seeps or the Marshes and Swamps habitats. Most of the wetland areas are dominated by trees and shrubs that form Swamp habitat, though localized areas support herbaceous plants more characteristic of meadow/seep habitats. The northeastern-edge of the study area is a more open form of Lower Montane Coniferous Forest which supports a number of shrubs that are associated with Chaparral and/or Great Basin Scrub, including manzanitas, ceanothus, and antelope bush (*Purshia tridentata*). However, this area is much more likely to support special-status plants of the "forest" habitat type noted above, since the shrubs are rather scattered and form more of an understory than a scrub plant community. With the exception of the landscaped park and its immediate surroundings, and along stretches of the roadside habitats, plant communities within the study area are relatively undisturbed and support a clear dominance of native plant species (see plant taxa noted above). In addition, there are localized areas of unique soils, including areas with exceptionally high gravel content as well as acidic, saturated soils. These and other areas within the study area have potential to support a significant number of special-status plants known from the region.

METHODOLOGY

Prior to conducting the field survey a list of special-status plants which could occur within the project site was compiled (Table 1). The list was generated following a computer search of the California Natural Diversity Database (CNDDDB) and the California Native Plant Society (CNPS) On-Line Inventory. A nine quad search for both the USGS Westwood West 7.5 minute topographic quadrangle and surrounding quadrangles (Westwood East, Red Cinder, Swain Mountain, Pegleg Mtn., Chester, Almanor, Canyondam and Greenville) produced a list of 56 plants. Table 1 provides their legal status, habitat, elevation and bloom time and an analysis of their potential to occur within the project site.

The botanical survey was conducted on June 18, 2018 by John Hale, M.S. (Botany). A focused survey was conducted for potential occurring special-status species within the project site. The entire project site within the Area of Potential Effect (APE) was surveyed by a combination of driving and walking the residential areas and walking the Lassen Scenic Byway, future tank location and the Clear Creek Park wetlands to the Spring House. The survey was floristic in nature whereby all plants observed were identified to species (or subspecies/variety) as appropriate. A list of all vascular plants observed is included in Appendix A. Taxonomic nomenclature is in accordance with the Jepson Manual: Vascular Plants of California, Second Edition, 2012.

RESULTS

No federal or state listed special-status plant species were observed within the Area of Potential Effect within the project site.

Two CNPS listed species were located within the Area of Potential Effect within the project site.

Western campion (*Silene occidentalis* ssp. *occidentalis*), CNPS List 4.3, was located in the northeast corner of Wilson Way in the open forested area adjacent to the paved road. The small population consists of approximately 10 plants. These plants can be avoided by constructing within the paved road. CNPS List 4.3 indicates a watch list, plants of limited distribution or infrequent throughout a broader area in California and their status should be monitored regularly. Western campion is a perennial in the Pink Family

(Caryophyllaceae) with an erect stem and opposite leaves with whitish to pink cylindrical to bell-shaped flowers. The plant is glandular-hairy.

Some shrubs of alder buckthorn (*Rhamnus alnifolia*), CNPS List 2B.2, were located along the west side of the trail leading through the Clear Creek Park wetlands on the way to the Spring House. These shrubs can be avoided by using a horizontal directional drill (HDD) to access the Spring House or accessing from the east side above the Spring House. CNPS List 2B.2 indicates plants that are rare, threatened or endangered in California but common elsewhere. All of the plants constituting California Rare Plant Rank 2B meet the definitions of the California Endangered Species Act of the California Department of Fish and Game Code, and are eligible for state listing. Alder buckthorn is a shrub in the Buckthorn Family (Rhamnaceae) with grey bark and brown twigs with deciduous leaves that are glabrous to puberulent, acute to obtuse base, with an acute tip with an irregularly toothed margin with prominent veins.

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Table 1. Special-Status Plants Potentially Occurring on the Clear Creek Project Site

<i>Scientific Name</i>	Common Name	Status CNPS/State /	Habitat, Elevation, Bloom Time	Potential for Occurrence/ Survey Results
<i>Astragalus pulsiferae</i> <i>var. suksdorfii</i>	Suksdorf's milk- vetch	1B.2	Great Basin scrub, Lower montane coniferous forest, Pinyon and juniper woodland, volcanic, gravelly, rocky, 4,265 to 6,560 feet, May-August	Suitable habitat present, not observed within the survey area
<i>Betula glandulosa</i>	dwarf resin birch	2B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Subalpine coniferous forest, mesic, 4,265 to 7,545 feet, May-July	Suitable habitat present, not observed within the survey area
<i>Boechea constancei</i>	Constance's rockcress	1B.1	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest, serpentinite, rocky, 3,195 to 6,645 feet, May-July	Suitable habitat present, not observed within the survey area
<i>Botrychium ascendens</i>	upswept moonwort	2B.3	Lower montane coniferous forest, Meadows and seeps, mesic, 3,655 to 9,990 feet, (June) July-August	Known from Westwood West quad, Suitable habitat present, not observed within the survey area
<i>Botrychium crenulatum</i>	scalloped moonwort	2B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps (freshwater), Upper montane coniferous forest, 4,160 to 10,760 feet, June-September	Known from Westwood West quad, Suitable habitat present, not observed within the survey area
<i>Botrychium minganense</i>	Mingan moonwort	2B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps (edges), Upper montane coniferous forest, mesic, 4,770 to 7,150 feet, July-September	Known from Westwood West quad, Suitable habitat present, not observed within the survey area

Table 1. Special-Status Plants Potentially Occurring on the Clear Creek Project Site

<i>Scientific Name</i>	Common Name	Status CNPS/State /	Habitat, Elevation, Bloom Time	Potential for Occurrence/ Survey Results
<i>Botrychium montanum</i>	western goblin	2B.1	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest, mesic, 4,805 to 7,150 feet, July-September	Known from Westwood West quad, Suitable habitat present, not observed within the survey area
<i>Botrychium pinnatum</i>	northwestern moonwort	2B.3	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest, mesic, 5,805 to 6,695 feet, July-October	Suitable habitat present, not observed within the survey area
<i>Brasenia schreberi</i>	watershield	2B.3	Marshes and swamps (freshwater), 95 to 7,220 feet, June-September	Suitable habitat present, not observed within the survey area
<i>Carex buxbaumii</i>	Buxbaum's sedge	4.2	Bogs and fens, Meadows and seeps (mesic), Marshes and swamps, 5 to 10,825 feet, March-August	Suitable habitat present, not observed within the survey area
<i>Carex geeyeri</i>	Geyer's sedge	4.2	Great Basin scrub, Lower montane coniferous forest, 3,785 to 7,200 feet, May-August	Suitable habitat present, not observed within the survey area
<i>Carex lasiocarpa</i>	woolly-fruited sedge	2B.3	Bogs and fens, Marshes and swamps (freshwater, lake margins), 5,575 to 6,890 feet, June-July	Suitable habitat present, not observed within the survey area
<i>Carex limosa</i>	mud sedge	2B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Upper montane coniferous forest, 3,935 to 8,860 feet, June-August	Suitable habitat present, not observed within the survey area

Table 1. Special-Status Plants Potentially Occurring on the Clear Creek Project Site

<i>Scientific Name</i>	Common Name	Status CNPS/State /	Habitat, Elevation, Bloom Time	Potential for Occurrence/ Survey Results
<i>Carex petasata</i>	Liddon's sedge	2B.3	Broadleaved upland forest, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland, 1,965 to 10,890 feet, May-July	Suitable habitat present, not observed within the survey area
<i>Carex sheldonii</i>	Sheldon's sedge	2B.2	Lower montane coniferous forest (mesic), Marshes and swamps (freshwater), Riparian scrub, 3,935 to 6,600 feet, May-August	Suitable habitat present, not observed within the survey area
<i>Castilleja lassenensis</i>	Lassen paintbrush	1B.3	Meadows and seeps, Subalpine coniferous forest, Volcanic, 3,130 to 10,235 feet, June-September	Suitable habitat present, not observed within the survey area
<i>Claytonia palustris</i>	marsh claytonia	4.3	Meadows and seeps (mesic), Marshes and swamps, Upper montane coniferous forest, 3,280 to 8,200 feet, May-October	Suitable habitat present, not observed within the survey area
<i>Cryptantha glomeriflora</i>	clustered-flower cryptantha	4.3	Great Basin scrub, meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest, granitic or volcanic, sandy, 5,905 to 12,305 feet, June-September	Known from Westwood West quad, suitable habitat present, not observed within the survey area
<i>Cypripedium californicum</i>	California lady's-slipper	4.2	Bogs and fens, Lower montane coniferous forest, seeps and streambanks, usually serpentinite, 95 to 9,020 feet, April-August (September)	Known from Westwood West quad, Suitable habitat present, not observed within the survey area
<i>Cypripedium fasciculatum</i>	clustered lady's-slipper	4.2	Lower montane coniferous forest, North Coast coniferous forest, usually serpentinite seeps and streambanks, 325 to 7,990 feet, March-August	Suitable habitat present, not observed within the survey area

Table 1. Special-Status Plants Potentially Occurring on the Clear Creek Project Site

<i>Scientific Name</i>	Common Name	Status CNPS/State /	Habitat, Elevation, Bloom Time	Potential for Occurrence/ Survey Results
<i>Diplacus pygmaeus</i>	Egg Lake monkeyflower	4.2	Great Basin scrub, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland, vernal mesic, streamsides, volcanic, clay, 1,640 to 6,035 feet, May-August	Suitable habitat present, not observed within the survey area
<i>Drosera anglica</i>	English sundew	2B.3	Bogs and fens, Meadows and seeps (mesic), 4,265 to 7,400 feet, June-September	Suitable habitat present, not observed within the survey area
<i>Eleocharis parvula</i>	small spikerush	4.3	Marshes and swamps 0 to 9,910 feet, (April) June-August (September)	Suitable habitat present, not observed within the survey area
<i>Erigeron inornatus</i> <i>var. calidipetris</i>	hot rock daisy	4.3	Lower montane coniferous forest (sandy, volcanic), 3,605 to 6,350 feet, June-September	Known from Westwood West quad, Suitable habitat present, not observed within the survey area
<i>Erigeron lassenianus</i> <i>var. deficiens</i>	Plumas rayless daisy	1B.3	Lower montane coniferous forest, Gravelly, sometimes serpentinite, sometimes disturbed sites, 4,460 to 6,495 feet, June-September	Suitable habitat present, not observed within the survey area
<i>Eriogonum pyrolifolium</i> <i>var. pyrolifolium</i>	pyrola-leaved buckwheat	2B.3	Alpine boulder and rock field (sandy or gravelly, pumice), 5,495 to 10,500 feet, July-September	No suitable habitat present, not observed within the survey area
<i>Eriogonum spectabile</i>	Barron's buckwheat	1B.1	Upper montane coniferous forest, glaciated andesite, rocky or sandy, 6,590 to 6,725 feet, July-September	No suitable habitat present, not observed within the survey area
<i>Eriophorum gracile</i>	slender cottongrass	4.3	Bogs and fens, Meadows and seeps, Upper montane coniferous forest, acidic, 4,195 to 9,515 feet, May-September	Suitable habitat present, not observed within the survey area

Table 1. Special-Status Plants Potentially Occurring on the Clear Creek Project Site

<i>Scientific Name</i>	Common Name	Status CNPS/State /	Habitat, Elevation, Bloom Time	Potential for Occurrence/ Survey Results
<i>Juncus dudleyi</i>	Dudley's rush	2B.3	Lower montane coniferous forest (mesic), 1,490 to 6,560 feet, July-August	Suitable habitat present, not observed within the survey area
<i>Juncus hemiendytus</i> <i>var. abjectus</i>	Center Basin rush	4.3	Meadows and seeps, Subalpine coniferous forest, mesic, 4,590 to 11,155 feet, May-June (July)	Suitable habitat present, not observed within the survey area
<i>Lupinus dalesiae</i>	Quincy lupine	4.2	Chaparral, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest, openings, often in disturbed areas, 2,805 to 8,200 feet, May-August	Suitable habitat present, not observed within the survey area
<i>Lysimachia thyrsoiflora</i>	tufted loosestrife	2B.3	Meadows and seeps mesic, Marshes and swamps, Upper montane coniferous forest, 3,195 to 5,495 feet, May-August	Suitable habitat present, not observed within the survey area
<i>Meesia triquetra</i>	three-ranked hump moss	4.2	Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest (mesic), soil, 4,265 to 9,690 feet, July	Suitable habitat present, not observed within the survey area
<i>Muhlenbergia jonesii</i>	Jones' muhly	4.3	Lower montane coniferous forest, Upper montane coniferous forest, 3,705 to 7,085 feet, June-August (September)	Suitable habitat present, not observed within the survey area
<i>Orcuttia tenuis</i>	slender Orcutt grass	1B.1/ CE/ FT	Vernal pools, Often gravelly, 110 to 5,775 feet, May-September (October)	No suitable habitat present, not observed within the survey area
<i>Oreostemma elatum</i>	tall alpine-aster	1B.2	Bogs and fens, Meadows and seeps, Upper montane coniferous forest, 3,295 to 6,890 feet, June-August	Known from Westwood West quad, Suitable habitat present, not observed within the survey area

Table 1. Special-Status Plants Potentially Occurring on the Clear Creek Project Site

<i>Scientific Name</i>	Common Name	Status CNPS/State /	Habitat, Elevation, Bloom Time	Potential for Occurrence/ Survey Results
<i>Packera eurycephala</i> <i>var. lewisrosei</i>	Lewis Rose's ragwort	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest, mesic, 895 to 6,200 feet, March-July (August-September)	Suitable habitat present, not observed within the survey area
<i>Penstemon cinicola</i>	ash beardtongue	4.3	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest, volcanic, sandy or rocky, 2,395 to 8,810 feet, June-August (September)	Suitable habitat present, not observed within the survey area
<i>Penstemon</i> <i>heterodoxus var.</i> <i>shastensis</i>	Shasta beardtongue	4.3	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest, volcanic, sandy or rock, 3,605 to 7,875 feet, May-September	Suitable habitat present, not observed within the survey area
<i>Penstemon personatus</i>	closed-throated beardtongue	1B.2	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest, metavolcanic, 3,490 to 6,955 feet, June-September (October)	Suitable habitat present, not observed within the survey area
<i>Penstemon sudans</i>	Susanville beardtongue	1B.2	Great Basin scrub, Lower montane coniferous forest (openings), Pinyon and juniper woodland, volcanic, rocky, sometimes roadsides, 3,935 to 7,955 feet, June-July (August-September)	Suitable habitat present, not observed within the survey area
<i>Piperia colemanii</i>	Coleman's rein orchid	4.3	Chaparral, Lower montane coniferous forest, often sandy, 3,935 to 7,545 feet, June-August	Suitable habitat present, not observed within the survey area
<i>Pyrocoma lucida</i>	sticky pyrocoma	1B.2	Great Basin scrub, Lower montane coniferous forest, Meadows and seeps, alkaline clay, 2,295 to 6,400 feet, July-October	Suitable habitat present, not observed within the survey area

Table 1. Special-Status Plants Potentially Occurring on the Clear Creek Project Site

<i>Scientific Name</i>	Common Name	Status CNPS/State /	Habitat, Elevation, Bloom Time	Potential for Occurrence/ Survey Results
<i>Rhamnus alnifolia</i>	alder buckthorn	2B.2	Lower montane coniferous forest, Meadows and seeps, Riparian scrub, Upper montane coniferous forest, 4,490 to 6,990 feet, May-July	Known from Westwood West quad, suitable habitat present, observed within the (APE), Area of Potential Effect within the wetlands north of Clear Creek Park.
<i>Scheuchzeria palustris</i>	American scheuchzeria	2B.1	Bogs and fens, Marshes and swamps (lake margins), 4,490 to 6,560 feet, July-August	Suitable habitat present, not observed within the survey area
<i>Schoenoplectus subterminalis</i>	water bulrush	2B.3	Bogs and fens, Marshes and swamps (montane lake margins), 2,460 to 7,380 feet, June-August (September)	Suitable habitat present, not observed within the survey area
<i>Scutellaria galericulata</i>	marsh skullcap	2B.2	Lower montane coniferous forest, Meadows and seeps (mesic), Marshes and swamps, 0 to 6,890 feet, June-September	Suitable habitat present, not observed within the survey area
<i>Sedum albomarginatum</i>	Feather River stonecrop	1B.2	Chaparral, Lower montane coniferous forest, serpentinite, 850 to 6,400 feet, May-June	Suitable habitat present, not observed within the survey area
<i>Silene occidentalis</i> ssp. <i>occidentalis</i>	Western campion	4.3	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest, dry, open sites, sometimes rocky, 4,035 to 6,855 feet, June-August	Suitable habitat present, observed within the survey area off the northeast end of Wilson Way
<i>Sparganium natans</i>	small bur-reed	4.3	Bogs and fens, Meadows and seeps, Marshes and swamps (lake margins), 5,330 to 8,200 feet, June-September	Suitable habitat present, not observed within the survey area
<i>Stellaria longifolia</i>	long-leaved starwort	2B.2	Bogs and fens, Meadows and seeps (mesic), Riparian woodland, Upper montane coniferous forest, 2,950 to 6,005 feet, May-August	Suitable habitat present, not observed within the survey area

Table 1. Special-Status Plants Potentially Occurring on the Clear Creek Project Site

<i>Scientific Name</i>	Common Name	Status CNPS/State /	Habitat, Elevation, Bloom Time	Potential for Occurrence/ Survey Results
<i>Stellaria obtusa</i>	obtuse starwort	4.3	Lower montane coniferous forest, Riparian woodland, Upper montane coniferous forest, mesic, streambanks, 490 to 7,515 feet, May-September (October)	Suitable habitat present, not observed within the survey area
<i>Subularia aquatica</i> <i>ssp. americana</i>	American water awlwort	4.3	Upper montane coniferous forest, lake margins, 6,230 to 10,170 feet, July-September	Marginal habitat present, not observed within the survey area
<i>Utricularia intermedia</i>	flat-leaved bladderwort	2B.2	Bogs and fens, Meadows and seeps (mesic), Marshes and swamps (lake margins), Vernal pools, 3,395 to 8,860 feet, July-August	Suitable habitat present, not observed within the survey area
<i>Utricularia minor</i>	lesser bladderwort	4.2	Bogs and fens, Marshes and swamps (assorted shallow freshwater), calcium-rich water, 2,620 to 9,515 feet, (May-June) July-August	Suitable habitat present, not observed within the survey area
<i>Utricularia ochroleuca</i>	cream-flowered bladderwort	2B.2	Meadows and seeps (mesic), Marshes and swamps (lake margins), 4,705 to 4,725 feet, June-July	Suitable habitat present, not observed within the survey area

<i>Silene occidentalis</i> ssp. <i>occidentalis</i> (CNPS List 4)	Western campion	Caryophyll
<i>Stellaria longipes</i> subsp. <i>longipes</i>	longstalk starwort	Caryophyll
<i>Calystegia macrophylla</i>	Sierra morning glory	Convolvula
<i>Calystegia occidentalis</i> subsp. <i>occidentalis</i>	chaparral morning glory	Convolvula
<i>Convolvulus arvensis</i>	field bindweed	Convolvula
<i>Cornus sericea</i> ssp. <i>sericea</i>	American dogwood	Cornaceae
<i>Calocedrus decurrens</i>	incense cedar	Cupressace
<i>Carex feta</i>	green-sheathed sedge	Cyperacea
<i>Carex nebrascensis</i>	Nebraska sedge	Cyperacea
<i>Carex pachystachya</i>	thick-headed sedge	Cyperacea
<i>Carex rossii</i>	Ross' sedge	Cyperacea
<i>Carex simulata</i>	short-beaked sedge	Cyperacea
<i>Carex subfusca</i>	rusty slender sedge	Cyperacea
<i>Scirpus microcarpus</i>	panicled bulrush	Cyperacea
<i>Pteridium aquilinum</i> var. <i>pubescens</i>	Western bracken fern	Dennstaed
<i>Equisetum arvense</i>	common horsetail	Equisetace
<i>Equisetum laevigatum</i>	smooth horsetail	Equisetace
<i>Arctostaphylos patula</i>	greenleaf manzanita	Ericaceae
<i>Orthilia secunda</i>	one-sided wintergreen	Ericaceae
<i>Acmispon americanus</i>	American bird's-foot trefoil	Fabaceae
<i>Hosackia oblongifolia</i> var. <i>oblongifolia</i>	streambank lotus	Fabaceae
<i>Lathyrus brownii</i>	Brown's brush pea	Fabaceae
<i>Lathyrus latifolius</i>	sweet pea	Fabaceae
<i>Lathyrus nevadensis</i> ssp. <i>nevadensis</i>	Sierra pea	Fabaceae
<i>Melilotus albus</i>	white sweetclover	Fabaceae
<i>Melilotus indica</i>	Indian sweetclover	Fabaceae
<i>Trifolium dubium</i>	shamrock	Fabaceae
<i>Trifolium longipes</i> subsp. <i>hansenii</i>	Hansen's clover	Fabaceae
<i>Trifolium repens</i>	white clover	Fabaceae
<i>Trifolium variegatum</i>	white-tipped clover	Fabaceae
<i>Erodium cicutarium</i>	red-stemmed filaree	Geraniaceae
<i>Ribes cereum</i> var. <i>cereum</i>	wax currant	Grossularia
<i>Ribes nevadense</i>	Sierra currant	Grossularia
<i>Ribes roezlii</i> var. <i>roezlii</i>	Sierra gooseberry	Grossularia
<i>Ribes viscosissimum</i>	sticky currant	Grossularia
<i>Hypericum perforatum</i>	Klamath weed	Hypericaceae
<i>Juncus balticus</i> subsp. <i>ater</i>	Baltic rush	Juncaceae
<i>Juncus nevadensis</i>	Sierra rush	Juncaceae
<i>Juncus orthophyllus</i>	straight-leaved rush	Juncaceae
<i>Luzula comosa</i> var. <i>comosa</i>	common wood-rush	Juncaceae
<i>Monardella odoratissima</i> subsp. <i>pallida</i>	pallid coyote mint	Lamiaceae
<i>Prunella vulgaris</i>	selfheal	Lamiaceae
<i>Stachys rigida</i> var. <i>rigida</i>	rough hedge-nettle	Lamiaceae
<i>Linum lewisii</i> var. <i>lewisii</i>	Lewis' flax	Linaceae

<i>Veratrum californicum</i> var. <i>californicum</i>	California corn-lily	Melanthia
<i>Montia chamissoi</i>	toad lily	Montiaceae
<i>Chamerion angustifolium</i> ssp. <i>circumvagum</i>	fireweed	Onagraceae
<i>Clarkia rhomboidea</i>	diamond-petaled clarkia	Onagraceae
<i>Epilobium brachycarpum</i>	annual willow weed	Onagraceae
<i>Epilobium ciliatum</i> ssp. <i>glandulosum</i>	glandular willowherb	Onagraceae
<i>Gayophytum diffusum</i> subsp. <i>diffusum</i>	spreading groundsmoke	Onagraceae
<i>Platanthera dilatata</i> var. <i>leucostachys</i>	bog orchid	Orchidaceae
<i>Castilleja applegatei</i> subsp. <i>pinetorum</i>	pine paintbrush	Orobanchaceae
<i>Castilleja miniata</i>	scarlet paintbrush	Orobanchaceae
<i>Paeonia brownii</i>	mountain peony	Paeoniaceae
<i>Mimulus breweri</i>	Brewer's monkey-flower	Phrymaceae
<i>Abies concolor</i>	white fir	Pinaceae
<i>Pinus contorta</i> ssp. <i>murrayana</i>	lodgepole pine	Pinaceae
<i>Pinus jeffreyi</i>	Jeffrey pine	Pinaceae
<i>Pinus ponderosa</i>	ponderosa pine	Pinaceae
<i>Pseudotsuga menziesii</i>	Douglas-fir	Pinaceae
<i>Penstemon neotericus</i>	Plumas County beardtongue	Plantaginaceae
<i>Penstemon roezlii</i>	Regel's mountain beardtongue	Plantaginaceae
<i>Penstemon rydbergii</i> var. <i>oreocharis</i>	meadow beardtongue	Plantaginaceae
<i>Plantago lanceolata</i>	English plantain	Plantaginaceae
<i>Veronica americana</i>	American brooklime	Plantaginaceae
<i>Veronica peregrina</i> var. <i>xalapensis</i>	purslane speedwell	Plantaginaceae
<i>Alopecurus aequalis</i> var. <i>aequalis</i>	water foxtail	Poaceae
<i>Bromus carinatus</i>	California brome	Poaceae
<i>Bromus tectorum</i>	cheatgrass	Poaceae
<i>Dactylis glomerata</i>	orchard grass	Poaceae
<i>Deschampsia caespitosa</i>	tufted hairgrass	Poaceae
<i>Elymus elymoides</i> var. <i>californicus</i>	squirreltail grass	Poaceae
<i>Elymus glaucus</i> subsp. <i>glaucus</i>	blue wildrye	Poaceae
<i>Festuca idahoensis</i>	blue fescue	Poaceae
<i>Festuca microstachys</i>	small fescue	Poaceae
<i>Festuca occidentalis</i>	western fescue	Poaceae
<i>Holcus lanatus</i>	velvet grass	Poaceae
<i>Hordeum brachyantherum</i> ssp. <i>brachyantherum</i>	meadow barley	Poaceae
<i>Poa annua</i>	annual bluegrass	Poaceae
<i>Poa bulbosa</i>	bulbous bluegrass	Poaceae
<i>Poa compressa</i>	Canadian bluegrass	Poaceae
<i>Poa pratensis</i> ssp. <i>pratensis</i>	Kentucky bluegrass	Poaceae
<i>Poa secunda</i> subsp. <i>juncifolia</i>	rush-leaved bluegrass	Poaceae
<i>Stipa lemmonii</i>	Lemmon's needlegrass	Poaceae
<i>Torreyochloa pallida</i> subsp. <i>pauciflora</i>	pale false mannagrass	Poaceae
<i>Trisetum canescens</i>	nodding oatgrass	Poaceae
<i>Microsteris gracilis</i>	slender phlox	Polemoniaceae

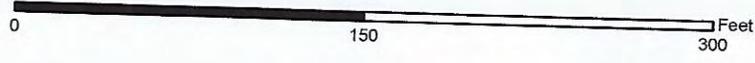
<i>Eriogonum nudum</i> var. <i>nudum</i>	naked-stemmed wild buckwheat	Polygonaceae
<i>Eriogonum vimineum</i>	wicker-stemmed wild buckwheat	Polygonaceae
<i>Polygonum aviculare</i>	common knotweed	Polygonaceae
<i>Rumex acetosella</i>	sheep sorrel	Polygonaceae
<i>Rumex crispus</i>	curly dock	Polygonaceae
<i>Delphinium nuttallianum</i>	Nuttall's larkspur	Ranunculaceae
<i>Ranunculus occidentalis</i>	western buttercup	Ranunculaceae
<i>Ranunculus uncinatus</i>	hook-fruited buttercup	Ranunculaceae
<i>Ceanothus cordulatus</i>	mountain whitethorn	Rhamnaceae
<i>Ceanothus prostratus</i> var. <i>prostratus</i>	Mahala mat	Rhamnaceae
<i>Rhamnus alnifolia</i> (CNPS List 2B.2)	alder buckthorn	Rhamnaceae
<i>Amelanchier utahensis</i>	Utah service-berry	Rosaceae
<i>Drymocallis glandulosa</i> subsp. <i>glandulosa</i>	sticky cinquefoil	Rosaceae
<i>Geum macrophyllum</i> var. <i>perincisum</i>	large-leaved avens	Rosaceae
<i>Horkelia fusca</i> var. <i>parviflora</i>	tawny horkelia	Rosaceae
<i>Potentilla gracilis</i> var. <i>fastigiata</i>	slender cinquefoil	Rosaceae
<i>Poteridium annuum</i>	western burnet	Rosaceae
<i>Prunus emarginata</i>	bitter cherry	Rosaceae
<i>Prunus virginianus</i> var. <i>demissa</i>	western chokecherry	Rosaceae
<i>Purshia tridentata</i>	antelope bitterbrush	Rosaceae
<i>Rosa woodsii</i> subsp. <i>ultramontana</i>	interior rose	Rosaceae
<i>Rubus parviflorus</i>	thimbleberry	Rosaceae
<i>Spiraea douglasii</i>	Douglas' spiraea	Rosaceae
<i>Kelloggia galioides</i>	Kelloggia	Rubiaceae
<i>Maianthemum stellatum</i>	Star-flowered false Solomon's-seal	Ruscaceae
<i>Populus tremuloides</i>	quaking aspen	Salicaceae
<i>Populus trichocarpa</i>	black cottonwood	Salicaceae
<i>Salix lasiandra</i> var. <i>lasiandra</i>	Pacific willow	Salicaceae
<i>Salix lasiolepis</i>	arroyo willow	Salicaceae
<i>Salix lemmonii</i>	Lemmon's willow	Salicaceae
<i>Salix scouleriana</i>	Scouler willow	Salicaceae
<i>Verbascum thapsus</i>	woolly mullein	Scrophulariaceae
<i>Athyrium filix-femina</i> var. <i>cyclosorum</i>	Western lady fern	Woodsia



FIGURE 4-2
Rare Plant Occurrence
Clear Creek, Lassen County

*Location
of
Alder
Buckthorn*

LEGEND
 Project Site



Data:
CDFW Stream data
VNLC 2018
Esri base map

APPENDIX B
MITIGATION MONITORING AND REPORTING PROGRAM
(to be included in Final IS)

