

PROPOSED MITIGATED NEGATIVE DECLARATION and INITIAL STUDY

Callahan Water District Water System Improvement Project



Prepared for:
Callahan Water District
June 2021

ENPLAN

3179 Bechelli Lane Suite 100
Redding, CA 96002

PROPOSED MITIGATED NEGATIVE DECLARATION

LEAD AGENCY:	Callahan Water District
PROJECT PROPONENT:	Callahan Water District
PROJECT NAME:	Callahan Water District Water System Improvement Project
PROJECT SUMMARY:	The proposed project entails improvements to the Callahan Water District's water system, including the water intake structure, storage facilities, water treatment facilities, and water distribution system. The purpose of the project is to comply with State Water Resources Control Board requirements for public water systems, provide adequate fire flows, and ensure a safe and reliable water supply for residents and businesses in the water service area. (See Section 3.0, <i>Project Description</i> , in the Initial Study)
LOCATION:	The proposed project is located in and near Callahan, an unincorporated community in Siskiyou County, situated approximately 30 air-miles southwest of Yreka (40 miles south via State Highway 3), and 25 air-miles west of the city of Mt. Shasta (74 miles west via Interstate 5 and State Highway 3). Water system improvements would be constructed primarily on the south side of Highway 3, along South Fork Road, and along McKeen Road, in Sections 7 and 31 of Township (T) 39N, Range (R) 8W; Sections 16, 17, 20, 21, 28, 29, and 32 of T40N, R8W; and in Section 36 of T40N, R9W MDM (See Figure 1 in the Initial Study).

FINDINGS / DETERMINATION

As documented in the Initial Study, project implementation could result in possible effects to special-status wildlife species, disturbance of sensitive stream habitats, disturbance of nesting migratory birds (if present during construction), the introduction and spread of noxious weeds during construction, impacts to cultural resources and tribal cultural resources (if present), potential encounters with unstable soils, temporarily increased air emissions, and temporarily increased noise and vibration levels.

Design features incorporated into the project would avoid or reduce certain potential environmental impacts, as would compliance with existing regulations and permit conditions. Remaining impacts can be reduced to levels that are less than significant through implementation of the mitigation measures presented in Section 1.10 of the Initial Study. Because the Callahan Water District will adopt mitigation measures as conditions of project approval and will be responsible for ensuring their implementation, it has been determined that the project will not have a significant adverse impact on the environment.

Final Mitigated Negative Declaration approved by the Callahan Water District on _____, 2021 by Resolution _____.

INITIAL STUDY

CALLAHAN WATER DISTRICT

WATER SYSTEM IMPROVEMENT PROJECT

LEAD AGENCY:

Callahan Water District
P.O. Box 1524
Callahan, CA 96014

PREPARED BY:

ENPLAN
3179 Bechelli Lane, Suite 100
Redding, CA 96002
530.221.0440

June 2021

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Appendix A	CalEEMod.2016.3.1 Emissions Reports
Appendix B	Biological Resource Documentation
	<ul style="list-style-type: none">• U.S. Fish and Wildlife Service List of Threatened and Endangered Species• National Marine Fisheries Service List of Threatened and Endangered Species, Critical Habitats, and Essential Fish Habitats• California Natural Diversity Database Query Summary• California Native Plant Society Query Summary• ENPLAN Summary Report: Potential for Special-Status Species to Occur on the Project Site• List of Vascular Plants Observed: May 27, June 8, and July 28, 2019

SECTION 1.0 INTRODUCTION

1.1 PROJECT SUMMARY

Project Title:	Water System Improvement Project
Lead Agency Name and Address:	Callahan Water District PO Box 1524 Callahan, CA 96014
Contact Person and Phone Number:	Shirley Gilmore, Secretary
Environmental Consultant:	ENPLAN 3179 Bechelli Lane Redding, CA 96002

1.2 PURPOSE OF STUDY

The Callahan Water District, as Lead Agency, has prepared this Initial Study to provide the general public and interested public agencies with information about the potential environmental impacts of its Water System Improvements Project (Project). Details about the proposed project are included in Section 3.0 (Project Description) of this Initial Study.

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified in California Public Resources Code §21000 et seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. Pursuant to these regulations, this Initial Study identifies potentially significant impacts and, where applicable, includes mitigation measures that would reduce all identified environmental impacts to less-than-significant levels. This Initial Study supports a Mitigated Negative Declaration (MND) pursuant to CEQA Guidelines §15070.

The Callahan Water District intends to apply for funding through the State Water Resources Control Board's Drinking Water State Revolving Fund (DWSRF); therefore, the proposed project is also subject to National Environmental Policy Act (NEPA) review. A NEPA Environmental Package will be prepared in accordance with DWSRF standards to satisfy NEPA requirements.

1.3 EVALUATION TERMINOLOGY

The environmental analysis in Section 4.0 is patterned after the Initial Study Checklist recommended in the State CEQA Guidelines. For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the proposed project. To each question, there are four possible responses:

- **No Impact.** The proposed project will not have any measurable environmental impact on the environment.

- **Less-Than-Significant Impact.** The proposed project has the potential to impact the environment; however, this impact will be below established thresholds of significance.
- **Potentially Significant Impact Unless Mitigation Incorporated.** The proposed project has the potential to generate impacts which may be considered a significant effect on the environment; however, mitigation measures or changes to the proposed project's physical or operational characteristics can reduce these impacts to levels that are less than significant.
- **Potentially Significant Impact.** The proposed project will have significant impacts on the environment, and additional analysis is required to determine if it is feasible to adopt mitigation measures or project alternatives to reduce these impacts to less than significant levels.

1.4 ORGANIZATION OF THE INITIAL STUDY

This document is organized into the following sections:

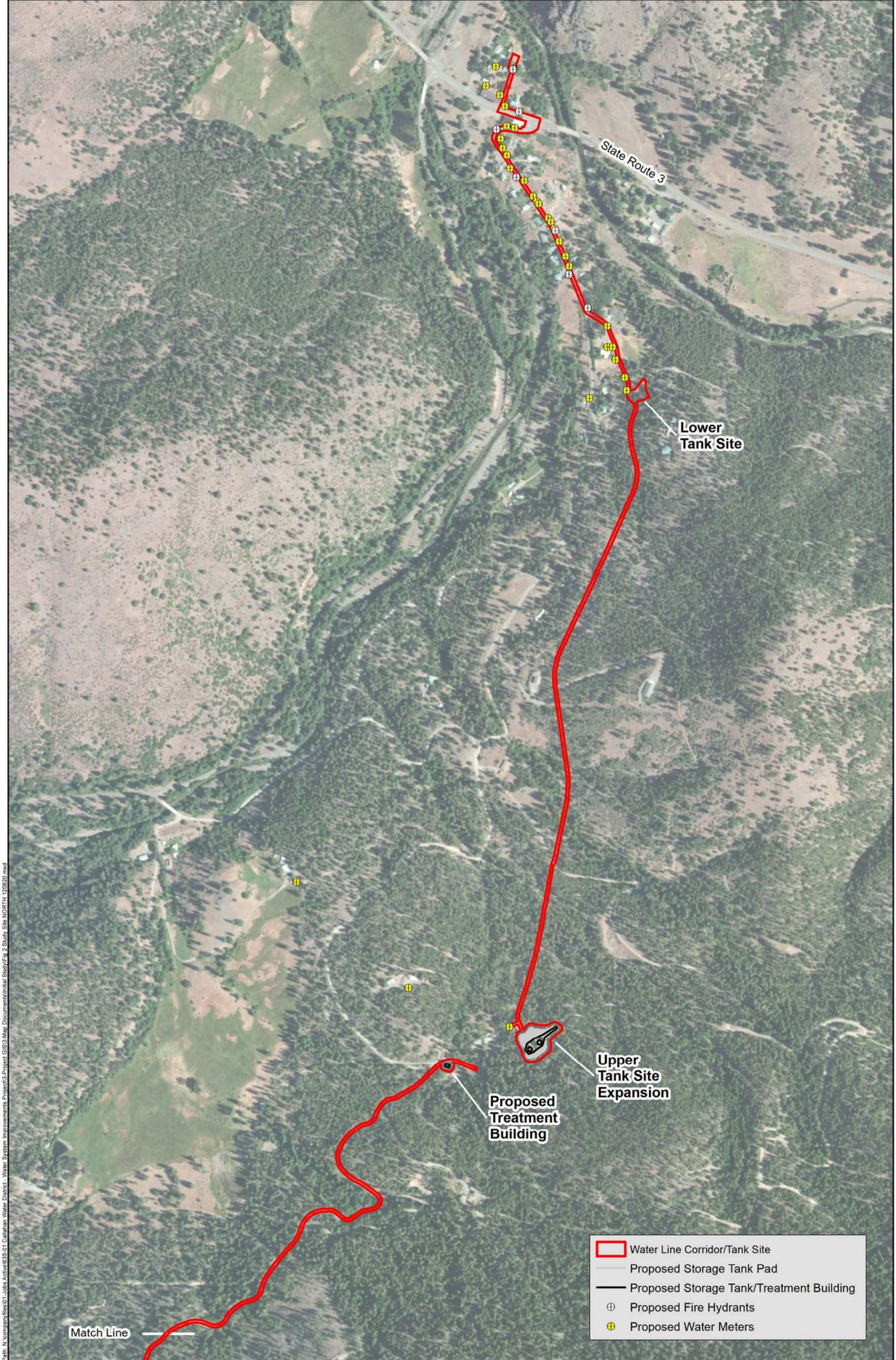
- Section 1.0: Introduction:** Describes the purpose, contents, and organization of the document and provides a summary of the proposed project.
- Section 2.0: CEQA Determination:** Identifies the determination of whether impacts associated with development of the proposed project are significant, and what, if any, additional environmental documentation may be required.
- Section 3.0: Project Description:** Includes a detailed description of the proposed project.
- Section 4.0: Environmental Impact Analysis (Checklist):** Contains the Environmental Checklist from CEQA Guidelines Appendix G with a discussion of potential environmental effects associated with the proposed project. Mitigation measures, if necessary, are noted following each impact discussion.
- Section 5.0: List of Preparers**
- Section 6.0: Abbreviations and Acronyms**
- Appendices:** Contain information to supplement Section 4.0.

1.5 PROJECT LOCATION

As shown in **Figure 1** (Project Location and Vicinity), the proposed project is located in the unincorporated community of Callahan in Siskiyou County in Sections 7 and 31 of Township (T) 39N, Range (R) 8W; Sections 16, 17, 20, 21, 28, 29, and 32 of T40N, R8W; and in Section 36 of T40N, R9W all as depicted in the U.S. Geological Survey's (USGS) Callahan 7.5-minute quadrangle. Proposed improvements would occur in town along State Highway 3, south of Highway 3, and along South Fork Road. Proposed improvements would also occur outside of town along McKeen Road and on Boulder Creek just below the confluence of West Boulder Creek and East Boulder Creek. **Figures 2 and 3** show the project details overlain on aerial photography.

Staging Areas:

Temporary staging of construction equipment and materials will vary depending on the location of the construction activity. For construction work within the roadways, staging will include the existing road rights-of-way (ROWs). For construction occurring in cross-country areas, staging will occur at the water tank sites.



Path: N:\company\files\01-Jobs Active\635-01 Callahan Water District - Water System Improvements\Project\GIS\Map Documents\Initial Study\Fig 2 Study Site NORTH 120820.mxd

All depictions are approximate. Not a survey product. 12.08.20



Figure 2
Project Site - North



Match Line

- Water Line Corridor
- Water Intake Staging Area

Boulder Creek

Path: N:\company\files\01-Jobs Active\635-01 Callahan Water District - Water System Improvements Project\3-Project GIS\3-Map Documents\Initial Study\Fig. 3 Study Site SOUTH 120820.mxd

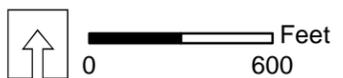


Figure 3
Project Site - South

All depictions are approximate. Not a survey product. 12.08.20



1.6 ENVIRONMENTAL SETTING

<p>General Plan Designation:</p>	<p>The County’s General Plan does not include specific land use designations; rather, the County uses overlay maps to identify development constraint areas. Potential development constraints are further discussed in Section 4.0 (Environmental Analysis).</p>
<p>Zoning:</p>	<p>Callahan Water Service Area: Zoning along State Highway 3 and portions of South Fork Road in the community of Callahan is Town Center District (C-C); elsewhere along South Fork Road and east to Callahan-Cecilville Road lands are zoned Low Density Residential (R-R).</p> <p>Water Storage Reservoirs: The lower tank site is zoned R-R and the upper tank site is zoned R-R-B-40 (rural residential, 40-acre minimum parcel size).</p> <p>Raw Water Supply Line: Lands along the raw water supply line corridor are zoned R-R, R-R-B-40, and Timberland Production (TP).</p> <p>Water Intake Structure: The parcel on which the water intake is located and surrounding parcels are zoned R-R-B-40.</p>
<p>Surrounding Land Uses:</p>	<p>Callahan is located 25 miles west of the City of Mt. Shasta and 30 miles south-southeast of the City of Yreka. The community is situated along State Highway 3 at the junction of the east and south forks of the Scott River. Once a booming mining town, Callahan now has a population of 152. On the west side of the highway is the Emporium, which has a store and a bar; a boarded-up brick Wells Fargo bank building; and the Mt. Bolivar Grange. On the east side of the highway is the U.S. Post Office, the now-closed Farrington’s Store, and the Callahan Ranch Hotel. The surrounding lands in the water service area are primarily developed with single-family residences. The pipeline corridor south of town traverses larger parcels owned by private citizens, U.S. Forest Service-Klamath National Forest, Western Rivers Conservancy, SIMPCO Lands, and timber companies.</p>
<p>Topography:</p>	<p>The study area ranges in elevation between 3,125 and 4,280 feet above sea level. The water service area in the northern portion of the study area is nearly flat to gently sloping in a northerly direction. The water mains would traverse moderate to steep cross-slopes draining primarily to the west and northwest.</p>
<p>Plant Communities/Wildlife Habitats:</p>	<p>Four plant communities are present in the study area: urban, ponderosa pine forest, Klamath mixed-conifer forest, and riverine. The urban community includes paved road rights-of-way and developed residential properties in the study area. Urban vegetation is primarily located along the road margins and on residential parcels.</p> <p>The dominant natural community type below the upper tank site is a ponderosa pine forest with a relatively open understory. At higher elevations, the dominant community type is Klamath mixed conifer forest. The onsite Klamath mixed forest habitat is relatively dry, with ponderosa pine being one of the more common species. Because the site is relatively dry, the shrub layer is much more limited than in the typical habitat type.</p>

	Riverine habitats include Boulder Creek as well as a number of unnamed small streams. The latter consist of ephemeral, intermittent, and near-perennial to perennial features ranging from approximately one foot wide to 11 feet wide.
Water Features:	As noted above, water features present within the project study area include Boulder Creek and a number of unnamed small streams that cross through the planned water line corridors.
Air Basin:	Northeast Plateau Air Basin (NPAB)

1.7 REGULATORY REQUIREMENTS

Permits and approvals that may be necessary for construction and operation of the proposed project are identified below.

Callahan Water District:

- Adoption of a Mitigated Negative Declaration for the project pursuant to the California Environmental Quality Act (CEQA), as amended.
- Adoption of a Mitigation Monitoring Plan for the project that incorporates the mitigation measures identified in this Initial Study.

Siskiyou County:

- Approval of Encroachment Permit for work in County road rights-of-way.
- Approval of a Naturally Occurring Asbestos (NOA) Dust Mitigation Plan by the Siskiyou County Air Pollution Control District.

California Department of Transportation:

- Approval of Encroachment Permit for work in the State Route 3 right-of-way.

State Water Resources Control Board (SWRCB)/North Coast Regional Water Quality Control Board (NCRWQCB):

- Coverage under the National Pollutant Discharge Elimination System (NPDES) permit for *Discharges of Storm Water Runoff Associated with Construction Activity* (currently Order No. 2009-009-DWQ). Permit coverage may be obtained by submitting a Notice of Intent to the SWRCB. The permitting process requires the development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) to reduce pollutants and any additional controls necessary to meet water quality standards.
- Issuance of a Section 401 Water Quality Certification (or waiver).
- If construction dewatering activities result in the direct discharge of relatively pollutant-free wastewater to waters of the U.S., coverage under NCRWQCB General Order R1-2015-0003 (NPDES NO. CAG0024902) *Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region*. This Order includes specific requirements for monitoring, reporting, and implementing BMPs for construction dewatering activities.

California Department Fish and Wildlife:

- Issuance of a Section 1600 Lake or Streambed Alteration Agreement.

California Department of Forestry and Fire Protection:

- Issuance of a Timberland Conversion Permit and/or Timber Harvest Plan approval, or utility right-of-way exemption, for tree removal on non-federal lands.

California Office of Historic Preservation, State Historic Preservation Officer (SHPO):

- Due to federal funding and federal permits for the proposed project, consultation regarding potential impacts to cultural resources is required pursuant to Section 106 of the National Historic Preservation Act (NHPA).

U.S Forest Service, Klamath National Forest

- Issuance of a Special Use Permit for activities on National Forest lands.

U.S. Army Corps of Engineers:

- Issuance of a Section 404 Permit under the Federal Clean Water Act.

1.8 TRIBAL CULTURAL RESOURCES CONSULTATION

Public Resources Code (PRC) §21084.2 (AB 52, 2014) establishes that “a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” Pursuant to PRC §21080.3.1, in order to determine whether a project may have such an effect, a lead agency is required to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if:

1. The California Native American tribe requested to the lead agency, in writing, to be informed through formal notification of proposed projects in the geographical area; and
2. The tribe responds, in writing, within 30 days of receipt of the formal notification and requests the consultation.

In response to ENPLAN’s request for comments on the proposed project, Les Anderson, the Cultural Resources Protection Specialist of the Klamath Tribe, responded by email on June 20, 2019. Mr. Anderson asked if the proposed project has a Federal nexus involved for upgrading the water system. Additionally, he provided a request by the Klamath Tribe to: (1) complete a pedestrian survey before ground disturbing activities begin; (2) to flag and protect any areas considered sensitive for cultural resources within the APE; (3) to monitor any ground disturbing activity at confluences, springs, streams, wetlands, and rivers; and (4) to protect any areas where significant traditional botanicals may exist. No other responses were received. See discussion in Section 4.5 regarding outreach to Native American Tribes identified by the Native American Heritage Commission.

1.9 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the proposed project, involving at least one impact requiring mitigation to bring it to a less-than-significant level. Impacts to these resources are evaluated using the checklist included in Section 4.0. The proposed project

was determined to have a less-than-significant impact or no impact without mitigation on unchecked resource areas.

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

1.10 SUMMARY OF MITIGATION MEASURES

The following mitigation measures are proposed to reduce impacts of the proposed project to less than significant levels.

AIR QUALITY

- MM 4.3.1** The following measures shall be implemented to reduce short-term air quality impacts during construction:
- a. Work shall be conducted in compliance with a Naturally Occurring Asbestos (NOA) Dust Mitigation Plan approved by the Siskiyou County Air Pollution Control District.
 - b. All material excavated, stockpiled, or graded shall be sufficiently watered a minimum of two times per day to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of ambient air quality standards.
 - c. All unpaved areas with vehicle traffic shall be watered periodically or have dust palliatives applied for stabilization of dust emissions.
 - d. All on-site vehicles shall be limited to a speed of 15 miles per hour in unpaved areas.
 - e. All land clearing, grading, earth moving or excavation activities on the project site shall be suspended if/when the County’s Building Official determines that winds are causing excessive dust generation.
 - f. Paved streets adjacent to construction areas shall be swept or washed at the end of the day if substantial volumes of silt and/or mud have been carried onto the paved roads as a result of activities on the work site.
 - g. All trucks hauling dirt, sand, soil, or other loose material shall be covered or shall maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code §23114.
 - h. All construction equipment shall be maintained and properly tuned in accordance with manufacturers’ specifications.
 - i. Off-road construction equipment and other diesel-fueled construction vehicles (e.g., dump trucks) shall not be left idling for periods longer than five minutes when not in use.

BIOLOGICAL RESOURCES

MM 4.4.1 The potential for direct impacts on Cascades frogs, foothill yellow-legged frogs, and Pacific tailed frogs that may be present in Boulder Creek shall be avoided by having a qualified biologist conduct a pre-construction survey for frogs immediately prior to the start of in-water work each day that in-water work would occur. Any frog adults, tadpoles, and/or egg masses that may be found shall be relocated to a safe location upstream or downstream of the work area. Potential indirect impacts on Cascades frogs, foothill yellow-legged frogs, and Pacific tailed frogs shall be minimized through use of erosion controls to minimize the amount of sediment discharged into drainages.

MM 4.4.2 The potential for direct impacts on SONCC Coho salmon that may be present in Boulder Creek shall be avoided by:

- Limiting in-stream work to the period between June 15 and October 15.
- Dewatering the in-stream work area.
- Retaining a biologist to monitor installation of the dewatering structures and to relocate any fish that may be trapped within the area being dewatered.

MM 4.4.3 The potential for introduction and spread of noxious weeds shall be avoided/minimized by:

- Using only certified weed-free erosion control materials, mulch, and seed.
- Limiting any import or export of fill material to material that is known to be weed free.
- Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering and upon leaving the job site.

MM 4.4.4 In order to avoid impacts to special-status birds protected under the California Endangered Species Act (CESA) and nesting migratory birds and/or raptors protected under the federal Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5, including their nests and eggs, one of the following shall be implemented:

- a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31, when birds are not nesting; or
- b. If vegetation removal or ground disturbance activities occur during the nesting season, a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area.

Surveys shall begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey shall take into account acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds.

At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed in the area, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.).

The results of the survey shall be submitted to the CDFW upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

If active nests are found, the Callahan Water District shall consult with the USFWS and CDFW regarding appropriate action to comply with the CESA, Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

CULTURAL RESOURCES

MM 4.5.1 In the event of any inadvertent discovery of cultural resources (i.e., burnt animal bone, midden soils, projectile points or other humanly-modified lithics, historic artifacts, etc.), all work within 50 feet of the find shall be halted until a professional archaeologist can evaluate the significance of the find in accordance with PRC §21083.2(g) and §21084.1, and CEQA Guidelines §15064.5(a). If any find is determined to be significant by the archaeologist, the District shall meet with the archaeologist to determine the appropriate course of action. If necessary, a Treatment Plan prepared by an archeologist outlining recovery of the resource, analysis, and reporting of the find shall be prepared. The Treatment Plan shall be reviewed and approved by the District prior to resuming construction.

MM 4.5.2 In the event that human remains are encountered during construction activities, the District shall comply with §15064.5 (e) (1) of the CEQA Guidelines and PRC §7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the County coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) has been completed.

ENERGY

Implementation of **Mitigation Measure MM 4.3.1(i)**.

GEOLOGY AND SOILS

MM 4.7.1 All grading plans, foundation plans, and structural calculations shall be reviewed by a qualified professional to ensure that all recommendations included in the SHN Geotechnical Report are implemented. Applicable notes shall be placed on the attachment sheet to the improvements plans and in applicable project plans and specifications.

If significant engineering design changes occur during construction, the District shall consult with a qualified geotechnical engineer to identify any geotechnical constraints related to the design changes. Recommendations of the geotechnical engineer shall be implemented as warranted.

MM 4.7.2 The District shall ensure through contractual obligations that earthwork activities are monitored by a qualified professional to ensure that recommendations included in the final Geotechnical Report are implemented.

MM 4.7.3 If paleontological resources (fossils) are discovered during construction, all work within a 60-foot radius of the find shall be halted until a professional paleontologist can evaluate the significance of the find. If any find is determined to be significant by the paleontologist, District representatives shall meet with the paleontologist to determine the appropriate course of action. If necessary, a Treatment Plan prepared by a paleontologist outlining recovery of the resource, analysis, and reporting of the find shall be prepared. The Treatment Plan shall be reviewed and approved by the District prior to resuming construction.

NOISE

Implementation of Mitigation Measure MM 4.3.1 (i).

MM 4.13.1 Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the daytime hours of 7:00 A.M. and 7:00 P.M., Monday through Saturday. Construction activities shall be prohibited on Sundays and federal/state recognized holidays. Exceptions to these limitations may be approved by the District for activities that require interruption of utility services to allow work during low demand periods, or to alleviate traffic congestion and safety hazards.

MM 4.13.2 Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.

MM 4.13.3 Stationary equipment (generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses.

TRIBAL CULTURAL RESOURCES

Implementation of Mitigation Measures MM 4.5.1 and 4.5.2

SECTION 2.0 CEQA DETERMINATION

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION has been 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 significant effect(s) 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, if the effect is a “potentially significant impact” or “potentially significant unless mitigated.” 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.



Shirley Gilmore, Secretary
Callahan Water District

March 9, 2021
Date

SECTION 3.0 PROJECT DESCRIPTION

3.1 PROJECT BACKGROUND, NEED AND OBJECTIVES

The Callahan Water District owns and operates Small Water System No. 4700503 in the unincorporated community of Callahan in rural Siskiyou County. The water system was originally constructed by the United States Forest Service (USFS) and used by both the USFS Guard Station and the community of Callahan. The Guard Station changed to a well system and the water facilities were sold to Callahan Water District for \$1.00. The District acquired an aging water system and a large financial liability.

The water system has 35 active service connections, serving primarily rural single-family homes, businesses, and public institutions. The current population of Callahan is approximately 70. The District's sole water source is surface water from Boulder Creek. An infiltration gallery was installed in the creek in 2006, but has had ongoing maintenance problems and has no intake flow control. Raw water is conveyed from the intake to the water treatment facility via a partially buried steel pipeline that was constructed in the 1930s when the water system was originally installed. The ± 2.6 -mile raw water pipeline consists of $\pm 2,200$ lineal feet of 4-inch diameter line and 6,600 lineal feet of 2-inch steel pipe leading to McKean Divide; downslope of McKean Divide, the supply line consists of $\pm 5,800$ lineal feet of 2-inch diameter pipe and ± 400 lineal feet of 4-inch diameter pipe connecting to the District's treatment facility. The majority of the pipeline runs cross country and is old, failing, and has many leaks.

The raw water is treated at the District's upper storage reservoir site. The treatment facility was installed in 1984. After passing through a pressure-reducing valve, raw water enters the treatment building where it is injected with polymer to aid the filtration process through flocculation, followed by chlorine for disinfection. The water passes through two vertical filters located inside the 16-foot by 18-foot wood-framed treatment building. The filters are pressure sand filters packed with graded layered media to remove particulates from the water. In-line treatment systems do not comply with current treatment requirements.

Following treatment, water is distributed to the upper pressure zone through $\pm 2,400$ lineal feet of 1-inch pipe that runs cross-country from the treatment plant. Water for the lower pressure zone flows to the lower storage reservoirs via $\pm 4,600$ feet of 2-inch diameter galvanized iron pipe and $\pm 4,600$ feet of 2-inch diameter "summer bypass" high-density polyethylene (HDPE) pipe. Water distribution from the lower storage reservoirs to the lower service locations is via $\pm 3,500$ lineal feet of 2½-inch PVC pipe that was installed in 2006. Although the distribution lines are in reasonable conditions, they convey substantially less than the 1,000 gallon-per-minute (GPM) residential fire-flow standard.

Treated water in excess of user demands is directed to storage reservoirs for use in the filter backwash process as well as storage for the system. The District's upper storage tanks consist of four plastic tanks and one steel tank, plumbed parallel. These above-ground tanks range in size from 5,000 to 7,000 gallons each and serve the District's upper pressure zone. The lower storage reservoirs consist of two 10,000-gallon concrete reservoirs. The District's total storage volume is about 47,000 gallons, which is approximately equal to the peak-day demand for the system. The current water storage capacity is well below the fire storage requirement of approximately 110,000 gallons.

The District's existing surface water rights would not change as a result of the proposed action. Further, there would be no increase in system capacity associated with the proposed

project; the increase in raw water and distribution pipe sizes would be solely to meet current standards for public water systems.

The purpose of the proposed project is to upgrade the Callahan Water District's public water system to comply with State Water Resources Control Board (SWRCB) requirements, provide adequate fire flows, and ensure a safe and reliable water supply for residents in the water service area.

For purposes of this Initial Study, "study area" and "project site" shall mean the project's footprint, and include access roads, staging areas, and areas in which improvements would occur.

3.2 PROJECT COMPONENTS/PHYSICAL IMPROVEMENTS

The project components and improvements include the following items:

Boulder Creek Surface Water Diversion

A new water intake structure would be installed in the water column of Boulder Creek at the District's existing water diversion point. The intake would consist of a perforated pipe with a non-self-cleaning steel fish screen, which would be installed in a pool below the low-water elevation of Boulder Creek. The intake pipe would be mounted on a 10-inch diameter ductile iron riser, which would connect to a 4-inch diameter PVC pipe that would in turn connect to the existing infiltration gallery. Two 6-inch diameter concrete-filled bollards mounted on 18-inch diameter by 60-inch deep precast footings would be installed upstream of the intake for flood protection. The intake would provide for an inflow of 0.098 cubic feet per second (cfs).

Raw Water Supply Line

The uppermost $\pm 2,200$ feet of the District's raw water supply line were replaced in 2006. The remainder of the cross-country water line between the intake and upper tanks would be abandoned in place and replaced by a new 4-inch diameter water line. The new line would be relocated to the inside edge of existing unsurfaced roads downslope of the existing water line and would be $\pm 13,600$ lineal feet (± 2.6 miles) in length. Where streams cross under the road in culverts, the new water line would be routed into the roadway and pass over or under the culverts to avoid disturbance of stream channels. Although the new roadside route would be longer than the existing cross-country route, both construction and maintenance would be easier than for an off-road pipeline.

Water Treatment Plant

The existing in-line filtration treatment system injects coagulants into the water line just ahead of the pressurized sand filters. Because the coagulants are introduced so close to the filters, there is very limited detention time for the flocculation process to occur prior to filtration. As part of the proposed project, the District would convert the in-line filtration system to a direct filtration system by installing an in-line static mixer on the existing 4-inch diameter raw water line about 400 feet ahead of the water treatment plant building. This would maintain existing system pressures while providing adequate time for flocculation, which would bring the treatment process into compliance with current surface drinking water standards. The treatment system upgrade would require construction of a new wood-framed 8-foot by 12-foot (96 square feet) chemical dosing building near the static mixer location.

Water Storage Reservoirs

The project proposal includes repairs to the existing in-ground concrete water storage reservoirs at the lower tank site and construction of a new 63,000-gallon steel reservoir at the upper tank location. Tank repairs would consist of lining the insides of the two concrete

tanks for leak protection and modifying the inlets and outlets. The new tank would be an above-ground welded steel storage tank with a diameter of 30 feet and a height of 15 feet. A new tank pad and entrance road would be constructed to the east of the five existing tanks. The tank pad would be about 150-feet long by 75-feet wide and would be sized to accommodate a future 60,000-gallon water tank. A 1:1 cut slope would extend upslope of the tank pad and a 2:1 fill slope would be constructed below the pad. The new entrance road would be 10 feet wide and about 115 feet long, with a drainage ditch constructed on the inside slope.

Distribution System

The existing 2-inch diameter distribution system lines would be replaced with $\pm 7,600$ lineal feet of 6-inch diameter lines. The larger lines would be able to provide the 1,000 gpm fire flows required in residential areas. In addition, distribution system improvements would also include installation of dry barrel hydrants, valves, and appurtenances.

The section of distribution line from the upper tanks to the lower tanks runs cross-country; the new line would be installed adjacent to the old line in this location. A 20-foot wide corridor would be needed for the cross-country water line installation. The distribution line below the lower tanks would remain primarily within the existing county road right-of-way.

Water Meters and Services

To meet SWRCB requirements, 35 water meters would be installed, including meter boxes, saddles, and service lines. Meters and associated improvements would be installed at existing service shutoff locations.

SECTION 4.0 ENVIRONMENTAL ANALYSIS (CHECKLIST)

4.1 AESTHETICS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. In non-urbanized 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 a 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

There are no federal regulations pertaining to aesthetics that apply to the proposed project.

STATE

California Scenic Highway Program

The California Scenic Highway Program, administered by the California Department of Transportation (Caltrans), was established in 1963 to preserve and protect the natural beauty of scenic highway corridors in the State. The Scenic Highway System includes a list of highways that have been designated as scenic highways as well as a list of highways that are eligible for designation as scenic highways. Local jurisdictions can nominate scenic highways for official designation by identifying and defining the scenic corridor of the highway and adopting a Corridor Protection Program that includes measures that strictly limit development and control outdoor advertising along the scenic corridor.

LOCAL

Siskiyou County, Scenic Highways Element

The Siskiyou County Scenic Highways Element of the General Plan was adopted in 1975 to provide guidance for the development of city and county programs to protect and enhance the scenic values along designated scenic routes and in scenic areas visible from these routes. The following objectives apply to the proposed project:

- To conserve, enhance and protect scenic views observable from scenic routes without unduly restricting the primary uses of the lands involved.

- To preserve for all travelers the outstanding characteristics of Siskiyou County, primarily clean air and magnificent scenery, so that it may so remain, providing incentives for tourism, and to stabilize and increase property values and the economy of Siskiyou County.

DISCUSSION OF IMPACTS

Questions A and C

Scenic vistas are defined as expansive views of highly valued landscapes from publicly accessible viewpoints. Scenic vistas include views of natural features such as mountains, hills, valleys, water courses, outcrops, and natural vegetation, as well as man-made scenic structures. Scenic resources in the project area include trees and other vegetation, creeks, streams, open space, and forested mountains that surround the community. The project area is visible to individuals living and working in the area and to travelers on adjacent roadways, including State Highway 3, Callahan-Cecilville Road, East Callahan Road, South Fork Road, and McKeen Road.

project impacts on scenic vistas and the visual character of the area would be both temporary and permanent. Temporary impacts would include the staging of construction materials and vehicles, and subsurface improvements such as replacement of the water lines. Permanent or long-term impacts would include tree removal and installation of aboveground facilities such as the water tank, hydrants, and meter boxes. Temporary visual impacts during construction are not considered significant due to their short duration.

Installation of hydrants and meter boxes is not considered a significant visual impact because these facilities are small, unobtrusive, and in keeping with the developed character of the water service area. The new water intake and protective bollards would be installed primarily below the water surface in an area that receives only very infrequent use; visual impacts of this component of the project are therefore less than significant. The new water treatment building would be similar in character to residential outbuildings and would not be considered as a significant visual impact. The new 63,000-gallon steel reservoir and future 60,000-gallon reservoir at the upper tank location would be installed off of McKeen Road. Considering that five small tanks are currently present on the site, trees and other vegetation would remain between the new tanks and the nearest residence, and the upper tank site is only marginally visible to the public, long-term visual impacts associated with tank pad creation and installation of the water tanks would be less than significant.

Tree removal associated with construction of the new off-road water line between the upper and lower tank sites would create a narrow, linear opening that would be visible from nearby roads and driveways, particularly those that cross the corridor. The cleared corridor would be similar in character to a narrow forest road, which would be visually consistent with other roads in the area and less intrusive than periodic timber harvest operations that occur throughout the area; therefore, the visual impact of tree removal along the water line corridor is not considered as a significant impact.

In summary, aesthetic impacts would be less than significant because the project does not include any components that would impair scenic vistas; above-ground structures would have only limited visibility and/or would be consistent with the visual character of surrounding lands; and impacts during construction would be temporary and cease at completion of the project.

Question B

There are currently no officially designated State Scenic Highways in Siskiyou County. Therefore, there would be no impact. It should be noted that the Siskiyou County General Plan, Scenic Highways Element, designates State Highway 3 as a scenic highway. However, project implementation would not conflict with any of the implementation measures presented in the Scenic Highways Element.

Question D

The proposed project does not include the installation of any new permanent exterior lighting. Temporary lighting is not expected to be used during project construction and, if used, would be required to comply with County standards to prevent impacts on motor vehicles and nearby residences. Impacts would be less than significant.

CUMULATIVE IMPACTS

The proposed project does not include any features that would result in a significant permanent change to the visual character of the community, nor are any substantial development projects anticipated in the community that would contribute to cumulative impacts. Potential cumulative projects in the area would be limited primarily to past and future timber harvesting. Although ±234 trees would be removed to accommodate the water line and water tank, the cumulative impacts of this action would be offset because abandonment of portions of the existing cross-country water line route would promote tree growth in the long term. Additionally, there are no officially designated Scenic Highways in Siskiyou County, and installation of exterior lighting is not proposed. Therefore, the aesthetic impacts of the proposed project would not be cumulatively considerable.

MITIGATION

None necessary.

DOCUMENTATION

- California Department of Transportation.** 2018. California Highway System Map. <https://www.arcgis.com/apps/webappviewer/index.html?id=026e830c914c495797c969a3e5668538>. Accessed June 2020.
- Siskiyou County.** 1975. Siskiyou County General Plan, Scenic Highways Element. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scenichighwayselement.pdf. Accessed June 2019.

4.2 AGRICULTURE AND FOREST RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	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 of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) or 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"/>
d. 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"/>

REGULATORY CONTEXT

FEDERAL

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) of 1981 applies to federal projects and federally funded activities. The FPPA requires a farmland conversion analysis for projects that result in the permanent conversion of lands designated by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), as prime, unique, or important farmland, as well as lands under a Williamson Contract. The NRCS land evaluation and site assessment (LESA) system is used to conduct the farmland conversion analysis.

STATE

California Farmland Mapping and Monitoring Program (FMMP)

The FMMP was established in 1982 to provide data to decision makers to assist them in making informed decisions for the best utilization of California's farmland. Under the FMMP, the Department of Conservation (DOC) is responsible for mapping, monitoring, and reporting on the conversion of the State's farmland to and from agricultural use. Important Farmland Maps are updated and released every two years. The following mapping categories, which are determined based on soil qualities and current land use information, are included in the FMMP: prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, grazing land, urban and built-up land, other land, and water. Any conversion of prime farmland, farmland of statewide importance, or unique farmland is typically considered an adverse impact.

Williamson Act

The Williamson Act (California Land Conservation Act of 1965) was enacted as a means to protect agricultural uses in the State. Under the Williamson Act, local governments can enter into contracts with private landowners to ensure that specific parcels are restricted to agricultural and related open space uses. In return, landowners receive reduced property tax assessments. The minimum term for a Williamson Act contract is ten years, and the contract is automatically renewed for one-year terms unless the landowner files a notice of nonrenewal or a petition for cancellation. When a notice of non-renewal is filed, the annual tax assessment gradually increases over a ten-year period until it reaches the market value tax rate, at which time the contract is terminated. The landowner may also petition the local government to immediately cancel the contract. If the cancellation is approved, the landowner must pay a cancellation fee, and the property is thereafter taxed at its current market value.

Forest Land and Timberland

Public Resources Code §12220(g) defines Forest Land as *“land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.”* Public Resources Code §4526 defines timberland as *“land, other than land owned by the federal government, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.”* Government Code §51104(g) defines Timberland Production Zone as *“an area which has been zoned pursuant to [Government Code] §51112 or §51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h).”*

LOCAL

Siskiyou County General Plan, Conservation Element

The Conservation Element of the Siskiyou County General Plan was adopted in 1973 to provide guidance for the conservation, development, and utilization of natural resources including water and its hydraulic force, forest, soils, rivers, and other water areas, including harbors, fisheries, and wildlife areas.

The Conservation Element includes the following general objective related to agricultural resources:

- Preserve and protect the prime and productive agricultural lands and the agricultural economy of Siskiyou County.

The Conservation Element includes the following general objective related to forested lands:

- Preserve, protect, and manage the Forest Lands as both a natural wild habitat and a productive economic resource.

DISCUSSION OF IMPACTS

Questions A, B, and D

According to the *Important Farmland in California* map published by the FMMP, there are no areas designated as Prime Farmland, Unique Farmland or Farmland of Statewide Importance in proximity to the project site. Callahan is designated as Urban and Built-Up Land. Urban and Built-Up land is occupied by structures with a building density of at least 1 unit per 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.

Areas surrounding the northern portion of the project site are designated as Farmland of Local Importance. In Siskiyou County, Farmland of Local Importance includes dryland, or sub-irrigated hay and grain, and improved pasture forage species; farmlands presently irrigated but which do not meet the soil characteristics of Prime Farmland or Farmland of Statewide Importance, and areas currently shown as Prime Agricultural Land in the Siskiyou County General Plan.

The proposed facilities would not be installed in areas designated as Farmland and no conversion of farmland would occur. In addition, no properties in the project area are under a Williamson Act contract. Therefore, the proposed project would have no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; would not conflict with zoning for agricultural use or with a Williamson Act contract; and would not result in other changes in the existing environment that could result in the conversion of farmland to non-agricultural use.

Question C

Most of the lands in the study area meet the definition of “forest land,” as discussed under Regulatory Context above. According to the County’s zoning map, the raw water supply line would pass through three parcels along McKeen Road that are zoned for timberland production; other lands in the study area are zoned as Rural Residential, Rural Residential with a 40-acre minimum parcel size, or Town Center. Project implementation would not require rezoning of any lands, and work on parcels designated for timber production would be limited to installation of a water line along an existing road corridor. The project would not conflict with existing zoning for, or cause rezoning of, forest land.

Project implementation would result in the removal of approximately 234 trees (ranging in size from 10” diameter at breast height (dbh) to 24” dbh) from the study area. Some tree removal would occur on the National Forest lands surrounding the upper tank site and water treatment facility, other trees would be removed from privately owned lands. Tree removal and construction of new facilities (such as the water treatment building) on private lands may be considered as “timberland conversion” or “timber harvest” and may be subject to a Timberland Conversion Permit and/or Timber Harvest Plan approval by the California Department of Forestry and Fire Protection (CAL FIRE). Trees removal from the water line corridor on private lands may qualify for a utility right-of-way exemption. Tree removal and other project activities on the National Forest lands would be subject to a Special Use Permit from Klamath National Forest.

Under current conditions, most of the raw water supply line corridor (from the intake to the upper tank site) and the treated water line corridor (between the upper and lower tank sites) are off-road in forest lands. The project proposal calls moving the raw water supply line to the shoulder of existing forest roads; this will promote tree regrowth in the off-road corridor and allow unrestricted use of the current corridor in the future, which will be of some benefit with respect to timber management. The corridor for the treated water line will remain in its current location; although trees will be removed to allow pipe replacement, work will not result in additional restrictions on timber management in the corridor.

Therefore, the project’s impact on forest land, as defined by PRC §12220(g), is less than significant because the benefits of moving the raw water supply line to existing road shoulders would at least partially offset impacts due to other project activities; further, work would be subject to the conditions of a Special Use Permit from Klamath National Forest and a Timber Harvest Plan, Timberland Conversion Permit, or other approvals from CAL FIRE.

CUMULATIVE IMPACTS

As documented above, the proposed project would not result in impact to agricultural resources; therefore, the proposed project would not contribute to adverse cumulative impacts to agricultural resources.

Project implementation would result in the removal of approximately 234 trees from the study area. These trees are in an area that meets the definition of forest land under PRC §12220(g). Some tree removal would occur on the National Forest lands surrounding the upper tank site and water treatment facility, other trees would be removed from privately owned lands. However, the impact on timberland would be offset because an existing off-road water line corridor would be abandoned, which would promote timber re-growth and remove obstacles to future timber harvest. Further, tree removal would be subject to the requirements of CAL FIRE and the Klamath National Forest. Therefore, the cumulative impacts of the proposed project on forest land would be negligible.

MITIGATION

None necessary.

DOCUMENTATION

Siskiyou County. 2020. Siskiyou County Code of Ordinances, Article 48, Rural Residential Agricultural District.

https://www.municode.com/library/ca/siskiyou_county/codes/code_of_ordinances?nodeId=TIT10_PLZO_CH6ZO_ART48RUREAGDI_S10-6.4801DI. Accessed June 2020.

_____. 1973. Siskiyou County General Plan, Conservation Element.

https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_conservationelement.pdf. Accessed June 2020.

State of California, Department of Conservation, California Important Farmland Finder.

<https://maps.conservation.ca.gov/dlrp/ciff/>. Accessed June 2020.

4.3 AIR QUALITY

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

Federal Ambient Air Quality Standards

The U.S. Environmental Protection Agency (USEPA), under the federal Clean Air Act (CAA), establishes maximum ambient concentrations for criteria air pollutants (CAP), known as the National Ambient Air Quality Standards (NAAQSs). The NAAQSs are designed to protect the health and welfare of the populace with a reasonable margin of safety. **Table 4.3-1** identifies the seven CAPs as well as characteristics, health effects and typical sources for each CAP:

Clean Air Act - Federal General Conformity Rule

The General Conformity Rule of the CAA requires that all federally funded projects conform to the applicable State Implementation Plan (SIP). The Conformity Rule applies to projects in areas that are designated as nonattainment or maintenance areas for any of the six federal criteria air pollutants when the total direct and indirect emissions of the criteria pollutant (or its precursors) are at or above the de minimis thresholds listed in Code of Federal Regulations (CFR) Title 40, §93.153(b).

Because Siskiyou County is designated as attainment or unclassified areas for all federal air quality standards, federal conformity requirements do not apply to the proposed project.

**TABLE 4.3-1
Federal Criteria Air Pollutants**

Pollutant	Characteristics	Primary Effects	Major Sources
Ozone (O₃)	<p>Ozone is a colorless or bluish gas formed through chemical reactions between two major classes of air pollutants: reactive organic gases (ROG) and oxides of nitrogen (NO_x).</p> <p>These reactions are stimulated by sunlight and temperature; thus, ozone occurs in higher concentrations during warmer times of the year.</p>	<ul style="list-style-type: none"> • Respiratory symptoms. • Worsening of lung disease leading to premature death. • Damage to lung tissue. • Crop, forest, and ecosystem damage. • Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals. 	<p>Motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.</p>
Carbon Monoxide (CO)	<p>Carbon monoxide is an odorless, colorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline and wood.</p> <p>Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of carbon monoxide.</p>	<ul style="list-style-type: none"> • Chest pain in patients with heart disease. • Headache. • Light-headedness. • Reduced mental alertness. 	<p>Motor vehicle exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.</p>
Nitrogen Dioxide (NO₂)	<p>Nitrogen dioxide is a reddish-brown gas formed when nitrogen (N₂) combines with oxygen (O₂). Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition.</p> <p>Of the seven types of nitrogen oxide compounds, NO₂ is the most abundant in the atmosphere and is related to traffic density.</p>	<ul style="list-style-type: none"> • Respiratory symptoms. • Damage to lung tissue. • Worsening of cardiovascular disease. • Precursor to ozone and acid rain. • Contributes to global warming and nutrient overloading which deteriorates water quality. • Causes brown discoloration of the atmosphere. 	<p>Automobile and diesel truck exhaust, petroleum-refining operations, industrial sources, aircraft, ships, railroads, and fossil-fueled power plants.</p>
Sulfur Dioxide (SO₂)	<p>Sulfur dioxide is a colorless, nonflammable gas that results mainly from burning high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries.</p>	<ul style="list-style-type: none"> • Respiratory symptoms. • Worsening of cardiovascular disease. • Damage to a variety of materials, including marble, iron, and steel. • Damages crops and natural vegetation. • Impairs visibility. • Precursor to acid rain. 	<p>Petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and large ships, and fuel combustion in diesel engines.</p>

Pollutant	Characteristics	Primary Effects	Major Sources
Particulate Matter (PM_{2.5} and PM₁₀)	<p>Particulate matter is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols that are small enough to remain suspended in the air for a long period of time.</p> <p>Particulate matter with a diameter of 10 microns or less (PM₁₀) are inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter (PM_{2.5}). Therefore, PM_{2.5} comprises a portion of PM₁₀.</p>	<ul style="list-style-type: none"> • Premature death. • Hospitalization for worsening of cardiovascular disease. • Hospitalization for respiratory disease • Asthma-related emergency room visits. • Increased symptoms, increased inhaler usage 	Dust- and fume-producing construction activities, power plants, steel mills, chemical plants, unpaved roads and parking lots, woodburning stoves and fireplaces, wildfires, motor vehicles, and other combustion sources. Also a result of photochemical processes.
Lead	A heavy metal that occurs both naturally in the environment and in manufactured products.	<ul style="list-style-type: none"> • Impaired mental functioning in children • Learning disabilities in children • Brain and kidney damage. • Reproductive disorders. • Osteoporosis. 	Lead-based industrial production (e.g., battery production and smelters), recycling facilities, combustion of leaded aviation gasoline by piston-driven aircraft, and crustal weathering of soils followed by fugitive dust emissions.

STATE

State Ambient Air Quality Standards

The California CAA establishes maximum concentrations for the six federal CAPs, as well as the four additional air pollutants identified below. The four additional standards are intended to address regional air quality conditions, not project-specific emissions. These maximum concentrations are known as the California Ambient Air Quality Standards (CAAQSs). The California Air Resources Board (CARB) has jurisdiction over local air districts and has established its own standards and violation criteria for each CAP under the CAAQS.

For areas within the State that have not attained air quality standards, the CARB works with local air districts to develop and implement attainment plans to obtain compliance with both federal and State air quality standards.

Visibility-Reducing Particles. Particulate matter impacts the environment by decreasing visibility. Visibility-reducing particles vary greatly in shape, size and chemical composition, and come from a variety of natural and manmade sources. Major sources include wildfires, residential fireplaces and woodstoves, windblown dust, ocean sprays, biogenic emissions, dust and fume-producing construction, industrial and agricultural operations, and fuel combustion.

Sulfate (SO₄). Sulfate is oxidized to sulfur dioxide (SO₂) during the combustion process and is subsequently converted to sulfate compounds in the atmosphere. Major sources include industrial processes and the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur.

Hydrogen Sulfide (H₂S). Hydrogen sulfide is a colorless gas with the odor of rotten eggs. Major sources include geothermal power plants, petroleum refineries, and wastewater treatment plants.

Vinyl Chloride (chloroethene). Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make PVC plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites due to microbial breakdown of chlorinated solvents.

Table 4.3-2 includes the federal and State ambient air quality standards:

**TABLE 4.3-2
Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards	National Standards
Ozone (O ₃)	8 Hour	0.070 ppm (137µg/m ³)	0.070 ppm (137µg/m ³)
	1 Hour	0.09 ppm (180 µg/m ³)	–
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)
	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	53 ppb (100 µg/m ³)
Sulfur Dioxide (SO ₂)	24 Hour	0.04 ppm (105 µg/m ³)	N/A
	3 Hour	–	N/A
	1 Hour	0.25 ppm (665 µg/m ³)	75 ppb
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	N/A
	24 Hour	50 µg/m ³	150 µg/m ³
Particulate Matter – Fine (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	15 µg/m ³
	24 Hour	N/A	35 µg/m ³
Sulfates	24 Hour	25 µg/m ³	N/A
Lead	Calendar Quarter	N/A	1.5 µg/m ³
	30 Day Average	1.5 µg/m ³	N/A
	Rolling 3-Month Average	-	(0.15 µg/m ³)
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	N/A
Vinyl Chloride (chloroethene)	24 Hour	0.01 ppm (26 µg/m ³)	N/A
Visibility-Reducing Particles	8 Hour (10:00 to 18:00 PST)	–	N/A

Source: CARB 2016. Notes: mg/m³=milligrams per cubic meter; ppm=parts per million; ppb=parts per billion; µg/m³=micrograms per cubic meter

Asbestos Airborne Toxic Control Measure (ATCM)

The Asbestos Airborne Toxic Control Measure (Title 17, § 93105 of the California Code of Regulations) is intended to reduce naturally occurring asbestos emissions from construction, grading, quarrying, and surface mining operations to the lowest achievable rates by using Best Available Control Technology

(BACT). Section 93105 applies to areas where a geographic ultramafic rock unit (GURU) may exist according to the Department of Conservation, Division of Mines and Geology maps that identify deposits of ultramafic rock in California; or where any area to be disturbed has naturally occurring asbestos, serpentine, or GURU as determined by the owner/operator or the Air Pollution Control Officer (APCO); or where naturally occurring asbestos, serpentine, or GURU is discovered by the owner/operator, a registered geologist, or APCO in the area to be disturbed after the start of construction, grading, quarrying, or surface mining.

California Regional Haze Plan

The USEPA adopted the Regional Haze Rule in 1999, which includes requirements to protect visibility in Class I areas, which are the largest national parks and wilderness areas in the United States. In 2009, CARB prepared the California Regional Haze Plan that sets forth goals for improving visibility in the State's Class I areas.

Toxic Air Contaminants

In addition to the California CAPs, Toxic Air Contaminants (TACs) are another group of pollutants regulated under the California CAA. There are presently over 200 chemicals listed by the State as TACs with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), grading and demolition of structures (asbestos), and diesel-motor vehicle exhaust. TACs are less pervasive in the urban atmosphere than the CAPs, but are linked to short-term (acute) and long-term (chronic or carcinogenic) adverse human health effects. Health effects of TACs include cancer, birth defects, neurological damage, and death. Ambient air quality standards have not been set for TACs. Instead, these pollutants are typically regulated through a technology-based approach for reducing TACs. This approach requires facilities to install Maximum Achievable Control Technology on emission sources.

Assembly Bill 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987, was adopted in response to public concern regarding potential adverse health effects associated with emissions of TACs. Facilities found to release high volumes of toxic air pollution are required to conduct a detailed health risk assessment that estimates emission impacts to the neighboring community.

LOCAL

Siskiyou County Air Pollution Control District (SCAPCD):

The SCAPCD has the responsibility of enforcing federal and state air quality regulations in Siskiyou County. It also issues rules and regulations setting specific standards of operation, defining permit requirements, and setting emission limits. For new or modified stationary sources, Siskiyou County has defined 250 pounds (lbs)/day as the threshold of significance for NO_x, PM_{2.5}, PM₁₀, and SO₂ emissions, and 2,500 lbs/day as the threshold of significance for CO emissions (Rule 6.1). Siskiyou County is currently designated in attainment or unclassified status for all federal and state criteria pollutants; therefore, the County is not required to have a local air quality attainment plan.

Additionally, Siskiyou County enforces the Asbestos Airborne Toxic Control Measure (Title 17, §93105 of the California Code of Regulations) through their adopted Rule 8.7 – Asbestos Airborne Toxic Control Measure and provides a Naturally Occurring Asbestos (NOA) Dust Mitigation Plan Application for projects that include construction where ultramafic rock exists.

DISCUSSION OF IMPACTS

Question A

See discussion under Regulatory Context above and Section 4.8 (Greenhouse Gas Emissions). project emissions were estimated using Version 2016.3.1 of the California Emissions Estimator

Model (CalEEMod). CalEEMod reports both maximum daily emissions (pounds per day) and overall annual emissions (tons per year) for both construction and operational emissions. Output files, including all site-specific inputs and assumptions, are provided in **Appendix A**.

Site-specific inputs and assumptions include, but are not limited to, the following. CalEEMod provides default values when site-specific inputs are not available.

- Emissions from construction are based on all construction-related activities, including but not limited to grading, site preparation, use of construction equipment, material hauling, trenching, and paving.
- Construction would start in May 2023 and occur over a period of approximately one year.
- Total land disturbance would be approximately 4.5 acres; 1,200 cubic yards (CY) of dirt would be imported; 1,700 CY would be exported.
- The total area to be re-paved following pipeline installation would be 0.14 acres.
- The total weight of demolition debris (pavement) to be removed from the project site would be approximately 116 tons.

The proposed project would result in the temporary generation of ROG, NO_x, PM₁₀, and other regulated pollutants during construction. ROG and NO_x emissions are associated with employee vehicle trips, delivery of materials, and construction equipment exhaust. PM₁₀ is generated during site preparation, excavation, road paving, and from exhaust associated with construction equipment.

Although the Siskiyou County Air Pollution Control District (SCAPCD) has not adopted specific thresholds for construction-related air quality emissions, current SCAPCD rules, including Rule 6.1-Construction Permit Standards for Criteria Pollutants, includes thresholds for new or modified stationary sources. Although the proposed project does not include any new or modified stationary sources, the Callahan Water District has determined that it would be appropriate to use these significance thresholds for construction-related emissions as well.

Emissions are considered significant if they exceed the thresholds presented in **Table 4.3-3**. As indicated, the proposed project would not exceed the numerical threshold for any of the pollutants during construction. In addition, the project does not have any components that would result in an increase in long-term operational emissions.

**TABLE 4.3-3
Projected Construction Emissions**

Pollutants of Concern						
Construction Year	ROG lbs/day	NO _x lbs/day	PM ₁₀ lbs/day	PM _{2.5} lbs/day	CO lbs/day	SO ₂ lbs/day
2023	2.8	27.61	9.62	5.69	20.42	0.07
2024	2.88	13.49	0.74	0.61	16.63	0.03
SCAPCD Threshold	250	250	250	250	2,500	250

Source: CalEEMod, 2021.

In addition, the proposed project would not result in significant impacts associated with ozone (O₃), lead (Pb), hydrogen sulfide (H₂S), vinyl chloride, or visibility-reducing particles as discussed below.

Ozone. CalEEMod does not directly calculate ozone emissions. Instead, the emissions associated with ozone precursors (ROG and NO_x) are calculated. Because project construction would generate relatively low amounts of both ROG and NO_x, the potential for ozone production/emissions is less than significant.

Lead. Elevated levels of airborne lead at the local level are usually found near industrial operations that process materials containing lead, such as smelters and battery manufacturing/recycling facilities. As these conditions are not applicable to the proposed project, the potential for lead emissions is less than significant.

Hydrogen Sulfide. Hydrogen sulfide is formed during the decomposition of organic material in anaerobic environments, including sewage treatment processes. Because these conditions are not applicable to the proposed project, the potential for hydrogen sulfide emissions is less than significant.

Vinyl Chloride. Vinyl chloride is used to manufacture polyvinyl chloride (PVC) plastic and other vinyl products. Approximately 98 percent of vinyl chloride produced in the United States is used during the manufacture of PVC. Additionally, vinyl chloride is produced during the microbial breakdown of chlorinated solvents (e.g., engine cleaner, degreasing agent, adhesive solvents, paint removers, etc.). The potential for vinyl chloride exposure is primarily limited to areas in close proximity to PVC production facilities. Because PVC manufacturing facilities are absent from the project area, and project implementation would not result in an increase of chlorinated solvents, potential vinyl chloride emissions associated with the proposed project would be less than significant.

Visibility-Reducing Pollutants. Visibility-reducing pollutants generally consist of sulfates, nitrates, organics, soot, fine soil dust, and coarse particulates. These pollutants contribute to the regional haze that impairs visibility, in addition to affecting public health. According to the California Regional Haze Management Plan, natural wildfires and biogenic emissions are the primary contributors to visibility-reducing pollutants. For the proposed project, visibility-reducing pollutants (e.g., PM_{2.5} and PM₁₀), would be generated only during construction activities. Because only relatively small amounts of particulates would be generated, potential impacts with respect to visibility-reducing pollutants are less than significant.

As discussed under Regulatory Context above, Siskiyou County is currently designated in attainment or unclassified status for all federal and state criteria pollutants; therefore, the County is not required to have a local air quality attainment plan. Further, because the proposed project would not exceed the referenced thresholds during construction, does not have any components that would increase long-term operational emissions, and would not result in significant impacts associated with O₃, Pb, H₂S, vinyl chloride, or visibility-reducing particles, impacts would be less than significant.

Question B

The Northeast Plateau Air Basin, which includes all of Siskiyou County, is in attainment or unclassified for all federal and state criteria pollutants; therefore, there would be no impact.

Question C

See discussion under Question A. Sensitive receptors are individuals or groups of people that are more affected by air pollution than others, including young children, elderly people, and people weakened by disease or illness. Locations that may contain high concentrations of sensitive receptors include residential areas, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. As stated above, the proposed project does not have any components that would result in long-term operational emissions.

The proposed project includes construction activities adjacent to single-family residences on California State Route 3, South Fork Road, and McKeen Road. As discussed above, the proposed project would generate PM₁₀ and other pollutants during construction. Additionally, according to the California Geological Survey, proposed improvements along and adjacent to McKeen Road would occur within a geographic ultramafic rock unit containing mostly serpentine. Asbestos can be released from serpentine and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. Construction of the proposed project would expose ultramafic and serpentine soils, potentially releasing asbestos into the air. Although these emissions would cease with completion of construction work, sensitive uses adjacent to the construction area could be exposed to elevated dust levels, asbestos, and other pollutants. Compliance with federal, state, and local regulations, and implementation of **Mitigation Measure MM 4.3.1** would reduce impacts to a less than significant level.

Question D

The project does not include any components that would result in the generation of long-term odors or similar emissions adversely affecting a substantial number of people. During construction, odors would be emitted from diesel equipment, paints, solvents, fugitive dust, asphalt, and adhesives. Odors from construction would be intermittent and temporary, and generally would not extend beyond the construction area. Due to the temporary and intermittent nature of construction odors, impacts during construction would be less than significant.

CUMULATIVE IMPACTS

Past, present, and future development projects contribute to a region's air quality conditions on a cumulative basis; therefore, by its very nature, air pollution is largely a cumulative impact. If a project's individual emissions contribute to exceedance of the NAAQS or the CAAQS, then the project's cumulative impact on air quality would be considered significant.

In developing attainment designations for criteria pollutants, the USEPA considers the region's past, present, and future emission levels. In addition, local air districts determine suitable significance thresholds based on an area's designated nonattainment status, which also considers the region's past, present, and future emissions levels. As noted above, Siskiyou County is currently designated in attainment or unclassified status for all federal and state criteria pollutants and is not required to have a local air quality attainment plan.

As documented above, the proposed project would not result in an increase in long-term operational emissions. In addition, construction emissions resulting from the proposed project would not exceed the SCAPCD referenced thresholds. However, implementation of the proposed project combined with future development within the project area could lead to cumulative impacts to air quality. All projects in Siskiyou County are subject to applicable CARB and SCAPCD rules and regulations, including mitigation measures that address impacts during construction.

Implementation of **Mitigation Measure MM 4.3.1** and compliance with CARB and SCAPCD regulations ensures that the proposed project would have a less-than-significant cumulative impact on local and regional air quality.

MITIGATION

- MM 4.3.1** The following measures shall be implemented to reduce short-term air quality impacts during construction:
- a. Work shall be conducted in compliance with a Naturally Occurring Asbestos (NOA) Dust Mitigation Plan approved by the Siskiyou County Air Pollution Control District.

- b. All material excavated, stockpiled, or graded shall be sufficiently watered a minimum of two times per day to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of ambient air quality standards.
- c. All unpaved areas with vehicle traffic shall be watered periodically or have dust palliatives applied for stabilization of dust emissions.
- d. All on-site vehicles shall be limited to a speed of 15 miles per hour in unpaved areas.
- e. All land clearing, grading, earth moving or excavation activities on the project site shall be suspended if/when the County's Building Official determines that winds are causing excessive dust generation.
- f. Paved streets adjacent to construction areas shall be swept or washed at the end of the day if substantial volumes of silt and/or mud have been carried onto the paved roads as a result of activities on the work site.
- g. All trucks hauling dirt, sand, soil, or other loose material shall be covered or shall maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code §23114.
- h. All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications.
- i. Off-road construction equipment and other diesel-fueled construction vehicles (e.g., dump trucks) shall not be left idling for periods longer than five minutes when not in use.

DOCUMENTATION

California Air Resources Control Board. 2020. Area Designations Maps—State and National. <http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed June 2020.

_____. 2020. Siskiyou County APCD List of Current Rules. <https://ww2.arb.ca.gov/current-air-district-rules>. Accessed June 2020.

_____. 2020. Toxic Air Contaminant Identification Reports. <https://ww2.arb.ca.gov/resources/documents/toxic-air-contaminant-identification-reports>. Accessed June 2020.

_____. 2009. California Regional Haze Plan. January 22. http://www.arb.ca.gov/planning/reghaze/final/rhplan_final.pdf. Accessed June 2020.

_____. 2020. In-Use Off-Road Diesel Vehicle Regulation. <https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation>. Accessed June 2020.

_____. 2002. Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. <https://ww3.arb.ca.gov/toxics/atcm/asb2atcm.htm>. Accessed June 2020.

California Governor's Office of Planning and Research. 2007. Memorandum Addressing Naturally Occurring Asbestos in CEQA Documents. <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/gopr-ceqa-noa-a11y.pdf>. Accessed June 2020.

U.S. Department of Health and Human Services. 2006. Toxicological Profile for Vinyl Chloride. <http://www.atsdr.cdc.gov/toxprofiles/tp20.pdf>. Accessed June 2019.

U.S. Environmental Protection Agency. n.d. Lead Emissions. cfpub.epa.gov/roe/indicator_pdf.cfm?i=13. Accessed June 2019.

_____. 2019. Nitrogen Oxide Emissions. <http://www3.epa.gov/climatechange/ghgemissions/gases/n2o.html>. Accessed June 2019.

4.4 BIOLOGICAL RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife 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 state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

Federal Clean Water Act

Section 404

Under Section 404 of the Clean Water Act (CWA), the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into wetlands and waters of the U.S. The USACE requires that a permit be obtained prior to the placement of structures within, over, or under navigable waters and/or prior to discharging dredged or fill material into waters below the ordinary high-water mark (OHWM). There are several types of permits issued by the USACE that are based on the project's location and/or level of impact. Regional general permits are issued for recurring activities at a regional level. Nationwide permits (NWP) authorize a wide variety of minor activities that have minimal effects. Projects that are not covered under a regional general permit and do not qualify for a NWP are required to obtain a standard permit (e.g., individual permit or letter of permission).

Section 401

Under Section 401 of the CWA, a project requiring a USACE Section 404 permit is also required to obtain a State Water Quality Certification (or waiver) to ensure that the project will not violate established State water quality standards. The RWQCB regulates waters of the State and has a policy of no-net-loss of wetlands. The RWQCB typically requires mitigation for impacts to wetlands before it will issue a water quality certification.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 requires that all federal agencies ensure that any action they authorize, fund, or carry out will not likely jeopardize the continued existence of federally listed species or result in the destruction or adverse modification of critical habitat. Projects that would result in “take” of any federally listed species are required to obtain authorization from National Marine Fisheries Service (NMFS) and/or USFWS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project.

Federal Migratory Bird Treaty Act

Under the Migratory Bird Treaty Act (MBTA) of 1918, as amended, migratory bird species listed in CFR Title 50, §10.13, including their nests and eggs, are protected from injury or death, and any project-related disturbances. The MTBA applies to over 1,000 bird species, including geese, ducks, shorebirds, raptors, songbirds, and other bird species that were near extinction before MBTA protections were put in place in 1918. The MTBA also provides protections for native bird species, including non-migratory birds.

Fish and Wildlife Conservation Act

Under the Fish and Wildlife Conservation Act of 1980, as amended, the USFWS maintains lists of migratory and non-migratory birds that, without additional conservation action, are likely to become candidates for listing under the FESA. These species are known as Birds of Conservation Concern and represent the highest conservation priorities.

Bald and Golden Eagle Protection Act

This Act provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds and their occupied and unoccupied nests.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), also known as the Sustainable Fisheries Act, requires the identification of Essential Fish Habitat (EFH) for federally managed fishery species and implementation of appropriate measures to conserve and enhance EFH that could be affected by project implementation. All federal agencies must consult with NMFS on projects authorized, funded, or undertaken by that agency that may adversely affect EFH for species managed under the MSFCMA.

STATE

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFW is responsible for listing and delisting threatened and endangered species, including candidate species for threatened or endangered status. CDFW maintains a list of these species and related occurrence records. In addition, CDFW maintains a list of fully protected species, most of which are also listed as threatened or endangered. CDFW also maintains a list of species of special concern (SSC). SSC are vulnerable to extinction but are not legally protected under CESA; however, impacts to SSC are generally considered significant under CEQA.

CESA prohibits the take of State-listed threatened and endangered species, but CDFW has the authority to issue incidental take permits under special conditions when it is demonstrated that impacts are minimized and mitigated. Fully protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take. One exception allows the collection of fully protected species for scientific research.

California Fish and Game Code §1600-1616 (Streambed Alteration)

California Fish and Game Code §1600 *et seq.*, requires that a project proponent enter into a Streambed Alteration Agreement (SAA) with CDFW prior to any work that would divert or obstruct the natural flow of any river, stream, or lake; change the bed, channel, or bank of any river, stream, or lake; use material from any river, stream, or lake; and/or deposit or dispose of material into any river, stream, or lake. The SAA will include conditions that minimize/avoid potentially significant adverse impacts to riparian habitat and waters of the state.

California Fish and Game Code §3503 and 3503.5 (Nesting Bird Protections)

These sections of the Code provide regulatory protection to resident and migratory birds and all birds of prey within the State and make it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Code.

California Fish and Game Code §1900-1913 (Native Plant Protection Act)

The Native Plant Protection Act (NPPA) includes measures to preserve, protect, and enhance native plants that are listed as rare and endangered under the CESA. The NPPA states that no person shall take, possess, sell, or import into the state, any rare or endangered native plant, except in compliance with provisions of the Act.

Oak Woodlands Conservation Act

The State of California provides for oak protection through the Oak Woodlands Conservation Act (Act), last amended in 2005. The Act applies only when the lead agency is a county and the project is located in an unincorporated county area. The Act requires a determination of whether the project may result in the conversion of oak woodlands that will have a significant effect on the environment as well as implementation of oak woodland mitigation measures, if necessary.

LOCAL

Siskiyou County General Plan, Conservation Element

The Siskiyou County Conservation Element of the General Plan was adopted in 1973 to provide guidance for the conservation, development, and utilization of natural resources including water and its hydraulic force, forest, soils, rivers, and other water areas, including harbors, fisheries, and wildlife areas. The Conservation Element includes the following general objectives related to biological resources:

- Conserve and protect the land resources of Siskiyou County.
- Conserve and maintain habitat for wildlife species and plant life.
- Preserve, protect and manage the Forest Lands as both a natural wild habitat and a productive economic resource.
- Preserve and maintain streams, lakes and forest open space as a means of providing natural habitat for species of wildlife.

DISCUSSION OF IMPACTS

Question A

The following evaluation of potential impacts on candidate, sensitive, and/or special-status species is based on record searches and field evaluations completed by ENPLAN. The record searches included a review of USFWS records for federally listed, proposed, and candidate plant and animal species under jurisdiction of the USFWS; review of NMFS records for federally listed, proposed, and candidate anadromous fish species under jurisdiction of the NMFS; essential fish habitat (EFH) data maintained by the NMFS; California Natural Diversity Data Base (CNDDDB) records for special-status plants and animals; and California Native plant Society records for special-status plants.

To determine the presence/absence of special-status plant and animal species, an ENPLAN biologist conducted botanical and wildlife surveys on May 27, June 8, and July 28, 2019. The special-status plant species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. The majority of special-status wildlife species would not have been evident at the time the fieldwork was conducted; however, determination of their potential presence could readily be made based on observed habitat characteristics.

More detailed evaluation of federally listed species potentially affected by project implementation, as well as evaluation of potential effects on designated critical habitats and essential fish habitat, is provided in a biological assessment prepared by ENPLAN (2020) for consideration by the U.S. Fish and Wildlife Service and National Marine Fisheries Service.

Appendix B includes the following:

- U.S. Fish and Wildlife Service List of Threatened and Endangered Species
- National Marine Fisheries Service List of Threatened and Endangered Species, Critical Habitats, and Essential Fish Habitats
- California Natural Diversity Database Query Summary
- California Native Plant Society Query Summary
- ENPLAN Summary Report: Potential for Special-Status Species to Occur on the Project Site
- List of vascular plants observed: May 27, June 8, and July 28, 2019

Special-Status Plant Species

Review of the USFWS species list for the project area identified three federally listed plant species, Gentner's fritillary, McDonald's rock-cress, and Yreka phlox, as potentially being affected by the proposed project. The project area does not contain designated critical habitat for federally listed plant species.

Review of CNDDDB records showed that one special-status plant species has been broadly mapped in the project area: woolly balsamroot. The following 14 other special-status plant species have been reported within a five-mile radius of the project area: Engelmann spruce, Klamath manzanita, Modoc green-gentian, Mt. Shasta sky pilot, Oregon sedge, Pickering's ivesia, Scott Mountain bedstraw, Scott Mountain sandwort, Scott Valley phacelia, showy raillardella, silky balsamroot, Siskiyou fireweed, Siskiyou phacelia, and subalpine fir. In addition, one non-status plant has been reported within a five-mile radius of the project site: Scott Mountain howellanthus.

The CNPS Inventory identified eight special-status plants within the U.S. Geologic Survey's Callahan 7.5-minute quadrangle: Modoc green-gentian, Mt. Shasta sky pilot, Pickering's ivesia, Scott Mountain bedstraw, Scott Mountain sandwort, Scott Valley phacelia, silky balsamroot, and woolly balsamroot. Additionally, seven non-status plants are reported within the quadrangle: California pitcherplant, Engelmann's lomatium, Greene's buckwheat, mountain lady's-slipper, red-stemmed cryptantha, Siskiyou onion, and Tracy's collomia.

The potential for each special-status plant species to occur in the project site is evaluated in the ENPLAN Summary Report: Potential for Special-Status Species to Occur on the Project Site (**Appendix B**). As documented in the table, no special-status plant species were observed during the botanical surveys, and none are expected to be present. A small population of one non-status plant (Engelmann's lomatium) was observed; however, given its listing status and relative abundance in the project vicinity, no mitigation is warranted for this species. A list of vascular plant species observed during the botanical surveys is provided in **Appendix B**.

Special-Status Wildlife Species

Review of the USFWS species list for the project area identified the following federally listed animal species as potentially being affected by the proposed project: gray wolf, North American wolverine, northern spotted owl, yellow-billed cuckoo, Oregon spotted frog, Lost River sucker, shortnose sucker, Conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp. The wolf and wolverine were eliminated from the 2021 list update. The USFWS Critical Habitat Mapper shows that critical habitat for northern spotted owl is present in the general project area.

NMFS records identified Southern Oregon/Northern California Coast Coho salmon ESU (Evolutionarily Significant Units) (federally threatened) as potentially occurring in the study area. NMFS records also show that the study area contains designated critical habitat for SONCC Coho salmon as well as Essential Fish Habitat for Coho and Chinook salmon.

Review of CNDDDB records showed that two special-status wildlife species have been broadly mapped to encompass a portion of the project site: Pacific tailed frog and western bumble bee. One non-status animal species, Pacific marten, was also mapped within the project area. In addition, the following special-status wildlife species have been reported within a five-mile radius of the project area: California wolverine, Cascades frog, fisher-West Coast DPS, foothill yellow-legged frog, prairie falcon, southern long-toed salamander, and Suckley's cuckoo bumble bee.

The potential for each special-status animal species to occur on the project site is evaluated in **Appendix B**. As documented in **Appendix B**, the project site provides potentially suitable habitat for northern spotted owls, Cascades frogs, foothill yellow-legged frogs, Pacific tailed frogs, Suckley's bumble bee, western bumble bee, and Southern Oregon/Northern California Coast (SONCC) Coho Evolutionary Significant Unit (ESU). Further evaluation of the potential for project implementation to adversely affect these species is provided below.

Northern Spotted Owl (Strix occidentalis caurina)

Northern spotted owls are a long-lived territorial species. They inhabit and defend large home-ranges, particularly during breeding season which can last from February to late summer. Juvenile northern spotted owls may remain in their parental home-range into December (USFWS, 2011).

The preferred habitat for this species is old-growth forest with large trees and moderate to closed canopy (United States Department of Agriculture, Forest Service, 2018). The owl is currently threatened by habitat loss due to logging activities and stand-replacing wildfires (USFS, 2018). In addition, the northern spotted owl faces continued pressure from the larger invasive barred owl, often outcompeted or even killed for territory (USFS, 2018).

The 2011 *Revised Recovery Plan for the Northern Spotted Owl* defines three levels of habitat based on the function each provides for the species: nesting/roosting habitat, foraging habitat, and dispersal habitat. Nesting/roosting habitat is the highest quality habitat characterized by large trees and snags suitable for cavity nesting, and multilayered canopies with moderate to high closure. Foraging habitat provides both foraging and dispersal function for the spotted owl, while dispersal habitat lacks adequate nesting and foraging functions but still provides protection for juveniles from various avian predators (USFWS, 2011).

The project would involve the removal of ±234 trees to allow for construction of the new off-road water pipeline, storage tanks, and tank-site access road. Based on survey data for the work area, and analysis of the average tree diameter at breast height (dbh) and percentage canopy closure, the habitat slated for tree removal is best defined as dispersal habitat.

Removal of dispersal habitat could affect dispersing juvenile northern spotted owls, as planned tree removal would contribute to forest fragmentation. However, dispersing juvenile northern spotted owls have been demonstrated to successfully travel through highly fragmented forest mosaics which include roads, clear-cuts, and unforested areas (Forsman et al., 2002). Additionally, the trees to be removed are primarily in a straight line to accommodate the new pipeline, resulting in a break in forest canopy of less than 30 feet. Where trees would be removed for construction of the water tanks, the break in canopy would be less than 250 feet and would encompass only a small acreage. Therefore, impacts on dispersal habitat would be less than significant.

Indirect impacts to the northern spotted owl could occur if construction-related noise disturbs a nesting pair. As the project will require the use of chainsaws, trucks, and heavy equipment, all of which produce potentially disruptive noises, indirect impacts could include nest abandonment by adult pairs, potentially resulting in juvenile death. Although the project is not within nesting/roosting or foraging habitats, spotted owls utilizing such habitats outside the project area may still be affected by noise disturbances.

Timber removal is expected to generate sound levels of up to about 90 decibels (USFWS, 2006). Noise levels associated with construction of the water tanks and pipeline would be similar. These noise levels are not likely to impact spotted owls that are farther than 500 feet away from the noise source (USFWS, 2006).

The CNDDDB Spotted Owl Observations Database was utilized to search for spotted owl observations in or near the project. The database is a collection of observations compiled from federal and state agencies, environmental consulting firms, private landowners and land managers, researchers, and field naturalists (CDFW, 2020). Observations are organized into various categories, including individual observations, opposite-sex pairs, nests, juveniles, and activity centers (the estimated center of a spotted owl home range).

The CNDDDB Spotted Owl Observations Database did not identify any spotted owl observations within the project area. The nearest observation of any type—a spotted owl individual—was recorded approximately 0.7 miles from the project area in 1997. The nearest spotted owl pair was observed 1.4 miles east of the project area in 2018, though a nest was not reported for this observation. The nearest spotted owl activity center was reported 1.5 miles east of the project area, also in 2018, while the nearest spotted owl nest and juveniles were reported approximately 1.6 miles southwest of the project area in 1992. All known observations documented in the CNDDDB database are well beyond the 500-foot noise disturbance threshold. Thus, nesting spotted owls are not expected to be impacted by noise disturbances.

Northern Spotted Owl Critical Habitat

On January 15, 1992, the USFWS designated 1.4 million acres of land in California as critical habitat for the northern spotted owl (USFWS, 1992). In 2008 and again in 2012, the USFWS designated revised critical habitat for the owl (USFWS, 2008; USFWS, 2012). As currently designated, critical habitat for the northern spotted owl spans 1.2 million acres in California. The primary constituent elements of northern spotted owl critical habitat include suitable forest types providing nesting, roosting, foraging, or dispersal habitat (USFWS, 2011).

Direct impacts to northern spotted owl critical habitat may occur if activities remove or modify designated critical habitat. However, the project footprint does not overlap with any designated critical habitat for the northern spotted owl. The nearest northern spotted owl critical habitat is

located approximately 0.3 miles southeast of the water intake structure. Therefore, there will be no direct impacts to northern spotted owl critical habitat.

Indirect impacts to northern spotted owl critical habitat may occur if tree removal preferentially supports barred owls in the area. The nearest trees slated for removal are approximately 1.1 miles from spotted owl critical habitat. Barred owls appear to be more tolerant of fragmented habitat than spotted owls (Dark et al., 1998), and if barred owls colonize the fragmented area created by tree removal, they may continue to expand their range into the critical habitat. However, while barred owls are more tolerant of fragmented habitats, they do not prefer it, readily colonizing old growth forest in addition to other successional stages (Dark et al., 1998). Furthermore, the habitat that would be removed functions only as dispersal habitat to northern spotted owls; it is not expected to provide any nesting or roosting opportunities, and foraging opportunities would be sufficient only to sustain a spotted owl during a dispersal event. As the habitat is already expected to be unoccupied by northern spotted owls except during dispersal activities, tree removal would not make the area any more attractive to barred owls than it is currently.

Temporary indirect impacts to northern spotted owl critical habitat could occur if construction-related noise reaches levels within critical habitat that would harass nesting or roosting owls, making the critical habitat temporarily unsuitable for owls. However, no construction activities for the project are expected to generate sustained sound levels exceeding 90 decibels; at this volume, these sound levels are only expected to adversely impact northern spotted owls within 500 feet of the sound source (USFWS, 2006). As the nearest critical habitat is over 1,500 feet away from the project, construction noise would not adversely affect critical habitat for the northern spotted owl.

Cascades Frog (*Rana cascadae*)

In the Klamath Mountains and southern Cascades of Northern California, the Cascades frog, a state candidate endangered species and a state species of special concern, is typically found above 5,000 feet in elevation, but may occur as low as 4,000 feet. Cascades frogs inhabit alpine lakes, inlet and outlet streams to mountain lakes, ponds, and meadows. Breeding occurs between March and mid-August in standing water lacking predatory fish. Adults are typically found in open, sunny areas along shorelines that provide basking and foraging opportunities; they can occasionally move between basins by crossing over mountain ridges. According to CNDDDB records, the closest reported occurrence of Cascades frog is in East Boulder Creek, approximately 1.3 miles southeast of the project site at an elevation of 5,700 feet.

Although Cascades frogs are typically found at higher elevations and no suitable breeding pools were observed in the project area, adults and juveniles could potentially utilize the project site. As called for in **Mitigation Measure 4.4.1**, the potential for direct impacts on Cascades frogs that may be present in Boulder Creek will be avoided by having a qualified biologist conduct a pre-construction survey for Cascades frogs immediately prior to the start of in-water work each day that in-water work would occur. Any frog adults, tadpoles, or egg masses that may be found will be relocated to a safe location upstream or downstream of the work area. Potential indirect impacts on Cascades frogs will be minimized through use of Best Management Practices for erosion controls, which would minimize sediments discharged into drainages.

Foothill Yellow-Legged Frog (*Rana boylei*)

Although the foothill yellow-legged frog is state-listed as endangered throughout much of its range, this designation does not apply to the northwestern population clade, which occurs in Siskiyou County; locally, the frog is a state species of special concern. Foothill yellow-legged frogs are typically found in shallow, partly-shaded, perennial streams in areas with riffles and rocky substrates. This species needs at least some cobble-sized substrate for egg-laying. Foothill yellow-legged frogs generally prefer low- to moderate-gradient streams, especially for breeding and egg-laying, although juvenile and adult frogs may utilize moderate- to steep-gradient streams during summer and early fall. According to CNDDDB records, the closest

reported occurrences of foothill yellow-legged frogs are in the South Fork Scott River ±3 miles west of the project site, and at the confluence of Grouse Creek and the Carmen Creeks, ±4.5 miles east of the project site.

West Boulder Creek in the vicinity of the fish screen improvements provides potentially suitable habitat for foothill yellow-legged frogs; the species could potentially be present in the project site. As called for in **Mitigation Measure 4.4.1**, the potential for direct impacts on foothill yellow-legged frogs that may be present in Boulder Creek will be avoided by having a qualified biologist conduct a pre-construction survey for foothill yellow-legged frogs immediately prior to the start of in-water work each day that in-water work would occur. Any frog adults, tadpoles, or egg masses that may be found will be relocated to a safe location upstream or downstream of the work area. Potential indirect impacts on foothill yellow-legged frogs will be minimized through use of Best Management Practices for erosion controls, which would minimize sediments discharged into drainages.

Pacific Tailed Frog (Ascaphus truei)

In California, the Pacific tailed frog, a state species of special concern, occurs in permanent streams of low temperatures in conifer-dominated habitats, including coast redwood, Douglas-fir, Klamath mixed-conifer, and ponderosa pine habitats, and in montane hardwood-conifer habitats. Pacific tailed frogs occur more often in mature or late-successional stands than in younger stands. During the day, adults seek cover under submerged rocks and logs in the stream or occasionally under similar surface objects close to the stream. According to CNDDDB records, a Pacific tailed frog was observed in East Boulder Creek in August 1997, +0.3 miles east of the project site.

West Boulder Creek in the vicinity of the fish screen improvements provides potentially suitable habitat for Pacific tailed frogs; the species could potentially be present in the project site. As called for in **Mitigation Measure 4.4.1**, the potential for direct impacts on Pacific tailed frogs that may be present in Boulder Creek will be avoided by having a qualified biologist conduct a pre-construction survey for Pacific tailed frogs immediately prior to the start of in-water work each day that in-water work would occur. Any frog adults, tadpoles, or egg masses that may be found will be relocated to a safe location upstream or downstream of the work area. Potential indirect impacts on Pacific tailed frogs will be minimized through use of Best Management Practices for erosion controls, which would minimize sediments discharged into drainages.

Bumble Bees

In general, all bumble bees have three basic habitat requirements; suitable nesting sites, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens. Bumble bees are generalist pollinators that are found in a wide variety of natural, agricultural, urban, and rural habitats (Goulson, 2010). Bumble bees also play an important role in the reproduction of a wide variety of plants, including food crops and wildflowers; thus, they are critical components of our environment and essential to our food security. Potential threats to bumble bees include modification or destruction of habitat, competition with honey bees, disease, use of herbicides and pesticides, and global climate change (Xerces Society, 2020).

Little is known about the overwintering habits of most bumble bee species. Some species are known to dig a few centimeters into soft, disturbed soil and form an oval-shaped chamber in which the queen will spend the duration of the winter. Compost in gardens, leaf litter, or mole hills may provide suitable protection for queens to overwinter (Goulson, 2010). More specific characteristics of the two species relevant to this project area are provided below.

Western Bumble Bee (Bombus occidentalis occidentalis)

Western bumble bees, a state candidate endangered species, were formerly common throughout much of California from sea level up to about 2,000 meters in elevation. Populations have declined sharply since the late 1990s (Williams et al., 2014). In California,

the species is now largely confined to high-elevation sites in the Sierra Nevada and scattered sites on the coast.

Western bumble bees may be found in open grassy areas, urban parks and gardens, chaparral and scrub areas, and mountain meadows with abundant floral resources. Food plants must provide adequate nectar and pollen throughout the colony's flight period, generally from early February to late November. Commonly used food plants include *Ceanothus*, *Centaurea*, *Chrysothamnus*, *Cirsium*, *Geranium*, *Grindellia*, *Lupinus*, *Melilotus*, *Monardella*, *Rubus*, *Solidago*, and *Trifolium* (Williams et al., 2014). Nests are found primarily in underground cavities on open west-southwest slopes bordered by trees, although a few aboveground nests have been reported. Very little is known about overwintering sites; however, the species has been reported in an overwintering site that was two inches deep in a "steep west slope of the mound of earth."

According to CNDDDB records, western bumble bee has been reported in several locations in Siskiyou County. In 1934, the species was reported in the project area along the Scott River; this occurrence is broadly mapped by CNDDDB to include the community of Callahan. Although western bumble bees may be present in the project vicinity, project implementation is not expected to result in significant adverse impacts to the species. Direct impacts would occur primarily through destruction of nests by earthwork activities, while indirect impacts could result from the loss of floral resources on which the bumble bee relies.

Given that the species has not been reported in Siskiyou County in over 35 years, the likelihood of presence is low. Because detection of nests in advance would be extremely difficult, a pre-construction survey for nests is not warranted. Because the project corridor does not include any habitats with abundant floral resources that would attract the bee, indirect impacts are expected to be minimal. To the extent that tree removal in the off-road pipeline corridor creates meadow or scrub habitats that may support food plants, the bee may be benefitted in the long term.

Suckley's Cuckoo Bumble Bee (Bombus suckleyi)

Suckley's cuckoo bumble bees, a state candidate endangered species, is known in California from only a few records in the Klamath Mountains. The species' range, distribution, and abundance in California are not well known due to the rarity of observations of the species.

Habitat used by this species includes meadows, largely confined to mountainous regions. Records of known plant associations for this species are scarce. In California, the species is associated with plants in the Asteraceae family including the genera: *Chrysothamnus*, *Cirsium*, *Solidago*, and *Centaurea*, as well as plant species associated with western bumble bees (Williams et al., 2014).

The bee is a nest parasite that has only been documented to reproduce successfully in colonies of western bumble bees, although it has been observed in colonies of several other species of bumble bees. The flight season for females is from late May to late October, during which they search for a suitable host bumble bee nest. Upon finding a nest, the invading female kills the queen, "enslaves" the workers, and lays her eggs in the nest. All offspring are reproductive. Males patrol circuits in search of females. Once mated, females seek a place to overwinter. Very little is known about overwintering sites utilized by the species, although generally, bumble bee females overwinter in soft, disturbed soil or under leaf litter or other debris.

According to CNDDDB records, Suckley's cuckoo bumble bee has been reported in three locations in Siskiyou County. The closest reported occurrence was in July 2009, ±2.5 miles east of the project area near Highway 3. As with the western bumble bee, it is possible that Suckley's cuckoo bumble bee could be present in the area, but impacts are unlikely or not discernible; no further evaluation or pre-construction nest surveys are warranted.

Southern Oregon/Northern California Coast (SONCC) Coho Evolutionary Significant Unit (ESU) (*Oncorhynchus kisutch*)

The Southern Oregon/Northern California Coast Coho salmon ESU is listed as Threatened by the federal government (NMFS, 1997). The ESU encompasses many of the coastal drainages from Cape Blanco, Oregon to Punta Gorda, CA (NMFS, 2014).

SONCC Coho salmon typically have a three-year life cycle, beginning in the spawning habitat selected by parent salmon. Spawning migrations begin after heavy, late autumn or winter rains encourage the returning adults to leave the ocean and move upstream. Spawning occurs in gravel/pebble substrate in cold, well-oxygenated water; females excavate nests in the gravel to lay their eggs (NMFS, 2014). Spawning generally occurs by mid-winter, although run and spawning timing vary within and between populations (NMFS, 2014). Eggs incubate for 1.5 to 4 months before they hatch; then, alevins emerge and feed on their attached yolk sac. Once the yolk sac is consumed, the juvenile fish—now known as fry—emerge from the gravel and begin to actively feed (NMFS, 2014). Coho salmon typically transition to juvenile stage by about mid-June. Fry rear in fresh water for a maximum of 15 months before completing a spring migration to the ocean (NMFS, 2014). Coho salmon smolts typically spend two years in the ocean before migrating back upstream to spawn and die (NMFS, 2014).

Within the Scott River basin, the SONCC Coho salmon faces numerous threats. Stream hydrology and structure differs from historical conditions due to past anthropogenic activities such as river channelization, dam construction, mining/gravel extraction, and residential development (NMFS, 2014). Current agricultural and residential water users divert both surface and groundwater from the Scott River watershed; this reduces natural stream flows, elevates water temperatures, and reduces side-channel connectivity (NMFS, 2014). Sedimentation is an additional threat caused by numerous factors, including agriculture/grazing, timber harvest, and high-severity wildfires. Sedimentation lowers water quality, reduces available rearing habitat, and may smother salmon eggs. Dams and diversions alter stream flows and prevent salmon passage, cutting off access to vital resources such as rearing habitat (NMFS, 2014). Lastly, stream channelization and diking eliminate side-channel habitat, reducing juvenile Coho salmon survival (NMFS, 2014).

As noted above, SONCC Coho salmon may rear in small tributary streams for up to 15 months before they migrate to the ocean. Therefore, juvenile Coho salmon could be present in the Boulder Creek water-intake work area during project construction and could be directly or indirectly affected by project implementation.

Direct impacts to SONCC Coho salmon may occur during installation of the new water intake, the pipeline connecting the new intake to the infiltration gallery, and the bollards that would be installed to protect the new intake. To facilitate in-stream work, the work area would be temporarily dewatered. Dewatering is expected to be accomplished by constructing a gravel or sandbag berm around the work area and covering the berm with plastic sheeting. The berm would divert water around the immediate work area, partially dewatering Boulder Creek. Berm construction could result in direct take of juvenile Coho salmon during gravel placement or could trap fish in the work area. If in-water work were to occur prior to mid-June, it would have some potential to kill alevins (newly hatched fish that have not yet absorbed their egg sac) that have not yet emerged from their spawning gravels. Following completion of construction, direct impacts on Coho salmon are not expected because the design of the proposed water-intake structure has been approved by CDFW.

As called for in **Mitigation Measure 4.4.2**, to ensure that Coho salmon are not adversely affected by dewatering, in-stream work would occur between June 15 and October 15. Further, as called for in **Mitigation Measure 4.4.2**, a biologist would be present when dewatering is conducted; the biologist would ensure that materials are installed in a manner that would not harm fish and, as

water levels are drawn down in the work area, would relocate any trapped fish back into the main stream channel.

Indirect impacts on SONCC Coho salmon could potentially occur if sediments or other pollutants enter Boulder Creek and degrade spawning and rearing habitat in the project area and/or downstream. In a worst-case scenario, fish could die or be impaired by asphyxiation if sediment-laden water fouls their gills, and developing embryos and/or alevins in spawning gravels downstream could die or be impaired from lack of oxygen resulting from siltation of the streambed.

In addition to installation of the water intake, activities that could result in erosion and sedimentation include pipeline construction and creation of the tank pad and access road. The upper 13,600 lineal feet of new pipeline would be constructed along existing roads. Where streams intercept the road corridor, they are diverted under the road via culverts. The new pipeline would be installed over or under the culverts to avoid direct impacts to the streams; this will also minimize the potential for increased erosion and sedimentation. In the off-road portion of the pipeline between the upper tanks and lower tanks, seven small drainages would be crossed. It is anticipated that most or all of the streams would be dry during the work period, in which case the new pipe would be installed using open-cut trenching through the drainages. If water is present, it would be diverted around the work area.

Extension of the upper tank pad and improvements to its access road would result in vegetation removal and exposure of approximately one acre of bare soil. Much of the work area would be steeply sloped (1:1 cut slopes and 2:1 fill slopes), which would increase the potential for erosion. However, no streams are immediately downslope of the work area, which will help to limit the potential for sediment to enter Boulder Creek and downstream waters that support Coho salmon.

Because best management practices for erosion control would be implemented during project construction, the potential for increased erosion or sedimentation that could adversely affect SONCC Coho salmon is expected to be minimal. Further, it should be noted that installation of the new water intake would have a beneficial effect in the long term because it would reduce the need for in-stream maintenance as compared to current conditions.

SONCC Coho Salmon Critical Habitat

Review of the NMFS species list found that critical habitat is designated in the Callahan quadrangle for SONCC Coho salmon. Critical habitat for the SONCC Coho salmon has been designated to include all river reaches accessible to listed Coho salmon between Cape Blanco, Oregon and Punta Gorda, California (NMFS, 1999). This critical habitat designation includes the reach of Boulder Creek within the project area.

Project implementation would involve several activities in and adjacent to the streambed that may adversely affect SONCC Coho salmon critical habitat. However, overall impacts on critical habitat are expected to be negligible, as discussed below.

According to the *Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Significant Unit of the Coho Salmon (Oncorhynchus kisutch)*, key limiting stresses for the SONCC Coho salmon are degraded riparian habitat conditions and altered hydrologic function (NMFS, 2014).

Woody riparian vegetation in the study area is almost entirely confined to the vicinity of the water intake on Boulder Creek. However, due to past water intake installation and maintenance activities, the immediate work area supports very little woody riparian vegetation. Project implementation would not require the removal of any riparian trees. It is possible that a few streamside shrubs could be crushed or removed during construction, but this would have only a negligible effect on Coho salmon critical habitat. Smaller streams in the project area support a limited amount of woody riparian vegetation, and those that do support woody riparian vegetation

are located in that segment of the study area above (south of) the upper tank site. Water line installation in this portion of the study area would occur along existing roads and no woody riparian vegetation would need to be removed at the stream crossings.

With respect to hydrologic functions in Boulder Creek, no alterations are anticipated. The proposed project would not involve any change in water rights or in the amount of water withdrawn from the stream. Because the new water intake would require less maintenance activity in the stream channel and would have an agency-approved fish screen, this aspect of the proposed work would have a negligible beneficial impact with respect to Coho salmon critical habitat.

Other elements of the proposed project that may affect critical habitat include displacement of in-stream habitat with structures, removal of trees in the off-road portion of the water line corridor, and earth-disturbing activities throughout the study area. The water intake structure would require placement of a precast, 4-foot by 3-foot (12 sq. ft. surface area) concrete footing in Boulder Creek to support the new intake. In addition, two concrete-filled bollards with 18-inch diameter footings (totaling 3.5 sq. ft. of surface area) would be installed for flood protection of the water intake structure. Replacement of 15.5 square feet of streambed with concrete footings may result in loss of spawning and rearing habitat, but the overall impact on critical habitat would be negligible.

Tree removal in the off-road pipeline corridor would reduce shading for seven small tributaries to Boulder Creek. Most of the streams are ephemeral or seasonal; only one of the streams appears to have near-perennial flow. Thus, the loss of shading in the 20-foot wide pipeline corridor is not expected to measurably affect water temperatures in Boulder Creek.

Indirect effects on critical habitat could also occur if sediments or other pollutants enter Boulder Creek and degrade spawning and rearing habitat in the project area and/or downstream. In a worst-case scenario, siltation of the streambed would reduce available oxygen and make the habitat unsuitable for SONCC Coho salmon embryos and alevins downstream from the project site. Additionally, sediment-laden water would temporarily become unsuitable for SONCC Coho salmon, as sediment could foul their gills.

The project activity with the greatest potential to generate erosion and sedimentation is installation of the new pipeline along existing roads and in the off-road corridor. The pipeline would be installed using open-cut trenching, which would generate erosion and sedimentation. Sediments from the work area could flow downstream into areas accessible to SONCC Coho salmon, thus degrading the quality of the critical habitat. However, because best management practices for erosion control and spill prevention would be implemented during construction, impacts on critical habitat for SONCC Coho salmon are expected to be negligible.

In conclusion, no mitigation measures are warranted with respect to northern spotted owls, western bumble bees, or Suckley's cuckoo bumble bees. With implementation of BMPs for erosion control and spill prevention, and implementation of the mitigation measures described above, direct and indirect impacts on Cascades frogs, foothill yellow-legged frogs, Pacific tailed frogs, and SONCC Coho salmon would be less than significant.

Questions B and C

According to CDFW, since the inception of the Natural Heritage Program in 1979, natural communities have been considered for their conservation significance (CDFW, 2017). Unique natural communities were recorded in the CNDDDB until the mid-1990s; at that time, funding for the natural community portion of the program was eliminated. Although natural communities are no longer being added to the CNDDDB, many of the natural community occurrences maintained in the CNDDDB still have significance for conservation, and their existence should be considered in the environmental review process.

Review of CNDDDB natural community records shows that a Darlingtonia seep has been mapped approximately 1.5 miles west of the project site; CNDDDB records do not identify any other sensitive natural communities within a five-mile radius of the project site. Other records reviewed for sensitive natural communities included those maintained by the USFWS and NMFS. The USFWS identifies designated critical habitat for northern spotted owl in the project vicinity, while NMFS identifies critical habitat for SONCC Coho salmon. NMFS also identifies Essential Fish Habitat in the study area for SONCC Coho salmon and Chinook salmon. Potential impacts on designated critical habitat for northern spotted owls and SONCC Coho salmon are discussed above. Potential effects on Essential Fish Habitat would be the same as effects on SONCC Coho salmon critical habitat and are not further addressed.

As described below, the principal natural communities in the study area are urban, ponderosa pine forest, Klamath mixed-conifer forest, and stream/riverine. Although no wetlands are present in the study area, the stream/riverine habitats are "Waters of the United States" and are considered as sensitive natural communities.

Principal Natural Communities

Generally speaking, that portion of the action area located downslope (north) of the lower tanks generally consists of parcels roughly one acre in size or smaller, and can be characterized as urban habitat. The remainder of the action area consists of larger parcels, generally 10 to 300 acres in size, that support private residences and/or commercial timber lands. The dominant natural community type below the upper tank site is ponderosa pine forest. At higher elevations, the dominant community type is Klamath mixed conifer forest. Small inclusions of montane riparian habitat are present, particularly at the water intake site on Boulder Creek. Habitat types in the action area are further described below.

Urban Habitat

General Characteristics

Urban habitats are characterized as natural habitats that have been converted to facilitate development or have been substantially altered by planting non-native vegetation. Vegetative components present may include tree groves, street strips, shade trees, lawns, and/or shrub cover. Three wildlife zones are recognized in urban habitats: downtown, urban residential, and suburbia. The diversity of wildlife species is lowest in downtown areas and highest in suburbia. Wildlife species commonly found in urban habitats include pigeons, doves, gulls, house sparrows, mockingbirds, raccoons, opossums, and striped skunks. Overall, this habitat has low value to wildlife species.

On-Site Characteristics

Most of the water distribution system improvements would occur within road rights-of-way in the town of Callahan. The road shoulders are predominantly unvegetated or support introduced weedy plant species such as red-stemmed filaree, bachelor's buttons, English peppergrass, bindweed, and dandelion. The urban habitat surrounding the road corridors contains a mixture of native and horticultural species occurring in association with nearby residences. This habitat type includes various ornamental plants as well as native pines, firs, cedars, and oaks.

The urban wildlife zone is suburbia. The mosaic of planted and native vegetation provides potential habitat for a variety of wildlife species. In spring and summer, the vegetation provides habitat for various migratory bird species.

Ponderosa Pine Forest

General Characteristics

Ponderosa pine forests consist of pure stands of ponderosa pine as well as mixed stands in which at least 50 percent of the canopy area is ponderosa pine (CDFW, 1988). Trees often accompanying ponderosa pine include white fir, incense-cedar, Jeffrey pine, sugar pine, Douglas-fir, canyon live oak, California black oak, Oregon white oak, Pacific madrone, and tanoak (CDFW, 1988). In Northern California, ponderosa pine forests occur in a narrow elevational belt above oak woodland habitats

and below mixed conifer habitats. Ponderosa pine forests are important migratory pathways for deer and are extremely important as deer foraging and holding areas. A wide variety of other animals also use ponderosa pine forests at various stages in their life cycle. Ponderosa pine forests are particularly important for wildlife that prefer open, dry habitats.

On-Site Characteristics

The onsite ponderosa pine forest is best developed between the upper and lower tank sites. As part of the land survey for the project, the survey crew collected data on all trees greater than or equal to 10 inches diameter at breast height (dbh) that would be removed to accommodate construction of the off-road pipeline as well as the upper tank pad and its access road. Tree removal would generally occur within the ponderosa pine forest habitat. The surveyors recorded a total of 234 trees consisting of 174 pines (74%; presumably *Pinus ponderosa*), 6 cedars (3%; presumably *Calocedrus decurrens*), 45 firs (19%; presumably *Pseudotsuga menziesii* but possibly *Abies concolor* as well), and 9 oaks (4%; presumably *Quercus kelloggii*). With respect to tree size, 141 trees (60%) have a dbh of 12 inches or less, 81 trees (35%) have a dbh of 14 to 18 inches, and 12 trees (5%) have a dbh of 20 to 24 inches. The tree species and size class data are considered to be representative of the local ponderosa pine forest habitat throughout the action area. Understory vegetation in the upland areas is quite limited and generally consists of sapling trees and patches of manzanita. Species diversity is somewhat greater at the small stream crossings, as further described below.

The onsite community is best characterized as a Ponderosa Pine Forest Alliance (87.010.00) as defined by the California Department of Fish and Wildlife. This alliance is rated as G5/S4, and is not considered as a sensitive natural community. Therefore, impacts of the proposed project on this natural community are not considered as significant.

Klamath Mixed Conifer Forest

General Characteristics

Klamath mixed conifer forests are typically tall, dense to moderately open, needle-leaved evergreen forests with patches of broadleaved evergreen and deciduous low trees and shrubs. On favorable mesic habitats, trees can be up to 200 feet in height, with a rich shrub layer and well-developed herbaceous layer. On drier sites, the habitat is generally open, but very diverse forestland with a well-developed shrub layer. Klamath mixed conifer forest generally occurs at higher elevations and more mesic sites than ponderosa pine forest. At the upper limits of its elevation range, Klamath mixed conifer forest intergrades with subalpine conifer habitat. Ultramafic soils are relatively abundant in the region. The high diversity of vegetation and soils in the Klamath mixed conifer forest habitat contributes to a high diversity of wildlife habitats, with a wide array of nesting and feeding opportunities and thermal cover for wildlife.

On-Site Characteristics

The onsite Klamath mixed forest habitat is relatively dry, with ponderosa pine being one of the more common species. Other trees present include Douglas-fir, white fir, incense-cedar, and sugar pine. Because the site is relatively dry, the shrub layer is much more limited than in the typical habitat type. Ultramafic soils are present in areas; these areas have a much higher diversity of herbaceous species.

The onsite community is best characterized as a Mixed Conifer Forest Alliance (87.015.00) as defined by the California Department of Fish and Wildlife. This alliance is rated as G4/S4, and is not considered as a sensitive natural community. Therefore, impacts of the proposed project on this natural community are not considered as significant.

Riverine

General Characteristics

Riverine habitat is characterized by intermittent or perennially flowing water. Riverine habitat includes rivers and streams (creeks). In inland areas, small streams converge to form larger streams; larger streams converge to form rivers, which discharge into the ocean. In coastal areas, many streams

discharge directly into the ocean. Streams and rivers typically exhibit distinct microhabitats, such as pools, riffles, and runs.

Riverine habitat is utilized by a variety of fish and wildlife species. Pools and backwater areas may provide breeding habitat for amphibians. Deep pools with basking sites (e.g., bedrock or logs) nearby may provide habitat for turtles. Waterfowl may forage for aquatic plants and invertebrates in slow-moving sections of riverine habitat. Small mammals such as beaver, river otter, and muskrat may build nests in or along riverine habitat. Riverine habitat may also provide spawning and rearing habitat for resident and anadromous fish. Numerous species of invertebrates occur in riverine habitats, often beneath submerged rocks (e.g., stoneflies, mayflies, and caddisflies), in mud (e.g., clams and mussels), or at the water surface (e.g., water striders, backswimmers, water boatmen, and mosquito larvae).

On-Site Characteristics

The new water intake structure would be installed in Boulder Creek, just below the confluence of West Boulder Creek and East Boulder Creek. Boulder Creek enters the South Fork Scott River approximately 2.5 miles downstream of the water intake. The South Fork Scott River joins the East Fork Scott River about 2.4 miles further downstream to form the mainstem Scott River, which is a tributary of the Klamath River.

In the vicinity of the water intake, Boulder Creek is a steep, rocky, perennial stream bordered by montane riparian forest habitat. The stream substrate consists of boulders and cobbles, with patches of gravels in low-velocity areas. Common species in the riparian zone include white alder, big-leaved maple, Douglas-fir, various willows, American dogwood, pink mountain currant, white-stemmed blackberry, and many others.

In addition to Boulder Creek, a number of unnamed small streams are located within the project area. These streams consist of ephemeral, intermittent, and near-perennial to perennial features ranging from approximately one foot wide to 11 feet wide. The features with more continuous flow tend to support woody riparian vegetation as well as perennial herbaceous vegetation. Representative riparian species include big-leaved maple, American dogwood, mugwort, common horsetail, thimbleberry, sedges, rushes, and various grasses. Features with less flow support correspondingly less vegetation; no woody riparian species are present, and the diversity and density of herbaceous species is reduced.

Native fish species presently or historically known to occur in Boulder Creek include Coho salmon, Chinook salmon, steelhead, Klamath speckled dace, and Klamath River lamprey; non-native species include black crappie, brook trout, brown trout, golden shiner, and largemouth bass (National Marine Fisheries Service, 2014; University of California, 2014). Upper Klamath-Trinity spring Chinook salmon once utilized the Boulder Creek-Scott River watershed, but were extirpated in the 1970s (Moyle, 2002). The ephemeral streams have no potential to support aquatic life. Although the intermittent streams could potentially provide fish habitat in the immediate vicinity of Boulder Creek, the steep slopes and limited flow volumes would prevent any fish from accessing the intermittent streams in the study reach.

The proposed project would temporarily impact Boulder Creek as well as eight streams in the off-road pipeline corridor. The latter include four ephemeral streams (some with very faint footprints), three intermittent streams that appear to generally be dry by June, and one small (four-foot wide) near-perennial to perennial stream. Impacts to streams in the off-road pipeline corridor would include open-cut trenching through the channels to allow pipe installation as well as vehicle and equipment access through the channels. If flowing water is present in any of these streams at the time work is conducted, it would be diverted around the work area using Visqueen-covered berms or sandbags to stop the in-stream flow and diversion pipes to route the water around the work area. The topography of the area would be restored following completion of construction.

At Boulder Creek, a temporary stream diversion would be established to route water around the work area. Excavation and installation of the new intake, associated piping, and bollards would then occur in the dewatered channel. As with the other streams, the topography of the work area would be restored following completion of construction. As discussed above, water intake construction would result in approximately 15 square feet of permanent fill in Boulder Creek.

The project is subject to conditions of a Clean Water Act (CWA) Section 404 permit as required by the U.S. Army Corps of Engineers (USACE). It is anticipated that the proposed project would qualify for USACE Nationwide Permit (NWP) 12. NWP 12 applies to activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities, provided the activity does not result in the loss of greater than ½-acre of waters of the U.S. NWP 12 also authorizes the construction of temporary and permanent access roads for the utility lines. It should be noted that NWP 12 is expected to be re-issued in 2021, and that water utility lines may be permitted under a new NWP 58; conditions of this new permit will not be known until it is formally released.

Among other conditions, the USACE permit requires that temporary fills be removed in their entirety and the affected areas be returned to pre-construction contours to maintain the original hydrology of the site. In addition, exposed slopes and streambanks must be immediately stabilized; appropriate soil, erosion and sediment controls must be applied; and the trench cannot be constructed in a manner that would drain waters of the U.S.

A project requiring a USACE Section 404 permit is also required to obtain a State Water Quality Certification (or waiver) to ensure that the project will not violate established State water quality standards. A Streambed Alteration Agreement from CDFW would also be required. Conditions similar or more stringent than those for the Nationwide Permit are anticipated, including limitations on the in-water work period. Because the Water District would comply with conditions of resource-agency permits, impacts to the streams would be less than significant.

Introduction and Spread of Noxious Weeds

The introduction and spread of noxious weeds during construction activities has the potential to impact natural communities. Each noxious weed identified by the California Department of Agriculture receives a rating which reflects the importance of the pest, the likelihood that eradication or control efforts would be successful and the present distribution of the pest within the state.

Several noxious weeds were observed during the botanical survey, including two “A-rated” species (dyer’s woad – *Isatis tinctoria*; and sulphur cinquefoil – *Potentilla recta*) and a number of others identified as “invasive” by the California Integrated Pest Council. These weeds could be transported off-site, or other noxious weeds could be introduced into the project area if construction vehicles are not properly washed before and after being used on-site.

Soil import/export and use of certain erosion-control materials such as straw can also result in the spread of noxious weeds. As required by **Mitigation Measure 4.4.3**, the potential for introduction and spread of noxious weeds can be avoided/minimized by using only certified weed-free erosion control materials, mulch, and seed; limiting any import or export of fill material to material that is known to be weed free; and requiring the construction contractor to thoroughly wash all construction vehicles and equipment at a commercial wash facility before entering the job site. Implementation of **Mitigation Measure MM 4.4.3** reduces potential impacts related to the introduction and spread of noxious weeds to a less than significant level.

Question D

Siskiyou County supports a wide range of fish and wildlife species that migrate both locally and over long distances. These resources include anadromous fish that migrate to the ocean and back, resident fish and wildlife with local migrations, deer herds that migrate from summer to winter ranges, and birds that migrate through the area or breed in the area. The movement patterns of the fish and

wildlife species can be disrupted by barriers such as dams, reservoirs, highways, altered stream flows, urban development, habitat conversion, and other impediments to travel. In addition, during construction, increased human activity in the project area may impede the movement of wildlife.

The potential for project implementation to affect anadromous fish habitat is addressed above and found to be less than significant because there would be no loss of riparian habitat, the loss of in-stream habitat would be confined to 15 square feet of fill, and potential indirect effects on fish habitat and migration corridors would be avoided through implementation of Best Management Practices for erosion control and spill prevention. For the same reasons, effects on resident fish would also be less than significant.

For terrestrial wildlife, migration patterns frequently follow stream corridors, although local wildlife movement can occur in upland areas. Although no riparian corridors would be adversely affected by project implementation, a 20-foot wide corridor would be cleared of trees between the upper and lower tanks to allow construction of the off-road pipeline. Although this could affect some wildlife movements, the effect would be less than road construction or commercial timber harvesting in is less than significant. Further, according to the Scott Valley Area Plan (Siskiyou County, 1980), the project site is not located within critical deer wintering range.

The project area is located within the Pacific Flyway, and it is possible that migratory birds could nest in or adjacent to the project area. The potential for adversely affecting nesting birds can be greatly minimized by removing vegetation and conducting construction activities outside of the nesting season (i.e., either before February 1 or after August 31). If this is not possible, a nesting survey would be conducted within one week prior to removal of vegetation and/or the start of construction. In the local area, most birds nest between February 1 and August 31.

As required by **Mitigation Measure MM 4.4.4**, if construction occurs during the nesting season, pre-construction surveys shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area. If absence is determined, construction may commence. If active nests are found, the Water District would consult with the USFWS and CDFW regarding appropriate action to comply with the CESA, Migratory Bird Treaty Act, and California Fish and Game Code §3503. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

The pre-construction nesting survey would be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site would be resurveyed.

Therefore, because construction activities that may impede the movement of wildlife are a temporary impact that would cease at completion of the project, and **Mitigation Measure MM 4.4.4** would reduce the potential for adversely affecting nesting birds, the proposed project would have a less than significant impact on the movement of any migratory fish or wildlife species and would not impact migratory wildlife corridors or impede the use of native wildlife nursery sites.

Question E

As discussed under Regulatory Context above, the County's General Plans include broad objectives related to the conservation of natural resources. **Mitigation Measures MM 4.4.1 through MM 4.4.4** are included to ensure consistency with the General Plan. There are no other local policies or ordinances related to the protection of biological resources that would apply to the proposed project. Therefore, impacts would be less than significant.

Question F

A Habitat Conservation Plan (HCP) is a federal planning document that is prepared pursuant to Section 10 of the Federal Endangered Species Act (FESA) when a project results in the “take” of threatened or endangered wildlife. Regional HCPs address the “take” of listed species at a broader scale to avoid the need for project-by-project permitting. A Natural Community Conservation Plan (NCCP) is a state planning document administered by CDFW. There are no HCPs, NCCPs or other habitat conservation plans that apply to the proposed project. Therefore, there would be no impact.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the project area may include growth resulting from the build-out of Siskiyou County’s General Plan and Scott Valley Area Plan, but are more likely to consist of timber harvest activities. Development and timber harvest would temporarily or permanently affect plant and wildlife resources, including species identified by state and federal resources agencies as threatened, endangered, fully protected, sensitive, species of concern, or candidate species. With continued conversion of natural habitat to human use, the availability and accessibility of remaining foraging and natural habitats in this ecosystem would dwindle and those remaining natural areas would not be able to support additional plant or animal populations. The conversion of plant and wildlife habitat on a regional level as a result of cumulative development would potentially result in a regionally significant cumulative impact on special-status species and their habitats.

Compliance with the conditions of resource-agency permits, implementation of BMPs for erosion and sediment control, and implementation of **Mitigation Measures MM 4.4.1 through 4.4.4** avoid, reduce, or mitigate potential impacts to biological resources. With these measures, the proposed project’s contribution to cumulative regional impacts to biological resources would be less than significant.

MITIGATION

MM 4.4.1 The potential for direct impacts on Cascades frogs, foothill yellow-legged frogs, and Pacific tailed frogs that may be present in Boulder Creek shall be avoided by having a qualified biologist conduct a pre-construction survey for frogs immediately prior to the start of in-water work each day that in-water work would occur. Any frog adults, tadpoles, and/or egg masses that may be found shall be relocated to a safe location upstream or downstream of the work area. Potential indirect impacts on Cascades frogs, foothill yellow-legged frogs, and Pacific tailed frogs shall be minimized through use of erosion controls to minimize the amount of sediment discharged into drainages.

MM 4.4.2 The potential for direct impacts on SONCC Coho salmon that may be present in Boulder Creek shall be avoided by:

- Limiting in-stream work to the period between June 15 and October 15.
- Dewatering the in-stream work area.
- Retaining a biologist to monitor installation of the dewatering structures and to relocate any fish that may be trapped within the area being dewatered.

MM 4.4.3 The potential for introduction and spread of noxious weeds shall be avoided/minimized by:

- Using only certified weed-free erosion control materials, mulch, and seed.
- Limiting any import or export of fill material to material that is known to be weed free.
- Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering and upon leaving the job site.

MM 4.4.4 In order to avoid impacts to special-status birds protected under the California Endangered Species Act (CESA) and nesting migratory birds and/or raptors protected under the federal Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5, including their nests and eggs, one of the following shall be implemented:

- a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31, when birds are not nesting; or
- b. If vegetation removal or ground disturbance activities occur during the nesting season, a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area.

Surveys shall begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey shall take into account acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds.

At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed in the area, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.).

The results of the survey shall be submitted to the CDFW upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

If active nests are found, the Callahan Water District shall consult with the USFWS and CDFW regarding appropriate action to comply with the CESA, Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

DOCUMENTATION

California Department of Fish and Wildlife. 1988. A Guide to Wildlife Habitats of California. <https://wildlife.ca.gov/Data/CWHR/Wildlife-Habitats>. Accessed June 2020.

Dark, S. J., R. J. Gutiérrez, and Gordon I. Gould. 1998. The Barred Owl (*Strix varia*) Invasion in California. *The Auk* 115.1: 50-56. <https://pdfs.semanticscholar.org/cb65/0d97d06119e294182cbbafb92818e3b2f6e5.pdf>.

California Department of Fish and Wildlife. 2019. California Regional Conservation Plans. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=68626&inline>. Accessed June 2020.

California Natural Diversity Database. January 2021.

ENPLAN. 2020. Biological Assessment: Callahan Water District Water System Improvement Project.

ENPLAN. Field surveys. May 27, June 8, and July 28, 2019.

Forsman, E., R. Anthony, J. Reid, P. Loschl, S. Sovern, M. Taylor, and D. Seaman. 2002. Natal and Breeding Dispersal of Northern Spotted Owls. *Wildlife Monographs* (149) 1-35. www.jstor.org/stable/3830803.

Goulson, Dave. 2010. *Bumblebees: Behavior, Ecology, and Conservation*. Oxford University Press, Oxford.

National Marine Fisheries Service. 1997. Endangered and Threatened Species; Threatened Status for Southern Oregon/Northern California Coast Evolutionarily Significant Unit (ESU) of Coho Salmon. Federal Register, 62(87):24588-24609.
<<https://www.govinfo.gov/content/pkg/FR-1997-05-06/html/97-11571.htm>>

_____. 2014. Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Significant Unit of Coho Salmon (*Oncorhynchus kisutch*).
<https://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/marblemountain/exhibits/nat_marine_fs_exhibits/nmfs_31.pdf>

Siskiyou County. 1973. Siskiyou County General Plan, Conservation Element.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_conservationelement.pdf. Accessed June 2019.

_____. 1980. Scott Valley Area Plan, County Area Plan Number I.
<<https://www.co.siskiyou.ca.us/planning/page/general-plan>>. Accessed June 2019.

U.S. Fish and Wildlife Service. 2019. USFWS Critical Habitat Map.
<https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>. Accessed June 2019.

_____. 2019. List of Threatened and Endangered Species that May Occur in the Project Location and/or May be Affected by the Proposed Project.

_____. 1992. Endangered and Threatened Wildlife and Plants; Determination of Critical Habitat for the Northern Spotted Owl; Final Rule. Federal Register 57: 1796-1838.
<https://www.fws.gov/arcata/es/birds/NSO/documents/1992Jan%2015%20Determination%20of%20Critical%20Habitat%20NSO%2057%20FR%201796.pdf>

_____. 2006. Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California.
<<https://www.fws.gov/arcata/es/birds/MM/documents/MAMU-NSO%20Harassment%20Guidance%20NW%20CA%202006Jul31.pdf>>

_____. 2008. Endangered and Threatened Wildlife and Plants: Revised Designation of Critical Habitat for the Northern Spotted Owl. Federal Register 73(157): 47326–47522.
<https://www.fws.gov/pacific/ecoservices/nso/NSO_Final_Revised_CH_FR_081308.pdf>

_____. 2011. Revised Recovery Plan for the Northern Spotted Owl (*Strix occidentalis caurina*).
<https://www.fws.gov/oregonfwo/documents/RecoveryPlans/NSO_RevisedRP_2011.pdf>

_____. 2012. *Endangered and Threatened Wildlife and Plants; Designation of Revised Critical Habitat for the Northern Spotted Owl; Final Rule*. 77 Federal Register 71875 (December 4, 2012), pp. 71875-72068. <<https://www.federalregister.gov/documents/2012/12/04/2012-28714/endangered-and-threatened-wildlife-and-plants-designation-of-revised-critical-habitat-for-the>>

United States Department of Agriculture, Forest Service. 2018. Synthesis of Science to Inform Land Management within the Northwest Forest Plan Area. Chapter 4: Northern Spotted Owl Habitat and Populations: Status and Threats.
<https://www.fs.fed.us/pnw/pubs/pnw_gtr966_chapter4.pdf>

Williams, P.H., R.W. Thorp, L.L. Richardson, and S.R. Colla. 2014. *Bumble Bees of North America: An Identification Guide*. Princeton University Press, Princeton.

Xerces Society for Invertebrate Conservation. 2020. Threats and Conservation Efforts. <[Threats & Conservation Efforts | Xerces Society](#)>. Accessed September 2020.

4.5 CULTURAL RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

Section 106 of the National Historic Preservation Act (NHPA)

Section 106 of the NHPA and its implementing regulations require federal agencies to take into account the effects of their activities and programs on historic properties. A historic property is any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and material remains related to such a property (NHPA Sec. 301[5]). A resource is considered eligible for listing in the NRHP if it meets the following criteria as defined in CFR Title 36, §60.4:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

1. *That are associated with events that have made a significant contribution to the broad patterns of our history;*
2. *That are associated with the lives of persons significant in our past;*
3. *That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
4. *That has yielded, or may be likely to yield, information important to prehistory or history.*

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP. In addition to meeting at least one of the criteria outlined above, the property must also retain enough integrity to enable it to convey its historic significance. To retain integrity, a property will always possess several, and usually most, of the seven aspects of integrity noted above. If a site is determined to be an eligible or historic property, impacts are assessed in terms of "effects." An undertaking is considered to have an adverse effect if it results in any of the following:

- Physical destruction or damage to all or part of the property;
- Alteration of a property;
- Removal of the property from its historic location;
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features; and
- Neglect of a property that causes its deterioration; and the transfer, lease, or sale of the property.

If a project will adversely affect a historic property, feasible mitigation measures must be incorporated. The State Historic Preservation Officer (SHPO) must be provided an opportunity to review and comment on these measures prior to commencement of the proposed project.

STATE

California Environmental Quality Act (CEQA)

CEQA requires that projects financed by or requiring the discretionary approval of public agencies in California be evaluated to determine potential adverse effects on historical and archaeological resources (California Code of Regulations [CCR], §15064.5). Historical resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance. Pursuant to §15064.5 of the CCR a property may qualify as a historical resource if it meets any of the following criteria:

- a. The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR).
- b. The resource is included in a local register of historic resources, as defined in §5020.1(k) of the Public Resources Code (PRC), or is identified as significant in a historical resources survey that meets the requirements of §5024.1(g) of the PRC (unless the preponderance of evidence demonstrates that the resource is not historically or culturally significant).
- c. The lead agency determines that the resource may be a historical resource as defined in PRC §5020.1(j), or §5024.1, or may be significant as supported by substantial evidence in light of the whole record. Pursuant to PRC §5024.1, a resource may be eligible for inclusion in the CRHR if it:
 - Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
 - Is associated with the lives of persons important in our past;
 - Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
 - Has yielded, or may be likely to yield, information important in prehistory or history.

Resources must retain integrity to be eligible for listing on the CRHR. Resources that are listed in or formally determined eligible for listing in the NRHP are included in the CRHR, and thus are significant historical resources for the purposes of CEQA (PRC §5024.1(d)(1)). A unique archaeological resource means an artifact, object, or site that meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

LOCAL

Siskiyou County General Plan, Conservation Element

The Conservation Element of the Siskiyou County General Plan was adopted in 1973 to provide guidance for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers, and other water areas, including harbors, fisheries, and wildlife areas. The Conservation Element includes the following general objective related to cultural resources: *Preserve, protect and develop the county's Archaeological, Paleontological and Historic as well as Geologic sites.*

DISCUSSION OF IMPACTS

Questions A and B

A Cultural Resources Inventory Report (CRI) was completed for the proposed project by ENPLAN (2019). The study included a records search, Native American consultation, and field evaluation. The records search included review of records at the Northeast Information Center of the California Historical Resources Information System (NEIC/CHRIS); and a review of historic maps, the *National Register of Historic Places*, *California Register of Historical Resources*, *California Historical Landmarks*, *California Inventory of Historic Resources*, *California Points of Historic Interest*, and *Directory of Properties in the Historic Property Data Files for Siskiyou County*.

Archaeological fieldwork took place on June 12 and 13, 2019, during which the entire APE was surveyed to identify cultural and historical resources that may be potentially affected by the proposed project.

Area of Potential Effects (APE)

For purposes of the CRI, the horizontal APE (i.e., the project footprint plus all unpaved access roads) was surveyed with transects spaced approximately 7 to 10 meters apart. Areas adjacent to the road corridors with exposed subsurface soil, including rodent burrows and ditches, were thoroughly inspected for evidence of any possible buried cultural deposits and/or soil differentiation. The undeveloped portion of the APE was carefully examined for cultural resources with boot scrapes performed where necessary to expose native soil. The purpose of the survey was to identify locations where cultural resources could be potentially affected by the proposed construction.

The vertical APE is based on the planned depths of excavations for the project and is associated with the potential for buried cultural resources. The maximum depth of excavation for project facilities will be four to six feet, with the exception of the water tank pad excavation, which will involve cuts extending up to 16 feet below original grade.

Records Search

Research at the NEIC/CHRIS was conducted on May 8, 2019, and covered an approximate half-mile radius around the APE for previously recorded archaeological sites and for previously conducted surveys. The size and scope of the search area was determined to be sufficient based on the results.

Sixteen archaeological surveys have previously been conducted within a half-mile radius of the APE, including seven within the proposed project's APE. There are 24 previously recorded archaeological sites within a half-mile radius of the APE. A single linear feature (the Callahan Ditch) was recorded crossing through the APE. There are no other previously recorded archaeological sites within the APE. Review of the NRHP, the CRHR, the California Inventory of Historic Resources, and the California Historical Landmarks identified no other historic properties within a half-mile radius of the project area.

Native American Consultation

In response to ENPLAN's request for information, on June 3, 2019, the Native American Heritage Commission (NAHC) conducted a search of the Sacred Lands File; the search did not reveal any known Native American sacred sites or cultural resources in the project area. The NAHC also provided contact information for several Native American representatives and organizations, who were contacted by ENPLAN on June 7, 2019, with a request to provide comments on the proposed project.

Les Anderson, the Cultural Resources Protection Specialist of the Klamath Tribe, responded by email on June 20, 2019. Mr. Anderson asked if the proposed project has a Federal nexus involved for upgrading the water system. Additionally, he provided a request by the Klamath Tribe to: (1) complete a pedestrian survey before ground disturbing activities begin; (2) to flag and protect any areas considered sensitive for cultural resources within the APE; (3) to monitor any ground disturbing activity at confluences, springs, streams, wetlands, and rivers; and (4) to protect any areas where significant traditional botanicals may exist. No other responses were received.

Follow-up correspondence was conducted on June 25, 2019. Ted Dawson responded on behalf of the Nor-Rel-Muk Nation on June 28, 2019. Mr. Dawson stated he would defer to any comments made by members of the Karuk Tribe or Shasta Nation. Natalie Forrest-Perez, THPO of the Pit River Tribe, responded via email July 5, 2019. Ms. Forrest-Perez stated the tribe is unaware of any cultural resources in the APE; however, she asks if any cultural resources are found during construction to please contact the Pit River Tribe regarding the find. No other responses were received.

Results

During the field evaluation, two isolated artifacts were identified within the APE: a basalt pestle and a hole-in-cap can. In addition, a number of resources observed adjacent to the APE included the following: four historical-era buildings previously recorded by the U.S. Forest Service, the Callahan School House, historical-era residences, two cemeteries, the Callahan Ditch, and a possible historical-era mining ditch. Additionally, a powder house was identified approximately 80 feet outside of the APE.

The basalt pestle was observed in the developed community of Callahan and appears to have been removed from its original context. Although both the pestle and hole-in cap can were recorded, isolates such as these are not eligible for listing in either the NRHP or CRHR, and no further evaluation is warranted. The remaining historical-era features observed during the survey are outside the APE and will not be affected by project implementation; accordingly, no further evaluation is warranted.

However, based on the geomorphological and topographic characteristics of the project site, the results of the records and literature search, and the age of soils mapped in the area, improvements in previously undisturbed areas have a low to moderate potential to encounter buried historic and prehistoric resources. **Mitigation Measures MM 4.5.1 and 4.5.2** address the inadvertent discovery of cultural resources and human remains.

Because the proposed project will receive federal funding, Section 106 review applies to the proposed project. It is possible that the federal funding agency and/or SHPO will require further evaluation of potential historical resources in the area. Any necessary mitigation measures would be identified through the Section 106 consultation process pursuant to the Secretary of the Interior's regulations to ensure impacts are less than significant.

Question C

The APE does not include any known cemeteries, burial sites, or human remains. However, it is possible human remains may be unearthed during construction activities. **Mitigation Measure 4.5.2**

ensures if human remains are discovered, there shall be no further excavation or disturbance of the site until the County coroner has been contacted and has made the necessary findings as to origin and disposition in accordance with Section 15064.5(e) of the CEQA Guidelines. Therefore, impacts are less than significant.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the project area have the potential to impact cultural resources. Archaeological and historic resources are afforded special legal protections designed to reduce the cumulative effects of development. Cumulative projects and the proposed project are subject to the protection of cultural resources afforded by the CEQA Guidelines Section 15064.5 and related provisions of the PRC. In addition, projects with federal involvement are subject to Section 106 of the NHPA.

Given the non-renewable nature of cultural resources, any impact to protected sites could be considered cumulatively considerable. As discussed above, **Mitigation Measures MM 4.5.1 and MM 4.5.2** address the inadvertent discovery of cultural resources and/or human remains during construction. Because all development projects in the State are subject to the same measures pursuant to PRC §21083.2 and CEQA Guidelines §15064.5., the proposed project's cumulative impact to cultural resources is less than significant.

MITIGATION

- MM 4.5.1** In the event of any inadvertent discovery of cultural resources (i.e., burnt animal bone, midden soils, projectile points or other humanly-modified lithics, historic artifacts, etc.), all work within 50 feet of the find shall be halted until a professional archaeologist can evaluate the significance of the find in accordance with PRC §21083.2(g) and §21084.1, and CEQA Guidelines §15064.5(a). If any find is determined to be significant by the archaeologist, the District shall meet with the archaeologist to determine the appropriate course of action. If necessary, a Treatment Plan prepared by an archeologist outlining recovery of the resource, analysis, and reporting of the find shall be prepared. The Treatment Plan shall be reviewed and approved by the District prior to resuming construction.
- MM 4.5.2** In the event that human remains are encountered during construction activities, the District shall comply with §15064.5 (e) (1) of the CEQA Guidelines and PRC §7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the County coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) has been completed.

DOCUMENTATION

ENPLAN. 2019. Cultural Resources Inventory Report: Callahan Water District Water System Improvements Project, Siskiyou County, California.

National Park Service. 1990. National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation. Published 1990, revised for Internet 2002.
<https://www.nps.gov/nr/publications/bulletins/nrb15/>. Accessed September 2019.

Siskiyou County. 1973. Siskiyou County General Plan, Conservation Element.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_conservationelement.pdf. Accessed September 2019.

4.6 ENERGY

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy deficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

There are no federal regulations pertaining to energy that apply to the proposed project.

STATE

Renewables Portfolio Standard

In 2002, SB 1078 was passed to establish the State's Renewables Portfolio Standard (RPS) Program, with the goal of increasing the amount of electricity generated and sold to retail customers from eligible renewable energy resources. The initial goal was to increase the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. The Renewables Portfolio Standard has been subsequently amended by the following actions:

Date	Legislation/Plan	Action
May 3, 2003	Energy Action Plan I	Accelerated the 20 percent renewable energy target to 2010.
September 21, 2005	Energy Action Plan II	Recommended a goal of 33 percent renewable energy by 2020.
September 26, 2006	SB 107	Codified the 20 percent renewable energy by 2010 target set forth in the Energy Action Plan I.
November 17, 2008	EO S-14-08 (Schwarzenegger)	Required 33 percent renewable energy by 2020 as per the Energy Action Plan II.
September 15, 2009	EO S-21-09 (Schwarzenegger)	Directed the CARB to adopt regulations by July 31, 2010, consistent with the 2020 target set forth in EO S-14-08.
April 12, 2011	Senate Bill X1-2	Codified the 2020 renewable energy target set forth in EO S-14-08; this new target applied to all electricity retailers in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators.
October 7, 2015	SB 350	Codified a target of 50 percent renewable energy by 2030. Also requires California utilities to develop integrated resource plans that incorporate a GHG emission reduction planning component beginning January 1, 2019.
September 10, 2018	SB 100	Codified targets of 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045.

California Building Standards Code

Title 24 of the CCR, also known as the California Building Standards Code (CBSC), is based on the International Building Code (IBC) used widely throughout the country. The CBSC has been modified for California conditions to include more detailed and/or more stringent regulations. The CBSC consists of 13 parts, including the California Building Code, Energy Code, and Green Building Standards Code.

California Energy Code

The California Energy Code (Part 6 of the CBSC), also known as the State's Energy Efficiency Standards, was established in 1978 with a goal of reducing California's energy consumption for residential and nonresidential buildings. The Standards include mandatory measures related to building envelopes, mechanical systems, indoor and outdoor lighting, and electrical power distribution. The Standards are periodically updated by the California Energy Commission (CEC).

The 2019 update to the Energy Efficiency Standards went into effect on January 1, 2020. The Initial Study prepared for the updated Standards estimated that implementation of the 2019 Standards would reduce the energy use of typical new residential buildings by about 7 percent and nonresidential buildings by about 31 percent compared to buildings constructed under the prior standards. In addition, the 2019 Standards were projected to decrease water consumption by approximately 246 million gallons per year (GPY), reduce statewide annual electricity consumption by about 650 gigawatt-hours per year, and reduce statewide natural gas consumption by 9.8 million therms per year. In addition, there could potentially be a net reduction in the emissions of nitrous oxide by roughly 100 metric tons per year, sulfur oxides by 0.27 metric tons per year, carbon monoxide by 28 metric tons per year, and (PM2.5) by 3.36 metric tons per year. The 2019 Standards were also anticipated to reduce growth in statewide GHG emissions by 230,000 metric tons of carbon dioxide (CO₂e) per year.

California Environmental Quality Act (CEQA)

Section 15126.2(b) of the CEQA Guidelines states that if analysis of a project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources, the effects must be mitigated. The Guidelines provide suggestions of topics that may be included in the energy analysis, including identification of energy supplies that would serve the project and energy use for all project phases and components. In addition to building code compliance, other relevant considerations may include the project's size, location, orientation, equipment use, and any renewable energy features that could be incorporated into the project. The energy use analysis may be included in related analyses of air quality, GHG emissions, transportation, or utilities at the discretion of the lead agency.

LOCAL

Siskiyou County General Plan, Energy Element

The Energy Element of the Siskiyou County General Plan was adopted in 1993 to address energy issues and formulate a plan for meeting future needs. The Energy Element was established to prepare the County to accommodate growth and diversification by relying on local efficiency improvements and renewable resource development, instead of having to import more conventional, non-renewable supplies. The Energy Element serves as a periodically-updated baseline against which to measure the County's achievements in building a sustainable energy future. The Energy Element includes the following general objectives related to energy resources:

- Contain comprehensive information on the County's energy resources, and present and future energy needs; and establish a planning framework for the energy issues of concern to citizens, businesses, and local government.

- Evaluate Countywide energy uses and opportunities for improving the efficiency of usage, including benefits to the local economy and environment from such improvements.
- Evaluate major opportunities and constraints surrounding renewable energy resource development in the County; and articulate the type and quality of energy development desired.
- Establish an energy strategy to meet future needs through self-sufficient efficiency and renewable actions to the greatest extent practical.
- Establish policies and implementation measures to carry out the strategy and thereby achieve a reliable, affordable, and environmentally-sound energy future for the County.

DISCUSSION OF IMPACTS

Questions A and B

The proposed project does not include any components that would result in a permanent increase in energy use. Energy consumption during construction would occur through use of fuels for construction equipment, haul trucks, and construction workers travelling to and from the work site. Construction equipment would comply with regulations that restrict idling when not in use (see **Mitigation Measure MM 4.3.1(i)**). Construction equipment must also comply with State regulations that require the use of fuel-efficient equipment. With implementation of **MM 4.3.1(i)**, and compliance with existing State regulations that require the use of fuel-efficient equipment, impacts would be less than significant. Also see discussion in Section 4.8 (Greenhouse Gas Emissions).

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the region, including timber harvest operations and growth resulting from build-out of the County's General Plan and Scott Valley Area Plan, could result in potentially significant impacts due to the wasteful, inefficient, or unnecessary consumption of energy resources. However, all new development projects in the State are required to comply with State regulations that require the use of fuel-efficient equipment during construction. With implementation of **Mitigation Measure MM 4.3.1(i)** and compliance with State regulations, the proposed project's cumulative impacts on energy resources would be less than significant.

MITIGATION

Implementation of **Mitigation Measure MM 4.3.1(i)**.

DOCUMENTATION

California Building Standards Commission. 2018. 2019 California Green Building Standards Code. <https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen>. Accessed June 2020.

California Energy Commission. 2018. Initial Study/Proposed Negative Declaration for the 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings. <https://ww2.energy.ca.gov/title24/2019standards/rulemaking/documents/>. Accessed June 2020.

Siskiyou County. 1993. Siskiyou County General Plan, Energy Element. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_energyelement.pdf. Accessed June 2019.

_____. 1980. Siskiyou County General Plan, Scott Valley Area Plan. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scottvalleyareaplanwithoutlargemaps.pdf. Accessed June 2020.

4.7 GEOLOGY AND SOILS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death, involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction (NEHR) Act was passed in 1977 to reduce the risks to life and property from future earthquakes in the United States. The Act established the National Earthquake Hazards Reduction Program, which was most recently amended in 2004. The Federal Emergency Management Agency (FEMA) is designated as the lead agency of the program. Other NEHR Act agencies include the National Institute of Standards and Technology, National Science Foundation, and the U.S. Geological Survey (USGS).

STATE

California Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (PRC §2621 *et seq.*) was passed in 1972 to reduce the risk to life and property from surface faulting in California. The Act prohibits the siting of most structures intended for human occupancy on the surface trace of active faults. Before a project can be permitted in a designated Alquist-Priolo Fault Study Zone, a geologic investigation must be prepared to demonstrate that proposed buildings would not be constructed across active faults.

California Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act (SHMA) of 1990 (PRC §2690–2699.6) addresses non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction and seismically induced landslides. The SHMA also addresses expansive soils, settlement, and slope stability. Under the SHMA, cities and counties may withhold development permits for sites within seismic hazard areas until geologic/geotechnical investigations have been completed and measures to reduce potential damage have been incorporated into development plans.

California Building Standards Code

Title 24 of the CCR, also known as the California Building Standards Code (CBSC), provides minimum standards for building design and construction, including excavation, seismic design, drainage, and erosion control. The CBSC is based on the International Building Code (IBC) used widely throughout the country. The CBSC has been modified for California conditions to include more detailed and/or more stringent regulations.

Protection of Paleontological Resources

Under CEQA, a project is considered to have a significant impact if it would disturb or destroy a unique paleontological resource or site or unique geologic feature. Public Resources Code (PRC) §5097.5 also provides for the protection of paleontological resources. It is unlawful to knowingly and willfully excavate upon, or remove, destroy, injure, or deface any vertebrate paleontological site that is situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Local agencies are required to comply with PRC 5097.5 when the agency has discretionary authority over a project undertaken by others (e.g., issuance of encroachment permits, grading permits, etc.).

LOCAL

Siskiyou County General Plan, Seismic-Safety and Safety Elements

The Seismic-Safety Element and Safety Element of the Siskiyou County General Plan were adopted in 1976 to examine the particular, physical needs of the county in relation to safety and seismic-safety, and to establish procedures for the orderly development of the county relative to physical problems. The Safety and Seismic-Safety Elements include the following general objective related to geology and soils:

- Introduce safety considerations into the planning process in order to reduce loss of life, injuries, damage to property, and economic and social dislocation resulting from fire and dangerous geologic occurrences.

Siskiyou County - Scott Valley Area Plan

The Scott Valley Area Plan represents a combined document – the Land Use Element of the Siskiyou County General Plan for the Scott Valley Watershed and the Environmental Impact Report on the Plan. The Plan sets forth development policies that guide and specify where future growth in the watershed will be located in order to fulfill the stated Plan goals. These policies are devised in order to ensure that growth will not be incompatible with surrounding or abutting critical resource areas and will ensure that

development will be located close to existing public services, so as to not overburden public services. The Scott Valley Area Plan includes the following general policies related to geology and soils:

- No development will be allowed in identified and potential landslide areas unless certified by a registered California geologist or geological engineer as safe. Proof that an area is safe from landslide, other than from a licensed California geologist or geological engineer, can be made by the County Planning Department if an on-site field inspection indicates that the mapped area of concern obviously presents no danger of landslide.

DISCUSSION OF IMPACTS

Question A

i and ii)

According to the Alquist-Priolo Earthquake Fault Zoning Map for Siskiyou County, there are no Alquist-Priolo Special Study Zones in the project area. The nearest Special Study Zone is the Cedar Mountain Fault Zone, approximately 49 miles northeast of the project area.

According to the County's General Plan, the project area has not experienced an earthquake that has resulted in a single death or injury insofar as official records reveal. Additionally, damage to buildings has been recorded as very minor. The General Plan also notes that there are many faults in Siskiyou County that must be regarded as generally active, but they do not pose a significant threat. According to the California Geological Survey (CGS), a number of pre-Quaternary (inactive) faults are located approximately two miles to the north and west of the project area.

The site-specific Geotechnical Report for the proposed new water storage tanks was completed by a registered professional geotechnical engineer from SHN Engineers & Geologists, Inc. in January 2019. The Geotechnical Report states the water tank site is located in an area that is distant from known, active faults and is likely to experience lower levels of shaking less frequently. The intensity of ground shaking from earthquakes depends on several factors, including the distance from the site to the earthquake focus, the magnitude and duration of the earthquake, and the response of the underlying bedrock. However, the water storage tanks and their foundations will be designed and constructed in accordance with the earthquake-resistant provisions of the American Water Works Association (AWWA) Standards and the current edition of the California Building Code. Additionally, **Mitigation Measure MM 4.7.1** requires that all grading plans, foundation plans, and structural calculations shall be reviewed by a qualified professional to ensure all recommendations included in the final report are implemented and **Mitigation Measure MM 4.7.2** ensures that a qualified engineer monitor and inspect work activities in accordance with the Geotechnical Report.

Because potential impacts would be addressed through proper engineering design, project plans would be reviewed by a geotechnical engineer to ensure that recommendations in the final Geotechnical Report are implemented, and a qualified engineer would monitor and inspect work activities in accordance with the Geotechnical Report, impacts would be less than significant.

iii)

See discussion under Questions A i) and ii) above. Liquefaction results from an applied stress on the soil, such as earthquake shaking or other sudden change in stress condition, and is primarily associated with saturated, cohesionless soil layers located close to the ground surface. During liquefaction, soils lose strength and ground failure may occur. Building foundations can sink, break apart or tilt, and gravity-fed pipelines can back up. This is most likely to occur in alluvial (geologically recent, unconsolidated sediments) stream channel deposits, and glacial outwash deposits, especially when the groundwater table is high.

According to the NRCS Soil Survey, as shown in Table 4.7-1, soils on the majority of the project site are sourced from granite. However, at the northern extent of the project site, within the community of Callahan, ±594 feet of pipeline would be located within alluvial soils such as Diyou loam. It is possible that liquefaction could occur in some areas due to soil type; however, improvement plans for the proposed project would be prepared by a registered professional engineer to ensure special design and/or construction methods are implemented to reduce or eliminate potential impacts. With implementation of standard engineering design measures, the potential for liquefaction is less than significant.

**TABLE 4.7-1
Soil Type and Characteristics**

Soil Name	Landform and Parent Material	Erosion Potential	Drainage	Runoff Class	Permeability	Shrink-Swell Potential
Gilligan-Chawanakee sandy loam, 30 to 90 percent slopes	Mountains, granite	High	Somewhat Excessively	Medium	Moderate to Rapid	Low
Gilligan-Holland sandy - gravelly loam, 15 to 70 percent slopes	Mountains, granite	High	Somewhat Excessively to Well-drained	Medium to Very High	Moderately Rapid to Moderately Slow	Low
Marpa-Kinkel-Boomer gravelly loam, 15 to 50 percent slopes	Mountains, metamorphic rock	High	Well-drained	Rapid	Moderately Slow	Low
Marpa-Kinkel-Boomer gravelly loam, 5 to 15 percent slopes	Mountains, metamorphic rock	Moderate	Moderately well-drained	Medium	Moderate	Low
Diyou loam, drained, 0 to 2 percent slopes	Floodplains; alluvium	Slight	Somewhat poorly drained	Medium	Moderately Slow	Moderate
Dumps, fragmental material, uneven piles of waste rock from dredging	Floodplains; igneous, metamorphic, and sedimentary rock	High	-	-	-	-

Source: U.S. Department of Agriculture, Natural Resources Conservation Service, 2019; USDA, Soil Conservation Service and Forest Service, Soil Survey of Klamath National Forest Area, California, 1982; USDA, Soil Conservation Service and Forest Service, Soil Survey of Siskiyou County, California, 1983

As required by **Mitigation Measure MM 4.7.2**, earthwork activities must be monitored by a qualified professional to ensure that recommendations included in the final Geotechnical Report are implemented. Therefore, impacts would be less than significant because the proposed project will be designed in accordance with USGS Seismic Design Maps and California Building Code seismic design specifications and **Mitigation Measure MM 4.7.2** ensures that a qualified engineer monitor and inspect work activities in accordance with the Geotechnical Report.

iv)

A landslide is a mass of rock, earth or debris moving down a slope. Landslides are most likely to occur in steep areas with weak rocks where the soil is saturated from heavy rains or snowmelt. The Landslide Susceptibility Map included in the Draft 2018 Siskiyou County Local Hazard Mitigation Plan indicates that areas in which improvements are proposed have a low susceptibility for landslide hazards. Additionally, the Geotechnical Report states that there was no evidence of recent landslides or features related to slope instability at the water tank site at the time of investigation. The proposed water tanks would be located on a level pad cut into the existing slope with morphology characterized as relatively smooth and planar. Therefore, because the project does not

include extensive grading on steep slopes, potential impacts associated with landslides are less than significant.

Question B

Construction of the proposed project would result in the temporary disturbance of soil. If the disturbed soils are exposed to storm events, this could cause localized erosion and sedimentation. In addition, construction activities could expose soil to wind erosion that could adversely affect on-site soils and the re-vegetation potential of the area. As shown in Table 4.7-1, some of the soils on the project site are shown to have a moderate to high potential for erosion.

As noted in Section 1.7 (Regulatory Requirements), the County is required to obtain coverage under the NPDES permit for Discharges of Storm Water Runoff Associated with Construction Activity by submitting a Notice of Intent to the SWRCB. The permitting process requires the development and implementation of an effective SWPPP that includes BMPs to reduce pollutants and any additional controls necessary to meet water quality standards. Measures that may be implemented to minimize erosion include, but are not limited to, limiting construction to the dry season; use of straw wattles, silt fences, and/or gravel berms to prevent sediment from discharging off-site; and revegetating temporarily disturbed sites upon completion of construction. Because BMPs for erosion and sediment control would be implemented in accordance with existing requirements, the potential for soil erosion and loss of top soil would be less than significant.

Question C

See discussion under Question A and B above. Unstable soils consist of loose or soft deposits or sands, silts, and clays. According to the NRCS Soil Survey, as shown in Table 4.7-1, soils on the majority of the project site are sourced from granite. However, at the northern extent of the project site, ±594 feet of pipeline would be located within alluvial soils such as Diyou loam.

According to the SHN Geotechnical Report, the proposed water tanks would be located on a level pad cut into the existing slope with morphology characterized as relatively smooth and planar. At the time of inspection no features related to recent landslides or slope instability were observed.

Mitigation Measure MM 4.7.1 requires that recommendations included in the final Geotechnical Report must be incorporated into the final project plans. The grading, foundation plans, and structural calculations would be reviewed by a qualified professional to ensure all recommendations included in the Geotechnical Report are implemented. In addition, **Mitigation Measure MM 4.7.2** requires that a qualified engineer monitor and inspect work activities in accordance with the final Geotechnical Report. Implementation of **Mitigation Measures MM 4.7.1 and MM 4.7.2** ensures that geologic and soils hazards associated with the proposed project would be less than significant.

Question D

Some soils have a potential to swell when they absorb water and shrink when they dry out. These expansive soils generally contain clays that expand when moisture is absorbed into the crystal structure. When these soils swell, the change in volume can exert significant pressure on loads that are upon them, such as buildings or underground utilities. Potentially expansive soils are generally those with a liquid limit over 50 percent and a plasticity index over 30. According to the NRCS Web Soil Survey, none of the soils in the study area have a liquid limit over 32.6 percent, and none have a plasticity index over 9.1. Therefore, the potential for expansive soils to be present is low.

Further, **Mitigation Measure MM 4.7.2** requires earthwork activities to be monitored by a qualified professional to ensure recommendations included in the Geotechnical Report are implemented. The qualified professional would also conduct laboratory testing as necessary to evaluate if soil conditions are as anticipated. If expansive soils are identified on the project site, appropriate design and

construction measures would be implemented to ensure that potential impacts associated with expansive soils are less than significant.

Question E

The project does not propose the installation or use of alternative wastewater disposal systems. Therefore, there would be no impact.

Question F

Paleontology is the study of prehistoric life forms, other than humans. Paleontological resources include fossils and deposits that contain fossils. Fossils are evidence of ancient life preserved in sediments and rock, such as the remains of animals, animal tracks, plants, and other organisms; as such, they are a non-renewable resource. Paleontological resources and fossils are found primarily in sedimentary rock deposits.

According to the California Geological Survey, the geology of the project area consists of Silurian-Ordovician period and Paleozoic period marine sedimentary and metasedimentary deposits. Because paleontological resources and fossils are found primarily in sedimentary rock deposits, fossilized paleontological resources may be present in the project area.

The project area has no unique geological features and, according to the U.C. Berkeley Museum of Paleontology, no fossils have been reported in the project area. However, there is the possibility that unanticipated paleontological resources will be encountered during ground-disturbing project-related activities. Although no unique geologic features or paleontological sites are known to exist in the study area, **Mitigation Measure MM 4.7.3** addresses the inadvertent discovery of paleontological resources and ensures that impacts are less than significant.

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the region could result in increased erosion and soil hazards and could expose additional structures and people to seismic hazards. In addition, ground disturbance has the potential to destroy paleontological resources and unique geological features.

As discussed above, all development projects in the County are required to obtain coverage under the NPDES permit for *Discharges of Storm Water Runoff Associated with Construction Activity* by submitting a Notice of Intent to the SWRCB along with an effective SWPPP that includes BMPs to minimize erosion. In addition, pursuant to existing State regulations, incorporation of CBC seismic design criteria and engineering design measures are required for all public utility projects. Implementation of **MM 4.7.1** through **MM 4.7.3** ensures that the project's impacts are not cumulatively considerable.

MITIGATION

MM 4.7.1 All grading plans, foundation plans, and structural calculations shall be reviewed by a qualified professional to ensure that all recommendations included in the SHN Geotechnical Report are implemented. Applicable notes shall be placed on the attachment sheet to the improvements plans and in applicable project plans and specifications.

If significant engineering design changes occur during construction, the District shall consult with a qualified geotechnical engineer to identify any geotechnical constraints related to the design changes. Recommendations of the geotechnical engineer shall be implemented as warranted.

- MM 4.7.2** The District shall ensure through contractual obligations that earthwork activities are monitored by a qualified professional to ensure that recommendations included in the final Geotechnical Report are implemented.
- MM 4.7.3** If paleontological resources (fossils) are discovered during construction, all work within a 60-foot radius of the find shall be halted until a professional paleontologist can evaluate the significance of the find. If any find is determined to be significant by the paleontologist, District representatives shall meet with the paleontologist to determine the appropriate course of action. If necessary, a Treatment Plan prepared by a paleontologist outlining recovery of the resource, analysis, and reporting of the find shall be prepared. The Treatment Plan shall be reviewed and approved by the District prior to resuming construction.

DOCUMENTATION

- SHN Consulting Engineers & Geologists, Inc.** 2019. Geologic Investigation Report. Proposed New Water Storage Tanks, Callahan, California.
- Siskiyou County.** 1973. Siskiyou County General Plan, Conservation Element. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_conservationelement.pdf. Accessed June 2019.
- _____. 1976. Siskiyou County General Plan, Seismic Safety and Safety Elements. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_seismicsafety-safetyelement.pdf. Accessed June 2019.
- _____. 1980. Siskiyou County General Plan, Scott Valley Area Plan. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scottvalleyareaplanwithoutlargemaps.pdf. Accessed June 2020.
- _____. 2018. Siskiyou County Draft Hazard Mitigation Plan Volume 1. https://www.co.siskiyou.ca.us/sites/default/files/fileattachments/emergency_services/page/1391/oes_20191008_siskiyoucohmp_vol.1_statesubmittal_femaupdate2019.pdf. Accessed June 2020.
- _____. 2018. Siskiyou County Draft Hazard Mitigation Plan Volume 2. https://www.co.siskiyou.ca.us/sites/default/files/fileattachments/emergency_services/page/1391/oes_20191008_siskiyoucohmp_vol.2_statesubmittal_femaupdate2019.pdf. Accessed June 2020.
- State of California, Department of Conservation, California Geological Survey.** 2019. Earthquake Zones of Required Investigation. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>. Accessed June 2019.
- _____. 2010. Fault Activity Map of California. <http://maps.conservation.ca.gov/cgs/fam/>. Accessed June 2019.
- U.S. Department of Agriculture, Natural Resource Conservation Service.** 2018. Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed November 2019.
- _____. Soil Conservation Service. 1983. Soil Survey of Siskiyou County California, Central Part. https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/siskiyouCA1983/siskiyouCA1983-I.pdf. Accessed November 2019.
- _____. Soil Conservation Service. 1982. Soil Survey of Klamath National Forest Area. https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/klamathNPCA1982/klamathCA1982-I.pdf. Accessed November 2019.

4.8 GREENHOUSE GAS EMISSIONS

Would the project:

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

REGULATORY CONTEXT

FEDERAL

U.S. Environmental Protection Agency

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gas emissions (GHGs) are air pollutants covered by the federal Clean Air Act (CAA). In reaching its decision, the Court also acknowledged that climate change is caused, in part, by human activities. The Supreme Court's ruling paved the way for the regulation of GHG emissions by the USEPA under the CAA. The USEPA has enacted regulations that address GHG emissions, including, but not limited to, mandatory GHG reporting requirements, carbon pollution standards for power plants, and air pollution standards for oil and natural gas.

STATE

California Executive Order (EO) S-3-05

EO S-03-05 was signed by the Governor on June 1, 2005, and established the goal of reducing statewide GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

Assembly Bill 32 (Global Warming Solutions Act of 2006)

As required by AB 32 (2006), CARB adopted the initial Climate Change Scoping Plan in 2008 that identified the State's strategy to achieve the 2020 GHG emissions limit via regulations, market-based mechanisms, and other actions. AB 32 requires that the Scoping Plan be updated every five years. CARB's first update to the Climate Change Scoping Plan (2014) addressed post-2020 goals and identified the need for a 2030 mid-term target to establish a continuum of actions to maintain and continue reductions.

Executive Order B-30-15 (2015) extended the goal of AB 32 and set a GHG reduction goal of 40 percent below 1990 levels by 2030. In December 2017, CARB adopted the second update to the Scoping Plan that includes strategies to achieve the 2030 mid-term target and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

The 2017 Scoping Plan Update recommends that local governments aim to achieve a community-wide goal of no more than 6 MT CO_{2e} per capita by 2030 and no more than 2 MT CO_{2e} per capita by 2050, which is consistent with the State's long-term goals.

Senate Bill 32/Assembly Bill 197

These two bills were signed into legislation on September 8, 2016. As set forth in EO B-30-15, SB 32 requires CARB to reduce GHG emissions to 40 percent below the 1990 levels by 2030. AB 197 requires that GHG emissions reductions be achieved in a manner that benefits the state's most disadvantaged communities. AB 197 requires CARB to prioritize direct GHG emission reductions in a manner that benefits the state's most disadvantaged communities and to consider social costs when adopting regulations to reduce GHG emissions. AB 197 also provides more legislative oversight of CARB by adding two new legislatively appointed non-voting members to the CARB Board and limiting the term length of Board members to six years.

Renewables Portfolio Standard

In 2002, SB 1078 was passed to establish the State's Renewables Portfolio Standard (RPS) Program, with the goal of increasing the amount of electricity generated and sold to retail customers from eligible renewable energy resources. The initial goal was to increase the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. SB 350 (2015) codified a target of 50 percent renewable energy by 2030, and requires California utilities to develop integrated resource plans that incorporate a GHG emission reduction planning component beginning January 1, 2019. SB100 (2018) codified targets of 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045.

California Executive Order B-55-18

EO B-55-18 was issued by the Governor on September 10, 2018. It sets a statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets.

Senate Bill 375 (Sustainable Communities and Climate Protection Act of 2008)

Under SB 375, the CARB sets regional targets for the reduction of GHG emissions from passenger vehicles and light duty trucks. Each Metropolitan Planning Organization (MPO) in the State, or Regional Transportation Planning Agency for regions without a MPO, must include a Sustainable Communities Strategy in the applicable Regional Transportation Plan that demonstrates how the region will meet the GHG emissions reduction targets.

CEQA Guidelines

§15064.4 of the CEQA Guidelines states that the lead agency should focus its GHG emissions analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A lead agency has the discretion to determine whether to use a model or methodology to quantify GHG emissions or to rely on a qualitative or performance-based standard.

The GHG analysis should consider: 1) the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting, 2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project, and 3) the extent to which the project complies with any regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an Environmental Impact Report (EIR) must be prepared for the project. To determine transportation-generated greenhouse gas emissions in particular, lead agencies may determine that it is appropriate to use the same method used to determine the transportation impacts associated with a project's VMT.

In *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204, which involved the Newhall Ranch project, the California Supreme Court concluded that a legally appropriate approach to assessing the significance of GHG emissions was to determine whether a project was consistent with "performance based standards' adopted to fulfill 'a statewide . . . plan for the reduction or

mitigation of greenhouse gas emissions' (CEQA Guidelines § 15064.4(a)(2), (b)(3); see also *id.*, §15064(h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including 'plans or regulations for the reduction of greenhouse gas emissions'].)" (62 Cal.4th at p. 229.)

Greenhouse Gases Defined

Table 4.8-1 provides descriptions of the GHGs identified in California Health and Safety Code §38505(g).

**TABLE 4.8-1
Greenhouse Gases**

Greenhouse Gas	Description
Carbon dioxide (CO ₂)	Carbon dioxide (CO ₂) is the primary greenhouse gas emitted through human activities. In 2014, CO ₂ accounted for about 80.9 percent of all U.S. greenhouse gas emissions from human activities. The main human activity that emits CO ₂ is the combustion of fossil fuels (coal, natural gas, and oil) for energy and transportation, although certain industrial processes and land-use changes also emit CO ₂ .
Methane (CH ₄)	Methane (CH ₄) is the second most prevalent greenhouse gas emitted in the United States from human activities. Methane is emitted by natural sources such as wetlands, as well as human activities such as the raising of livestock; the production, refinement, transportation, and storage of natural gas; methane in landfills as waste decomposes; and in the treatment of wastewater.
Nitrous oxide (N ₂ O)	In 2014, nitrous oxide (N ₂ O) accounted for about 6 percent of all U.S. greenhouse gas emissions from human activities. Nitrous oxide is naturally present in the atmosphere as part of the Earth's nitrogen cycle. Human activities such as agricultural soil management (adding nitrogen to soil through use of synthetic fertilizers), fossil fuel combustion, wastewater management, and industrial processes are also increasing the amount of N ₂ O in the atmosphere.
Hydrofluorocarbons (HFCs)	Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products such as refrigerants, aerosol propellants, solvents, and fire retardants. They are released into the atmosphere through leaks, servicing, and disposal of equipment in which they are used.
Perfluorocarbons (PFCs)	Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF ₄), perfluoroethane (C ₂ F ₆), perfluoropropane (C ₃ F ₈), perfluorobutane (C ₄ F ₁₀), perfluorocyclobutane (C ₄ F ₈), perfluoropentane (C ₅ F ₁₂), and perfluorohexane (C ₆ F ₁₄). Perfluorocarbons are produced as a byproduct of various industrial processes associated with aluminum production and the manufacturing of semiconductors.
Sulfur hexafluoride (SF ₆)	Sulfur hexafluoride (SF ₆) is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF ₆ is primarily used in magnesium processing and as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF ₆ produced worldwide.

Greenhouse Gas	Description
Nitrogen trifluoride (NF ₃)	Nitrogen trifluoride is a colorless, odorless, nonflammable gas that is highly toxic by inhalation. It is one of several gases used in the manufacture of liquid crystal flat-panel displays, thin-film photovoltaic cells and microcircuits.

LOCAL

There are no local regulations pertaining to greenhouse gas emissions that apply to the proposed project.

DISCUSSION OF IMPACTS

Question A

Gases that trap heat in the atmosphere create a greenhouse effect that results in global warming and climate change. These gases are referred to as greenhouse gases (GHGs). As described in Table 4.8-1, some GHGs occur both naturally and as a result of human activities, and some GHGs are exclusively the result of human activities.

The atmospheric lifetime of each GHG reflects how long the gas stays in the atmosphere before natural processes (e.g., chemical reactions) remove it. A gas with a long lifetime can exert more warming influence than a gas with a short lifetime. In addition, different GHGs have different effects on the atmosphere. For this reason, each GHG is assigned a global warming potential (GWP) which is a measure of the heat-trapping potential of the gas over a specified period of time.

Gases with a higher GWP absorb more heat than gases with a lower GWP, and thus have a greater effect on global warming and climate change. The GWP metric is used to convert all GHGs into CO₂ equivalent (CO₂e) units, which allows policy makers to compare impacts of GHG emissions on an equal basis. The GWPs and atmospheric lifetimes for each GHG are shown in **Table 4.8-2**.

TABLE 4.8-2
Greenhouse Gases: Global Warming Potential and Atmospheric Lifetime

GHG	GWP (100-year time horizon)	Atmospheric Lifetime (years)
CO ₂	1	50 – 200
CH ₄	25	12
N ₂ O	298	114
HFCs	Up to 14,800	Up to 270
PFCs:	7,390-12,200	2,600 – 50,000
SF ₆	22,800	3,200
NF ₃	17,200	740

Source: U.S. Environmental Protection Agency, 2018.

Thresholds of Significance

Siskiyou County has not adopted numerical thresholds of significance or performance-based standards for GHG emissions. As stated under Regulatory Context, §15064.4 of the CEQA Guidelines gives lead agencies the discretion to determine whether to use a model or other method to quantify GHG emissions and/or to rely on a qualitative or performance-based standard.

For a quantitative analysis, a lead agency could determine a less-than-significant impact if a project did not exceed an established numerical threshold. For a qualitative/performance-based threshold, a lead agency could determine a less-than-significant impact if a project complies with State, regional, and/or local programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

If a qualitative approach is used, lead agencies should still quantify a project’s construction and operational GHG emissions to determine the amount, types, and sources of GHG emissions resulting from the project. Quantification may be useful in indicating to the lead agency and the public whether emissions reductions are possible, and if so, from which sources. For example, if quantification reveals that a substantial portion of a project’s emissions result from mobile sources (automobiles), a lead agency may consider whether design changes could reduce the project’s vehicle miles traveled (VMT) (OPR, 2018).

Project GHG Emissions

GHG emissions resulting from implementation of the proposed project were estimated using the CalEEMod.2016.3.1 software. CalEEMod is a statewide model designed to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Because operational emissions are not anticipated to be higher than existing levels, the GHG analysis focuses on construction-related GHG emissions. Site-specific inputs and assumptions for the proposed project include, but are not limited to, the following. Output files, including all site-specific inputs and assumptions, are provided in **Appendix A**.

- Emissions from construction are based on all construction-related activities, including but not limited to grading, site preparation, use of construction equipment, material hauling, trenching, and paving.
- Construction would start in May 2023 and occur over a period of approximately one year.
- Total land disturbance would be approximately 4.5 acres; 1,200 cubic yards (CY) of dirt would be imported; 1,700 CY would be exported.
- The total area to be re-paved following pipeline installation would be 0.14 acres.
- The total weight of demolition debris (pavement) to be removed from the project site would be approximately 116 tons.

Estimated annual construction GHG emissions for the proposed project are shown in **Table 4.8-3**.

**TABLE 4.8-3
Estimated Maximum Annual Greenhouse Gas Emissions (Metric Tons)**

Carbon Dioxide (CO ₂)	Methane (CH ₄)	Nitrous Oxide (N ₂ O)	Carbon Dioxide Equivalent (CO ₂ e)
242.22	0.06	0	243.61

Source: CalEEMod, 2021.

Conclusions

As stated above, the County has not adopted numerical thresholds for GHG emissions. Numerical thresholds that have been referenced for other projects in the north State range from 700 MT per year CO₂e (Tehama County) to 1,100 MT per year CO₂e for both construction and operational emissions and 10,000 MT per year CO₂e for stationary sources (various communities in the Sacramento Valley and Northeast Plateau air basins). As indicated in **Table 4.8-3**, the project’s GHG emissions are negligible in comparison to these thresholds. Further, the project does not include any components that could potentially lead to population growth or a permanent increase in VMT or result in mobile source emissions over existing levels. Therefore, impacts would be less than significant.

Question B

See discussions under Regulatory Context and Question A above. There are no adopted local plans associated with GHG emissions. The District would ensure compliance with applicable State regulations adopted for the purpose of reducing GHG emissions through contractual obligations. There would be no impact.

CUMULATIVE IMPACTS

GHG emissions and global climate change are, by nature, cumulative impacts. Unlike criteria pollutants, which are pollutants of regional and local concern, GHGs are global pollutants and are not limited to the area in which they are generated. As discussed under Regulatory Context above, the State legislature has adopted numerous programs and regulations to reduce statewide GHG emissions.

As documented above, construction-related GHG emissions would be temporary and cease at completion of the project, and the project would not generate operational GHG emissions above existing levels; therefore, the proposed project would not significantly contribute to adverse impacts associated with cumulative GHG emissions and cumulative impacts would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

- California Air Pollution Control Officers Association.** 2008. CEQA & Climate Change. <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>. Accessed May, 2020.
- California Environmental Protection Agency, Air Resources Board.** 2018. California Global Warming Solutions Act of 2006 (AB 32) Scoping Plan Website. <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed May 2020.
- California Natural Resources Agency.** 2018. Safeguarding California Plan: 2018 Update. <http://resources.ca.gov/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>. Accessed May 2020.
- California Office of Planning and Research.** 2018. Discussion Draft: CEQA and Climate Change Advisory. http://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Advisory.pdf. Accessed October 2020.
- United States Environmental Protection Agency.** 2019. Overview of Greenhouse Gases. <https://www.epa.gov/ghgemissions/overview-greenhouse-gases#f-gases>. Accessed October 2020.
- _____. 2017. Understanding Global Warming Potentials. <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>. Accessed October 2020.
- University of California, Berkeley Law.** 2020. California Climate Policy Dashboard. <https://www.law.berkeley.edu/research/cee/research/climate/climate-policy-dashboard/>. Accessed October 2020.

4.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, 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 area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>

REGULATORY CONTEXT

FEDERAL

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the primary federal law for the regulation of solid waste and hazardous waste in the United States and provides for the “cradle-to-grave” regulation of hazardous wastes, including generation, transportation, treatment, storage, and disposal. The USEPA has primary responsibility for implementing the RCRA. The RCRA requires businesses, institutions, and other entities that generate hazardous waste to track such waste from the point of generation until it is recycled, reused, or properly disposed.

USEPA’s Risk Management Plan

Section 112(r) of the federal CAA (referred to as the USEPA’s Risk Management Plan) specifically covers “extremely hazardous materials” which include acutely toxic, extremely flammable, and highly explosive substances. Facilities involved in the use or storage of extremely hazardous materials must implement a

Risk Management Plan (RMP), which requires a detailed analysis of potential accident factors and implementation of applicable mitigation measures.

Federal Occupational Safety and Health Administration (OSHA)

The Occupational Safety and Health Act (OSHA) prepares and enforces occupational health and safety regulations with the goal of providing employees a safe working environment. OSHA regulations apply to the work place and cover activities ranging from confined space entry to toxic chemical exposure. OSHA regulates workplace exposure to hazardous chemicals and activities through regulations governing workplace procedures and equipment.

U.S. Department of Transportation

The United States Department of Transportation regulates the interstate transport of hazardous materials and wastes through implementation of the Hazardous Materials Transportation Act. This act specifies driver-training requirements, load labeling procedures, and container design and safety specifications. Transporters of hazardous wastes must also meet the requirements of additional statutes such as RCRA, discussed previously.

STATE

California Code of Regulations (CCR), Title 22, Definition of Hazardous Material

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, State, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22, §66260.10, of the CCR as: *“A substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.”*

Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under the RCRA and the State Hazardous Waste Control Law. Both laws impose “cradle-to-grave” regulatory systems for handling hazardous waste in a manner that protects human health and the environment.

California Occupational Safety and Health Administration (Cal/OSHA)

The California Occupational Safety and Health Administration (Cal/OSHA) has primary responsibility for developing and enforcing state workplace safety regulations, including requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations, which include identifying and labeling hazardous substances, communicating information related to hazardous substances and their handling, and preparing health and safety plans to protect workers and employees at hazardous waste sites.

California Department of Forestry and Fire Protection (CAL FIRE)

The Bates Bill (AB 337), enacted in 1992, required CAL FIRE to work with local governments to identify high fire hazard severity zones throughout each county in the State. CAL FIRE adopted Fire Hazard Severity Zone (FHSZ) Maps for State Responsibility Areas (SRAs) in November 2007. Pursuant to California Government Code §51175-51189, CAL FIRE also recommended FHSZs for Local Responsibility Areas (LRAs). Over the years, CAL FIRE has updated the maps and provided new recommendations to local governments based on fire hazard modeling.

The fire hazard model considers wildland fuels (natural vegetation that burns during the wildfire); topography (fires burn faster as they burn up-slope); weather (fire burns faster and with more intensity when air temperature is high, relative humidity is low, and winds are strong); and ember production and movement (how far embers move and how receptive the landing site is to new fires). The model recognizes that some areas of California have more frequent and severe wildfires than other areas.

Regional Water Quality Control Board

The SWRCB and RWQCBs regulate hazardous substances, materials, and wastes through a variety of state statutes, including the Porter-Cologne Water Quality Control Act and underground storage tank cleanup laws. The Regional Boards regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. Any person proposing to discharge waste within the State must file a report of waste discharge with the appropriate regional board. The proposed project is located within the jurisdiction of the North Coast RWQCB.

Hazardous Materials Emergency Response/Contingency Plan

Chapter 6.95, §25503, of the California Health and Safety Code requires businesses that handle/store a hazardous material or a mixture containing a hazardous material to establish and implement a Business Plan for Emergency Response (Business Plan). A Business Plan is required when the amount of hazardous materials exceeds 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases.

A Business Plan is also required if federal thresholds for extremely hazardous substances are exceeded. The Business Plan includes procedures to deal with emergencies following a fire, explosion, or release of hazardous materials that could threaten human health and/or the environment.

California Accidental Release Prevention Program (CalARP)

The goal of the California Accidental Release Prevention Program (CalARP) is to prevent accidental releases of substances that pose the greatest risk of immediate harm to the public and the environment. Facilities are required to prepare a Risk Management Plan in compliance with CCR Title 19, Division 2, Chapter 4.5, if they handle, manufacture, use, or store a federally regulated substance in amounts above established federal thresholds; or if they handle a state regulated substance in amounts greater than state thresholds and have been determined to have a high potential for accident risk.

LOCAL

Siskiyou County General Plan, Land Use Element

The Land Use Element of the Siskiyou County General Plan was updated in 1997. The Element guides future development to occur in areas that will be easiest to develop without entailing great public service costs, to have the least negative environmental effect, and to not displace or endanger the County's critical natural resources. The Land Use Element includes the following general policies related to hazards:

- All development proposed within a wildfire hazard area shall be designed to provide safe ingress, egress, and have an adequate water supply for fire suppression purposes in accordance with the degree of wildfire hazard.

Siskiyou County General Plan, Seismic-Safety and Safety Elements

The Seismic-Safety Element and Safety Element of the Siskiyou County General Plan were adopted in 1976 to examine the particular physical needs of the county in relation to safety and seismic-safety, and to establish procedures for the orderly development of the county relative to physical problems. The Safety and Seismic-Safety Elements include the following general recommendations related to safety:

- Regarding fire protection requirements of the citizens of Siskiyou County, Siskiyou County has established Callahan as a fire protection district. In addition, during the fire season the firefighting capability of state and federal agencies is available to assist in the fire control.

Siskiyou County - Scott Valley Area Plan

The Scott Valley Area Plan represents a combined document – the Land Use Element of the Siskiyou County General Plan for the Scott Valley Watershed and the Environmental Impact Report on the Plan. The Plan sets forth development policies to guide and specify where future growth in the watershed will be located in order to fulfill the stated Plan goals. These policies are devised in order to ensure that growth will not be incompatible with surrounding or abutting critical resource areas and will ensure that development will be located close to existing public services, so as to not overburden public services. The Scott Valley Area Plan includes the following general policies related to hazards:

- All development will be designed so that every individual parcel of land created is a buildable site, and will not create erosion, runoff, access, fire hazard, resource protection, or any other environmentally related problems. This policy shall also apply to all proposed uses of the land.
- Safe, buildable access must exist to all proposed uses of the land. The access must also be adequate to accommodate the immediate and cumulative traffic impacts of the proposed development.

DISCUSSION OF IMPACTS

Questions A and B

During construction activities, limited quantities of hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc., may be used in the project area. There is a possibility of accidental release of hazardous substances into the environment, such as spilling petroleum-based fuels used for construction equipment. Construction contractors are required to comply with applicable federal and state environmental and workplace safety laws. Additionally, construction contractors are required to implement BMPs for the storage, use, and transportation of hazardous materials. Because construction activities would comply with existing regulations and project operation would not increase the need for the transport, use, or disposal of hazardous materials, impacts would be less than significant.

Question C

According to the Siskiyou County Office of Education, the school closest to the project site is Etna Elementary School, which is located on Collier Way approximately 12 miles north of the project site. There are no other schools within one-quarter mile of the proposed improvements.

Question D

The Cortese list is prepared in accordance with California Government Code §65962.5. The following databases were reviewed to locate "Cortese List" sites.

- List of Hazardous Waste and Substances sites from the Department of Toxic Substances Control (DTSC) EnviroStor database.
- SWRCB GeoTracker database.
- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit.
- List of "active" Cease and Desist Orders and Clean-Up and Abatement Orders from the SWRCB.

The EnviroStor database identified the following hazardous waste site:

Hjertager Mill Site

The Hjertager Mill Site is located approximately 1.1 miles northwest of proposed improvements on the west side of Highway 3. Potential contaminants of concern, including waste oil, mixed oil, and waste potentially containing dioxins, were discovered on September 28, 1988. A preliminary assessment identifying potential onsite disposal of hazardous materials was completed on October 2, 1990. According to the assessment, no evidence of chemical use or disposal was found. Therefore, there would be no impact.

Additionally, the SWRCB Geotracker database does not identify any active clean-up sites, active Cease and Desist Orders, or Clean-Up and Abatement Orders within a one-mile radius of the proposed improvements. Therefore, the proposed project would have no impact on such sites.

Question E

The nearest airport, Scott Valley Airport, is located approximately 17 miles north of the northern-most planned water system improvements. Because the project site is not located in an airport land use area or within two miles of a public airport, the project would not result in safety hazards related to airports.

Question F

The proposed project does not involve a use or activity that could interfere with long-term emergency response or emergency evacuation plans for the area. Although a temporary increase in traffic could occur during construction and could interfere with emergency response times, construction-related traffic would be minor due to the overall scale of the construction activities. Further, construction-related traffic would be spread over the duration of the construction schedule and would be minimal on a daily basis.

In addition, pursuant to Cal/OSHA requirements, temporary traffic control during completion of activities that require work in the public right-of-way is required and must adhere to the procedures, methods and guidance given in the current edition of the California Manual on Uniform Traffic Control Devices (MUTCD). Specific requirements for traffic safety measures would be included in the District's contract documents. At the discretion of the State or County, the contractor may be required to submit a temporary traffic control plan for review and approval prior to issuance of an encroachment permit. The plan must illustrate the location of the work, affected roads, and types and locations of temporary traffic control measures (i.e., signs, cones, flaggers, etc.) that would be implemented during the work. These requirements ensure that impacts are less than significant.

Question G

Wildland fire hazards associated with the proposed project include construction of one building that may be susceptible to burning, as well as an increased potential for wildfire ignition during construction. The new building would be a wood-framed 8-foot by 12-foot (96 square feet) chemical dosing building located near the lower tank site; the building would be at some risk due to wildland fires. However, the net effect of the project would be to reduce the risk of fires by increasing water storage and hydrant flow capacities.

Equipment used during construction activities, including power tools and acetylene torches, may create sparks that could ignite dry grass. However, the California Fire Code includes requirements that must be followed during construction, including Chapter 33 (Fire Safety During Construction and Demolition) and Chapter 35 (Welding and Other Hot Work). These regulations prescribe safeguards for construction, alteration, and demolition operations intended to maintain required levels of fire

protection, limit fire spread, establish the appropriate operation of equipment, and promote prompt response to fire emergencies. The regulations also address fire protection systems, access to the site and building by fire personnel, hazardous materials storage and use, and temporary heating and other ignition sources. Specific safeguards are included for welding, cutting, open torches, and other hot work operations to prevent sparks or heat from igniting exposed combustibles. Implementation of existing California Fire Code regulations ensures that impacts during construction would be less than significant.

CUMULATIVE IMPACTS

Other than wildfires, hazard-related impacts associated with the proposed project are site specific and have the potential to affect only a limited area on a temporary basis during construction of the improvements. The transport, use, and disposal of hazardous chemicals would be regulated in a similar fashion to other cumulative projects using hazardous chemicals for site-specific activities. In addition, pursuant to conditions for issuance of encroachment permits, the proposed project and cumulative projects must implement temporary traffic control measures (i.e., signs, cones, flaggers, etc.) to ensure that emergency response vehicles are not hindered by construction activities. Likewise, the California Fire Code includes requirements that must be followed for construction operations and for building safety. Because the proposed project and cumulative projects are required to implement measures to reduce the potential for adverse impacts associated with hazards and hazardous materials, including wildfire, the proposed project's cumulative impacts would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Forestry and Fire Protection (CAL FIRE). 2020. Fire Hazard Severity Zone Viewer. <https://egis.fire.ca.gov/FHSZ/>. Accessed June 2020.

California Environmental Protection Agency. 2021. Cortese List Data Resources. <http://www.calepa.ca.gov/sitecleanup/corteselist/>. Accessed May 2021.

Department of Toxic Substances Control. 2021. EnviroStor Cleanup Documents: Hjertager Mill, Callahan, California. https://www.envirostor.dtsc.ca.gov/public/map/?global_id=47240004. Accessed May 2021.

Federal Aviation Administration. 2020. Airport Facilities Data. <https://www.faa.gov/>. Accessed June 2020.

Siskiyou County. Siskiyou County General Plan. <https://www.co.siskiyou.ca.us/planning/page/general-plan>. Accessed June 2020.

_____. 1980. Siskiyou County General Plan, Scott Valley Area Plan. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scottvalleyareaplanwithoutlargemaps.pdf. Accessed June 2020.

Siskiyou County Office of Education. 2020. Siskiyou County Schools. <https://www.siskiyoucoe.net/schools>. Accessed June 2020.

4.10 HYDROLOGY AND WATER QUALITY

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water 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, or through the addition of impervious surfaces in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) 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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

Clean Water Act (CWA)

The CWA (33 USC §1251-1376), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality and was established to “*restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.*” Pertinent sections of the Act are as follows:

1. Sections 303 and 304 provide for water quality standards, criteria, and guidelines.
2. Section 401 (Water Quality Certification) requires an applicant for any federal permit that would authorize a discharge to waters of the U.S to obtain certification from the state that the discharge will comply with other provisions of the Act.
3. Section 402 establishes the NPDES, a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the U.S. This permit program is administered by the SWRCB and is discussed in detail below.

4. Section 404, jointly administered by the USACE and USEPA, establishes a permit program for the discharge of dredged or fill material into waters of the U.S.

Federal Anti-Degradation Policy

The federal Anti-Degradation Policy is part of the CWA (Section 303(d)) and is designed to protect water quality and water resources. The legislation directs states to adopt a statewide policy that protects designated uses of water bodies (e.g., fish and wildlife, recreation, water supply, etc.). The water quality necessary to support the designated use(s) must be maintained and protected.

Safe Drinking Water Act

Under the 1974 Safe Drinking Water Act, most recently amended in 1996, USEPA regulates contaminants of concern to domestic water supply, which are those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are classified as either primary or secondary Maximum Contaminant Levels (MCLs). MCLs and the process for setting these standards are reviewed triennially.

Federal Emergency Management Agency (FEMA)

FEMA is responsible for mapping flood-prone areas under the National Flood Insurance Program (NFIP). Communities that participate in the NFIP are required to adopt and enforce a floodplain management ordinance to reduce future flood risks related to new construction in a flood hazard area. In return, property owners have access to affordable federally-funded flood insurance policies.

National Pollutant Discharge Elimination System

Under Section 402(p) of the CWA, the USEPA established the NPDES to enforce discharge standards for both point-source and non-point-source pollution. Dischargers can apply for individual discharge permits, or apply for coverage under the General Permits that cover certain qualified dischargers. Point-source discharges include municipal and industrial wastewater, stormwater runoff, combined sewer overflows, sanitary sewer overflows, and municipal separate storm sewer systems. NPDES permits impose limits on discharges based on minimum performance standards or the quality of the receiving water, whichever type is more stringent in a given situation.

STATE

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (California Water Code §13000 *et seq.*) is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of waters of the State. The Porter-Cologne Act applies to surface waters, wetlands, and groundwater, and to both point and non-point sources of pollution. The Act requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. The RWQCBs enforce waste discharge requirements identified in the Report.

State Anti-Degradation Policy

In 1968, as required under the Federal Anti-Degradation Policy, the SWRCB adopted an Anti-Degradation Policy, formally known as the *Statement of Policy with Respect to Maintaining High Quality Waters in California* (State Water Board Resolution No. 68-16). Under the Anti-Degradation Policy, any actions that can adversely affect water quality in surface or ground waters must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial use of the water, and not result in water quality less than that prescribed in water quality plans and policies.

National Pollutant Discharge Elimination System

Pursuant to the federal CWA, the responsibility for issuing NPDES permits and enforcing the NPDES program was delegated to the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB). NPDES permits are also referred to as waste discharge requirements (WDRs) that regulate discharges to waters of the U.S. Below is a description of relevant NPDES general permits.

Construction Activity and Post-Construction Requirements

Discharges from construction sites that disturb one acre or more of total land area are subject to the NPDES permit for *Discharges of Storm Water Runoff associated with Construction Activity* (currently Order No. 2009-009-DWQ), also known as the Construction General Permit. The permitting process requires the development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP). Coverage under the Construction General Permit is obtained by submitting a Notice of Intent (NOI) to the SWRCB and preparing the SWPPP prior to the beginning of construction. The SWPPP must include BMPs to reduce pollutants and any more stringent controls necessary to meet water quality standards. Dischargers must also comply with water quality objectives as defined in the applicable Basin Plan. If Basin Plan objectives are exceeded, corrective measures are required.

The Construction General Permit includes post-construction requirements for areas in the State not covered by a Standard Urban Storm Water Management Plan (SUSWMP) or a Phase I or Phase II MS4 Permit. These requirements are intended to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream or downstream.

Where applicable, the SWPPP submitted to the SWRCB with the NOI must include a description of all post-construction stormwater management measures. The SWRCB SMARTS post-construction calculator or similar method would be used to quantify the runoff reduction resulting from implementation of the measures. The applicant must also submit a plan for long-term maintenance with the NOI. The maintenance plan must be designed for a minimum of five years and must describe the procedures to ensure that the post-construction stormwater management measures are adequately maintained.

Dewatering Activities (Discharges to Surface Waters and Storm Drains)

Construction dewatering activities that involve the direct discharge of relatively pollutant-free wastewater that poses little or no threat to the quality of waters of the U.S. are subject to the provisions of NCRWQCB Order R1-2015-0003 (NPDES No. CAG0024902), *Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region*, as amended. WDRs for this order include discharge prohibitions, receiving water limitations, monitoring, and reporting, etc. The District may be required to obtain coverage under this order, which would be initiated by submitting a Notice of Intent to the NCRWQCB.

Dewatering Activities (Discharges to Land)

Construction dewatering activities that are contained on land and do not enter waters of the U.S. are authorized under SWRCB Water Quality Order No. 2003-003-DWQ, provided that the dewatering discharge is of a quality as good as or better than the underlying groundwater, and there is a low risk of nuisance.

Water Quality Control Plans (Basin Plans)

Each of the State's RWQCBs is responsible for developing and adopting a basin plan for all areas within its region. The Plans identify beneficial uses to be protected for both surface water and groundwater. Water quality objectives for all waters addressed through the plans are included, along with implementation programs and policies to achieve those objectives. Waste discharge requirements (WDRs) were adopted in order to attain the beneficial uses listed for the Basin Plan areas.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), enacted in September 2014, established a framework for groundwater resources to be managed by local agencies in areas designated by the Department of Water Resources (DWR) as “medium” or “high” priority basins. Basins were prioritized based, in part, on groundwater elevation monitoring conducted under the California Statewide Groundwater Elevation Monitoring (CASGEM) program.

The SGMA requires local agencies in medium- and high-priority basins to form Groundwater Sustainability Agencies (GSAs) and be managed in accordance with locally-developed Groundwater Sustainability Plans (GSPs). Medium- and high-priority basins must be managed under a GSP by January 31, 2022. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans.

LOCAL

Siskiyou County General Plan, Conservation Element

The Conservation Element of the Siskiyou County General Plan was adopted in 1973 to provide guidance for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers, and other water areas, including harbors, fisheries, and wildlife areas. The Conservation Element includes the following general objectives related to hydrology and water resources:

- To preserve the quality of the existing water supply in Siskiyou County and adequately plan for the expansion and retention of valuable water supplies for future generations and to provide for a comprehensive program for sustained multiple use of watershed lands through reduction of fire hazards, erosion control and type conversion of vegetation where desirable and feasible.

Siskiyou County General Plan, Land Use Element

The Land Use Element of the Siskiyou County General Plan was updated in 1997. The main goal of the Element is to allow the physical environment to determine the appropriate future land use pattern that will develop in Siskiyou County. The Element guides future development to occur in areas that will be easiest to develop without entailing great public service costs, to have the least negative environmental effect, and to not displace or endanger the County’s critical natural resources. The Land Use Element includes the following general policies related to hydrology and water resources:

- No development may be allowed within the designated floodways, and any development proven to be outside the designated floodway and within the 100-year flood hazard boundary shall be in accordance with the requirements of the County's flood plain management ordinance.
- No residential or industrial development shall be allowed on water bodies. Exceptions may be considered for water supply, hydroelectric power generation facilities, public works projects necessary to prevent or stabilize earth movement, erosion, and the enhancement of migratory fish and other wildlife, light commercial, open space, non-profit and non-organizational in nature recreational uses, and commercial/recreational uses.

Siskiyou County - Scott Valley Area Plan

The Scott Valley Area Plan sets forth development policies to guide and specify where future growth in the watershed will be located in order to fulfill the stated Plan goals. These policies are devised in order to ensure that growth will not be incompatible with surrounding or abutting critical resource areas and will ensure that development will be located close to existing public services, so as to not overburden public services. The Scott Valley Area Plan includes the following general policies related to hydrology and water quality:

- No development shall be allowed within the designated floodways, and any development within the 100-year flood hazard boundary outside the designated floodways shall be in accordance with the requirements of the county's flood hazard ordinance. Proof that land is not within a designated floodway can only be made when so indicated by the county engineer. The county engineer must make this determination prior to any action by the county on any proposed development.
- In order to maintain high water quality and prevent erosion and surface water runoff problems, the mountainous regions of the Scott Valley Watershed shall be excluded from any intense or dense development.

DISCUSSION OF IMPACTS

Questions A and E

The proposed project has the potential to temporarily degrade water quality due to increased erosion during project construction; however, as discussed under Regulatory Context above, and in Section 4.6 under Question B, the SWRCB Construction General Permit requires implementation of an effective SWPPP that includes BMPs to control construction-related erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat.

Because the Callahan area is not subject to a SUSWMP or a Phase I or Phase II MS4 Permit, the proposed project is subject to post-construction requirements included in the SWRCB Construction General Permit to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect impacts from stormwater runoff (i.e., pollution and/or hydromodification) upstream or downstream.

Post-construction measures are defined as structural and non-structural controls that detain, retain, or filter the release of pollutants to receiving waters after final stabilization is attained. Non-structural controls are required unless the discharger demonstrates that non-structural controls are infeasible or that structural controls will produce greater reduction in water quality impacts. Nonstructural controls may include vegetated swales, soil quality enhancement, setbacks, buffers and/or rooftop and impervious surface disconnection.

The SWPPP submitted to the SWRCB with the NOI for the proposed project must include a description of all post-construction stormwater management measures and a plan for long-term maintenance. The maintenance plan must be designed for a minimum of five years and must describe the procedures to ensure that the post-construction stormwater management measures are adequately maintained.

In addition, if dewatering is required during construction, the project is subject to a NCRWQCB General Order that includes specific requirements for monitoring, reporting, and implementing BMPs for construction dewatering activities. The District also must file a Report of Waste Discharge for any discharge of waste to land or surface waters that may impair a beneficial use of surface or groundwater of the state. Further, prior to any work in Boulder Creek or other waters of the State, the District must also obtain a State Water Quality Certification (or waiver) from the NCRWQCB, which will help ensure that the project will not violate established State water quality standards.

As discussed under Regulatory Context above, the SGMA established a framework for groundwater resources to be managed by local agencies in areas designated by the DWR as medium or high priority basins. The northern portion of the project site is located within the Scott Valley Groundwater Basin, which is currently designated as a medium priority basin (DWR, 2020). The designated Groundwater Sustainability Agency for the Scott Valley Groundwater Basin is the Siskiyou County Flood Control and Water Conservation District. The District is currently in the process of developing a draft Groundwater Sustainability Plan for the Basin, which must be submitted to the Department of

Water Resources by January 31, 2022. Compliance with NCRWQCB permit conditions ensures that the project would not violate any water quality standards or waste discharge requirements or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

Question B

The proposed project would not require new groundwater supplies for construction or operation and would not substantially increase the amount of impervious surface on the project site in a manner that would prevent the infiltration of water into the soil. For these reasons, impacts on groundwater supplies and recharge are less than significant, and the project would not impede sustainable groundwater management of the basin.

Question C

The project area located in the South Fork Scott River Watershed. The Scott River is a large interior watershed in south-central Siskiyou County that drains approximately 814 square miles before joining the Klamath River. Boulder Creek is a tributary to the South Fork of the Scott River and is the sole source of water for the community of Callahan.

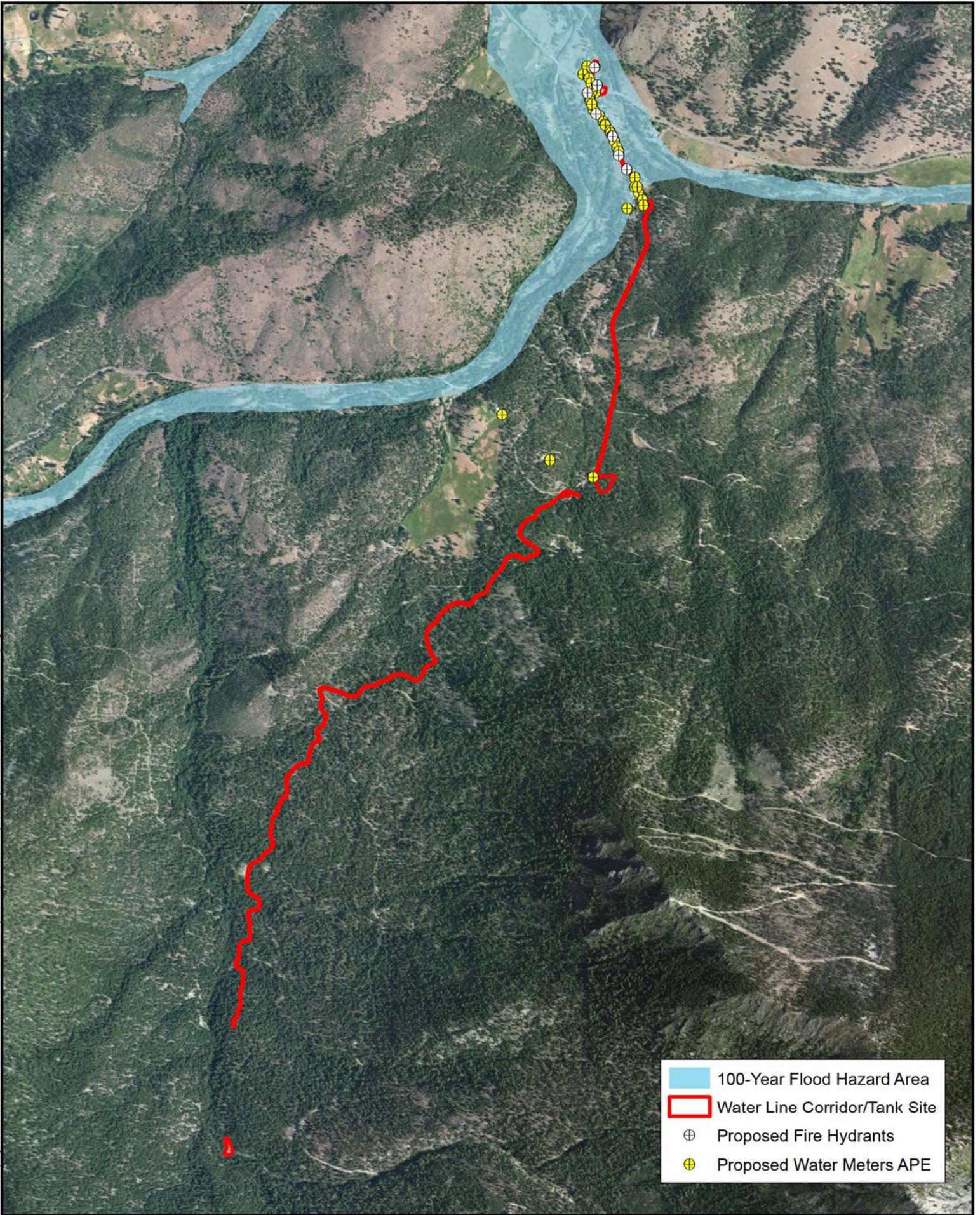
Although the proposed project would include installation of a new water intake in Boulder Creek, the intake would not increase the amount of surface water being withdrawn from Boulder Creek. Although Boulder Creek and its tributaries may be temporarily dewatered or re-routed during construction, no long-term changes to drainage patterns would occur. New impervious surfaces associated with the proposed project would include the new water tank, possible future water tank, water treatment building, water meters, and fire hydrants; together, these features would add about 1,500 square feet of impervious surfacing, which is a negligible amount.

Because BMPs for erosion control and spill prevention would be implemented, the project would not result in substantial erosion or sedimentation. Because project implementation would not result in substantial changes to drainage patterns or substantial addition of impervious surfaces, work would not cause a substantial increase in the rate or amount of surface runoff that would result in on-site or off-site flooding, creation of additional runoff that would exceed the capacity of stormwater runoff systems, or creation of additional runoff that would provide additional sources of polluted runoff.

With respect to flooding, the FEMA Flood Insurance Rate Map (Panel 06093C2925D, effective January 19, 2011), shows that the northern portion of the project site is located within a 1% annual chance flood hazard zone (see **Figure 4.10-1**). The flood zone includes nearly all of the water service area below the lower tank site, but does not include the tank site. The only above-ground facilities that would be installed in the FEMA-designated flood zone would be approximately six fire hydrants. The hydrants would have no perceptible effect on flood levels or flow patterns. Although not within a FEMA-designated flood zone, the new water intake would be exposed to flood flows. Protective bollards immediately upstream of the intake structure; the in-water facilities would not substantially impede or redirect flood flows. Impacts would be less than significant.

Question D

A tsunami is a wave generated in a large body of water (typically the ocean) by fault displacement or major ground movement. The project area is located approximately 70 miles east of the Pacific Ocean and is not at risk for inundation by tsunami. A seiche is a large wave generated in an enclosed body of water in response to ground shaking. Given the relatively small size of upstream water bodies and the low potential for intensive earthquakes in Siskiyou County, the risk of a seiche is negligible. Although the water distribution system is located within a FEMA-designated flood hazard zone and the water intake is located in a non-designated flood zone, no potential pollutants would be associated with either component of the water system and no pollutants would be released as a result of a flood event.



	100-Year Flood Hazard Area
	Water Line Corridor/Tank Site
	Proposed Fire Hydrants
	Proposed Water Meters APE

All depictions are approximate. Not a survey product. 10.16.20

 0  Feet
2,000

Figure 4.10-1
100-Year Flood Hazard Zone

CUMULATIVE IMPACTS

Completion of the proposed project and other potential cumulative projects in the region could temporarily degrade water quality due to increased erosion during construction; however, all development projects in the County are required to obtain coverage under the NPDES permit for *Discharges of Storm Water Runoff Associated with Construction Activity* and implement an effective SWPPP that includes BMPs to minimize erosion. In addition, all projects are required to comply with local regulations for stormwater runoff and storm drain systems. These regulations are intended to reduce the potential for cumulative impacts to water quality during construction. In addition, all projects in the County are subject to regulations for development in flood hazard areas to ensure that impacts related to flooding are minimized or avoided. With implementation of federal, State, and local regulations, the cumulative impact of the proposed project and other regional projects with respect to hydrology and water quality would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Water Resources. 2020. Sustainable Groundwater Management Act 2019 Basin Prioritization, Process and Results. <https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization>. Accessed July 2020.

_____. 2019. GAMA Groundwater Information System. <https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/default.asp?CMD=runreport&myaddress=callahan%2C+ca>. Accessed July 2020.

_____. 2020. Statewide Map of 2020 SGMA Basin Prioritization. <https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization>. Accessed July 2020.

North Coast Regional Water Quality Control Board. 2020. *Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region, NPDES No. CAG024902; Order R1-2020-0006*. https://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2020/20_0006_Low%20Threat%20Discharges%20to%20Surface%20Waters.pdf Accessed May 2020.

Siskiyou County. Siskiyou County General Plan. <https://www.co.siskiyou.ca.us/planning/page/general-plan>. Accessed June 2020.

_____. 1980. Siskiyou County General Plan, Scott Valley Area Plan. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scottvalleyareaplanwithoutlargemaps.pdf. Accessed June 2020.

Federal Emergency Management Agency. National Flood Hazard Map (Panel 06093C2925D), effective January 19, 2011. <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>. Accessed June 2020.

4.11 LAND USE AND PLANNING

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	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. Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

There are no federal regulations pertaining to land use and planning that apply to the proposed project.

STATE

California Government Code

California Government Code (CGC) §65300 *et seq.* contains many of the State laws pertaining to the regulation of land uses by cities and counties. These regulations include requirements for general plans, specific plans, subdivisions, and zoning. State law requires that all cities and counties adopt General Plans that include seven mandatory elements: land use, circulation, conservation, housing, noise, open space, and safety. A General Plan is defined as a comprehensive long-term plan for the physical development of the county or city, and any land outside its boundaries that is determined to bear relation to its planning. A development project must be found to be consistent with the General Plan prior to project approval.

LOCAL

Siskiyou County General Plan, Land Use Element

The Land Use Element of the Siskiyou County General Plan was updated in 1997. The main goal of the Element is to allow the physical environment to determine the appropriate future land use pattern that will develop in Siskiyou County. The Element guides future development to occur in areas that will be easiest to develop without entailing great public service costs, to have the least negative environmental effect, and to not displace or endanger the County's critical natural resources. The Land Use Element includes the following general policies related to land use and planning:

- All development will be designed so that every proposed use and every individual parcel of land created is a buildable site, and will not create erosion, runoff, access, fire hazard or any other resource or environmentally related problems.

Siskiyou County - Scott Valley Area Plan

The Scott Valley Area Plan sets forth development policies to guide and specify where future growth in the watershed will be located in order to fulfill the stated Plan goals. These policies are devised in order to ensure that growth will not be incompatible with surrounding or abutting critical resource areas and will

ensure that development will be located close to existing public services, so as to not overburden public services. The Scott Valley Area Plan includes the following general policies related to land use and planning:

- All land uses shall be designed in a manner that is compatible with surrounding planned and existing uses of the land. All proposed development is prohibited unless each site meets all criteria for development set forth by the North Coast Regional Water Quality Control Board and the Siskiyou County Health Department.

DISCUSSION OF IMPACTS

Question A

Land use impacts are considered significant if a proposed project would physically divide an existing community (a physical change that interrupts the cohesiveness of the neighborhood). The project would not create a barrier for existing or planned development; therefore, there would be no impact.

Question B

As discussed in each resource section of this Initial Study, the proposed project is consistent with applicable Goals and Policies of the Siskiyou County General Plan, Scott Valley Area Plan, and regulations of the regulatory agencies identified in Section 1.7 of this Initial Study. Where necessary, mitigation measures are included to reduce impacts to less than significant levels. Therefore, with implementation of the Mitigation Measures identified in Section 1.10, the proposed project would not conflict with any plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. No additional mitigation measures are necessary.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the project area, including population growth resulting from build-out of the County's General Plan and Scott Valley Area Plan, would be developed in accordance with local and regional planning documents. Thus, cumulative impacts associated with land use compatibility are expected to be less than significant. In addition, with implementation of the recommended mitigation measures, the proposed project would be consistent with the General Plan land use designations, goals, and policies, and would not contribute to the potential for adverse cumulative land use effects.

MITIGATION

None necessary.

DOCUMENTATION

- Siskiyou County.** 1997. Siskiyou County General Plan, Land Use Policies.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_landusepolicies19970910.pdf. Accessed June 2019.
- _____. 1980. Siskiyou County General Plan, Scott Valley Area Plan.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scottvalleyareaplanwithoutlargemaps.pdf. Accessed June 2019.

4.12 MINERAL RESOURCES

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	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"/>

REGULATORY CONTEXT

FEDERAL

There are no federal regulations pertaining to mineral resources that apply to the proposed project.

STATE

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA), Chapter 9, Division 2 of the Public Resources Code (PRC), provides a comprehensive surface mining and reclamation policy to ensure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. Mineral Resource Zones (MRZs) are applied to sites determined by the California Geological Survey (CGS) as being resources of regional significance, and are intended to help maintain mining operations and protect them from encroachment of incompatible uses. The Zones indicate the potential for an area to contain significant mineral resources.

LOCAL

The Siskiyou County Conservation Element of the General Plan was adopted in 1973 to provide guidance for the conservation, development, and utilization of natural resources including water and its hydraulic force, forest, soils, rivers, and other water areas, including harbors, fisheries, and wildlife areas. The Conservation Element includes the following general objectives related to mineral resources:

- To plan for mineral production and performance so as to avoid destruction, pollution, or degradation of surrounding land and of water and air resources. After mineral extraction has been completed, land used for mineral production should be revegetated and restored to its original site condition.

DISCUSSION OF IMPACTS

Questions A and B

A mineral resource is land on which known deposits of commercially viable mineral or aggregate deposits exist. The designation is applied to sites determined by the California Geological Survey as being a resource of regional significance, and is intended to help maintain mining operations and protect them from encroachment of incompatible uses.

There are no publicly known, economically viable deposits of precious metals in the vicinity, nor is the project site or adjacent areas designated or zoned for mineral extraction activities. In addition, the State does not identify mineral deposits of statewide significance in the area. Therefore, there would be no impact.

CUMULATIVE IMPACTS

As documented herein, the proposed project would not result in impacts to mineral resources; therefore, the project would not contribute to adverse impacts associated with cumulative impacts to mineral resources.

MITIGATION

None necessary.

DOCUMENTATION

Siskiyou County. 1973. Siskiyou County General Plan, Conservation Element.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_conservationelement.pdf. Accessed June 2019.

State of California, Department of Conservation, California Geological Survey. SMARA Mineral Lands Classification Data Portal.
<http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc>. Accessed June 2019.

4.13 NOISE

Would the project result in:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

NOISE FUNDAMENTALS

Commonly used technical acoustical terms are defined as follows:

- Ambient Noise** The distinctive pre-project acoustical characteristics of a given area consisting of all noise sources audible at that location.
- A-Weighting** The sound level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.
- Decibel, or dB** The fundamental unit of measurement that indicates the intensity of a sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.

REGULATORY CONTEXT

FEDERAL

There are no federal regulations pertaining to noise that apply to the proposed project.

STATE

California Government Code §65302(f)

California Government Code §65302(f) requires a Noise Element to be included in all city and county General Plans. The Noise Element must identify and appraise major noise sources in the community (e.g., highways and freeways, airports, railroad operations, local industrial plants, etc.). A noise contour diagram depicting major noise sources must be prepared and used as a guide for establishing land use patterns to minimize the exposure of residents to excessive noise. The Noise Element must include implementation measures and possible solutions that address existing and foreseeable noise levels.

LOCAL

Siskiyou County General Plan, Noise Element

The Noise Element of the Siskiyou County General Plan was adopted in 1978 to provide a basis for evaluating and controlling environmental noise and for protecting county residents from excessive noise exposure. The Noise Element identifies land use compatibility for community noise. Table 13 of the County's Noise Element (Land Use Compatibility for Exterior Community Noise) provides standards for several land use categories and noise ranges for each category. The ranges indicate whether a new land use is acceptable, whether a new land use requires implementation of noise-abatement features, whether a new land use should generally be avoided, or whether a new land use is generally not allowable. Table 13 does not identify standards or thresholds for temporary construction impacts; Siskiyou County does not have adopted standards pertaining to construction noise.

DISCUSSION OF IMPACTS

Question A

Some individuals and groups of people are considered more sensitive to noise than others and are more likely to be affected by the existence of noise. A sensitive receptor is defined as any living entity or aggregate of entities whose comfort, health, or well-being could be impaired or endangered by the existence of noise. Locations that may contain high concentrations of noise-sensitive receptors include residential areas, schools, parks, churches, hospitals, and long-term care facilities.

The effects of noise on people can include annoyance, nuisance, and dissatisfaction; interference with activities such as speech, sleep, and learning; and physiological effects such as hearing loss or sudden startling. A common method to predict human reaction to a new noise source is to compare a project's predicted noise level to the existing environment (ambient noise level). A change of 1 dBA generally cannot be perceived by humans; a 3-dBA change is considered to be a barely noticeable difference; a 5-dBA change is typically noticeable; and a 10-dBA increase is considered to be a doubling in loudness and can cause an adverse response (Caltrans, 2013).

The proposed project does not include any components that would result in a permanent increase in noise levels in the area. However, project construction would temporarily increase noise levels and vibration at nearby noise-sensitive land uses. Construction activities would occur adjacent to single-family residences on Highway 3, South Fork Road, and McKeen Road. Water line construction activities would occur as close as 15 to 25 feet from some residences, while water tank construction work would occur approximately 200 feet from the nearest residences.

Temporary noise impacts would occur due to an increase in traffic from construction workers commuting to the site; as well as delivery of construction equipment and materials to the project site; however, these impacts would be negligible. The principal noise impacts would be generated by construction equipment, and would depend on: 1) the noise generated by various pieces of construction equipment; 2) the timing and duration of noise-generating activities; 3) the distance between construction noise sources and noise-sensitive receptors; and 4) existing ambient noise levels. **Figure 4.13-1** shows noise levels of common activities to enable the reader to compare construction-noise with common activities.

Figure 4.13-1
Noise Levels of Common Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
Quiet Rural Nighttime	30	Bedroom at Night, Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans, 2016

Noise levels from construction-related activities would fluctuate, depending on the number and type of construction equipment operating at any given time. As shown in **Table 4.13-1**, construction equipment anticipated to be used for project construction typically generates maximum noise levels ranging from 74 to 89 decibels (dBA) at a distance of 50 feet.

Noise from construction activities generally attenuates at a rate of 6 dBA per doubling of distance, assuming the intervening ground is a smooth surface without much vegetation. At an attenuation rate of 6 dBA, 74 to 89 dBA noise levels would drop to 68 to 83 dBA at a distance of 100 feet; 62 to 77 dBA at a distance of 200 feet; and 58 to 73 dBA at a distance of 300 feet. At a distance of 15 feet, 74 to 89 dBA noise levels would increase to 84 to 99 dBA.

Because it is a logarithmic unit of measurement, a decibel cannot be added or subtracted arithmetically. The combination of two or more identical sound pressure levels at a single location involves the addition of logarithmic quantities as shown in **Table 4.13.2**. A doubling of identical sound sources results in a sound level increase of approximately 3 dB. Three identical sound sources would result in a sound level increase of approximately 4.8 dB.

TABLE 4.13-1
Examples of Construction Equipment
Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 feet from Source
Roller	74
Concrete Vibrator	76
Pump	76
Saw	76
Backhoe	80
Air Compressor	81
Generator	81
Compactor	82
Concrete Pump	82
Compactor (ground)	83
Crane, Mobile	83
Concrete Mixer	85
Dozer	85
Excavator	85
Grader	85
Loader	85
Jack Hammer	88
Truck	88
Paver	89
Scraper	89

Sources: U.S. Department of Transportation, Federal Transit Administration, 2018. Federal Highway Administration, 2017.

For example, if the sound from one backhoe resulted in a sound pressure level of 80 dB, the sound level from two backhoes would be 83 dB, and the sound level from three backhoes would be 84.8.

TABLE 4.13.2
Cumulative Noise: Identical Sources

Number of Sources	Increase in Sound Pressure Level (dB)
2	3
3	4.8
4	6
5	7
10	10
15	11.8
20	13

Sources: U.S. Department of Transportation, Federal Transit Administration, 2018. The Engineering Toolbox, 2019.

In addition, as shown in **Table 4.13.3**, the sum of two sounds of a different level is only slightly higher than the louder level. For example, if the sound level from one source is 80 dB, and the sound level from the second source is 85 dB, the level from both sources together would be 86 dB; if the sound level from one source is 80, and the sound level from the second source is 89 dB, the level from both sources together would be 89.5.

TABLE 4.13.3
Cumulative Noise: Different Sources

Sound Level Difference between two sources (dB)	Decibels to Add to the Highest Sound Pressure Level
0	3
1	2.5
2	2
3	2
4	1.5
5	1
6	1
7	1
8	0.5
9	0.5
10	0.5
Over 10	0

Sources: U.S. Department of Transportation, Federal Transit Administration, 2018. *The Engineering Toolbox*, 2019.

With two pieces of equipment with a noise level of 99 dBA operating simultaneously within 15 feet of a sensitive receptor, noise levels could reach approximately 102 dBA at the exterior of single-family residences where improvements would occur.

As noted above, assuming typical California construction methods, interior noise levels are about 10 to 15 dBA lower than exterior levels within residential units with the windows partially open, and approximately 20 to 25 decibels lower than exterior noise levels with the windows closed. Interior noise levels could reach 77 to 82 dBA when equipment operates within 15 feet of a residence, provided that the windows were closed.

In addition, OSHA regulations (Title 29 CFR, §1926.601(b)(4)(i) and (ii) and §1926.602(a)(9)(ii)) state that no employer shall use any motor vehicle, earthmoving, or compacting equipment that has an obstructed view to the rear unless the vehicle has a reverse signal alarm audible above the surrounding noise level or the vehicle is backed up only when an observer signals that it is safe to do so.

Although these regulations require an alarm to be only at a level that is distinguishable from the surrounding noise level (± 5 dB), some construction vehicles are pre-equipped with non-adjustable alarms that range from 97 to 112 dBA. At a distance of 15 feet, 97 to 112 dBA noise levels would increase to 107.5 to 122 dBA; such noise levels could temporarily be experienced at the exteriors of single-family residences abutting alleyways where improvements would occur. Depending on the decibel level of the alarm, interior noise levels could reach 97 to 102 dBA, provided that the windows were closed.

The exposure to loud noises (above 85 dB) over a long period of time may lead to hearing loss. The longer the exposure, the greater the risk for hearing loss, especially when there is not

enough time for the ears to rest between exposures. Hearing loss can also result from a single extremely loud sound at very close range, such as sirens and firecrackers (Centers for Disease Control, 2018). Even when noise is not at a level that could result in hearing loss, excessive noise can affect quality of life, especially during nighttime hours.

Although the County does not have specific thresholds for construction noise, the California Division of Safety and Health and OSHA have established thresholds for exposure to noise in order to prevent hearing damage. The maximum allowable daily noise exposure is 90 dBA for 8 hours, 95 dBA for 4 hours, 100 dBA for 2 hours, 105 dBA for 1 hour, 110 dBA for 30 minutes, and 115 dBA for 15 minutes (Caltrans, 2013).

In the worst-case scenario, interior noise levels due to construction equipment operation could reach approximately 82 dBA, and could reach approximately 102 dBA if reverse signal alarms are used. However, construction equipment does not operate continuously throughout the entire work day. In addition, given the linear nature of the project, construction equipment would be operating adjacent to a particular residence for a relatively short duration and would then proceed to the next work area. In addition, reverse signal alarms are needed only intermittently, and each occurrence involves only seconds of elevated noise levels. Therefore, while construction noise may reach considerable levels for short instances, much of the time the construction noise levels at the nearby residences will be moderate.

In order to minimize impacts from construction noise, **Mitigation Measure MM 4.3.1 (i)** prohibits motorized construction equipment from idling for more than five minutes when not in use, **MM 4.13.1** restricts construction noise to the daytime hours of 7 AM to 7 PM, Monday through Saturday, **MM 4.13.2** requires that construction equipment be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds. Further **MM 4.13.3** mandates that any stationary equipment, such as generators and compressors, shall be located at the furthest practical distance from nearby noise-sensitive land uses.

Therefore, because the proposed project does not include any components that would result in a permanent increase in ambient noise levels; there is no expectation that noise levels during construction would be at a duration and intensity that would cause hearing loss; and **Mitigation Measures MM 4.13.1 through MM 4.13.3** and **MM 4.3.1 (i)** minimize noise during construction, impacts would be less than significant. Further, construction noise is a temporary impact that would cease at completion of the project.

Question B

Excessive vibration during construction may occur when high vibration equipment (e.g., compactors, large dozers, etc.) is operated. The proposed project may require limited use of such equipment during construction. Potential effects of ground-borne vibration include perceptible movement of building floors, rattling windows, shaking of items on shelves or hangings on walls, and rumbling sounds.

In extreme cases, vibration can cause damage to buildings. Both human and structural responses to ground-borne vibration are influenced by various factors, including ground surface, distance between the source and the receptor, and duration.

The most common measure used to quantify vibration amplitude is the peak particle velocity (PPV). PPV is a measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state.

Although there are no federal, state, or local regulations for ground-borne vibration, Caltrans has developed criteria for evaluating vibration impacts, both for potential structural damage and for human annoyance. The Caltrans Transportation and Construction Vibration Guidance Manual (2013), was referenced in the analysis of construction-related vibration impacts.

Table 4.13-4 identifies the potential for damage to various building types as a result of ground-borne vibration. Transient sources include activities that create a single isolated vibration event, such as blasting. Continuous, frequent, or intermittent sources include jack hammers, bulldozers, and vibratory rollers.

**TABLE 4.13-4
Structural Damage Thresholds from Ground-Borne Vibration**

Structure Type	Vibration Level (Inches per Second PPV)	
	Transient Sources	Continuous/Frequent/ Intermittent Sources
Older residential structures	0.5	0.3
Newer residential structures	1.0	0.5
Historic and some old buildings	0.5	0.25
Newer industrial/commercial buildings	2.0	0.5

Source: Caltrans Transportation and Construction Vibration Guidance Manual, 2013.

Table 4.13-5 indicates the potential for annoyance to humans as a result of ground-borne vibration.

**TABLE 4.13-5
Human Response to Ground-Borne Vibration**

Human Response	Vibration Level (Inches per Second PPV)	
	Transient Sources	Continuous/Frequent/ Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.10
Disturbing	2.0	0.4

Source: Caltrans Transportation and Construction Vibration Guidance Manual, 2013.

Table 4.13-6 indicates vibration levels for various types of construction equipment that may be used for the proposed project.

**TABLE 4.13-6
Examples of Construction Equipment Ground-Borne Vibration**

Equipment Type	Inches per Second PPV at 25 feet
Bulldozer (small)	0.003
Bulldozer (large)	0.089
Jackhammer	0.035
Loaded trucks	0.076

Source: Caltrans Transportation and Construction Vibration Guidance Manual, 2013.

Vibration levels from construction equipment use at varying distances from the source can be calculated using the following formula:

$$PPV_{\text{Equipment}} = PPV_{\text{Ref}} \times (25/D)^n, \text{ where } D = \text{distance from the equipment and } n \text{ is a constant (1.1)}$$

Based on this equation, a large bulldozer at a distance of 15 feet would generate a PPV of 0.156 inches per second, while a jackhammer would generate a PPV of up to 0.06 inches per second. As shown in **Table 4.13-6**, these vibration levels would be distinctly perceptible to strongly perceptible but would not rise to a level that would be considered disturbing.

In addition, as shown in **Table 4.13-5**, vibration levels would not be at a level that would cause structural damage. Because increased ground-borne vibration is temporary and would cease at completion of the project, and **Mitigation Measure MM 4.13.1** would reduce the potential for human annoyance by limiting construction hours, impacts would be less than significant.

Question C

The Scott Valley Airport is located approximately 17 miles north of the project site. According to the Siskiyou County General Plan Land Use and Circulation Element, no portion of the project site is located within an airport land use area. According to the Federal Aviation Administration, the project site is not located in the vicinity of a private airstrip. Therefore, the project would not expose people residing or working in the project area to excessive noise levels associated with an airport or private airstrip; there would be no impact.

CUMULATIVE IMPACTS

The proposed project would result in a temporary increase in daytime noise and vibration levels during construction activities. However, given the linear nature of the project, noise and vibration would be intermittent and occur for short periods of time until the equipment proceeds to the next work area. With implementation of **Mitigation Measures MM 4.13.1 through MM 4.13.3** and **MM 4.3.1**, the proposed project's contribution to cumulative noise impacts would be less than significant.

MITIGATION

Implementation of Mitigation Measure MM 4.3.1 (i).

- MM 4.13.1** Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the daytime hours of 7:00 A.M. and 7:00 P.M., Monday through Saturday. Construction activities shall be prohibited on Sundays and federal/state recognized holidays. Exceptions to these limitations may be approved by the District for activities that require interruption of utility services to allow work during low demand periods, or to alleviate traffic congestion and safety hazards.
- MM 4.13.2** Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.
- MM 4.13.3** Stationary equipment (generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses.

DOCUMENTATION

- California Department of Transportation.** 2013. Transportation and Construction Vibration Guidance Manual. http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf. Accessed June 2020.
- _____. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf. Accessed June 2020.
- Centers for Disease Control.** 2018. Loud Noise and Hearing Loss. https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html. Accessed June 2020.
- Engineering Toolbox.** 2019. Logarithmic Decibel Scale. https://www.engineeringtoolbox.com/adding-decibel-d_63.html. Accessed June 2020.
- Federal Aviation Administration.** 2019. Airport Facilities Data. <https://airports-gis.faa.gov/agis/public/#/airportData/A30>. Accessed November 2019.
- Federal Highway Administration.** 2017. Construction Noise Handbook. https://www.fhwa.dot.gov/Environment/noise/construction_noise/handbook/handbook09.cfm. Accessed June 2020.
- Siskiyou County.** 1978. Siskiyou County General Plan, Noise Element. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_noiseelement.pdf. Accessed September 2020.
- U.S. Department of Transportation, Federal Transit Administration.** 2018. Transit Noise and Vibration Impact Assessment Manual. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed June 2020.
- U.S. Government Publishing Office.** 2013. California Code of Regulations, Title 29, Part 1926 (Safety and Health Regulations for Construction). <https://www.gpo.gov/fdsys/pkg/CFR-2013-title29-vol8/pdf/CFR-2013-title29-vol8-part1926.pdf>. Accessed June 2020.

4.14 POPULATION AND HOUSING

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

REGULATORY CONTEXT

There are no federal or state regulations pertaining to population or housing that apply to the proposed project.

LOCAL

Siskiyou County - Scott Valley Area Plan

The Scott Valley Area Plan sets forth development policies to guide and specify where future growth in the watershed will be located in order to fulfill the stated Plan goals. These policies are devised in order to ensure that growth will not be incompatible with surrounding or abutting critical resource areas and will ensure that development will be located close to existing public services, so as to not overburden public services. The Scott Valley Area Plan includes the following general policies related to population and housing:

- All land uses shall be designed in a manner that is compatible with surrounding planned and existing uses of the land. All proposed development is prohibited unless each site meets all criteria for development set forth by the North Coast Regional Water Quality Control Board and the Siskiyou County Health Department.

DISCUSSION OF IMPACTS

Question A

Because the proposed project does not involve construction of residences or businesses, the project would not directly induce population growth. The purpose of the proposed project is to replace aging and inefficient infrastructure and correct existing deficiencies; however, the improvements would not induce substantial unplanned population growth in the area, either directly or indirectly. Therefore, the proposed project's potential growth-inducing impacts are less than significant.

Question B

No residences would be demolished to accommodate the proposed improvements; therefore, there would be no impact.

CUMULATIVE IMPACTS

Cumulative growth in the area has been addressed in the County's General Plan and Scott Valley Area Plan. Because the proposed project does not involve construction of residences or businesses, it would not directly increase growth beyond that projected in the County's Plans.

The project could potentially indirectly foster development in the District's water service area due to the infrastructure improvements; however, due to the many factors that influence the density and timing of development (e.g., cost of installing water, electric, and gas infrastructure; cost of completing roadway improvements, regulatory controls, economic conditions, property owner decisions, and other market forces), it is not anticipated that the proposed project would significantly influence development. Therefore, cumulative population and housing impacts would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Finance. 2018. E-5 Population and Housing Estimated for Cities, Counties and the State, 2011-2018 with 2010 Census Benchmark. <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>. Accessed June 2019.

_____. 2019. P-1: State Population Projects (2010-2060), Total Population by County. <http://www.dof.ca.gov/Forecasting/Demographics/projections/>. Accessed June 2019.

Siskiyou County. 2014. Housing Element for the County of Siskiyou. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_housingelement.pdf. Accessed June 2019.

_____. 1980. Siskiyou County General Plan, Scott Valley Area Plan. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scottvalleyareaplanwithoutlargemaps.pdf. Accessed June 2020.

4.15 PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

REGULATORY CONTEXT

There are no federal or State regulations pertaining to public services that apply to the proposed project.

LOCAL

Siskiyou County - Scott Valley Area Plan

The Scott Valley Area Plan sets forth development policies to guide and specify where future growth in the watershed will be located in order to fulfill the stated Plan goals. These policies are devised in order to ensure that growth will not be incompatible with surrounding or abutting critical resource areas and will ensure that development will be located close to existing public services, so as to not overburden public services. The Scott Valley Area Plan includes the following general policies related to public services:

- In order to minimize the cost of providing public services in the Scott Valley Watershed, intense development should only occur in close proximity to existing public services.
- Existing public services should not be overburdened by development.

DISCUSSION OF IMPACTS

Question A

The proposed project would improve fire protection capabilities through increased storage of water for fire suppression and improved flow capacity in water lines and hydrants. In the event of an emergency during construction, fire protection services would be provided by the Scott Valley Fire Department in Callahan. In addition, the proposed project would not result, either directly or indirectly, in an increase in population requiring additional fire protection services. Therefore, there would be no adverse impact on fire protection services.

Questions B, C and D

The proposed project would not result, either directly or indirectly, in an increase in population requiring additional law enforcement services, or the expansion of existing schools or parks. Therefore, there would be no impact.

Question E

The proposed project would not result, either directly or indirectly, in an increase in population or new commercial development that would result in a permanent increase in traffic that would require roadway improvements. No other public facilities would be impacted.

CUMULATIVE IMPACTS

As described above, the proposed project would not increase the demand for long-term public services; therefore, no cumulatively considerable impacts would occur.

MITIGATION

None necessary.

DOCUMENTATION

Siskiyou County. 2014. Housing Element for the County of Siskiyou.

https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_housingelement.pdf. Accessed July 2020.

_____. 1980. Siskiyou County General Plan, Scott Valley Area Plan.

https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scottvalleyareaplanwithoutlargemaps.pdf. Accessed June 2019.

4.16 RECREATION

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

b. Does the project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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REGULATORY CONTEXT

There are no federal, State, or local regulations pertaining to recreation that apply to the proposed project.

DISCUSSION OF IMPACTS

Questions A and B

The proposed project does not include the construction of houses or businesses that would increase the number of residents in the area. Therefore, the proposed project would not result in an increased demand for recreational facilities.

CUMULATIVE IMPACTS

The proposed project would not impact any existing recreational facilities. Therefore, it would not contribute to cumulative impacts to recreational facilities.

MITIGATION

None necessary.

DOCUMENTATION

Siskiyou County. 1973. Siskiyou County General Plan, Conservation Element.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_conservationelement.pdf. Accessed June 2019.

_____. 1980. Siskiyou County General Plan, Scott Valley Area Plan.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scottvalleyareaplanwithoutlargemaps.pdf. Accessed June 2019.

4.17 TRANSPORTATION

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) (criteria for analyzing transportation impacts-vehicle miles traveled).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

There are no federal regulations pertaining to transportation/traffic that apply to the proposed project.

STATE

California Streets and Highways Code

California Streets and Highways Code §660 *et seq.* requires that an encroachment permit be obtained from Caltrans prior to the placement of structures or fixtures within, under, or over State highway right-of-way (ROW). This includes, but is not limited to, utility poles, pipes, ditches, drains, sewers, or other above-ground or underground structures.

CEQA Guidelines

SB 743 of 2013 (CEQA Guidelines §15064.3 *et seq.*) was enacted as a means to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHGs. Pursuant to SB 743, traffic congestion is no longer considered a significant impact on the environment under CEQA. The new metric bases the traffic impact analysis on vehicle-miles travelled (VMT). VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT, including whether to express the change in absolute terms, per capita, per household, or in any other measure. The requirement to use the VMT metric became effective statewide on July 1, 2020.

LOCAL

Siskiyou County General Plan, Circulation Element

The Circulation Element of the Siskiyou County General Plan was adopted in 1987 and contains policies and standards to be applied to right-of-way acquisition and road development. The information in the Circulation Element is to be used when identifying potential problems in the review of specific projects and in the scheduling of future public works programs. The proposed improvements are located within the unincorporated community of Callahan in Siskiyou County, and some of the roads used to access the project site are under the jurisdiction of Siskiyou County and the State of California. The Circulation Element includes the following general objective related to the proposed project:

- Construction shall acquire adequate rights-of-way for existing county roads.

DISCUSSION OF IMPACTS

Questions A through D

The proposed project does not include the construction of housing or commercial/industrial development that would cause a permanent increase in traffic or VMT in the area. The proposed project does not include any components that would remove or change the location of any sidewalk,

bicycle lane, trail, or public transportation facility. There are no adopted policies, plans or programs related to alternative transportation that would apply to the proposed project.

Short-term increases in traffic volume associated with construction workers and equipment on the local road network would occur during construction, and this increased traffic could interfere with emergency response times. However, as discussed under Section 4.9, Question F, temporary traffic control would be required and must adhere to the procedures, methods, and guidance given in the current edition of the California Manual on Uniform Traffic Control Devices (California MUTCD). Additionally, the proposed project does not include any components that would permanently increase the potential for hazards due to a design feature or incompatible uses.

Because a permanent increase in VMT would not occur, safety measures would be employed to safeguard travel by the general public and emergency response vehicles during construction, and the project does not include design features that would result in hazards or uses that are incompatible with the surrounding area, impacts would be less than significant.

CUMULATIVE IMPACTS

The proposed project would not result in a permanent increase in traffic or VMT, although there would be a temporary increase in traffic associated with construction workers and equipment during construction.

As discussed above, pursuant to Cal/OSHA requirements, temporary traffic control for all projects that require work in the public right-of-way would be required and must adhere to the procedures, methods, and guidance given in the current edition of the MUTCD. Specific requirements for traffic safety measures would be included in the District's contract documents. In addition, at the discretion of the State or County, the contractor may be required to submit a temporary traffic control plan for review and approval prior to issuance of an encroachment permit. The plan would illustrate the location of the work, affected roads, and types and locations of temporary traffic control measures (i.e., signs, cones, flaggers, etc.) that would be implemented during the work.

Therefore, the project's traffic impact would not be cumulatively considerable because the project would not result in a permanent increase in traffic or VMT, construction traffic would be a temporary impact that would cease at completion of the project, and all cumulative projects would be required to implement safety measures to protect the traveling public during construction.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Transportation. 2019. California Manual on Uniform Traffic Control Devices. <https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/ca-mutcd/camutcd2014-cover-rev4-a11y.pdf>. Accessed November 2019.

Siskiyou County. 1987 Siskiyou County General Plan, Circulation Element. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_circulationelementupdate.pdf. Accessed June 2019.

4.18 TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code (PRC) 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:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. A resource listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth PRC Section 5024.1(c)? In applying the criteria set forth in PRC Section 5024.1(c), 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"/>

REGULATORY CONTEXT

FEDERAL

There are no federal regulations pertaining to tribal cultural resources that apply to the proposed project.

STATE

California Environmental Quality Act

Assembly Bill 52 of 2014 (PRC §21084.2) establishes that “a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” In order to determine whether a project may have such an effect, a lead agency is required to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if the tribe requested to the lead agency, in writing, to be informed through formal notification of proposed projects in the geographical area; and the tribe responds, in writing, within 30 days of receipt of the formal notification and requests the consultation.

The consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. Pursuant to PRC §21084.3, lead agencies must, when feasible, avoid damaging effects to a tribal cultural resource and must consider measures to mitigate any identified impact.

PRC §21074 defines “tribal cultural resources” as either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the CRHR; or are included in a local register of historical resources as defined in PRC §5020.1(k).
2. A resource determined by the lead agency, taking into consideration the significance of the resource to a California Native American tribe, to be significant pursuant to criteria set forth in PRC §5024.1(c).

In addition, a cultural landscape that meets one of these criteria is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. A historical resource described in §21084.1, a unique archaeological resource as defined in §21083.2(g), or a “nonunique archaeological resource” as defined in §21083.2(h) may also be a tribal cultural resource if it meets one of these criteria.

LOCAL

Siskiyou County General Plan, Conservation Element

The Conservation Element of the Siskiyou County General Plan was adopted in 1973 to provide guidance for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers, and other water areas, including harbors, fisheries, and wildlife areas. The Conservation Element includes the following general objective related to cultural resources:

- Preserve, protect and develop the county’s Archaeological, Paleontological and Historic as well as Geologic sites.

DISCUSSION OF IMPACTS

Questions A and B

See discussion in Section 1.8 (Tribal Cultural Resources Consultation) and Section 4.5 under Questions A and B. As stated in Section 4.5, consultation with Native American tribes identified by the NAHC was conducted, and none of the tribes requested specific mitigation measures for the proposed project. **Mitigation Measures MM 4.5.1 and MM 4.5.2** address the inadvertent discovery of cultural resources, including tribal cultural resources, and human remains. These measures ensure that impacts to tribal cultural resources are less than significant.

CUMULATIVE IMPACTS

Cumulative projects in the vicinity of the project area have the potential to impact tribal cultural resources. Given the non-renewable nature of tribal cultural resources, any impact to tribal cultural sites, features, places, landscapes, or objects could be considered cumulatively considerable. Tribal cultural resources are afforded special legal protections designed to reduce the cumulative effects of development. Potential cumulative projects and the proposed project would be subject to the protection of tribal cultural resources afforded by Public Resources Code §21084.3. As discussed above, no cultural resources of significance to a California Native American tribe were identified within the project area. In addition, **Mitigation Measures MM 4.5.1 and 4.5.2** address the inadvertent discovery of cultural resources; therefore, the proposed project would have less than significant cumulative impacts to tribal cultural resources.

MITIGATION

Implementation of **Mitigation Measures MM 4.5.1 and 4.5.2**.

DOCUMENTATION

ENPLAN. 2019. Cultural Resources Inventory for the Callahan Water District Water System Improvements.

Siskiyou County. 1973. Siskiyou County General Plan, Conservation Element. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_conservationelement.pdf. Accessed June 2019.

4.19 UTILITIES AND SERVICE SYSTEMS

Would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	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 of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

There are no federal regulations pertaining to utilities and service systems that apply to the proposed project.

STATE

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act (CIWMA) of 1989 is designed to increase landfill life and conserve other resources through increased source reduction and recycling. Goals of the CIWMA include diverting approximately 50 percent of solid waste from landfills and identifying programs to stimulate local recycling in manufacturing and the purchase of recycled products. The CIWMA requires cities and counties to prepare Solid Waste Management Plans and Source Reduction and Recycling Elements to implement CIWMA goals.

LOCAL

Siskiyou County General Plan, Land Use Element

The Land Use Element of the Siskiyou County General Plan was updated in 1997. The main goal of the Element is to allow the physical environment to determine the appropriate future land use pattern that will

develop in Siskiyou County. The Element guides future development to occur in areas that will be easiest to develop without entailing great public service costs, to have the least negative environmental effect, and to not displace or endanger the County's critical natural resources. The Land Use Element includes the following general policies related to utilities and service systems.

- In order to minimize the cost of providing public services in the Scott Valley Watershed, intense development should only occur in close proximity to existing public services.
- Existing public services should not be overburdened by development.
- All uses of the land shall occur in a manner that is compatible with other existing and planned land uses.
- Specific mitigation measures will be provided that lessen soil erosion, including contour grading, channelization, revegetation of disturbed slopes and soils, and project timing (where feasible) to less the effect of seasonal factors (rainfall and wind).
- Because of the incidence of heavy metals, including arsenic, and other known non-potable water sources throughout Siskiyou County, random sampling should be undertaken to monitor the acceptability of water supplies for development purposes.
- No residential or industrial development shall be allowed on water bodies. Exceptions may be considered for water supply, hydroelectric power generation facilities, public works projects necessary to prevent or stabilize earth movement, erosion, and the enhancement of migratory fish and other wildlife, light commercial, open space, non-profit and non-organizational in nature recreational uses, and commercial/recreational uses.

Siskiyou County - Scott Valley Area Plan

The Scott Valley Area Plan sets forth development policies that will guide and specify where future growth in the watershed will be located in order to fulfill the stated Plan goals. These policies are devised in order to ensure that growth will not be incompatible with surrounding or abutting critical resource areas and will ensure that development will be located close to existing public services, so as to not overburden public services. The Area Plan includes the following general policies related to utilities and services:

- In order to minimize the coast of providing public services in the Scott Valley Watershed, intense development should only occur in close proximity to existing public services.
- Existing public services should not be overburdened by development.

DISCUSSION OF IMPACTS

Question A

The purpose of the proposed project is to upgrade the Callahan Water District's public water system to comply with SWRCB requirements, provide adequate fire flows, and ensure a safe and reliable water supply for residents in the water service area. While the proposed project includes the relocation and construction of water infrastructure and facilities, as discussed under Section 4.14, Question A, the proposed project would not induce substantial unplanned population growth in the area, either directly or indirectly; therefore, the proposed project would not result in the need for new or expanded water, wastewater treatment, electric power, natural gas, or telecommunications facilities. Additionally, no wastewater treatment, electric power, natural gas, or telecommunications facilities would need to be relocated to accommodate the proposed project. Therefore, impacts would be less than significant.

Questions B and C

Relatively small amounts of water would be used during project construction, but this is a temporary impact. As discussed in Section 4.14, Question A, the proposed project would not induce population growth either directly or indirectly that would require additional long-term water supplies or increase the demand for wastewater treatment. Therefore, there would be no impact.

Questions D and E

The proposed project would not result in a long-term demand for additional solid waste disposal services. Solid waste would be generated during construction, mainly from removal of pavement in public road ROWs to accommodate the pipeline improvements. Construction debris would be disposed of at the Black Butte Transfer Station, located approximately 24 miles west of the project site. The Black Butte Transfer Station is permitted through the California Integrated Waste Management Board (CIWMB). The maximum permitted throughput is 100 tons per. The Transfer Station is subject to periodic inspections by Siskiyou County to ensure compliance with the CIWMB permit. Although the transfer station occasionally reaches capacity and is unable to accept additional waste on certain days, waste and recycled materials can be disposed of at another transfer station in the County. The average volume at the transfer station is 60 to 65 tons per day.

Because there are no active landfills in Siskiyou County, all solid waste in the County is trucked to the Dry Creek Landfill in southern Oregon. The Dry Creek Landfill was expanded to a regional facility in 1999 and has a projected operational life exceeding 100 years.

The construction contractor would be responsible for recycling or disposing of all construction waste. The District would ensure through contractual obligations that the contractor complies with all federal, State, and local statutes related to solid waste disposal. Given the relatively small volume of waste that would be generated and compliance with all applicable regulations related to solid waste disposal, impacts would be less than significant.

CUMULATIVE IMPACTS

Utility and service systems in the area would not experience a permanent increase in demand for services over existing conditions. Although solid waste would be generated during construction, no permanent increase in solid waste generation would occur. Therefore, the proposed project would have less than significant cumulative impacts to utility and service systems.

MITIGATION

None necessary.

DOCUMENTATION

Siskiyou County. 1997. Siskiyou County General Plan, Land Use Policies.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_landusepolicies19970910.pdf. Accessed June 2019.

_____. 1980. Siskiyou County General Plan, Scott Valley Area Plan.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scottvalleyareaplanwithoutlargemaps.pdf. Accessed June 2019.

Rogue Disposal and Recycling, Inc. 2018. Construction Services.
<https://roguedisposal.com/solutions/construction>. Accessed August 2018.

4.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REGULATORY CONTEXT

FEDERAL

There are no federal regulations pertaining to wildfire that apply to the proposed project.

STATE

California Department of Forestry and Fire Protection (CAL FIRE)

The Bates Bill (AB 337), enacted in 1992, required CAL FIRE to work with local governments to identify high fire hazard severity zones throughout each county in the State. CAL FIRE adopted Fire Hazard Severity Zone (FHSZ) Maps for State Responsibility Areas (SRA) in November 2007. Pursuant to California Government Code §51175-51189, CAL FIRE also recommended FHSZs for Local Responsibility Areas (LRA). Over the years, CAL FIRE has updated the maps and provided new recommendations to local governments based on fire hazard modeling. Proposed improvements in the northern portion of the project area are located within SRA Very High FHSZs and proposed improvements in the southern portion are located within Federal Responsibility Areas (FRA). However, FHSZs are not designated on federal land.

The fire hazard model considers wildland fuels (natural vegetation that burns during the wildfire), topography (fires burn faster as they burn up-slope), weather (fire burns faster and with more intensity when air temperature is high, relative humidity is low, and winds are strong), and ember production and movement (how far embers move and how receptive the landing site is to new fires). The model recognizes that some areas of California have more frequent and severe wildfires than other areas.

California Fire Code

California Fire Code, Part 9, Chapter 49 (Wildland-Urban Interface Fire Areas), and California Building Code Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure) include standards for new construction in Wildland-Urban Interface Fire Areas (fire hazard severity zones). The purpose of the standards is to prevent a building from being ignited by flying embers that can travel as much as a mile away from a wildfire and to contribute to a systematic reduction in fire-related losses through the use of performance and prescriptive requirements.

LOCAL

Siskiyou County General Plan, Land Use Element

The Land Use Element of the General Plan was updated in 1997. The main goal of the Element is to allow the physical environment to determine the appropriate future land use pattern that will develop in Siskiyou County. The Element guides future development to occur in areas that will be easiest to develop without entailing great public service costs, to have the least negative environmental effect, and to not displace or endanger the County's critical natural resources. The Land Use Element includes the following policy related to wildfire hazards:

- All development proposed within a wildfire hazard area shall be designed to provide safe ingress, egress, and have an adequate water supply for fire suppression purposes in accordance with the degree of wildfire hazard.

Siskiyou County General Plan, Seismic-Safety and Safety Elements

The Siskiyou County Seismic-Safety Element and Safety Element of the General Plan were adopted in 1976 to examine the particular physical needs of the county in relation to safety and seismic-safety, and to establish procedures for the orderly development of the county relative to physical problems. The Safety and Seismic-Safety Elements note that Siskiyou County has established Callahan as a fire protection district. In addition, during the fire season the firefighting capability of state and federal agencies is available to assist in fire control.

Siskiyou County - Scott Valley Area Plan

The Scott Valley Area Plan sets forth development policies to guide and specify where future growth in the watershed will be located in order to fulfill the stated Plan goals. These policies are devised in order to ensure that growth will not be incompatible with surrounding or abutting critical resource areas and will ensure that development will be located close to existing public services, so as to not overburden public services. The Scott Valley Area Plan includes the following policy related to wildfire hazards:

- All development will be designed so that every individual parcel of land created is a buildable site, and will not create erosion, runoff, access, fire hazard, resource protection, or any other environmentally related problems. This policy shall also apply to all proposed uses of the land.

DISCUSSION OF IMPACTS

According to Fire Hazard Severity Zones (FHSZ) maps prepared by CAL FIRE, proposed improvements in the northern portion of the project area are located within SRA Very High FHSZs and proposed improvements in the southern portion are located within federal responsibility areas. However, FHSZs are not designated on federal land.

Question A

See discussion in Section 4.9 under Question F. The proposed project does not involve a use or activity that could interfere with long-term emergency response or emergency evacuation plans for the area. Although a temporary increase in traffic could occur during construction and could interfere with emergency response times, construction-related traffic would be minor due to the overall scale of the construction activities. Temporary traffic control during completion of activities that require work in the public right-of-way would be required and must adhere to the procedures, methods and guidance given in the current edition of the MUTCD. Implementation of traffic control measures during construction ensures impacts are less than significant.

Question B

As discussed under Regulatory Context above, proposed improvements in the northern portion of the project area are located within SRA Very High FHSZs. However, with the exception of construction of a single wood-framed building (96 sq. ft. in size), the proposed project does not include any development or improvements that would increase the risk of wildland fires or expose people or structures to wildland fires. The net effect of the project would be to reduce wildlife risk due to increased water storage and improved hydrant flow capacities; this would in turn reduce the potential exposure of nearby residents to pollutant concentrations from a wildfire and to the uncontrolled spread of a wildfire.

Question C

The proposed project would not require installation of infrastructure that could exacerbate fire hazards (e.g., power lines in vegetated areas); would not construct public roads or otherwise intrude into natural spaces in a manner that would increase wildlife hazards in the long term; and would not require construction of fuel breaks that may result in temporary on-going impacts to the environment. The project would allow increased storage of water that could be used for fire suppression and would improve fire hydrant flow capacities. Therefore, the increased risk of fire due to project infrastructure and the potential for temporary or ongoing environmental impacts due to fire-related infrastructure are less than significant.

Question D

The proposed project would not expose people to significant post-fire risks such as flooding and landslides. New structures most exposed to post-fire hazards would be the new water tank(s) that could be exposed to post-fire slope instability. However, the proposed water tanks would be located on a level pad cut into an existing slope. According to the Geotechnical Report, the existing slope morphology can be characterized as being relatively smooth and planar and no evidence of recent landslides or features related to slope instability was observed. Therefore, the impacts are less than significant.

CUMULATIVE IMPACTS

Pursuant to conditions for issuance of an encroachment permit, the proposed project and all other projects in public road rights-of-way must implement temporary traffic control measures (i.e., signs, cones, flaggers, etc.) to ensure that emergency response vehicles are not hindered by construction activities. Because all projects must provide adequate access during construction, there would be no cumulative impact even if more than one project were under construction at the same time.

In the long term, the proposed project would not contribute individually or cumulatively to increased risks of wildfire or post-fire hazards. Compliance with existing Fire Code and Building Code standards would minimize the cumulative risk of wildfire ignition and spread. Further, project implementation would have a net positive effect on fire suppression capabilities due to increased water storage and improved fire

hydrant flow capacities. Therefore, the project's cumulative contribution to increased risks associated with wildfire would be less than significant.

MITIGATION

None necessary.

DOCUMENTATION

California Department of Forestry and Fire Protection (CAL FIRE). 2020. Fire Hazard Severity Zone Viewer. <https://egis.fire.ca.gov/FHSZ/>. Accessed June 2020.

Siskiyou County. Siskiyou County General Plan. <https://www.co.siskiyou.ca.us/planning/page/general-plan>. Accessed June 2020.

_____. 1980. Siskiyou County General Plan, Scott Valley Area Plan. https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scottvalleyareaplanwithoutlargemaps.pdf. Accessed June 2020.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

Issues and Supporting Evidence	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DISCUSSION OF IMPACTS

Question A

As discussed in the applicable environmental resource sections above, project implementation could result in possible effects to special-status wildlife species, disturbance of nesting migratory birds (if present during construction), disturbance of stream habitats, the introduction and spread of noxious

weeds during construction, impacts to cultural resources and tribal cultural resources (if present), potential encounters with unstable soils, impacts to paleontological resources (if present), temporarily increased air emissions, and temporarily increased noise and vibration levels. However, mitigation measures are included to reduce all potential impacts to a less than significant level.

Question B

The potential cumulative impacts of the proposed project have been analyzed within the discussion of each environmental resource area above. The mitigation measures identified in Section 1.10 reduce all potential impacts to less than significant levels.

Question C

As discussed in the applicable environmental resource sections above, the proposed project could result in adverse effects on human beings due to temporarily increased air emissions and temporarily increased noise and vibration levels. However, mitigation measures are included to reduce all potential impacts to a less than significant level.

SECTION 5.0 LIST OF PREPARERS

ENPLAN

Donald Burk Environmental Services Manager
Carla L. Thompson, AICP Senior Environmental Planner
Kiara Cuerpo-Hadsall Environmental Planner
Jacob Ewald Environmental Scientist
Sabrina Hofkin Wildlife Biologist
John Luper Environmental Scientist
Jacques Peltier Archaeologist

E & S Engineers and Surveyors, Inc.

Morgan Eastlick, P.E.
Jose Hernandez, P.E.

SECTION 6.0 ABBREVIATIONS AND ACRONYMS

AB	Assembly Bill
APCD	Air Pollution Control District
APCO	Air Pollution Control Office
APE	Area of Potential Effects
AQMD	Air Quality Management District
ATCM	Airborne Toxic Control Measure
BACT	Best Available Control Technology
BMP	Best Management Practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Criteria Air Pollutants
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH ₄	Methane
CNDDB	California Natural Diversity Data Base
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
County	Siskiyou County
CRHR	California Register of Historical Resources
CWA	Clean Water Act
CY	Cubic Yards
dBA	Decibels (A-weighted)
DBH	Diameter at Breast Height
District	Callahan Water District
DOC	Department of Conservation

DPS	Distinct Population Segment
DTSC	California Department of Toxic Substances Control
DWSRF	Drinking Water State Revolving Fund
EO	Executive Order
FEMA	Federal Emergency Management Act
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program
GHG	Greenhouse Gas Emissions
GURU	Geographic Ultramafic Rock Unit
GWP	Global Warming Potential
H ₂ S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
HSC	California Health and Safety Code
I&I	Infiltration and Inflow
IBC	International Building Code
IS	Initial Study
LRA	Local Responsibility Area
MACT	Maximum Achievable Control Technology
MCL	Maximum Contaminant Level
mg/m ³	Milligrams per Cubic Meter
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
MUTCD	California Manual on Uniform Traffic Control Devices
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEIC/CHRIS	Northeast Information Center of the California Historical Resources Information System
NEHRA	National Earthquake Hazards Reduction Act
NEPA	National Environmental Policy Act
NF ₃	Nitrogen Trifluoride
NHPA	National Historic Preservation Act

NMFS	National Marine Fisheries Service
N ₂	Nitrogen gas
N ₂ O	Nitrous Oxide
NO	Nitric Oxide
NOA	Naturally Occurring Asbestos
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
NPAB	Northeast Plateau Air Basin
NPDES	National Pollutant Discharge Elimination System
NPPA	California Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
NCRWQCB	North Coast Regional Water Quality Control Board
O ₂	Oxygen gas
O ₃	Ozone
OHWM	Ordinary High Water Mark
OSHA	Occupational Safety and Health Act
Pb	Lead
PFC	Perfluorocarbons
PM _{2.5}	Particulate Matter, 2.5 microns in size
PM ₁₀	Particulate Matter, 10 microns in size
PPB	Parts per Billion
PPM	Parts per Million
PRC	Public Resources Code
Project	Callahan Water District Water System Improvements Project
PVC	Polyvinyl Chloride
PWWF	Peak Wet Weather Flow
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SB	Senate Bill
SCAPCD	Siskiyou County Air Pollution Control District
SF ₆	Sulfur Hexafluoride
SHPO	State Historic Preservation Officer

SMARA	The Surface Mining and Reclamation Act
SO ₂	Sulfur Dioxide
SO ₄	Sulfate
SO _x	Sulfur Oxides
SRA	State Responsibility Area
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VMT	Vehicle Miles Travelled
WDRs	Waste Discharge Requirements
WWTP	Wastewater Treatment Plant
µg/m ³	Micrograms per Cubic Meter

Appendix A

CalEEMod.2016.3.1 Emissions Reports

Appendix B

Biological Resource Documentation

U.S. Fish and Wildlife Service List of Threatened and Endangered Species
National Marine Fisheries Service List of Threatened and Endangered Species,
Critical Habitats, and Essential Fish Habitats
California Natural Diversity Database Query Summary
California Native Plant Society Query Summary
ENPLAN Summary Report: Potential for Special-Status Species to Occur on the
Project Site
List of Vascular Plants Observed: May 27, June 8, and July 28, 2019