

Water Distribution System Replacement Project

Public Review Draft
Initial Study/Mitigated Negative Declaration

November 2024

Prepared for:

**County of Humboldt
Public Works Department**
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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
APE	Area of Potential Effects
APN	Assessor's Parcel Number
BACT	Best Available Control Technology
Bcf	billion cubic feet
BMP	Best Management Practices
BRA	Biological Resources Assessment
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
CALFIRE	California Department of Fire and Forestry
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CF	Conservation Floodway
CH ₄	methane
CHRIS	Cultural Historic Resources Information System
CIWMB	California Integrated Waste Management Board
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalents
CRA	Cultural Resources Assessment
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CWPP	Community Wildfire Protection Plan
CY	cubic yards
dB	decibels
District	Klamath-Trinity Joint Unified School District
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control

ACRONYMS AND ABBREVIATIONS (cont.)

EIR	Environmental Impact Report
EO	Executive Order
EQ Zapp	Earthquake Hazards Zone Application
ESU	evolutionary significant unit
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FPD	Fire Protection Districts
ft	foot
FYLF	foothill yellow-legged frog
GHG	greenhouse gases
GWP	global warming potential
HFC	hydrofluorocarbons
HWMA	Humboldt Waste Management Authority
Hz	hertz
IPaC	Information for Planning and Consultation
IPCC	Intergovernmental Panel on Climate Change
ISMND	Initial Study Mitigated Negative Declaration
KTHA	Karuk Tribe Housing Authority
LCFS	Low Carbon Fuel Standard
Ldn	day-night average sound level
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MMRP	Mitigation Monitoring and Reporting Program
MSL	mean sea level
MT	metric tons
N ₂ O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCAB	North Coast Air Basin
NCUAQMD	North Coast Unified Air Quality Management District
NMFS	National Marine Fisheries Service
NO _x	nitrogen oxides
NO ₂	nitrogen dioxide
NOI	Notice of Intent

ACRONYMS AND ABBREVIATIONS (cont.)

NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSO	northern spotted owl
NWIC	Northwest Information Center
O ₃	ozone
OCSD	Orleans Community Services District
OHP	Office of Historic Preservation
OMWC	Orleans Mutual Water Company
PER	Preliminary Engineering Report
PFC	perfluorocarbons
PM ₁₀	coarse particulate matter
PM _{2.5}	fine particulate matter
POC	Point of Contact
PPV	peak particle velocity
PRC	Public Resources Code
ROGs	reactive organic gases
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SF ₆	sulfur hexafluoride
SLCP	short-lived climate pollutants
SLF	Sacred Lands File
SMA	Streamside Management Area
SO _x	sulfur oxides
SO ₂	sulfur dioxide
SONCC	Southern Oregon/Northern California Coast
SR	State Route
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCR	Tribal Cultural Resource
THP	Timber Harvest Plan
THPO	Tribal Historic Preservation Officer
TPZ	Timber Production Zone

ACRONYMS AND ABBREVIATIONS (cont.)

U	Unclassified
UKTR	Upper Klamath and Trinity River
USACE	U. S. Army Corps of Engineers
USEPA	U. S. Environmental Protection Agency
USFS	U. S. Forest Service
USFWS	U. S. Fish and Wildlife Service
USGS	U. S. Geological Survey
VMT	Vehicles miles traveled

1.0 INTRODUCTION

1.1 INITIAL STUDY INFORMATION SHEET

1. Project title: Water Distribution System Replacement Project
2. Lead agency name and address: Humboldt County Public Works Department
1106 Second Street, Eureka, CA 95501
3. Contact person and phone number: Hank Seemann, Deputy Director – Environmental Services
707-268-2680
4. Project location: The unincorporated community of Orleans,
Humboldt County, CA 95546
5. General plan designation: Conservation Floodway (CF), and Residential Estates, 1-5 acre minimum (RE1-5)
6. Zoning: Unclassified (U)

7. Description of project:

Under the Water Distribution System Replacement Project (proposed project), existing water distribution piping would be demolished or abandoned in place and replaced with new water alignment piping. The proposed project is divided into three water main alignments: the Crawford Hill Subdivision Alignment, the Camp Creek Crossing Alignment, and the Raw Water Alignment. The Crawford Hill Subdivision Alignment would serve properties within the Crawford Hill Subdivision; the Camp Creek Crossing Alignment would serve properties on the eastern side of Placer Drive and along Lower Camp Creek Road, east of Camp Creek; the Raw Water Alignment would provide raw water for agricultural irrigation to the Tishaniik farm. A turnout would be installed at the bottom of Lower Camp Creek Road for future consolidation with the Orleans Community Services District (OCSD) and for water system redundancy. New non-potable fire hydrants would be installed at approximately 500-foot (ft) intervals along Camp Creek Road and Placer Drive.

Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains. The new water services would include new water meters and customer-side isolation valves in separate valve boxes.

8. Surrounding land uses and setting:

The proposed project is located in a rural, unincorporated portion of Humboldt County. The project site is located approximately one mile west of downtown Orleans. The project site is bordered by Six Rivers National Forest, Crawford Creek, Camp Creek, State Route (SR) 96, and single-family homes. Camp Creek transects the project site north—south on the eastern portion of the project site. Refer to **Figure 1** for a vicinity graphic of the project site and **Figure 2** for an aerial map of the project site. (Note: all Figures are located in Appendix A).

9. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):
- State Water Resource Control Board (SWRCB)
 - California Air Resources Board (CARB)
 - California Department of Fish and Wildlife (CDFW)
 - California Department of Public Health (CDPH)
 - Native American Heritage Commission (NAHC)
 - Office of Historic Preservation (OHP)
10. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

On June 6, 2024, the County sent Tribal consultation letters to the Yurok Tribe and Karuk Tribe. On June 16, 2024, a Tribal representative from the Karuk Tribe emailed the County noting that the Tribe would like to enter consultation on the project. On August 7, 2024, the Karuk Tribe and the County met virtually to discuss consultation on the project. On October 28, 2024, a letter from the Karuk Tribe Tribal Historic Preservation Officer (THPO) was sent to the County noting that the Karuk Tribe THPO concurs with the proposed project with implementation of the Karuk Tribe Inadvertent Discovery Plan. The Karuk Tribe THPO letter and Inadvertent Discovery Plan are included as Appendix E to this Initial Study. Therefore, consultation with the Karuk Tribe concluded on October 28, 2024.

2.0 PROJECT BACKGROUND

The Orleans Mutual Water Company (OMWC) owns and operates a small water treatment and distribution system in the community of Orleans, CA. The water system was originally constructed in the mid-1960s to serve the Crawford Hill Subdivision (subdivision). The water treatment system includes a diversion from Crawford Creek on U.S. Forest Service (USFS) land, a redwood raw water storage tank, two pressure filters, a coagulant pump, a chlorine pump, two booster pump, and associated appurtenances. The OMWC is currently in the process of applying for construction funding to complete the design and environmental documents, obtain permits, and construct the water treatment system.

The existing water system is broken down into multiple segments, Segments 1-13. The existing water system segments are described below and are shown in **Figure 3**.

Segment 1

The existing water main starts at the water treatment plant and follows an unimproved access road to Camp Creek Road. A small wharf hydrant is located adjacent to the water main on the north side of Camp Creek Road. The piping then crosses Camp Creek Road heading south and continues across the center of the subdivision, over a small hill, to Placer Drive following property lines within a 10-inch-wide easement for the water line. The water main then heads west briefly before turning south to cross Placer Drive.

Segment 2

At the top of the hill behind the first property, the water main branches off Segment 1 and heads west one pair of parcels and heads east 5 pairs of parcels within a 10-inch-wide easement to Placer Drive. A total of 12 properties on the hill are served from the piping running within this 10-inch wide east-west easement.

Segment 3

Immediately before Segment 1 heads south to cross Placer Drive, the water main branches and continues west along the north shoulder of Placer Drive. Four properties are served by this segment of piping.

Segment 4

After Segment 1 crosses Placer Drive, the water main branches and heads west to the end of the cul-de-sac and east along the south shoulder of Placer Drive. A total of 11 properties are served by this segment of piping, including a lower parcel that is accessed from a driveway off SR 96.

Segment 5

After Segment 1 crosses Placer Drive, near where Segment 4 branches from it, a 2-inch water line extends south from Placer Drive in a 10-inch-wide easement between two properties down a hill to SR 96. Along this segment there are two water services near the end of the western property's driveway beneath an old travel trailer. At the bottom of the hill, a 2-inch galvanized steel pipe crosses the Caltrans SR 96 through an 8-inch culvert. At the end of the pipe, the pipe branches to serve two properties on the south side of the highway, including the Tishaniik farm.

Segment 6

This segment of the water main begins at the east end of Segment 2 on the inner curve of Placer Drive. From here, a 1.5-inch galvanized steel pipe extends through a vegetated area to the east and ends at a

pressure reducing valve and manifold from which Segments 7, 10, 11 and 12 begin. Piping branching from this segment serve three parcels on the west side of Camp Creek and seven parcels on the east side of Camp Creek

Segment 7

This segment begins at the manifold at the end Segment 6 and heads north through 1.5-inch polyethylene piping until Segments 8 and 9 branch from it.

Segment 8

This segment begins at the end of Segment 7 and heads east as 1.5-inch polyethylene piping. The piping goes through a short section of 3-inch galvanized steel pipe (casing) through a hillside cut before being suspended across Camp Creek via an overhead cable system. The east end of the overhead crossing ends at a winch assembly that allows the cable to be lowered to access the pipe for maintenance or replacement. This segment of pipe serves three properties, plus one property at the end of Segment 13.

Segment 9

This segment begins at the end of Segment 7 and heads north as 1-inch polyethylene piping to serve one property to the north of the subdivision that's accessed from Camp Creek Road.

Segment 10

This segment begins at the manifold at the end Segment 6 and heads east as 1-inch polyethylene where it crosses Camp Creek via an overhead cable system. This segment serves one property.

Segment 11

This segment begins at the manifold at the end Segment 6 and heads southeast as 1-inch polyethylene where it crosses Camp Creek via an overhead cable system. This segment serves one property.

Segment 12

This segment begins at the manifold at the end Segment 6 and heads south-southeast as 1.5-inch galvanized steel piping. The piping branches and transitions to 1-inch polyethylene piping and heads east where it crosses Camp Creek via an overhead cable system to serve two properties. The piping also continues south from the branch to serve two homes on a single parcel on the west side of Camp Creek.

Segment 13

This segment branches from Segment 8 along Lower Camp Creek Road and consists of a 1-inch polyethylene pipe that heads mostly cross-country south to serve one property at the bottom of Lower Camp Creek Road.

3.0 PROJECT PURPOSE

Due to the age and condition of the existing water mains, frequent repairs are necessary to provide residents with a reliable water supply. Since the water services are un-metered, it makes it difficult to identify leaks in the systems and also to encourage conservation. Potable water is currently used at the Tishaniik farm for agricultural irrigation which puts more strain on the water treatment system to keep up with the water demands. Additionally, due to the water main pipe size and need for boost pressure, there are no fire hydrants, other than small wharf hydrants, which can reasonably provide water for fire suppression.

The purpose of the project is to address the following issues:

1. Replace water distribution mains with new piping that meets current standards for size, material, and construction to provide a more reliable water system that is less prone to leaks;
2. Install water meters at each service to encourage water conservation and assist with leak detection;
3. Install raw water piping to the Tishaniik farm for agricultural purposes to reduce the load on the water treatment system;
4. Install fire hydrants on raw water piping, which would allow higher fire flows and volumes than the current system can provide;
5. Construct new piping crossing over Camp Creek that is not susceptible to damage from falling trees and forest fires; and,
6. Install a turnout at the bottom of Lower Camp Creek Road for future consolidation with the OCSD and for water system redundancy.

4.0 PROJECT SETTING

4.1 PROJECT LOCATION

The proposed project is located one mile west of the unincorporated community of Orleans, Humboldt County, California. The distribution system serves privately owned parcels along Camp Creek Road, Placer Drive, SR 96, and Lower Camp Creek Road.

The project site is bordered by Six Rivers National Forest, Crawford Creek, Camp Creek, SR 96, and single-family homes. Camp Creek transects the project site north—south on the eastern portion of the project site. Neighboring land uses are summarized in **Table 1**. Refer to **Figure 1** for a vicinity graphic of the project site and **Figure 2** for an aerial map of the project site. (Note: all Figures are located in Appendix A).

Table 1
NEIGHBORING LAND USES

Direction	Land Use
North	Six Rivers National Forest, densely wooded land
East	Camp Creek, wooded land
South	Klamath River, SR 96, wooded land
West	Crawford Creek, Six Rivers National Forest, densely wooded land

4.2 ENVIRONMENTAL SETTING

The proposed project is located in a rural, unincorporated portion of Humboldt County. The project site is located approximately one mile west of downtown Orleans. The community of Orleans is surrounded by the Six Rivers National Forest and the Marble Mountain Wilderness Area. Land uses surrounding the

project site include single-family homes and public land used for timber extraction primarily within the Six Rivers National Forest.

The General Plan land use designations for the project are Conservation Floodway (CF), and Residential Estates, 1-5 acre minimum (RE1-5). The zoning code for the property is Unclassified (U) (County 2017). Land uses surrounding the project site include USFS Land and residential land.

5.0 PROJECT DESCRIPTION

Under the proposed project, existing water distribution piping would be demolished or abandoned in place and replaced with new water alignment piping. The proposed project is divided into three water main alignments: the Crawford Hill Subdivision Alignment, the Camp Creek Crossing Alignment, and the Raw Water Alignment. The Crawford Hill Subdivision Alignment would serve properties within the Crawford Hill Subdivision; the Camp Creek Crossing Alignment would serve properties on the eastern side of Placer Drive and along Lower Camp Creek Road, east of Camp Creek; the Raw Water Alignment would provide raw water for agricultural irrigation to the Tishaniik farm. A turnout would be installed at the bottom of Lower Camp Creek Road for future consolidation with the OCSD and for water system redundancy. New non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive.

Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains. The new water services would include new water meters and customer-side isolation valves in separate valve boxes.

5.1 PROJECT CHARACTERISTICS

Crawford Hill Subdivision Alignment

This alignment is proposed to serve properties within the Crawford Hill Subdivision. The majority of the proposed distribution mains within the Crawford Hill Subdivision would run parallel to the existing piping located within existing easements and right-of-way's (ROW) to minimize new ground disturbance or the need for new easements. The components of the proposed distribution mains within the Crawford Hill Subdivision Alignment are described below in Segments one through five and are shown on **Figure 4**.

Segment 1

The existing water main alignment transverses over the hill between houses to connect Camp Creek Road and Placer Drive. However, this portion of the alignment would be routed eastward along the shoulder of Camp Creek Road and then southward along Placer Drive. The existing north-south easements between Camp Creek Road and Placer Drive would be abandoned as part of the project due to difficulties constructing the new piping and ongoing poor access for future maintenance.

Segment 2

At the apex of Placer drive, the water main alignment would diverge, running west through an existing 10-inch-wide easement to serve properties on the hill as they are currently.

Segment 3

Along Placer Drive, this portion of the alignment would mainly remain as it is currently; however, the alignment would only span two properties rather than four properties.

Segment 4

This portion of the alignment would be move south from Placer Drive, crossing State Highway and entering the Tishaniik farm. The alignment would include a 4-inch water main alignment connection in the existing 10-ft-wide easement. The alignment would then be reduced to 2-inch and would cross SR 96 through an existing 8-inch culvert. The water alignment would serve the properties on the southern side of SR 96 and would utilize an existing 10-ft-wide easement along the northern edge of Tishaniik farm to access the property to the west.

Segment 5

The alignment would branch off east from Camp Creek Drive into an existing unimproved roadway that is more accessible for construction and future access. This portion of the alignment ends at the starting point for the Camp Creek Crossing Alignment, described below.

Camp Creek Crossing Alignment

This alignment is proposed to serve properties on the eastern side of Placer Drive and along Lower Camp Creek Road, east of Camp Creek. The components of the proposed distribution mains within the Camp Creek Crossing Alignment are described below in Segments six and seven and are shown on **Figure 5**.

Segment 6

A proposed 6-inch potable water main alignment would begin in the eastern end of the Crawford Hill Subdivision alignment near the existing manifold where flow is distributed to the four existing overhead creek crossings. The water main alignment would move south to an existing private driveway and then move east along a private parcel parallel to SR 96 ROW. Near the western end of the Caltrans bridge, the water main alignment would move south and enter SR 96 ROW. The alignment would cross Camp Creek beneath the existing Caltrans bridge and would continue east to the bottom of Lower Camp Creek Road. A turnout consisting of a wharf hydrant, tee, shutoff valve, and blind flange or pipe cap would be provided to accommodate a potential future intertie with OCSD's water system.

Segment 7

A 6-inch water main would be installed on the shoulder of Lower Camp Creek Road to serve eight properties along Lower Camp Creek Road.

In order to accommodate Caltrans requirements, the following would be included as part of the project:

- Installation of a new 6-inch welded steel carrier water pipeline within a 10-inch welded steel casing. The steel casing would be provided within the bridge and extend 20 feet beyond the abutment backwalls on each side.

- Two 6-inch forced balanced flanged double ball expansion fittings would be placed on either side of the bridge outside of the abutment. The expansion fittings would not be encased.
- Two 6-inch isolation valves would be installed on either side of the bridge outside the limits of the pipe casing.

Nothing would be attached to the bridge steel members and the pipeline would not be installed on the upstream side of the bridge.

Raw Water Alignment

This alignment would provide raw water for agricultural irrigation to the Tishaniik farm. A new 6-inch raw water main would pass through the Crawford Hill Subdivision, parallel to the Crawford Hill Subdivision alignment. Proposed 6-inch piping would support new non-potable fire hydrants that would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. These hydrants would provide greater flow and volume compared to what could be achieved if they were installed on the potable water mains. From Placer Drive, a 2-inch raw water main would head southward through an existing easement, reaching SR 96 and passing through an existing culvert crossing. For this alignment, the highway crossing would be shared with the new potable water service line crossing, under the Crawford Hill Subdivision alignment. See **Figure 6** for the raw water alignment.

Water Services

A total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains. The new water services would include new water meters and customer-side isolation valves in separate valve boxes. The new water meters would be sized to 1-inch meters to meet current California fire code requirements. All meters would be radio-read capable, likely via a portable receiver.

During installation of new water services, service to each property would be temporarily shut off for up to 4 hours. Property owners would be notified in advance of the shutdown. Temporary piping would be used where necessary to limit the shutdown duration.

5.2 EASEMENTS AND PERMITTING

Easements

A new utility easement would be required for piping east of Placer Drive on the larger parcel owned by the Karuk Tribe Housing Authority (KTHA) (Assessor's Parcel Number [APN] 529-141-037). All other water mains would be installed within the County ROW, Caltrans ROW or existing easements.

Permitting

Permitting for the project would be required to comply with the California Environmental Quality Act (CEQA), California Department of Transportation (Caltrans), and Humboldt County. Expected permitting requirements for the proposed project are summarized in **Table 2**.

**Table 2
EXPECTED PERMITTING REQUIREMENTS**

Agency/Technical Study	Authorization Required/ Permit Type
Caltrans—District 1 Office of Permits	Encroachment Permit
CEQA (Humboldt County Lead Agency)	Initial Study/Mitigated Negative Declaration (IS/MND)
Public Works Department (Humboldt County)	Encroachment Permit

5.3 PROJECT CONSTRUCTION

Project construction is anticipated to begin May 2026 and would take approximately 8 months to complete. The project would be constructed in a single phase. Construction would include approximately 2 weeks of mobilization, 6 months of demolition/excavation/installation, one month of backfill/paving, and 2 weeks of demobilization. The project would require 1,700 cubic yards (CY) of material export during demolition/excavation/installation.

During installation of new water services, service to each property would be temporarily shut off for up to 4 hours. Property owners would be notified in advance of the shutdown. Temporary piping would be used where necessary to limit the shutdown duration.

6.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially significant impact” or “Less than significant impact with mitigation” as indicated by the checklist on the following pages.

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

7.0 DETERMINATION

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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 will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	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.



Signature

November 8, 2024

Date

Andrew Bundschuh

Printed Name

Humboldt County Public Works

For

8.0 ENVIRONMENTAL INITIAL STUDY CHECKLIST

The lead agency has defined the column headings in the environmental checklist as follows:

- A. “Potentially significant impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially significant impact” entries when the determination is made, an Environmental Impact Report (EIR) is required.
- B. “Less than significant impact with mitigation” applies where the inclusion of mitigation measures has reduced an effect from “Potentially significant impact” to a “Less than significant impact.” All mitigation measures are described, including a brief explanation of how the measures reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be cross-referenced.
- C. “Less than significant impact” applies where the project does not create an impact that exceeds a stated significance threshold.
- D. “No impact” applies where a project does not create an impact in that category. “No impact” answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project specific screening analysis).

The explanation of each issue identifies the significance criteria or threshold used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significance. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [CEQA Guidelines Section 15063(c)(3)(D)]. Where appropriate, the discussion identifies the following:

- a) Earlier Analyses Used. Identifies where earlier analyses are available for review.
- b) Impacts Adequately Addressed. Identifies which effects from the checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and states whether such effects were addressed by mitigation measures based on the earlier analysis.
- c) Mitigation Measures. For effects that are “Less than significant impact with mitigation,” describes the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

I. AESTHETICS

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Except as provided in Public Resources Code Section 21099, would the project:				
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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Humboldt County is an area of diverse visual character, including timberland, range, mountains, rolling hills, and streams. Forestland is a prominent component of the visual landscape of Humboldt County, covering more than 80 percent of the total land area. Redwood National Park, Six Rivers National Forest, Redwoods State Park, and King Range National Conservation Area are all significant, protected forests. Agricultural land vistas are also a quintessential characteristic of Humboldt County; agriculture and grazing land uses comprise 15 percent of unincorporated lands. Portions of several rivers in the County are designated as part of the National and/or California Wild and Scenic River Systems. Sections of the Eel, Klamath, Trinity, and Van Duzen rivers are designated "wild," "scenic," or "recreational" (County 2017).

According to the Caltrans, SR 96 is considered an eligible State Scenic Highway (Caltrans 2023). However, no officially designated State Scenic or County Scenic highways in Humboldt County exist near the project site. Views along both sides of SR 96 include heavily forested hillsides, along with grass and brush closer to the highway.

Impact Analysis

a) Have a substantial adverse effect on a scenic vista?

Less than significant impact. A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape (such as an area with remarkable scenery or a resource that is indigenous to the area) for the benefit of the general public. Under construction of the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. New non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp

Creek Road and Placer Drive. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains. The majority of the proposed project would be subterranean and would have no substantial adverse effect on a scenic vista. Therefore, the impact would be less than significant, and no mitigation is required.

- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Less than significant impact. Though there are no currently designated scenic highways in the project area, SR 96 is considered an eligible State Scenic Highway (Caltrans 2023). The proposed project would not damage rock outcroppings, historic buildings, or other scenic resources in the project area. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. The majority of the proposed project would be subterranean and would not be visible from SR 96. Additionally, majority of the project work would be isolated in nature given the topography of the area and the obscuring vegetation that generally exists along SR 96. Therefore, the proposed project would not damage scenic resources within a State scenic highway and the impact would be less than significant.

- 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 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?

Less than significant impact. Sensitive viewer groups in the project area typically include residents, recreationists, and motorists. Land uses surrounding the project site include single-family homes and public land used for timber extraction primarily within the Six Rivers National Forest.

Under construction of the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. During installation of new water services, service to each property would be temporarily shut off for up to 4 hours. Property owners would be notified in advance of the shutdown. Temporary piping would be used where necessary to limit the shutdown duration. Construction of the proposed project would be temporary and short-term and would not degrade the existing visual character or quality of views of the site and its surroundings.

Operation of the proposed project is divided into three water main alignments: the Crawford Hill Subdivision Alignment, the Camp Creek Crossing Alignment, and the Raw Water Alignment. The Crawford Hill Subdivision Alignment would serve properties within the Crawford Hill Subdivision; the Camp Creek Crossing Alignment would serve properties on the eastern side of Placer Drive and along Lower Camp Creek Road, east of Camp Creek; the Raw Water Alignment would provide raw water for agricultural irrigation to the Tishaniik farm. New non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains. The majority of the proposed project would be subterranean and would have no permanent impact on the visual character or quality of the site and surrounding areas. Therefore, the impact would be less than significant.

- d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Less than significant impact. The proposed project would not introduce any new lighting or create a new source of glare. The majority of the proposed water alignment piping would be subterranean. However, some portions of the alignment piping as well as the proposed fire hydrants and water meters, would be aboveground and would be made of material that would not produce glare. Some artificial lighting may be needed during construction activities where portions of the water alignment piping would be constructed in dark areas; however, lighting for project construction would be temporary and short term. Therefore, the proposed project would not create a new source of substantial light or glare that would adversely affect day, or nighttime views and the impact would be less than significant.

II. AGRICULTURE AND FORESTRY RESOURCES

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non- forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

According to the 2002 U.S Department of Agriculture Census, approximately 27 percent of Humboldt County land (634,000 acres) is in agricultural use (County 2017). Humboldt County does not display data for the California Important Farmland Finder; however, it is noted on the Humboldt County Web GIS that the project parcel is not located on Prime Agricultural Soils (County 2023a).

As a means of agricultural land preservation, the State Legislature enacted the California Land Conservation Act of 1965 commonly called the “Williamson Act.” Under the Act, property owners may enter into contracts with their county to keep their lands in agricultural production for a minimum of 10 years in exchange for property tax relief. Lands covered by Williamson Act contracts are assessed based on their agricultural value instead of their potential market value under non-agricultural uses and are known as “Agricultural Preserves.” According to Humboldt County Web GIS mapping there are no portions of the project area that are under Williamson Act contract (County 2023a).

Impact Analysis

- 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?

No impact. Humboldt County does not display data for the California Important Farmland Finder; however, it is noted on the Humboldt County Web GIS that the project parcel is not located on Prime Agricultural Soils (County 2023a). Therefore, the proposed project would not convert farmland to a non-agricultural use and no impact would occur.

- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No impact. According to Humboldt County Web GIS mapping there are no portions of the project area that are under Williamson Act contract (County 2023a). Additionally, the project site is zoned Unclassified and would not conflict with any authorized use or current land use. Therefore, no impact would occur.

- 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))?

No impact. The project site is not zoned Timber Production Zone (TPZ). Additionally, no aspect of the proposed project would interfere with the required characteristics of TPZ nor with the ability to grow trees now or in the future. Therefore, the proposed project would not require a rezone and no impact would occur.

- d) Result in the loss of forest land or conversion of forest land to non-forest use?

No impact. No portion of the project site is zoned TPZ, and no removal of trees is proposed. Therefore, the proposed project would not result in the loss or the conversion of forest land to non-forest use and no impact would occur.

- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No impact. As described in questions a) through d), the proposed project would not result in the conversion of Farmland to a non-agricultural use or result in the conversion of forest land to non-forest use. Therefore, no impact would occur.

III. AIR QUALITY

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) 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"/>

The California Emissions Estimator Model (CalEEMod 2024) version 2022.1 was used to quantify project-generated construction emissions. The model output sheets are included in Appendix B to this Initial Study.

Environmental Setting

Criteria pollutants are defined and regulated by State and federal law as a risk to the health and welfare of the public and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources including: carbon monoxide (CO); reactive organic gases (ROGs); nitrogen oxides (NO_x); sulfur dioxide (SO₂); coarse particulate matter (PM₁₀); fine particulate matter (PM_{2.5}); and lead. Of these primary pollutants, CO, SO₂, PM₁₀, PM_{2.5}, and lead are criteria pollutants. ROGs and NO_x are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. The principal secondary criteria pollutants are ozone (O₃) and nitrogen dioxide (NO₂).

Ambient air quality is described in terms of compliance with State and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The USEPA has established national ambient air quality standards (NAAQS) for criteria pollutants. As permitted by the Clean Air Act, California has adopted the more stringent California ambient air quality standards (CAAQS) and expanded the number of regulated air pollutant constituents.

The project site is in Humboldt County, which lies within the North Coast Air Basin (NCAB). The NCAB extends for 250 miles from Sonoma County in the south to the Oregon border. The climate of NCAB is influenced by two major topographic units: the Klamath Mountains and the Coast Range provinces. The

climate is moderate with the predominant weather factor being moist air masses from the ocean. Average annual rainfall in the area is approximately 50 to 60 inches with the majority falling between October and April. The predominant wind direction is from the northwest during summer months and from the southwest during winter storm events.

Project activities which result in air pollutant emissions are subject to the authority of the North Coast Unified Air Quality Management District (NCUAQMD) and the CARB. Humboldt County is listed as "attainment" or "unclassified" for all the federal and State ambient air quality standards except for the State 24-hour PM₁₀ standard.

In determining whether a project has potentially significant air quality impact on the environment, agencies often apply their local air district's thresholds of significance to project impacts in the review process. The NCUAQMD has not adopted thresholds for determining the significance of a project's emissions under CEQA. The Best Available Control Technology (BACT) emissions rate limits for stationary sources as defined and listed in the NCUAQMD Rule and Regulations, Rule 110 – New Source Review and Prevention of Significant Deterioration, Section 5.1 – BACT (pages 8-9; NCUAQMD 2021). Although the Rule 110 levels do not generally apply to mobile sources or land development projects, the Rule 110 daily emission limits may be used as screening thresholds to evaluate the increased emissions which would be discharged to the NCAB from proposed land development and infrastructure projects. If project construction or operational emissions would exceed the screening level thresholds, shown in **Table 3**, additional air quality modeling may be needed to demonstrate that ground level concentrations resulting from project emissions would not exceed the applicable NAAQS and CAAQS.

Table 3
SCREENING LEVEL THRESHOLDS FOR PROJECT EMISSIONS

Pollutant	Screening Threshold (pounds per day)
NO _x	50
ROG	50
PM ₁₀	80
PM _{2.5}	50
CO	500
SO _x	80

Source: NCUAQMD Rule 110 (NCUAQMD 2021)

NO_x = nitrogen oxides; ROG = reactive organic gases; PM₁₀ = particulate matter 10 microns or less in diameter; PM_{2.5} = particulate matter 2.5 microns or less in diameter; CO = carbon monoxide; SO_x = sulfur oxides

The closest sensitive receptors are single-family residences located approximately 50 ft from the proposed pipeline alignment.

Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant impact. A potentially significant impact to air quality would occur if the project would conflict with or obstruct the implementation of the applicable air quality management or attainment plan.

The California Clean Air Act requires the NCUAQMD to achieve and maintain State ambient air quality standards for PM₁₀ by the earliest practicable date. The NCUAQMD prepared the Particulate Matter

Attainment Plan, Draft Report, in May 1995. This report includes a description of the planning area (North Coast Unified Air District), an emissions inventory, general attainment goals, and a listing of cost-effective control strategies. The NCUAQMD's attainment plan established goals to reduce PM₁₀ emissions and eliminate the number of days in which standards are exceeded. The plan includes three areas of recommended control strategies to meet these goals: (1) transportation, (2) land use, and (3) burning. Control measures for these areas are included in the Attainment Plan. The project design incorporates control measures identified in the PM₁₀ Attainment Plan appropriate to this type of project, such as:

- 1) The project's operation would maintain current employment levels and hours and vehicle miles traveled (VMT) are not anticipated to increase.
- 2) The project would apply water in construction areas and on unpaved access roads used for construction-related traffic to control dust.
- 3) The project's construction and operation would not utilize burn piles to dispose of biomass.

Therefore, the proposed project would not conflict with or obstruct implementation of the NCUAQMD Attainment Plan for PM₁₀, and the impact would be less than significant.

- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than significant impact. Air quality standards within the NCUAQMD are set for emissions that may include, but are not limited to visible emissions, particulate matter, and fugitive dust. Pursuant to Air Quality Regulation 1, Chapter IV, Rule 400 – *General Limitations*, a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, endanger the comfort, repose, health or safety of any such persons or the public, or have a natural tendency to cause injury or damage to business or property. Visible emissions include emissions that are visible to the naked eye, such as smoke from a fire. Under the proposed project, existing water distribution piping would be demolished or abandoned in place and replaced with new water alignment piping. No activities resulting in visible emissions, including intentional fire/burn, would be associated with the project.

The CalEEMod was used to quantify project-generated construction emissions. The model output sheets are included in Appendix B. Operational emissions were not modeled using CalEEMod as it is assumed operation of the new pipeline alignment would produce negligible operational emissions beyond what currently exists.

Construction

Project construction is anticipated to begin in May 2026 and would take approximately 8 months to complete. The project would be constructed in a single phase. Project construction emissions sources would include exhaust and fugitive dust emissions from off-road equipment use and emissions related to on-road vehicles (e.g., construction worker vehicles, vendor delivery vehicles, and material haul trucks). Emissions from construction equipment would occur for a limited period, and the equipment would be maintained to meet current emissions standards as required by CARB and the NCUAQMD. Construction would include approximately 2 weeks of mobilization, 6 months of

demolition/excavation/installation, one month of backfill/paving, and 2 weeks of demobilization. The project would require 1,700 CY of material export during demolition/excavation/installation.

Mobilization and demobilization would require 4 one-way worker trips and 2 one-way hauling trips. Demolition/excavation/installation would require 12 one-way worker trips, 2 vendor trips, approximately 2 one-way hauling trips, and 1 one-way onsite truck trips. Backfill/paving would require 12 one-way worker trips, and approximately 7 hauling trips. Worker trips during construction assume a maximum of six employees per day. Vendor trips include exporting old piping and importing new piping. Paving haul trips are based on an estimated 68 loads of aggregate and asphalt, assuming a total of 16 CY per tandem trailed load. Per the project engineer, minimal restriping may be required if road lines would be disturbed during construction. Due to the minimal area to be repainted, potential emissions from restriping would be negligible.

The project has the potential to generate particulate matter (dust) during construction activities. All activities at the project site are required to meet NCUAQMD Air Quality standards, including Regulation 1, which prohibits nuisance dust generation and is enforceable by the NCUAQMD (NCUAQMD 2015). Rule 104 states that:

1. No person shall allow handling, transporting, or open storage of materials in such a manner which allows or may allow unnecessary amounts of particulate matter to become airborne.
2. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:
 - a. Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.
 - b. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Containment methods can be employed during sandblasting and other similar operations.
 - c. Conduct agricultural practices in such a manner as to minimize the creation of airborne dust.
 - d. The use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
 - e. The application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts.
 - f. The paving of roadways and their maintenance in a clean condition.
 - g. The prompt removal of earth or other track out material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

The project would comply with NCUAQMD regulations, minimizing fugitive dust emissions.

The project's estimated construction emissions of criteria pollutants are shown below in **Table 4**. As shown in Table 4, project construction emissions would not exceed the NCUAQMD screening level

thresholds. Modeling assumes watering unpaved disturbed areas two times per day during dry weather, in accordance with NCUAQMD Rule 104.

Table 4
CONSTRUCTION CRITERIA POLLUTANT EMISSIONS (POUNDS PER DAY)

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Maximum Daily Emissions	0.5	4.1	6.7	<0.1	3.2	0.4
Screening Threshold	50	50	500	80	80	50
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: CalEEMod Output (Appendix B); Thresholds: NCUAQMD Rule 110.

ROG = reactive organic gases; NO_x = nitrogen oxides; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = particulate matter 10 microns or less in diameter; PM_{2.5} = particulate matter 2.5 microns or less in diameter.

Operation

Operation of the project would not require installation of new electrical equipment. Additionally, the project would not require an increase in facility maintenance beyond what currently exists; therefore, there would be no increase in operational VMT. The proposed project would include the replacement of water distribution mains with new piping that meets current standards for size, material, and construction to provide a more reliable water system that is less prone to leaks. The project would also include installation of water meters at each service to encourage water conservation and assist with leak detection. By reducing water leaks within the system, energy usage could be decreased compared to existing conditions.

Therefore, construction and operation of the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Additionally, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard. The impact would be less than significant, and no mitigation would be necessary.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact. Sensitive receptors (e.g., children, senior citizens, and acutely or chronically ill people) are more susceptible to the effect of air pollution than the general population. Land uses that are considered sensitive receptors typically include residences, schools, parks, childcare centers, hospitals, convalescent homes, and retirement homes. The closest sensitive receptors are single-family residences located approximately 50 ft from the proposed pipeline alignment.

The NCUAQMD currently enforces dust emissions according to the CA Health and Safety Code (Section 41701) which limits visible dust emissions that exceed 40 percent density to a maximum of three minutes in any one-hour period. NCUAQMD District Rule 104 states that “*reasonable precautions shall be taken to prevent particulate matter from becoming airborne.*” As described in the impact b) discussion, above, the project would incorporate fugitive best management practices in accordance with NCUAQMD Rule 110. Due to the limited activity that would occur, the rapid dissipation of the dust, and the distance to and low density of residences near the project site, project construction or operation would not result in substantial localized fugitive dust concentrations.

Diesel-powered construction equipment used on the project site would result in emissions of the Toxic Air Contaminant (TAC) diesel particulate matter (DPM). The dose (of TAC) to which receptors are

exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the duration of exposure a person has to the substance; a longer exposure period to a fixed quantity of emissions would result in higher health risks. Construction equipment used for the proposed project would include: An excavator, a rubber-tired loader, an off-highway truck, paving equipment, and a roller. These pieces of construction equipment would be used for seven months, and the entire buildout of the project would take less than one year. Due to the short and temporary nature of project construction activity which would require heavy diesel-powered contract equipment use, and due to the limited number of diesel-power equipment anticipated to be use on the project site, construction of the project would not expose sensitive receptors to substantial DPM concentrations.

Operation of the project would not require installation of any electrical equipment. Additionally, the project would not require an increase in facility maintenance beyond what currently exists, and there would be no increase in operational VMT. Therefore, the operation of the project would not expose sensitive receptors to substantial DPM concentrations.

Therefore, the construction or operation of the project would not expose sensitive receptors to substantial pollutant concentrations. The impact would be less than significant, and no mitigation would be necessary.

- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than significant impact. Odors during the construction phase would consist primarily of diesel truck fumes; however, these impacts would be temporary and less than significant. No new sources of odors from operations would occur as no electrical equipment is proposed. Additionally, the project would not require an increase in facility maintenance beyond what currently exists, and there would be no increase in operational VMT. Therefore, the proposed project would not result in other emissions (such as those leading to odors) affecting a substantial number of people. The impact would be less than significant, and no mitigation would be necessary.

IV. BIOLOGICAL RESOURCES

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US 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, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A Biological Resources Assessment (BRA) Report was prepared by HELIX on March 1, 2024. The BRA Report is included as Appendix C to this Initial Study Mitigated Negative Declaration (ISMND_.

Environmental Setting

The project site (or called Study Area) is located in a rural, unincorporated portion of Humboldt County. The Study Area is located on the west side of Orleans, north of Highway 96 and the Klamath River. The community of Orleans is surrounded by the Six Rivers National Forest and the Marble Mountain Wilderness Area. Land uses within and surrounding the Study Area are residential and public land used for timber production, primarily within the Six Rivers National Forest.

Topography within the Study Area varies and includes relatively flat areas adjacent to SR 96 and Camp Creek, as well as moderate to steep slopes in the northwestern portion of the Study Area with graded areas associated with a rural residential subdivision. Elevations range from 380 to 500 ft above mean sea

level (MSL). Camp Creek flows through the eastern portion of the Study Area. The Study Area contains three soil map units (NRCS 2024a): Typic Xerofluvents–Riverwash association, 2 to 10 percent slopes, Pits and Dumps, and Hugo family, moderately deep, 50 to 70 percent slopes.

The Study Area is located within the Camp Creek hydrologic unit (HUC12: 180102090801). Waterways in the region of the Study Area, including Camp Creek, flow into the Klamath River and eventually to the Pacific Ocean.

Methods

Background Research

Background research was conducted to inform and create target species lists to focus the survey efforts. Accessible information in public databases pertaining to natural resources in the region of the Study Area was queried. The following site-specific published information was reviewed for this BRA:

- California Department of Fish and Wildlife (CDFW). 2024. California Natural Diversity Database (CNDDDB); For Lonesome Ridge, Orleans, Bark Shanty Gulch, Somes Bar, Fish Lake, Orleans Mtn., Weitchpec, Hopkins Butte, and Salmon Mtn. U. S. Geological Survey (USGS) 7.5-minute series quadrangles, Sacramento, CA. Accessed [February 5, 2024];
- California Native Plant Society (CNPS). 2024. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39) For: Lonesome Ridge, Orleans, Bark Shanty Gulch, Somes Bar, Fish Lake, Orleans Mtn., Weitchpec, Hopkins Butte, and Salmon Mtn. USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed [February 5, 2024];
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). 2024. *Web Soil Survey*. Available at: <http://websoilsurvey.sc.egov.usda.gov>. [Accessed February 5, 2024];
- U.S. Fish and Wildlife Service (USFWS). 2024. Information for Planning and Consultation (IPaC). List of threatened and endangered species that may occur in your proposed project location and/or be affected by your proposed project. [Accessed February 5, 2024];
- U.S. Fish and Wildlife Critical Habitat Portal at: <https://ecos.fws.gov/ecp/report/table/critical-habitat.html>.

Special-Status Species Evaluation

For the purposes of this report, special-status species are those that fall into one or more of the following categories, including those:

- listed as endangered or threatened under the Federal Endangered Species Act (FESA; including candidates and species proposed for listing);
- listed as endangered or threatened under the California Endangered Species Act (CESA; including candidates and species proposed for listing);
- designated as rare, protected, or fully protected pursuant to California Fish and Game Code;

- designated a Species of Special Concern (SSC) by the CDFW;
- considered by CDFW to be a Watch List species with potential to become an SSC;
- defined as rare or endangered under Section 15380 of CEQA; or
- Having a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, 2B, or 3.

In order to evaluate special-status species and/or their habitats with the potential to occur in the Study Area and/or be impacted by the proposed project, HELIX obtained lists of special-status species known to occur and/or that have the potential to occur in the Study Area and vicinity from the USFWS (USFWS 2024), the CNPS (CNPS 2024), and the CNDDB (CDFW 2024). Attachment C of the BRA Report includes these lists of special-status plant and animal species occurring in the project region.

Reconnaissance Survey

A biological reconnaissance survey was conducted on November 21, 2023, by HELIX biologist Greg Davis. The Study Area was systematically surveyed on foot to ensure total search coverage; however, some areas were not accessed at the request of the tribal representative during the survey. All plant and animal species observed on-site during the surveys were recorded (Attachment E of the BRA Report), and all biological communities occurring on-site were characterized. Following the field survey, the potential for each species identified in the database query to occur within the Study Area was determined based on the site survey, soils, habitats present within the Study Area, and species-specific information.

Biological Communities

Eight biological communities were mapped within the Study Area, including rural residential, ruderal/disturbed areas, road, Douglas fir forest, mixed chaparral, irrigated row crop, montane riparian, and perennial drainage (Camp Creek). Mapped roads within the Study Area include SR 96, which are not further described in this document. A list of species observed during the biological reconnaissance survey is included in Attachment E of the BRA Report. Representative site photographs are not included in this report at the request of the tribal representative present at the time of the survey.

Rural Residential

Approximately 23.83 acres of rural residential areas were mapped within the Study Area. This community includes existing residences and access roads associated with Placer Drive and Lower Camp Creek Road. These areas are relatively developed and include a mix of native and non-native species, which include ornamental plants, weeds, and native trees such as Douglas fir (*Pseudotsuga menziesii*).

Ruderal/Disturbed

Ruderal/disturbed habitat covers approximately 3.45 acres of the Study Area and occurs along roadways and previously cleared areas. This community occurs in areas that are heavily disturbed by past or ongoing human activities but retain a soil substrate. Ruderal/disturbed areas may be sparsely to densely vegetated, but do not support a recognizable community or species assemblage. Vegetative cover is usually herbaceous and dominated by a wide variety of weedy non-native species or a few ruderal native species. Dominant plants within this community include ripgut brome (*Bromus diandrus*),

common velvet grass (*Holcus lanatus*), wild mustard (*Hirschfeldia incana*), yellow star-thistle (*Centaurea solstitialis*), stinkwort (*Dittrichia graveolens*), and Himalayan blackberry (*Rubus armeniacus*).

Douglas Fir

Douglas fir forested habitat covers approximately 5.63 acres of the Study Area. This community is present between Camp Creek and the subdivision associated with Placer Drive, as well as east of Lower Camp Creek Road. This community consists of stands dominated by Douglas fir and tanoak (*Notholithocarpus densiflorus*) and is interspersed with Pacific madrone (*Arbutus menziesii*), bigleaf maple (*Acer macrophyllum*), and black oak (*Quercus kelloggii*). This habitat type is frequently found on stream terraces, slopes, and ridges of all aspects. The understory is sparse, with dense leaf litter and small woody debris. The understory of this community includes evergreen huckleberry (*Vaccinium ovatum*), western sword fern (*Polystichum munitum*), and poison oak (*Toxicodendron diversilobum*).

Mixed Chaparral

Approximately 0.38 acre of mixed chaparral was mapped within the Study Area, which is associated with a remnant pile of tailings in the northern portion of the Study Area adjacent to Placer Drive. Dominant plant species within this community include Eastwood manzanita (*Arctostaphylos glandulosa*), toyon (*Heteromeles arbutifolia*), Pacific madrone, poison oak, and licorice fern (*Polypodium glycyrrhiza*).

Irrigated Row Crop

Approximately 3.03 acres of irrigated row crop community was mapped within the southern portion of the Study Area. This community is associated with the Tishaniik Community Farm, which is situated south of SR 96. A portion of this community includes a thicket of arroyo willow (*Salix lasiolepis*) that follows the base of the fill slope of SR 96. The thicket of willow receives runoff from the adjacent roadway; however, hydric soils and/or wetland hydrology were not observed in the willow thicket at the time of the survey.

Montane Riparian

Approximately 2.36 acres of montane riparian habitat was mapped within the Study Area, which is associated with Camp Creek in the eastern portion of the Study Area. This community extends from the banks of Camp Creek to the adjacent low terraces to the west and east. Dominant plant species within this community include white alder (*Alnus rhombifolia*), big leaf maple, California hazel (*Corylus cornuta*), Pacific dogwood (*Cornus nuttallii*), and giant chain fern (*Woodwardia fimbriata*).

Perennial Drainage (Camp Creek)

Approximately 1.86 acres of perennial drainage (Camp Creek) was mapped within the Study Area, consisting of one perennial drainage that flows into the Klamath River approximately 0.2 miles north of the Study Area. The perennial drainage in the Study Area exhibits a well-defined ordinary high water mark. The low flow channel exhibits an apparent bed and bank that transitions to a gently sloped and vegetated terrace in some areas, which is included within the active floodplain of Camp Creek. Perennial drainages are typically fed by waters from a groundwater table that supplies year-round water and are supplemented by precipitation and storm water runoff. After the initial onset of rains, these features have persistent flows throughout and past the end of the rainy season, with reduced flow before the onset of precipitation in the fall. Typically, these features exhibit a defined bed and bank and show signs

of scouring because of rapid flow events. Within the Study Area, the bed of the perennial drainage consists of boulder, gravel, and cobble in riffle and run sections of the drainage. Camp Creek is known to support spawning salmonids such as Chinook salmon (*Oncorhynchus tshawytscha*) and coho salmon (*Oncorhynchus kisutch*). This community is heavily shaded by the tree species associated with the montane riparian habitat, some of which are growing within the active floodplain, and includes other plants such as umbrella plant (*Darmera peltata*), California blackberry (*Rubus ursinus*), and Himalayan blackberry.

Special-Status Species Evaluation

A total of 30 regionally occurring special-status plant species and 27 regionally occurring special-status wildlife species were identified during the database queries and desktop review and are evaluated in Attachment D of the BRA Report.

Special-Status Plant Species

A total of 30 regionally occurring special-status plant species were identified during the database searches and desktop review. The Study Area does not provide habitat for the majority of the regionally occurring special-status plant species, which are associated with high elevation habitats, serpentine soils, and certain wetland habitats that do not occur within the Study Area.

However, based on the results of the desktop review and biological reconnaissance survey, the Study Area provides suitable habitat for eight special-status plant species: Bald Mountain milk-vetch (*Astragalus umbraticus*), coast fawn lily (*Erythronium revolutum*), small groundcone (*Kopsiopsis hookeri*), white-flowered rein orchid (*Piperia candida*), crinkled rag lichen (*Platismatia lacunosa*), Hooker's catchfly (*Silene hookeri*), Marble Mountain campion (*Silene marmorensis*), and robust false lupine (*Thermopsis robusta*). These species are discussed below. Special-status species determined to have no potential to occur in the Study Area or that are not expected to occur in the Study Area and be impacted by the proposed project (Attachment D of the BRA Report) are not discussed further in this Initial Study.

Special-Status Wildlife Species

A total of 27 regionally occurring special-status wildlife species were identified during the database searches and desktop review. The Study Area does not provide habitat for the majority of the regionally occurring special-status wildlife species, which are associated with aquatic habitats such as lakes and ponds, steep cliff faces, and old-growth forest habitat that do not occur within the Study Area.

The Study Area provides suitable habitat for 13 special-status wildlife species, including Klamath River lamprey (*Entosphenus similis*), coastal cutthroat trout (*Oncorhynchus clarkii clarkii*), coho salmon (*Oncorhynchus kisutch* pop. 2), Chinook salmon (*Oncorhynchus tshawytscha* pop. 30), Pacific tailed frog (*Ascaphus truei*), Del Norte salamander (*Plethodon elongatus*), foothill yellow-legged frog (*Rana boylei* pop. 1), southern torrent salamander (*Rhyacotriton variegatus*), northern goshawk (*Accipiter gentilis*), ruffed grouse (*Bonasa umbellus*), bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), and northern spotted owl (*Strix occidentalis caurina*), as well as habitat for other migratory birds and raptors. These species are discussed briefly below. Although marbled murrelet (*Brachyramphus marmoratus*) and Pacific marten (*Martes caurina*) are not expected to occur within the Study Area, they are discussed in this report due to the presence of designated Critical Habitat for these species in the Study Area. The remaining special-status species determined to have no potential to occur within the

Study Area or that are not expected to occur in the Study Area and be impacted by the proposed project (Attachment D of the BRA Report) are not discussed further in this Initial Study.

Migratory Birds and Raptors

As noted in Attachment B of the BRA Report, migratory and non-game birds are protected during the nesting season by the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Codes. The Study Area and immediate vicinity provides nesting and foraging habitat for a variety of native birds. Nests were not observed during surveys; however, a variety of migratory birds have the potential to nest in and adjacent to the Study Area, in trees, shrubs, and on the ground in vegetation.

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA; Section 1600 of the California Fish and Game Code, which includes riparian areas; and/or Sections 401 and 404 of the Clean Water Act, which include wetlands and other waters of the U.S., and Critical Habitat protected under the ESA. Sensitive habitats or resource types within the Study Area are discussed below, including aquatic resources and riparian habitat.

Aquatic Resources and Riparian Habitat

The perennial drainage (Camp Creek) is the only aquatic resource within the Study Area. The Study Area also supports montane riparian habitat that parallels Camp Creek. The project has been designed to avoid direct impacts to Camp Creek and the montane riparian habitat by proposing to tie in water distribution lines to the existing infrastructure of the Camp Creek bridge crossing on SR 96.

Streamside Management Areas

In addition to Camp Creek and the montane riparian habitat, the Streamside Management Area (SMA) associated with Camp Creek is considered a sensitive habitat. The Humboldt County General Plan defines SMAs for perennial drainages, such as Camp Creek, as being a buffer of 100 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line, whichever is greater, on either side of perennial streams (Humboldt County 2017).

Wildlife Migration Corridors

Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. This fragmentation of habitat can also occur when a portion of one or more habitats is converted into another habitat; for instance, when woodland or scrub habitat is altered or converted into grasslands after a disturbance such as fire, mudslide, or construction activities. Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and, (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The Study Area includes major roadways and residential properties but also supports a salmon bearing drainage, Camp Creek, as well as other natural habitats such as montane riparian and Douglas fir forest.

Critical Habitat

Portions of the Study Area are mapped as Critical Habitat for marbled murrelet and proposed Critical Habitat for Pacific marten.

Impact Analysis

- 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 Wildlife or U.S. Fish and Wildlife Service?

Less than significant impact with mitigation. Special-status plant and wildlife species have the potential to occur within the Study Area and be impacted by construction activities.

Special-Status Plant Species

Based on the results of the desktop review and biological reconnaissance survey, the Study Area provides suitable habitat for eight special-status plant species: Bald Mountain milk-vetch (*Astragalus umbraticus*), coast fawn lily (*Erythronium revolutum*), small groundcone (*Kopsiopsis hookeri*), white-flowered rein orchid (*Piperia candida*), crinkled rag lichen (*Platismatia lacunosa*), Hooker's catchfly (*Silene hookeri*), Marble Mountain campion (*Silene marmorensis*), and robust false lupine (*Thermopsis robusta*). These species are discussed below. Special-status species determined to have no potential to occur in the Study Area or that are not expected to occur in the Study Area and be impacted by the proposed project (Attachment D of the BRA Report) are not discussed further in this report.

Bald Mountain Milk-vetch

Federal status – None

State status – None

Other – California Rare Plant Rank (CRPR) 2B.2

Species Description

Bald Mountain milk-vetch is a perennial herb in the legume family (Fabaceae) that is classified with a CRPR of 2B by the CNPS, which are plants considered to be rare, threatened, or endangered in California but are more common elsewhere. This species is found in dry openings within cismontane woodland and lower montane coniferous forest, sometimes on roadsides, from 150 to 1,250 meters above MSL (CNPS 2024, CDFW 2024). The blooming period for this species is from May to August.

Survey History

Bald Mountain milk-vetch was not observed during the biological survey; however, the survey was conducted outside of the known blooming period for this species. There are no documented CNDDDB records of this species within a five-mile radius of the site (CDFW 2024).

Habitat Suitability

Suitable habitat for this species is present in openings within the Douglas fir forest community, as well as in roadcuts along Camp Creek Road. This species may occur within the Study Area, given that it is known to occur in the vicinity and suitable habitat is present.

Potential for Impacts

There is potential for direct and indirect effects to Bald Mountain milk-vetch if this species is present within the Study Area. However, Mitigation Measure BIO-2 would reduce potential impacts to this species to less than significant.

Coast Fawn Lily

Federal status – None

State status – None

Other – CRPR 2B.2

Species Description

Coast fawn lily is a perennial bulbiferous herb in the lily family (Liliaceae) that is classified with a CRPR of 2B by the CNPS. This species is found on mesic soils and streambanks in bogs and fens, broadleaved upland forest, and North Coast coniferous forest from 0 to 1,600 meters above MSL. The blooming period for this species is from March to July, and can occasionally bloom as late as August. Associated species include Douglas fir, tanoak, and Pacific madrone (CNPS 2024).

Survey History

Coast fawn lily was not observed during the biological survey; however, the survey was conducted outside of the known blooming period for this species. The nearest extant occurrence is 8.5 miles south of the Study Area along a logging road (CDFW 2024).

Habitat Suitability

Suitable habitat for this species is present in the Douglas fir and montane riparian communities within the Study Area. This species may occur within the Study Area, given that it is known to occur in the vicinity and suitable habitat is present.

Potential for Impacts

There is potential for direct and indirect effects to coast fawn lily if this species is present within the Study Area. However, Mitigation Measure BIO-2 would reduce potential impacts to this species to less than significant.

Small Groundcone

Federal status – None

State status – None

Other – CRPR 2B.3

Species Description

Small groundcone is a parasitic perennial rhizomatous herb in the broomrape family (Orobanchaceae) that is classified with a CRPR of 2B by the CNPS. This species is found in North Coast coniferous forest from 90 to 885 meters above MSL and blooms from April to August. Microsite habitat characteristics include shrubby places in open woods, generally found on salal (*Gaultheria shallon*) and occasionally on Pacific madrone (*Arbutus menziesii*) and Kinnikinnick (*Arctostaphylos uva-ursi*) (CNPS 2024).

Survey History

Small groundcone was not observed during the biological survey; however, the survey was conducted outside of the known blooming period for this species. There are no documented CNDDDB records of this species within a five-mile radius of the Study Area (CDFW 2024).

Habitat Suitability

Pacific madrone, an occasional host plant of this species, was observed in the Douglas fir community within the Study Area, which provides suitable habitat for this species. This species may occur in the Douglas fir community within the Study Area, given that is known to occur in the vicinity and suitable habitat is present.

Potential for Impacts

There is potential for direct and indirect effects to small groundcone if this species is present within the Study Area. However, Mitigation Measure BIO-2 would reduce potential impacts to this species to less than significant.

White-flowered Rein Orchid

Federal status – None

State status – None

Other – CRPR 1B.2

Species Description

White-flowered rein orchid is a perennial herb in the orchid family (Orchidaceae) that is classified with a CRPR of 1B by the CNPS, which are plants considered to be rare, threatened, or endangered in California and elsewhere. This species is found within broadleaved upland forests, lower montane coniferous forests, and North Coast coniferous forests from 30 to 1,310 meters above MSL. This species is sometimes found on serpentinite substrates and is generally associated with sites containing forest duff, mossy banks, rock outcrops, and muskeg. The blooming period for this species has been documented as early as March; however, it typically blooms between May and September (CDFW 2024, CNPS 2024).

Survey History

White-flowered rein orchid was not observed during the biological survey; however, the survey was conducted outside of the known blooming period for this species. The nearest extant occurrence is 6.5 miles west of the Study Area, which is described to be within Douglas fir forest (CDFW 2024).

Habitat Suitability

The Douglas fir community within the Study Area provides suitable habitat for this species. This species may occur in the Douglas fir community within the Study Area, given that is known to occur in the vicinity and suitable habitat is present.

Potential for Impacts

There is potential for direct and indirect effects to white-flowered rein orchid if this species is present within the Study Area. However, Mitigation Measure BIO-2 would reduce potential impacts to this species to less than significant.

Crinkled Rag Lichen

Federal status – None

State status – None

Other – CRPR 2B.3

Species Description

Crinkled rag lichen is an epiphytic foliose lichen that is classified with a CRPR of 2B by the CNPS. This species is found within North Coast coniferous forest and riparian woodland from 20 to 2,000 meters

above MSL (CNPS 2024). This species is usually found growing on alder trees (*Alnus* spp.) and/or alder bark litterfall (CDFW 2024).

Survey History

Crinkled rag lichen would likely have been identifiable during the survey; however, its suitable habitat, the montane riparian community, was only partially accessible due to private property being present within the Study Area that could not be accessed. There are no documented CNDDDB records of this species within a five-mile radius of the Study Area (CDFW 2024).

Habitat Suitability

The montane riparian community within the Study Area contains alders that provide suitable habitat/substrate for this species. This species may occur in the montane riparian community within the Study Area, given that it is known to occur in the vicinity and suitable habitat is present.

Potential for Impacts

Direct and/or indirect effects to this species are not anticipated, given that the current designs do not indicate impacts to the montane riparian community. If future iterations of the project design were to include impacts to the montane riparian community, Mitigation Measure BIO-2 would reduce potential impacts to this species to less than significant.

Hooker's Catchfly

Federal status – None

State status – None

Other – CRPR 2B.2

Species Description

Hooker's catchfly is a perennial herb in the pink family (Caryophyllaceae) that is classified with a CRPR of 2B by the CNPS. This species is often found in grassy openings within chaparral, cismontane woodland, and lower montane coniferous forest from 150 to 1,260 meters above MSL. This species is sometimes found growing on rocky slopes and/or serpentine substrates. The blooming period for this species has been documented as early as March, but typically blooms between May and July (CDFW 2024, CNPS 2024).

Survey History

Hooker's catchfly was not observed during the biological survey; however, the survey was conducted outside of the known blooming period for this species. There are five reported CNDDDB occurrences of this species within a five-mile radius of the Study Area, with the nearest being a historic occurrence from 1929 that overlaps the Study Area (CDFW 2024). The next nearest and more recent CNDDDB occurrence is located approximately 3.7 miles to the north, which is from 2019 and is associated with an exposed serpentine road bank (CDFW 2024).

Habitat Suitability

Openings within the Douglas fir community in the Study Area provide suitable habitat for this species; however, the potential for this species to occur is low, given that it is typically observed growing on serpentine substrates, which do not occur in the Study Area.

Potential for Impacts

There is potential for direct and indirect effects to Hooker's catchfly if this species is present within the Study Area. Mitigation Measure BIO-2 would reduce potential impacts to this species to less than significant.

Marble Mountain Campion

Federal status – None

State status – None

Other – CRPR 1B.2

Species Description

Marble Mountain campion is a perennial herb in the pink family (Caryophyllaceae) that is classified with a CRPR of 1B by the CNPS. This species is found in broadleaf upland forests, chaparral, cismontane woodlands, and lower montane coniferous forests from 170 to 1,250 meters above MSL. The blooming period for this species is between June and August (CNPS 2024).

Survey History

Hooker's catchfly was not observed during the biological survey; however, the survey was conducted outside of the known blooming period for this species. The nearest extant occurrence is 6.2 miles east of the Study Area along the Salmon River Trail in an area with Douglas fir and tanoak (CDFW 2024).

Habitat Suitability

The Douglas fir community within the Study Area provides suitable habitat for this species. This species may occur in the Douglas fir community within the Study Area, given that it is known to occur in the vicinity and suitable habitat is present.

Potential for Impacts

There is potential for direct and indirect effects to Marble Mountain campion if this species is present within the Study Area. However, Mitigation Measure BIO-2 would reduce potential impacts to this species to less than significant.

Robust False Lupine

Federal status – None

State status – None

Other – CRPR 1B.2

Species Description

Robust false lupine is a perennial rhizomatous herb in the legume family (Fabaceae) that is classified with a CRPR of 1B by the CNPS. This species is found within broadleaf upland forests and North Coast coniferous forests from 150 to 1,500 meters above MSL. Other ecological preferences of this species include growing along ridges and sometimes on serpentine substrates. The blooming period of this species is between May and July (CDFW 2024, CNPS 2024).

Survey History

Hooker's catchfly was not observed during the biological survey; however, the survey was conducted outside of the known blooming period for this species. There are 10 reported CNDDB occurrences of this species within a five-mile radius of the Study Area, with the nearest being a historic occurrence from 1931 that overlaps the Study Area (CDFW 2024). The next nearest and more recent CNDDB occurrence is

located approximately 2.2 miles to the northwest along a ridgeline road, which is from 2009 (CDFW 2024).

Habitat Suitability

Although there are no ridgelines within the Study Area, the openings along the mid-slope Camp Creek Road and adjacent to the mixed chaparral community may provide marginal habitat for this species. This species may occur in the openings along the mid-slope Camp Creek Road and adjacent mixed chaparral community within the Study Area, given that it is known to occur in the vicinity and marginal habitat is present.

Potential for Impacts

There is potential for direct and indirect effects to robust false lupine if this species is present within the Study Area. However, Mitigation Measure BIO-2 would reduce potential impacts to this species to less than significant.

Special-Status Wildlife Species

The Study Area provides suitable habitat for 13 special-status wildlife species, including Klamath River lamprey (*Entosphenus similis*), coastal cutthroat trout (*Oncorhynchus clarkii clarkii*), coho salmon (*Oncorhynchus kisutch* pop. 2), Chinook salmon (*Oncorhynchus tshawytscha* pop. 30), Pacific tailed frog (*Ascaphus truei*), Del Norte salamander (*Plethodon elongatus*), foothill yellow-legged frog (*Rana boylei* pop. 1), southern torrent salamander (*Rhyacotriton variegatus*), northern goshawk (*Accipiter gentilis*), ruffed grouse (*Bonasa umbellus*), bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), and northern spotted owl (*Strix occidentalis caurina*), as well as habitat for other migratory birds and raptors. These species are discussed briefly below. Although marbled murrelet (*Brachyramphus marmoratus*) and Pacific marten (*Martes caurina*) are not expected to occur within the Study Area, they are discussed in this report due to the presence of designated Critical Habitat for these species in the Study Area. The remaining special-status species determined to have no potential to occur within the Study Area or that are not expected to occur in the Study Area and be impacted by the proposed project (Attachment D of the BRA Report) are not discussed further in this Initial Study.

Klamath River Lamprey

Federal status – None

State status – None

Other – CDFW Species of Special Concern

Species Description

Klamath River lamprey are a species of fish that appear to be non-migratory and are resident in both rivers and lakes of the Klamath basin. Klamath River lamprey are thought to need cold, clear water for spawning and incubation (Moyle 2002). Adults typically use spawning gravel to build nests, while ammocoetes burrow in soft sediments for rearing (Kostow 2002). Ammocoetes also need larger substrates as they grow and algae for food in habitats with slow or moderately slow water velocities.

Survey History

Klamath River lamprey was not observed during the biological survey; however, the Klamath River is located approximately 0.1 mile south of the Study Area. There are no documented CNDDDB occurrences of this species within a five-mile radius of the Study Area (CDFW 2024).

Habitat Suitability

This species' distribution in the lower Klamath River coincides with spawning Chinook and coho salmon, their main prey in the lower Klamath River (Moyle et al. 2015). Given that coho and Chinook salmon are known to occur within Camp Creek, this species may occur within the Study Area. However, Camp Creek within the Study Area is heavily shaded and likely does not produce abundant algae as a food source for ammocoetes, which lowers the potential for this species to occur.

Potential for Impacts

No direct impacts to potential habitat in Camp Creek would be anticipated as a result of the proposed project, as the project will not occur in Camp Creek. Indirect impacts associated with ground-disturbing activities, such as transport/deposition of deleterious substances to surface waters from adjacent work areas (e.g., sediment, petroleum products, etc.), could occur as a result of the proposed project.

Mitigation Measure BIO-3 would reduce potential impacts to this species to less than significant.

Coastal Cutthroat Trout

Federal status – None

State status – None

Other – CDFW Species of Special Concern

Species Description

Coastal cutthroat trout usually inhabit and spawn in small to moderately large, clear, well-oxygenated, shallow rivers with gravel bottoms. The native range of the coastal cutthroat trout extends south from the southern coastline of the Kenai Peninsula in Alaska to the Eel River in Northern California. Coastal cutthroat trout are resident in tributary streams and rivers of the Pacific basin and are rarely found more than 100 miles (160 km) from the ocean (Behnke 2002).

Survey History

Coastal cutthroat trout was not observed during the biological survey; however, the Study Area is within the native range of this species. There are no documented CNDDDB occurrences of this species within a five-mile radius of the Study Area (CDFW 2024).

Habitat Suitability

Camp Creek within the Study Area provides suitable habitat for this species, as it is a perennial drainage with suitable gravel substrate and is within 100 miles of the ocean. Additionally, Camp Creek is known to support salmonid species such as coho and Chinook salmon.

Potential for Impacts

No direct impacts to potential habitat in Camp Creek would be anticipated as a result of the proposed project, as the project will not occur in Camp Creek. Indirect impacts associated with ground-disturbing activities, such as transport/deposition of deleterious substances to surface waters from adjacent work areas (e.g., sediment, petroleum products, etc.), could occur as a result of the proposed project.

Mitigation Measure BIO-3 would reduce potential impacts to this species to less than significant.

Coho Salmon – Southern Oregon/Northern California Coast (SONCC) ESU

Federal status – Threatened

State status – Threatened

Other – None

Species Description

Coho salmon are anadromous fish that spawn in small headwater streams and side channels with clean gravel beds. In California, these salmon return to their natal streams to spawn after 6 to 18 months in the ocean. Hatchlings mature in shaded, off-channel pools and oxbows that are protected from high winter flows. Juveniles migrate to the ocean to mature before returning upstream to spawn and die (NMFS 2014). This evolutionary significant unit (ESU) includes all naturally spawned populations of coho salmon in coastal streams between Cape Blanco, Oregon, and Santa Cruz, California (NMFS 2014). The National Marine Fisheries Service (NMFS) divided the California populations into five diversity strata, which each represent environmentally and ecologically similar regions: Klamath River, Trinity River, Eel River, Central Coastal, and Southern Coastal strata (Williams et al 2007). The largest remaining SONCC coho populations in California are in the Klamath, Trinity, Mad, Humboldt Bay, Eel, and Mattole drainages, with additional populations in some smaller coastal streams.

Survey History

Coho salmon was not observed during the biological survey; however, the Study Area is within the native range of this species. This species is known to occur within Camp Creek and the Klamath River downstream of the Study Area (CDFW 2012).

Habitat Suitability

Camp Creek within the Study Area provides suitable spawning and overwintering habitat for this species.

Potential for Impacts

No direct impacts to potential habitat in Camp Creek would be anticipated as a result of the proposed project, as the project will not occur in Camp Creek. Indirect impacts associated with ground-disturbing activities, such as transport/deposition of deleterious substances to surface waters from adjacent work areas (e.g., sediment, petroleum products, etc.), could occur as a result of the proposed project.

Mitigation Measure BIO-3 would reduce potential impacts to this species to less than significant.

Chinook Salmon – Upper Klamath and Trinity River (UKTR) ESU

Federal status – Candidate

State status – Threatened

Other – CDFW Species of Special Concern

Species Description

This ESU includes both spring- and fall-run Chinook salmon, which are anadromous salmonid fishes native to fresh and ocean waters of the North Pacific rim. Individuals within this ESU spawn in rivers and streams with cool, clear, water and suitable cobble and gravel substrate within the upper Klamath and Trinity River (UKTR) basins. Adult UKTR spring Chinook salmon enter the Klamath estuary in the spring and summer (March – July) for spawning, while the fall-run returns to the UKTR from August to October (CDFW 2020).

Survey History

Chinook salmon was not observed during the biological survey; however, the Study Area is within the native range of this species. This species is known to occur within Camp Creek and the Klamath River downstream of the Study Area (USFWS 2008).

Habitat Suitability

Camp Creek within the Study Area provides suitable spawning and overwintering habitat for this species.

Potential for Impacts

No direct impacts to potential habitat in Camp Creek would be anticipated as a result of the proposed project, as the project will not occur in Camp Creek. Indirect impacts associated with ground-disturbing activities, such as transport/deposition of deleterious substances to surface waters from adjacent work areas (e.g., sediment, petroleum products, etc.), could occur as a result of the proposed project.

Mitigation Measure BIO-3 would reduce potential impacts to this species to less than significant.

Pacific Tailed Frog

Federal status – None

State status – None

Other – CDFW Species of Special Concern

Species Description

In California, this species occurs in coastal California from Mendocino to the Oregon border up to an elevation of nearly 2,000 meters (Jennings and Hayes 1994). This species requires cold, clear, and permanent water for all life stages, including larval development. This species is most commonly found in old growth forests that provide cold water conditions that this species requires (Jennings and Hayes 1994). This species is active from April through October which is typically when reproduction occurs. Eggs are deposited in strands on the underside of submerged rocks and metamorphosis typically takes two to three years (Jennings and Hayes 1994).

Survey History

Pacific tailed frog was not observed within the Study Area during the biological survey. There are four reported CNDDDB occurrences of this species within a five-mile radius of the Study Area, with the nearest being located approximately 2.6 miles to the southwest within Red Cap Creek, south of the Klamath River (CDFW 2024).

Habitat Suitability

There is high potential for Pacific tailed frog to occur within the Study Area, given that Camp Creek provides suitable aquatic habitat and that this species is known to occur within close proximity to the Study Area. This species may also utilize adjacent uplands to Camp Creek as upland dispersal and/or refugia habitat.

Potential for Impacts

If Pacific tailed frog occupies the Study Area or areas adjacent to the Study Area during construction, potential adverse effects to the species could include take of individuals using upland areas for dispersal and/or refugia during construction. This would be a potentially significant impact. No direct impacts to potential habitat in Camp Creek would be anticipated as a result of the proposed project, as the project will not occur in Camp Creek or the montane riparian community.

Mitigation Measure BIO-4 would reduce potential impacts to this species to less than significant.

Del Norte Salamander

Federal status – None

State status – None

Other – CDFW Watchlist Species

Species Description

This species is found along the coast in far northwest California from near Orick, Humboldt County, east to near the Seiad Valley, Siskiyou County, and Salyer, Trinity County, and north into southwestern Oregon where they have been found inland along West Cow Creek in Douglas County. The species is terrestrial and strongly associated with moist talus in humid shaded and closed-canopy coastal forests of mixed hardwoods and conifers, but also found in rock rubble of old riverbeds, and under bark and logs on the forest floor, usually in rocky areas. It is especially attracted to older forests (Stebbins et al. 2012).

Survey History

Del Norte salamander was not observed within the Study Area during the biological survey. There are five reported CNDDDB occurrences of this species within a five-mile radius of the Study Area, with the nearest being located approximately 0.5 mile to the west (CDFW 2024). This observation is from 1989 and is associated with Ullathorne Creek. This species was also observed within Camp Creek in 1995 approximately 0.6 mile upstream and to the north of the Study Area (CDFW 2024).

Habitat Suitability

There is a high potential for Del Norte salamander to occur within the Study Area, given that this species is known to occur within Camp Creek. This species may also utilize adjacent uplands to Camp Creek as upland dispersal and/or refugia habitat.

Potential for Impacts

If Del Norte salamander occupies the Study Area or areas adjacent to the Study Area during construction, potential adverse effects to the species could include take of individuals using upland areas for dispersal and/or refugia during construction. This would be a potentially significant impact. No direct impacts to potential habitat in Camp Creek would be anticipated as a result of the proposed project, as the project will not occur in Camp Creek or the montane riparian community.

Mitigation Measure BIO-4 would reduce potential impacts to this species to less than significant.

Foothill Yellow-legged Frog

Federal status – None (see species description)

State status – None (see species description)

Other – CDFW Species of Special Concern

Species Description

The foothill yellow-legged frog (FYLF) range extends from the Transverse Mountains in southern California north to the Oregon border along the Coast Ranges in California (Zeiner *et al.* 2000). The range of FYLF in the Sierra Nevada exists from the Cascade crest and along the western side of the Sierra Nevada to Kern County. Isolated records of the FYLF are known from San Joaquin County and Los Angeles County. The elevational range of FYLF extends from sea level up to 6,370 feet above msl (Zeiner *et al.* 2000).

Two studies have identified geographic breaks in populations of FYLF which are currently recognized by the CDFW. Both studies, Peek (2018) and McCartney-Melstad (2018), reached similar conclusions; however, Peek identified a separate and divergent clade along the Feather River. CDFW recognizes the five clades of FYLF, which include:

- 1) Northwest/North Coast: north of San Francisco Bay in the Coast Ranges and east in Tehama County;
- 2) Northeast/Northern Sierra: northern El Dorado County (North Fork American River watershed, includes Middle Fork American River) and north in the Sierra Nevada to southern Plumas County (Upper Yuba River watershed);
- 3) East/Southern Sierra: El Dorado County (South Fork American River watershed) and south in the Sierra Nevada;
- 4) West/Central Coast: south of San Francisco Bay in the Coast Ranges to San Benito and Monterey counties, presumably east of the San Andreas Fault/Salinas Valley; and,
- 5) Southwest/South Coast: presumably west of the San Andreas Fault/Salinas Valley in Monterey County and south in the Coast Ranges.

The project site is located in population 1, North Coast distinct population segment of FYLF, which does not currently warrant listing under FESA and/or CESA but is considered a species of special concern by CDFW.

The FYLF aquatic habitat consists of streams flowing through a variety of vegetation communities, such as valley foothill hardwood, riparian, hardwood-conifer, chaparral, wet meadow, ponderosa pine, and mixed pine. FYLF prefer stream habitat with some shading greater than 20 percent but seem to be absent from streams with a canopy closure of 90 percent or more. The most important characteristics for FYLF habitat include the stream order, minimum temperatures, frequency of precipitation, stream gradient, and elevation. Breeding and rearing habitat is generally located in gently flowing, low-gradient streams with variable substrates dominated by cobble and boulders. In larger streams, breeding sites are usually in depositional areas at the tail end of pools or near tributary confluences. In smaller streams, egg masses are placed in similar locations amongst cobble in depositional areas near pools. Egg masses are typically attached to leeward sides of boulders or cobbles to avoid exposure to high velocity flows. Tadpoles tend to also occupy similar sites as the egg masses, which are typically more protected from scouring events. The presence of sediment may reduce refugia for tadpoles and increase the likelihood they will be washed downstream during periods of high flow (Hayes *et al.* 2016).

FYLF upland habitat and their activity during the nonbreeding season is poorly known. FYLF have been detected moving through uplands, but it is not known where they are going, such as terrestrial sites or smaller tributary streams. FYLF is generally considered to be closely associated with stream habitats and typically are found within 165 feet of stream habitat. FYLF have been detected under surface objects in terrestrial environments (Zeiner *et al.* 2000).

Breeding typically starts in spring after high velocity flows begin to subside and air and water temperatures begin to increase. FYLF typically lay eggs as early as March, but as late as June at higher elevations in the Sierra Nevada. Eggs typically hatch after one to three weeks, which is dependent upon the temperature, with cooler temperatures decreasing the hatching time. Larvae metamorphose in 3 to

4 months and cooler water also delays larval metamorphosis. Growth rates and timing of development are dependent on location, which varies with temperature and flow velocities (Hayes *et al.* 2016).

Survey History

FYLF was not observed in the Study Area during the biological survey; however, focused or USFWS protocol-level surveys were not conducted for FYLF. There are six reported CNDDDB occurrences of this species within a five-mile radius of the Study Area, with the nearest being located approximately 0.1 mile to the south, which is associated with the Klamath River and the mouth of Camp Creek (CDFW 2024).

Habitat Suitability

Suitable habitat for FYLF is present in the Study Area. The Douglas fir and montane riparian communities provide suitable upland habitat, where this species could disperse or seek refuge. Camp Creek provides suitable aquatic habitat for breeding and larval development in a cold, clear, and rocky stream.

Potential for Impacts

If FYLF occupies the Study Area or areas adjacent to the Study Area during construction, potential adverse effects to the species could include take of individuals using upland areas for dispersal and/or refugia during construction. This would be a potentially significant impact. No direct impacts to potential habitat in Camp Creek would be anticipated as a result of the proposed project, as the project will not occur in Camp Creek or the montane riparian community.

Mitigation Measure BIO-4 would reduce potential impacts to this species to less than significant.

Southern Torrent Salamander

Federal status – None

State status – None

Other – CDFW Species of Special Concern

Species Description

In California, this species ranges from Mendocino County to the Oregon border up to 1,200 meters in elevation. This species occurs in cold, permanent small streams and seeps with rocky habitats (Jennings and Hayes 1994). Old growth forests typically provide cooler and wetter climates that this species requires. Larvae may occur in slightly larger streams, but overall, this species is likely excluded from larger streams by the presence of the larger California giant salamander larvae (Jennings and Hayes 1994).

Survey History

Southern torrent salamander was not observed within the Study Area during the biological survey. There are four reported CNDDDB occurrences of this species within a five-mile radius of the Study Area, with the nearest being located approximately 0.8 mile to the south, which is associated with occurrence described as being between Boise Creek and Orleans (CDFW 2024).

Habitat Suitability

There is high potential for southern torrent salamander to occur within the Study Area, given that suitable habitat is present, and that this species is known to occur within close proximity to the Study Area. This species may also utilize adjacent uplands to Camp Creek as upland dispersal and/or refugia habitat.

Potential for Impacts

If southern torrent salamander occupies the Study Area or areas adjacent to the Study Area during construction, potential adverse effects to the species could include take of individuals using upland areas for dispersal and/or refugia during construction. This would be a potentially significant impact. No direct impacts to potential habitat in Camp Creek would be anticipated as a result of the proposed project, as the project will not occur in Camp Creek or the montane riparian community.

Mitigation Measure BIO-4 would reduce potential impacts to this species to less than significant.

Northern Goshawk

Federal status – None

State status – None

Other – CDFW Watchlist Species

Species Description

This species nests and forages in mature and old-growth forest stands in a broad range of conifer and coniferous hardwood types, including Pacific ponderosa, Jeffrey and lodgepole pine, mixed conifer, firs, and pinyon-juniper with relatively dense canopies. This species may also forage in meadow edges and open sagebrush. The typical nesting and fledgling period for this species is between March 1 and August 15 (Woodbridge and Hargis 2006).

Survey History

Northern goshawk was not observed within or adjacent to the Study Area during the biological survey. There is one reported CNDDDB occurrence of this species within a five-mile radius of the Study Area, which is located approximately 4.6 miles to the west (CDFW 2024). This occurrence documents a nest that was active in 1979 and 1980, which produced two young in both years (CDFW 2024).

Habitat Suitability

Suitable nesting for northern goshawk is present in the Study Area, and suitable foraging habitat is present within and adjacent to the Study Area.

Potential for Impacts

If northern goshawk were to nest within or adjacent to the Study Area during construction, impacts to active nests could occur through noise, vibration, and the presence of construction equipment and personnel resulting in nest abandonment. Project activities such as clearing and grubbing, grading or other earthwork, or tree removal during the breeding season (February 1 through August 31) could result in injury or mortality of eggs and chicks directly through nest destruction or indirectly through forced nest abandonment due to noise and other disturbance. This would be a potentially significant impact.

Mitigation Measure BIO-5 section would reduce potential impacts to this species to less than significant.

Ruffed Grouse

Federal status – None

State status – None

Other – CDFW Watchlist Species

Species Description

This species is an uncommon local resident of riparian and surrounding conifer forests at low to middle elevations in northwestern California. Its distribution within California extends from northern Del Norte County south to southern Humboldt County and westward to northern Trinity County and southwestern Siskiyou County. It primarily forages on aspen, alder, and willow buds/catkins but also eats insects, fruits, and vegetation. It utilizes thickets of alder, maple, hawthorn, and other deciduous trees for summer/fall cover, and adjacent conifer stands, which are used for winter shelter and escape cover. It nests on the ground near base of tree, stump, log, or brush, near stream (Zeiner et al. 1990).

Survey History

Ruffed grouse was not observed within or adjacent to the Study Area during the biological survey. There are no documented CNDDDB records of this species within a five-mile radius of the Study Area (CDFW 2024).

Habitat Suitability

The montane riparian and Douglas fir communities within the Study Area provide suitable foraging and nesting habitat for this species.

Potential for Impacts

If ruffed grouse were to nest within or adjacent to the Study Area during construction, impacts to nesting could occur through noise, vibration, and the presence of construction equipment and personnel. Project activities such as clearing and grubbing, grading or other earthwork, or tree removal during the breeding season (February 1 through August 31) could result in injury or mortality of eggs and chicks directly through nest destruction or indirectly through forced nest abandonment due to noise and other disturbance. This would be a potentially significant impact.

Mitigation Measure BIO-5 would reduce potential impacts to this species to less than significant.

Bald Eagle

Federal status –Delisted

State status – Endangered

Other – CDFW Fully Protected

Species Description

Bald eagles require large bodies of water with an abundant fish population. This species also feeds on fish, carrion, small mammals, and waterfowl. In California, the nests are usually located within one mile of permanent water. Nests are most often situated in large, old growth, or dominant live trees with open branches such as ponderosa pine. The nests are usually placed 16 to 61 meters (50 to 200 feet) above ground in trees with a commanding view of the area (Zeiner et al. 1990).

Survey History

Bald eagles were not observed within or adjacent to the Study Area during the biological survey. There are two reported CNDDDB occurrences of this species within a five-mile radius of the Study Area, with the nearest being located approximately 0.6 mile away on the south side of the Klamath River (CDFW 2024). This occurrence documents that a nest was discovered in 1995, with young fledging in 1995, 1996, and 1997 (CDFW 2024).

Habitat Suitability

Suitable nesting for bald eagle is present in the Study Area, and suitable foraging habitat is present adjacent to the Study Area. The Klamath River, located 0.1 mile south of the Study Area, provides suitable foraging habitat for bald eagle, and the species may nest within trees in the Study Area.

Potential for Impacts

If bald eagles were to nest within or adjacent to the Study Area during construction, impacts to nesting could occur through noise, vibration, and the presence of construction equipment and personnel. Project activities such as clearing and grubbing, grading or other earthwork, or tree removal during the breeding season (February 1 through August 31) could result in injury or mortality of eggs and chicks directly through nest destruction or indirectly through forced nest abandonment due to noise and other disturbance. This would be a potentially significant impact.

Mitigation Measure BIO-5 would reduce potential impacts to this species to less than significant.

Osprey

Federal status – none

State status – None

Other – CDFW Watch List

Species Description

Osprey breed in Northern California from the Cascade Ranges southward to Lake Tahoe, and along the coast south to Marin County. They prey primarily on fish but also predate small mammals, birds, reptiles, and invertebrates. Foraging areas include open, clear waters of rivers, lakes, reservoirs, bays, estuaries, and surf zones. Nesting habitat for osprey include large trees, snags, and dead-topped trees in open forest habitats for cover and nesting (Zeiner et al. 1988-1990).

Survey History

Osprey was not observed in the Study Area during the biological survey. There are four reported CNDDDB occurrences of this species within a five-mile radius of the Study Area, with the nearest being located approximately 2.3 miles to the northeast along the Klamath River (CDFW 2024).

Habitat Suitability

Suitable nesting habitat for osprey is present in the Study Area, and suitable foraging habitat for osprey is present along the Klamath River, located 0.1 mile south of the Study Area. Therefore, the species could potentially nest within the Study Area.

Potential for Impacts

If osprey were to nest within or adjacent to the Study Area during construction, impacts to nesting could occur through noise, vibration, and the presence of construction equipment and personnel. Project activities such as clearing and grubbing, grading or other earthwork, or tree removal during the breeding season (February 1 through August 31) could result in injury or mortality of eggs and chicks directly through destruction or indirectly through forced nest abandonment due to noise and other disturbance. This would be a potentially significant impact.

Mitigation Measure BIO-5 would reduce potential impacts to this species to less than significant.

Northern Spotted Owl

Federal status – Threatened

State status – Threatened

Other – CDFW Watch List

Species Description

Northern spotted owl (NSO) is found from southwestern British Columbia down through the western half of Washington, Oregon, and northern California south at least to Marin County. In California, it occurs in the Klamath Ranges, Cascade Range, and North Coast Ranges. Spotted owls have also been observed in the Santa Cruz Mountains in San Mateo and Santa Cruz counties, but the status of those populations is poorly known, and it is uncertain whether those birds are northern spotted owl or California spotted owl (*Strix occidentalis occidentalis*). NSO prefers late-stage and old-growth forests characterized by a dense, multilayered, multi-species canopy with large overstory trees and varied understory. Forest types it has been observed in include Douglas-fir, western hemlock (*Tsuga heterophylla*), grand fir (*Abies grandis*), white fir (*Abies concolor*), ponderosa pine (*Pinus ponderosa*), Shasta red fir (*Abies magnifica* var. *shastensis*), mixed evergreen, mixed conifer hardwood, redwood (*Sequoia sempervirens*), Bishop pine (*Pinus muricata*), and mixed evergreen deciduous forest. These forests typically are characterized by a high incidence of large trees with various deformities (large cavities, broken tops, mistletoe infections, and other evidence of decadence); large snags; large accumulations of fallen trees and other woody debris on the ground; and sufficient open space below the canopy for spotted owls to fly (USFWS 2011).

Although it is dependent on old-growth and late-successional forests, there is research that suggests that a mosaic of late-successional forest habitat interspersed with other seral stages may be superior to large, homogeneous expanses of older forest as habitat for the species, at least in areas where woodrats are a major component of the species' diet. Low- to moderate-severity wildfire may enhance habitat for the species by increasing habitat heterogeneity. Diet is variable dependent upon prey availability, but northern flying squirrel (*Glaucomys sabrinus*) (mainly in Washington and Oregon) and dusky-footed woodrat (*Neotoma fuscipes*) (mainly in the Oregon Klamath Ranges and California) dominate the diet both in terms of biomass and quantity. Spotted owl territories tend to be larger where flying squirrels are the primary prey and smaller where wood rats are the primary prey. Other prey occasionally taken include deer mice, (*Peromyscus* spp.), tree voles (*Arborimus* spp.), red-backed voles (*Myodes* spp.), gophers (Geomysidae), snowshoe hare (*Lepus americanus*), bushy-tailed wood rats (*Neotoma cinerea*), birds, and insects. Prey is generally taken using a sit-and-wait technique from a single perch each night.

Spotted owl pairs begin forming in February and are typically maintained until the death of one of the partners. Spotted owl uses existing nests, often of corvids, or platforms created by broken treetops or limbs. A clutch of three to four eggs is laid from late March (occasionally as early as mid-March) to mid-April and incubated by the female for approximately 30 days. Young are brooded by the female for eight to 10 days while the male provides food. The flightless young leave the nest at approximately 35 days after hatching, and receive decreasing parental care at least until September, or until they become independent around November (USFWS 2011).

Survey History

NSO was not observed in the Study Area during the biological survey; however, this species is typically only detectable during protocol call surveys. The nearest observation of NSO is within 0.45 mile of the Study Area with a second observation within 0.9 mile. There are six observations of northern spotted owl within one mile of the Study Area and numerous observations of the species within five miles

(CDFW 2024). At least five NSO activity centers are located within approximately two miles of the Study Area.

Habitat Suitability

Suitable nesting habitat for NSO is present adjacent to the Study Area but it is unlikely that the trees within the Study Area provide suitable nesting habitat for this species. The Douglas fir community within the Study Area lacks a multi-storied tree canopy or trees with suitable nesting platforms. Given the proximity of the Study area to suitable nesting habitat, the species may forage in the Study Area. The Study Area is surrounded by northern spotted owl Critical Habitat on all sides, although the Study Area itself is not within the Critical Habitat boundaries.

Potential for Impacts

Given that the proposed project will not modify spotted owl habitat (i.e., tree removal or land conversion), but will result in potential disturbance to NSO, it will likely represent short-term effects compared to the long-term effects of habitat modification. If NSO were to nest adjacent to the Study Area during construction, impacts to nesting could occur through noise, vibration, and the presence of construction equipment and personnel. Project activities such as clearing and grubbing, grading or other earthwork, or tree removal during the breeding season (February 1 through September 30) could result in forced nest abandonment due to noise and other disturbance to adjacent nesting habitat. This would be a potentially significant impact.

Mitigation Measure BIO-6 would reduce potential impacts to this species to less than significant.

Marbled Murrelet

Federal status – Threatened

State status – Endangered

Other status – None

Species Description

This species is pelagic, except during its nesting season where it will use old-growth, multi-layered canopied forests up to 50 miles inland from the coast. When nesting trees are not present, this species will nest on the ground or amongst rocks. In California, nesting typically occurs in coastal redwood forest or Douglas fir forests (USFWS 1997).

Survey History

No marbled murrelet or potential nest sites for this species were observed in the Study Area during the biological reconnaissance survey. The nearest reported occurrence of marbled murrelet in the CNDDDB is over 20 miles southwest of the Study Area along Redwood Creek within Redwood National Park (CDFW 2024).

Habitat Suitability

The Douglas fir community in the Study Area does not provide suitable nesting habitat for marbled murrelet. The Study Area lacks dense, mature, multi-layer old growth forest and is disturbed. The portion of the Study Area along Camp Creek overlaps designated Critical Habitat for this species; however, the site lacks the primary constituent elements of critical habitat, including old growth trees with the presence of deformities and/or large branches to use as a nesting platform.

Potential for Impacts

No impacts to marbled murrelet or suitable habitat for this species are anticipated as a result of the proposed project. Suitable nesting habitat is not present in or immediately adjacent to the Study Area. Pre-construction surveys will be conducted for migratory birds and raptors (see following section). If marbled murrelet is observed, coordination will be conducted with USFWS and CDFW to determine the appropriate nest buffer based on the location of the nest and the type of construction activity occurring within proximity to the nest.

Mitigation Measure BIO-5 would reduce potential impacts to this species to less than significant.

Pacific Marten

Federal status – Threatened

State status – Endangered

Other status – CDFW Species of Special Concern

Species Description

Pacific marten are found in coniferous and mixed conifer forests with more than 40% canopy closure typically from 1,350 to 3,200 meters above MSL and require old growth forests that consist primarily of fir and lodgepole pines with cavities for nesting and denning (Zielinski 2014). The species will also den under logs in the snow and form snow tunnels. Pacific marten is active year round, and typically avoid open areas with no canopy cover, but will forage in meadows, riparian areas and along streams (Zielinski 2014). When traveling, marten typically move along ridgetops and are capable of traveling up to 15 miles in a single night while foraging (Zeiner et al. 1990).

Survey History

No Pacific marten or potential den sites for this species were observed in the Study Area during the biological reconnaissance survey. There is one reported CNDDDB occurrence of this species within a five-mile radius of the Study Area, which is located approximately 2.6 miles to the north (CDFW 2024). This is a historic observation from 1977 that describes the site as Douglas fir forest (CDFW 2024).

Habitat Suitability

The Douglas fir community in the Study Area does not provide suitable denning habitat for Pacific marten. The Study Area lacks dense, mature, multi-layer old growth forest and is disturbed. The northern portion of the Study Area, encompassing a portion of the proposed water distribution replacement project, overlaps designated proposed Critical Habitat for this species; however, the site lacks the primary constituent elements of the proposed critical habitat, including old growth trees with the presence of cavities to use as a den site.

Potential for Impacts

No impacts to Pacific marten or suitable habitat for this species are anticipated as a result of the proposed project. Suitable denning habitat is not present in or adjacent to the Study Area. No direct impacts to Pacific marten or potential habitat in the Study Area would be anticipated as a result of the proposed project as Pacific marten would not be expected to be present within the project footprint, and there is no suitable habitat for this species in the project footprint. No impact would occur.

Migratory Birds and Raptors

As noted in Attachment B to the BRA Report, migratory and non-game birds are protected during the nesting season by the federal MBTA and California Fish and Game Codes. The Study Area and immediate

vicinity provides nesting and foraging habitat for a variety of native birds. Nests were not observed during surveys; however, a variety of migratory birds have the potential to nest in and adjacent to the Study Area, in trees, shrubs, and on the ground in vegetation.

Project activities such as clearing and grubbing during the avian breeding season (February 1 through August 31) could result in injury or mortality of eggs and chicks directly through destruction or indirectly through forced nest abandonment due to noise and other disturbance. Destruction of active nests, eggs, and/or chicks would be a violation of the MBTA and Fish and Game Codes and a significant impact.

Mitigation Measure BIO-5 would reduce potential impacts for nesting birds to a less than significant level.

In summary, the impact to special-status plant and wildlife species would be reduced to a less than significant level with implementation of Mitigation Measures BIO-1 through BIO-6.

Mitigation Measure BIO-1: Worker Environmental Awareness Training

Special-status plant and wildlife species have the potential to occur within the Study Area and be impacted by construction activities. As such, a qualified biologist shall conduct environmental awareness training for all project-related personnel before the initiation of work, including vegetation removal, grubbing, or other construction activities. The training shall include information on the identification of special-status species that may be encountered, nesting birds and bird nests, and any other sensitive species or communities with the potential to occur onsite and required practices to implement before the start of construction. General measures that are being implemented to protect species that may occur onsite shall be referenced, including penalties for non-compliance, and boundaries of the permitted disturbance zones. Upon completion of the training, all construction personnel shall sign a form stating that they have attended the training and understand all the measures. Proof of this instruction shall be kept on file with the project proponent.

Mitigation Measure BIO-2: Special-Status Plants

The Study Area contains suitable habitat for Bald Mountain milk-vetch, coast fawn lily, small groundcone, white-flowered rein orchid, crinkled rag lichen, Hooker's catchfly, Marble Mountain campion, and robust false lupine. To avoid potential impacts to these species, the following measures shall be implemented:

- A qualified botanist shall conduct a special-status plant survey within the appropriate identification (blooming) period before the initiation of any ground-disturbing activities. Based on the methodology described in the California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018), it is recommended that two botanical surveys of the Study Area spread throughout the growing season, one in May and one in July, to satisfy the blooming periods for Bald Mountain milk-vetch, coast fawn lily, small groundcone, white-flowered rein orchid, crinkled rag lichen, Hooker's catchfly, Marble Mountain campion, and robust false lupine. These surveys shall be spaced out between May and July to capture the floristic diversity at a level necessary to determine if special-status plants are present. If no special-status plants are observed, then a letter report documenting the survey results shall be prepared and submitted to the project proponent, and no further measures are recommended.

- If special-status plants are observed within the Study Area, the location of the special-status plants shall be marked with pin flags or other highly visible markers and may also be marked by global positioning system. The project proponent shall determine if the special-status plant(s) onsite can be avoided by project design or utilize construction techniques to avoid impacts to the special-status plant species. All special-status plants to be avoided shall have exclusion fencing or other highly visible material marking the avoidance area, and the avoidance area shall remain in place throughout the entire construction period.
- If special-status plants are found within the Study Area and cannot be avoided, the project proponent shall consult with the California Department of Fish and Wildlife (CDFW) to determine appropriate measures to mitigate the loss of special-status plant populations. These measures may include gathering seed from impacted populations for planting within nearby appropriate habitat, preserving or enhancing existing offsite populations of the plant species affected by the project, or restoring suitable habitat for special-status plant species habitat as directed by the regulatory agencies.

Mitigation Measure BIO-3: Special-Status Fish

The perennial drainage (Camp Creek) provides potential spawning and/or rearing habitat for Klamath River lamprey, coastal cutthroat trout, coho salmon, and Chinook salmon within the Study Area. Although the current project activities do not propose work within Camp Creek, potential construction activities shall potentially affect these species by increasing turbidity levels in the perennial drainage during project construction or through direct mortality associated in-stream work, if proposed in future iterations of the project design. Erosion control best management practices (BMP), such as the ones listed within the amphibian minimization and avoidance measures above, shall be implemented during and following construction to avoid sediment being placed into streams and their subsequent receiving waters. If BMP are properly implemented, the project shall be expected to have minimal temporary direct and/or indirect impacts to fish species and their habitat. If a project requires a 404 permit, the U.S. Army Corps of Engineers (USACE) would likely consult with National Marine Fisheries Service (NMFS) regarding potential impacts to these species. If a project only requires a Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW), CDFW will require avoidance and minimization measures in the Streambed Agreement to avoid and minimize impacts to these species during construction. Potential avoidance and minimization measures may include but are not limited to seasonal work restrictions to avoid the spawning season of special-status fish, work setbacks from the perennial drainages, use of appropriate BMP to avoid impacts to water quality during construction and minimizing the work area adjacent to the stream to avoid water quality impacts from operation and fueling of equipment.

Mitigation Measure BIO-4: Special-Status Amphibians

The Study Area provides potentially suitable habitat for Pacific tailed frog, Del Norte salamander, foothill yellow-legged frog (FYLF), and southern torrent salamander. In the absence of the proposed mitigation measures, potential adverse effects to these protected amphibian and reptile species shall include take of individuals using upland areas for dispersal and/or refugia during construction. No direct impacts to potential habitat in Camp Creek would be anticipated as a result of the proposed project, as the project will not occur in Camp Creek or montane riparian habitat. Impacts that could harm Pacific tailed frog, Del Norte salamander, FYLF, and southern torrent salamander would be considered potentially significant. Potential indirect impacts could occur as a result of reduced water quality if contaminated

runoff were to enter Camp Creek during and following construction. The following mitigation shall be implemented to avoid potential direct and indirect impacts to special-status amphibians:

- Before the commencement of construction, preconstruction surveys for Pacific tailed frog, Del Norte salamander, FYLF, and southern torrent salamander shall be conducted in the Study Area within two weeks and immediately before the initiation of construction activities to ensure that Pacific tailed frog, Del Norte salamander, FYLF, and southern torrent salamander are not actively using the Study Area or adjacent areas as a dispersal corridor. Preconstruction surveys shall be conducted by a qualified biologist familiar with all life stages and would cover all terrestrial and aquatic habitats on and immediately adjacent to the Study Area that are suitable for Pacific tailed frog, Del Norte salamander, FYLF, and southern torrent salamander dispersal.
- If any life stage of Pacific tailed frog, Del Norte salamander, FYLF, and/or southern torrent salamander (e.g., egg, juvenile, or adult) is detected within the Study Area during any surveys or monitoring for the project during construction, the California Department of Fish and Wildlife (CDFW) shall be notified within 48 hours. The biologist shall monitor the animal to make sure it is not harmed and that it leaves the site on its own. Construction activities will not be allowed within 100 feet of the animal.
- Clearing within the Study Area shall be confined to the minimum area necessary to facilitate construction. To ensure that construction equipment and personnel do not affect sensitive habitat outside of designated work areas, orange barrier fencing shall be erected to clearly define the habitat to be avoided. This will delineate the Environmentally Sensitive Area (ESA) on the project. The integrity and effectiveness of ESA fencing and erosion control measures shall be inspected daily. Corrective actions and repairs shall be carried out immediately for fence breaches and ineffective erosion control best management practices (BMP).
- Standard construction BMP shall be implemented throughout construction to avoid and minimize adverse effects to the water quality within the Study Area. Appropriate erosion control measures shall be used (e.g., hay bales, filter fences, vegetative buffer strips, or other accepted equivalents) to reduce siltation and contaminated runoff from leaving the Study Area and entering the riparian corridor or Camp Creek. The integrity and effectiveness of the BMP shall be inspected daily by qualified project personnel and/or the site foreman. Corrective actions and repairs shall be carried out immediately.
- Construction by-products and pollutants such as petroleum products, chemicals, or other deleterious materials shall not be allowed to enter Camp Creek. A plan for the emergency clean-up of any spills of fuel or other materials shall be available when construction equipment is in use.
- Equipment shall be re-fueled and serviced at designated construction staging areas. All construction material and fill shall be stored and contained in a designated area that is located away from channel areas to prevent transport of materials into adjacent streams. The preferred distance is 100 feet from the wetted width of Camp Creek. In addition, a silt fence shall be installed to collect any discharge, and adequate materials shall be available for spill clean-up and during storm events.

- Construction vehicles and equipment shall be monitored and maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Leaking vehicles and equipment shall be removed from the site.
- Building materials storage areas containing hazardous or potentially toxic materials such as herbicides and petroleum products shall be located outside of the 100-year flood zone, have an impermeable membrane between the ground and the hazardous material, and shall be bermed to prevent the discharge of pollutants to ground water and runoff water. The bermed area shall at a minimum have the capacity to store the volume of material placed in it.
- All disturbed soils shall undergo erosion control treatment before October 15 and/or immediately after construction is terminated. Appropriate erosion control measures shall be used (e.g., hay bales, filter fences, vegetative buffer strips, or other accepted equivalents) to reduce siltation and contaminated runoff from leaving the Study Area. Erosion control blankets shall be installed on any disturbed soils steeper than a 2:1 slope or steeper.
- During Project activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
- No monofilament plastic shall be used for erosion control.

Mitigation Measure BIO-5: Northern Goshawk, Ruffed Grouse, Bald Eagle, Osprey, Other Raptors, and Migratory Birds

The Study Area and adjacent areas provide suitable nesting habitat for a variety of native birds, including native songbirds and raptors. Removal of vegetation containing active nests would potentially result in destruction of eggs and/or chicks; and noise, dust, and other anthropogenic stressors in the vicinity of an active nest could lead to forced nest abandonment and mortality of eggs and/or chicks. Needless destruction of eggs or chicks would be a violation of the California Fish and Game Code. Pre-construction surveys shall be conducted before project implementation to determine if nesting birds are present on or adjacent to the site, so that measures could be implemented if needed to avoid harming nesting birds.

The following mitigation shall be implemented to reduce potential project impacts to nesting birds:

- If project construction, including ground-disturbing or vegetation clearing and grubbing activities, commence during the avian breeding season (February 1 through August 31), a qualified biologist shall conduct a pre-construction nesting bird survey no more than 14 days before initiation of project construction activities. The survey area shall include suitable raptor nesting habitat within 500 feet of the project footprint (inaccessible areas outside of the Study Area can be surveyed from the site or from public roads using binoculars or spotting scopes). Pre-construction surveys are not required in areas where project construction activities have been continuous since before February 1, as determined by a qualified biologist. Areas that have been inactive for more than 14 days during the avian breeding season shall be re-surveyed before the resumption of project construction activities. If no active nests are identified, no further mitigation is required. If active nests are identified, the following measure shall be implemented:

- A suitable buffer (up to 500 feet for raptors; 100 feet for passerines) shall be established by a qualified biologist around active nests and no construction activities within the buffer shall be allowed until a qualified biologist has determined that the nest is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest or the nest has failed). Encroachment into the buffer may occur at the discretion of a qualified biologist. Any encroachment into the buffer shall be monitored by a qualified biologist to determine whether nesting birds are being impacted.

Mitigation Measure BIO-6: Northern Spotted Owl

There are several documented Activity Centers and numerous observations for northern spotted owl (NSO) within two miles of the Study Area and there is potential for the species to occur in the surrounding Douglas fir forest. Before any ground-disturbing activities within 0.25 mile of suitable nesting, roosting, or foraging habitat for NSO, the following shall be followed to reduce impacts to NSO to less than significant:

- A qualified biologist, familiar with the life history of the NSO, shall conduct pre-construction surveys for nests as described in the *Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls* (USFWS 2012). Surveys shall take place between March 15 and August 31.

As per the U.S Fish and Wildlife Service (USFWS) survey protocol, a one-year, six-visit survey can apply to noise-disturbance only actions. The USFWS's 2012 survey protocol states that six visits that cover all NSO habitat within a 0.25-mile buffer of the project area will be effective until the beginning of the following breeding season, which is generally between February 1 to September 30. If operations are not completed by year two, three spot-check survey visits each year shall occur in years two and three or the project proponent can choose to utilize the two-year, six-visit survey protocol.

- If NSO are determined to be present within 0.25 mile of the Study Area, then further mitigation measures will need to be developed as deemed satisfactory by the USFWS and CDFW.
 - If NSO surveys determine that no active NSO nests are present adjacent to the Study Area, then the project may proceed through the breeding season.
- 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?

Less than significant impact with mitigation.

Aquatic Resources and Riparian Habitat

The perennial drainage (Camp Creek) is the only aquatic resource within the Study Area. The Study Area also supports montane riparian habitat that parallels Camp Creek. The project has been designed to avoid direct impacts to Camp Creek and the montane riparian habitat by proposing to tie in water distribution lines to the existing infrastructure of the Camp Creek bridge crossing on SR 96. Camp Creek

will not be developed as part of the proposed project, and there will be no direct impacts to aquatic resources or riparian habitat.

The perennial drainage (Camp Creek) within the Study Area is likely to be considered waters of the U.S. and State subject to USACE and the Regional Water Quality Control Board (RWQCB) jurisdiction under Sections 404 and 401 of the Clean Water Act (CWA) as well as subject to CDFW jurisdiction under Section 1600 of the Fish and Game Code. The montane riparian habitat also falls under the jurisdiction of Section 1600 of the California Fish and Game Code. These habitats are not expected to be impacted by the proposed project as currently described. If future iterations of the proposed project include impacts to either of these features, then a formal aquatic resources delineation should be submitted to the appropriate resource agencies to determine the extent of jurisdiction. In the event that any aquatic resources or riparian habitat are determined to be jurisdictional, the project proponent will be required to apply for appropriate permits and any mitigation measures contained in the permits will require implementation before impacting any on-site features or habitats deemed subject to regulation. Therefore, the impact would be less than significant.

Streamside Management Areas

In addition to Camp Creek and the montane riparian habitat, the SMA associated with Camp Creek is considered a sensitive habitat. The Humboldt County General Plan defines SMAs for perennial drainages, such as Camp Creek, as being a buffer of 100 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line, whichever is greater, on either side of perennial streams (Humboldt County 2017). The proposed project may encroach on the SMA for Camp Creek; however, Mitigation Measure BIO-7 would reduce potential impacts to less than significant.

Critical Habitat

Portions of the Study Area are mapped as Critical Habitat for marbled murrelet and proposed Critical Habitat for Pacific marten. The Study Area does not support the primary constituent elements of either of these mapped Critical Habitats, and the proposed project would not significantly modify or convert forested habitat that may meet the criteria of the primary constituent elements over time. Therefore, the impact would be less than significant.

In summary, potential impacts on any riparian habitat or other sensitive natural community would be reduced to a less than significant impact with implementation of Mitigation Measure BIO-7.

Mitigation Measure BIO-7: Streamside Management Areas

To comply with measure BR-P6 of the Humboldt County General Plan, development within Streamside Management Areas shall only be permitted where mitigation measures (Standards BR-S8 – Required Mitigation Measures, BR-S9 – Erosion Control, and BR-S10 – Development Standards for Wetlands) have been provided to minimize any adverse environmental effects and shall be limited to uses as described in Standard BR-S7 – Development within Streamside Management Areas (Humboldt County 2017). Further information regarding these mitigation measures is available in Chapter 10 of the Humboldt County General Plan.

- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than significant impact with mitigation. As noted in question b), sensitive habitats within the Study Area include the perennial drainage (Camp Creek) and montane riparian habitat. The perennial drainage (Camp Creek) within the Study Area is likely to be considered waters of the U.S. and State subject to USACE and RWQCB jurisdiction under Sections 404 and 401 of the CWA as well as subject to CDFW jurisdiction under Section 1600 of the Fish and Game Code. The montane riparian habitat also falls under the jurisdiction of Section 1600 of the California Fish and Game Code. These habitats are not expected to be impacted by the proposed project as currently described. If future iterations of the proposed project include impacts to either of these features, then a formal aquatic resources delineation should be submitted to the appropriate resource agencies to determine the extent of jurisdiction. In the event that any aquatic resources or riparian habitat are determined to be jurisdictional, the project proponent will be required to apply for appropriate permits and any mitigation measures contained in the permits will require implementation before impacting any on-site features or habitats deemed subject to regulation.

In addition to Camp Creek and the montane riparian habitat, the SMA associated with Camp Creek is considered a sensitive habitat. The Humboldt County General Plan defines SMAs for perennial drainages, such as Camp Creek, as being a buffer of 100 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line, whichever is greater, on either side of perennial streams (Humboldt County 2017). The proposed project may encroach on the SMA for Camp Creek; however, Mitigation Measure BIO-7 would reduce potential impacts to less than significant.

- 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?

Less than significant impact. Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. This fragmentation of habitat can also occur when a portion of one or more habitats is converted into another habitat; for instance, when woodland or scrub habitat is altered or converted into grasslands after a disturbance such as fire, mudslide, or construction activities. Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and, (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The Study Area includes major roadways and residential properties but also supports a salmon bearing drainage, Camp Creek, as well as other natural habitats such as montane riparian and Douglas fir forest. The proposed project does not propose significant habitat modification that would inhibit wildlife from dispersing through the Study Area on a local level. Therefore, the impact would be less than significant and no mitigation is required.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than significant impact with mitigation. As noted in question b), the Humboldt County General Plan defines SMAs for perennial drainages, such as Camp Creek, as being a buffer of 100 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line, whichever is greater, on either side of perennial streams (Humboldt County 2017). The proposed project may encroach on the SMA for Camp Creek; however, implementation of Mitigation Measure BIO-7 would reduce potential impacts to a less than significant level. With implementation of Mitigation Measure BIO-7, the project would not conflict with local policies or ordinances protecting biological resources.

- 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?

No impact. The project site is not within the boundaries of any adopted habitat conservation plan; therefore, the project would not conflict with the provisions of any adopted habitat conservation plan. No impact would occur.

V. CULTURAL RESOURCES

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §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 §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"/>

A Cultural Resources Assessment (CRA) was prepared by HELIX in May 2024. The CRA is summarized below; however, the CRA is a confidential document and will not be available for public review.

Environmental Setting

Area of Potential Effects

The Area of Potential Effects (APE) is defined as the geographic area or areas within which a project may directly or indirectly cause alterations in the character or use of significant archaeological or architectural resources. The APE is influenced by the scale and nature of the project as well as by the types of cultural resources in the vicinity. For the purposes of this analysis, the APE for the project comprises 41.62 acres and corresponds to the parcels within which the project improvements will occur. The APE’s vertical dimensions consist of excavations not anticipated to exceed depths of 6ft in locations where new water alignment piping and other subsurface installations/systems maintenance would be required.

Background Research

HELIX conducted background research for the APE and vicinity to identify cultural resources and the sensitivity for such resources. The background research included a California Historical Resources Information System (CHRIS) records search, a search of the files maintained by the California Native American Heritage Commission, and a review of aerial photographs and historic-era maps. Each source of information, and the results obtained by HELIX, are described below.

CHRIS Records Search

On November 22, 2023, staff at the Northwest Information Center (NWIC) at Sonoma State University, in Rohnert Park, California, conducted a records search for the APE and a 0.5-mile radius. The records search was done to (1) identify prehistoric and historic-era resources within the search radius; (2) determine which portions of the APE have been previously studied; and (3) ascertain the potential for cultural resources and human remains to occur within the APE. The search included a review of USGS archaeological site location maps at the NWIC, resource records, and data from previous studies. The California Points of Historical Interest, the California Historical Landmarks, the National Register of Historic Places (NRHP), the California Register of Historic Resources, and the California State Historic

Resources Inventory were also reviewed. Historical maps and historical aerial photographs of the area were also examined.

Previous Studies

The NWIC records search identified 15 studies that have previously been conducted within a 0.5-mile radius of the APE. Five of these studies, S-000193, S-015886, S-024552, S-038865, and S-053155, had study areas that at least partially overlap with the currently proposed APE. Each previously conducted study within a 0.5-mile radius of the APE is described briefly in **Table 5**. The five studies with study areas that at least partially overlap with the currently proposed APE are discussed in the table below.

Table 5
PREVIOUS STUDIES CONDUCTED WITHIN 0.5-MILE OF THE APE

Report	Year	Author(s)	Title	Affiliation	Includes APE?
S-000193	1975	Roop, William G.	Orleans-Red Cap Bridge Project	Archaeological Resource Service	Yes
S-015886	1994	Roscoe, James	Cultural Resource Inventory for the Proposed Fish Rehabilitation Project on Camp Creek, Orleans, California	N/A	Yes
S-024552	2000	Vaughan, Trudy	Confidential Archaeological Addendum for Timer Operations on Non-Federal Lands in California, Camp Creek THP, 1-00-406 HUM (California Department of Forestry)	Coyote & Fox Enterprises	Yes
S-038865	2011	Leach-Palm, Laura, Pat Mikkelsen, Libby Seil, Darla Rice, Bryan Larson, Joseph Freeman, and Julia Costello	Cultural Resources Inventory of Caltrans District 1 Rural Conventional Highways in Del Norte, Humboldt, Mendocino and Lake Counties, Contract NO. 01A1056, Expenditure Authorization No. 01-453608	Far Western Anthropological Research Group, JRP Historical Consulting LLC, and Foothill Resources Ltd.	Yes
S-053155	2019	Cardiff, Darrell	Historic Property Survey Report, Three Humboldt Bridges Seismic Retrofit Project, Camp Creek Bridge (04-0066), HUM-96, PM 37.25, Willow Creek Bridge (04-01235), HUM-96, PM 0.24, G Street Overcrossing (04-0243) HUM-101, PM 86.77, EA 01-0A120, E-FIS Project Number 0113000109	California Department of Transportation	Yes
S-001-061	1978	Stradford, Richard A.	A Cultural Resource Study of the Proposed Orleans Water System, Northeastern Humboldt County, California	Northwest Indian Cemetery Protective Association, Inc.	No
S-007439	1984	Martz, Eric	Archaeological Reconnaissance Report, ARR No. 05-10-412, Snake Timber Sale	Six Rivers National Forest	No

Report	Year	Author(s)	Title	Affiliation	Includes APE?
S-013124	1978	Winter, Joseph C, Kathy Heffner, Gary Stumpf, and Kim Yerton	Cultural Assessment of the Proposed Orleans-Red Cap Bridge and the <i>Panamenik</i> World Renewal Ceremony	Six Rivers National Forest; Indian Action Council Library	No
S-013187	1978	Maniery, James G.	Short Timber Sale, Archaeological Reconnaissance Report	N/A	No
S-018995	1996	Sanders, Philip C.	Archaeological and Historical Resources Survey and Impact Assessment, Downs Rach NTMP, 1-96NTMP-030 HUM (California Department of Forestry)	N/A	No
S-043192	2012	Roscoe, James, William Rich, and Donald Verwayen	An Archaeological Survey Report for the Proposed Orleans Health and Wellness Center at Assessor's Parcel Number 529-131-013 Located in Orleans, Humboldt County, California	Roscoe and Associates	No
S-045638	2013	Roeder, Mim	Orleans Broadband Project, Archaeological Inventory and Evaluation Report, Orleans, Humboldt County, California	North State Resources Inc.	No
S-046715	2014	Cardiff, Darrell, Sara Thomas, and Dana York	Historic Property Survey Report for Metal Beam Guardrail Repair and Replacement Project, Humboldt County, Var 2014, E-FIS Project Number, 0112000274	Caltrans District 01	No
S-047392	2015	Schwennesen, Tad	Pacific Gas & Electric Cultural Resources Constraints Report, HOOPA 1101-Orleans Anchor Replacements, PM Number 31119779, Humboldt County, California	Blue Rock Services, Inc.	No
S-047640	2001	N/A	Red Cap Road Bypass Summary	Six Rivers National Forest	No

- Report S-000193:** the *Orleans-Red Cap Bridge Project* Report, written by William G. Roop of Archaeological Resource Services in 1975, outlines the results of a general reconnaissance survey of the Orleans Red Cap Bridge project site, which covered the bridge's southern right-of-way, approximately 125 feet between the Klamath River and Red Cap Road, and the northern right-of-way which mainly consisted of the flood plain of the Klamath River. No new resources were encountered or recorded in association with this report; however, the report does make mention of the cultural significance of an area in the project vicinity, which includes the Orleans bridge towards the northeast and to the southwest up to the mouth of Ullathorne Creek. According to the report, this area formed a prehistoric population center that contained two important villages and a "countless number" of points of religious significance to the Karuk Tribe. Among them was *Panamenik* (located in the present town of Orleans), which was one of four places where the Karuk's central religious ceremony, "The World Renewal Ceremony," was held. This resource, formally described as the *Panamenik* World Renewal Ceremony District (P-12-003123), is listed on the NRHP and lies within the currently proposed project area. As a result, it is discussed in further detail below in **Table 6**.

- **Report S-015886:** *Cultural Resource Inventory for the Proposed Fish Rehabilitation Project on Camp Creek, Orleans, California*, written by James Roscoe in 1994, covers the results of a cultural resources investigation of a proposed stream fisheries enhancement project located on Camp Creek in Orleans California. This study was conducted at the request of Carl Harral, Fish Habitat Supervisor, of the Department of Fish and Game, Region 1. The area examined included the Camp Creek Bridge on Highway 96 immediately west of the town of Orleans, and, to the extent possible, the stream bed of Camp Creek from the Highway 96 bridge going north for approximately 1,000 feet. The investigation consisted of a records search conducted at the NWIC, a review of ethnographic and historic published and unpublished documents, maps, and photographs pertaining to the study area kept at the offices of the Six Rivers National Forest in Eureka, California, and an intensive archaeological field reconnaissance of the project area. Leaf Hillman, Director of the Natural Resources for the Karuk Tribe (at the time of the study) was also contacted with the survey results to discuss his knowledge of cultural resources in the area. No cultural resources within the vicinity of the APE were encountered or recorded in association with this report.
- **Report S-024552:** *Confidential Archaeological Addendum for Timber Operations on Non-Federal Lands in California, Camp Creek Timber Harvest Plan (THP), 1-00-406 HUM (California Department of Forestry)*, written by Trudy Vaughan of Coyote & Fox Enterprises in 2000, details a cultural resource study conducted to document the archaeological and historical resources located within the Camp Creek Timber Harvest Plan area. A records search associated with this cultural study revealed that the THP footprint overlaps with the NRHP listed Karuk *Panamenik* World Renewal Ceremony District (P-12-003123). This resource also lies within the currently proposed project area and is discussed in further detail below in Table 6. In addition, during the survey associated with report S-024552, archaeologists encountered Site P-12-001386 (CA-HUM-001042H), which consists of remnants of the Oak Ridge and Salstrom Placers (also known as Delany #1) and evidence of placer mining and hydraulic mining, which were recorded as features of another mining site known as P-12-001152 (CA-HUM-000944H) or the Orleans Bar Gold Mining Co Ditch system. The Oak Ridge and Salstrom Placer site (P-12-001386 or CA-HUM-001042H) is located within the current project area and discussed in further detail below in Table 6, while the Orleans Bar Gold Mining Co. site (P-12-001152 or CA-HUM-000944H) is within 0.25 mile of the current project area and discussed briefly in Table 6. Two previously unrecorded archaeological sites were also noted during the survey associated with report S-024552, including a historic homestead consisting of a rock fireplace, fence, orchard, and domestic vegetation, and an extensive historic trash deposit; the two encountered sites were never formally recorded. These two sites, however, are located well to the southeast of the APE and would not be impacted by the proposed project.
- **Report S-038865:** *Cultural Resources Inventory of Caltrans District 1 Rural Conventional Highways in Del Norte, Humboldt, Mendocino and Lake Counties, Contract NO. 01A1056, Expenditure Authorization No. 01-453608*, was written by several authors on behalf of Far Western Anthropological Research Group, JRP Historical Consulting LLC, and Foothill Resources Ltd. in 2011. The report details a cultural resources investigation conducted in advance of a proposed modification of an existing telecommunications facility. The surveys and archaeological research associated with this report identified 238 cultural resources spread out across four counties in California. Four of these resources are known to lie within 0.25 mile of the currently proposed project area, including the Orleans Bar Gold Mining Co site (P-12-001152 or CA-HUM-000944H), a California Mining and Dredging Syndicate Ditch (P-12-002410 or CA-HUM-001220H/JHU-038), a Prehistoric/Historic Era-sacred medicine place and an ethnographic site (P-12-002448 or CA-HUM-001227H/ FS 05-10-52-13), and a Historic-era trash scatter, retaining wall, and wire fence (P-12-

002600 FH-103H). These resources are described briefly in Table 6. None of the resources encountered during the research associated with the CRA are known to lie within the currently proposed project area.

- **Report S-053155:** *Historic Property Survey Report, Three Humboldt Bridges Seismic Retrofit Project, Camp Creek Bridge (04-0066), HUM-96, PM 37.25, Willow Creek Bridge (04-01235), HUM-96, PM 0.24, G Street Overcrossing (04-0243) HUM-101, PM 86.77, EA 01-0A120, E-FIS Project Number 0113000109* was written by Darrell Cardiff for the California Department of Transportation in 2019 to provide cultural resource management report for a Caltrans retrofitting of the Camp Creek Bridge located in Orleans. The surveys conducted for the CRA encompassed at least portions of a historic era site consisting of mining tailings (P-12-002337) located within 0.25 mile of the current project area. This resource is briefly described in Table 6. The surveys associated with the CRA also encompassed at least portions of the Orleans Bar Gold Mining Co. site (P-12-001152 or CA-HUM-000944H), the Oak Ridge & Salstrom Placers site (P-12-001386 or CA-HUM-001042H), and the NRHP listed Karuk *Panamenik* World Renewal Ceremonial District (P-12-003123). The Orleans Bar Gold Mining Co site (P-12-001152 or CA-HUM-000944H) lies within 0.25 mile of the proposed APE, and it is discussed briefly within Table 6. The Oak Ridge & Salstrom Placer site (P-12-001386 or CA-HUM-001042H) and Karuk *Panamenik* World Renewal Ceremonial District (P-12-003123) are located partially within the proposed APE and are described briefly in Table 6.

Previously Recorded Resources

The NWIC records search identified 19 previously documented cultural resources within 0.5 mile of the APE, four of which were located within the APE itself. Each of these resources is described briefly in Table 6, while those four previously recorded resources, which at least partially lie within the currently proposed APE, are described below the table.

Table 6
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN 0.5-MILE OF THE APE

Primary	Trinomial	Year	Recorder	Description	Within APE?
P-12-002448	CA-HUM-001227H	2009	Ross, K.	Prehistoric/Historic Era- Resource named FS 05-10-52-13, which includes a sacred medicine place and an ethnographic site, physically overlaps with resource P-12-003123	Yes
P-12-003123	N/A	1978	Burke, R. E.	Prehistoric/Protohistoric Era – Karuk <i>Panamenik</i> World Renewal Ceremony District	Yes
P-12-003719	N/A	1978	Burke, R.E.	Prehistoric/Protohistoric Era – <i>Kusnachanimnam</i> , a sacred/medicine place which is an element of the Karuk <i>Panmenik</i> World Renewal Ceremony District	Yes
P-12-003726	N/A	1978	Burke, R. E.	Prehistoric/Protohistoric Era – <i>Tishannik</i> , a village which is an element of the Karuk <i>Panmenik</i> World Renewal Ceremony District	Yes

Primary	Trinomial	Year	Recorder	Description	Within APE?
P-12-001129	CA-HUM-000919/H	1978	Maniery, James G., Thomas Keter	Prehistoric/Historic Era -Chimikenee Ridge / Possible Medicine Man's Route, Trails/linear earthworks, groundstone, physically overlaps with resource P-12-003123	No
P-12-001152	CA-HUM-000944H	2012	Roeder, Mim	Historic Era- Orleans Bar Gold Mining Co (OBGM) and Ditch System, including foundations/structure pads, wells and cisterns, a water conveyance system, mines, quarries, and tailings, a water reservoir, and mining structures and buildings	No
P-12-001386	CA-HUM-001042H	1997	Vaughan, T.	Historic Era – Oak Ridge & Salstrom Placers, also known as Delaney #1, includes privies, dumps, trash scatters, water conveyances including flume, ditches, and sluiceway cuts, and machinery	No
P-12-002337	N/A	2009	Colegrove, Bryan and David Goodwin	Historic Era- Mining Tailings Area	No
P-12-002338	N/A	2009	Colegrove, Bryan and David Goodwin	Prehistoric/Protohistoric/Historic Era – Karuk Ceremonial Trail Segment, physically overlaps with resource P-12-003123	No
P-12-002409	CA-HUM-001219H	2009	Melvin, Steven and Heather Miller	Historic Era – County Road through Orleans	No
P-12-002410	CA-HUM-001220H	2009	Melvin, Steven and Heather Miller	Historic Era- California Mining and Dredging Syndicate Ditch, also known as site JHU-038, consist of a canal/aqueduct	No
P-12-002600	N/A	2009	Ross, K.	Historic Era – Resource named FH-103H, consisting of privies, dumps, trash scatters, and a retaining wall and wire fence	No
P-12-003568	N/A	1977	Stumpf, Gary	Prehistoric/Protohistoric Era- <i>Chamikinach</i> , consisting of habitation debris and a dance ground, resource is a contributing element to resource P-12-003123	No
P-12-003569	CA-HUM-001655/H	1999	McCovey, Kathy and Gary Baxter	Multicomponent, Chimmekanee Ridge, Woodwardia Fern Site, Foundations/structure pads, Landscaping/orchard, Privies/dumps/trash scatters, wells/cisterns, roads/trails/railroad grades, Wall/fences, trails/linear earthworks, habitation debris	No

Primary	Trinomial	Year	Recorder	Description	Within APE?
P-12-003709	N/A	2010	Verwayen, Donald, Jerry Rohde, William Rich, and James Roscoe	Prehistoric/Protohistoric Era- <i>Tishawnik</i> , also known as Camp Creek, <i>Tisanihouf</i> , <i>Tishanishunu</i> , and or <i>Panamnik</i> , a religious ceremonial site, is a contributing element to resource P-12-003123	No
P-12-003715	N/A	1978	Burke, R.E.	Prehistoric Era – <i>Tuyukman</i> sacred/medicine place, is a contributing element of district 12-003123	No
P-12-003718	N/A	1978	Burke, R.E.	Prehistoric/Protohistoric Era- <i>Tishanikurnam</i> , a sacred medicine place, is a contributing element of district 12-003123	No
P-12-003727	N/A	1978	Burke, R.E.	Prehistoric/Protohistoric Era- <i>Kusripis amayay</i> , also known as <i>Kushripish-amayau</i> , is a village site, is a contributing element of district 12-003123	No
P-12-003728	N/A	1978	Burke, R.E.	Prehistoric/Protohistoric Era- <i>Afcufic</i> , is a village site, is a contributing element of district 12-003123	No

- P-12-002448:** First formally recorded to NWIC standards by Gary Stumpf in 1977, this resource is an ethnographic site with no reported artifacts. Described by Stumpf as a “sacred medicine place visited by priest[s] during [the] Karok World Renewal Ceremony” the seemingly key features of the site, including an old hollowed-out madrone tree and what was once perhaps a collection of “world rocks” placed by priests during the annual ceremony, were not present on site for Stumpf’s recording. Gathering his information from identified informants amongst the Karuk Tribe, Stumpf also reported that even during his recordation of the site in 1977, the old hollow madrone tree, which was used in the ceremony was gone, with the tree’s former location now lying under road fill on the southern edge of Highway 96 close to the highway’s intersection with a small access road to the Wilder Property (which emanates from the highway and traverses to the southwest). The site was revisited during a 2009/20210 Rural Conventional Highways Inventory, which examined only the highway’s right-of-way. By the time of the 2009 survey, it appears as though the highway had been realigned since the resource’s original 1977 recording. No cultural materials were observed during the 2009/2010 survey, though the ground surface visibility was reported as poor during that survey. Nonetheless, the 2009/2010 surveying archaeologist (K. Ross, at Far Western Anthropological Research Group Inc.) wrote that he believed the site now lies under the current highway alignment.
- P-12-003123:** First recorded in 1978 by R. E. Burke, this resource is the Karuk *Panamenik* World Renewal Ceremony District. Within this district, Karuk Native Americans performed the sacred White Deerskin Dance or World Renewal Ceremony, which was the most important event of the community’s late 19th and early 20th century religious system. Many Karuk are reported to have considered the World Renewal Ceremony as the focal point for the entire culture and thought of it as absolutely essential for the well-being of the universe. The religious leaders who performed

the Ceremony were the most wealthy and influential men and women in the Karuk culture. Often these were upper class men, who were generally *Yash-arara* (rich men), whose names, exploits, and families have been remembered for generations. There were also *fatawenan* (priests) who knew the sacred rites for the ceremonies. The study of this site has revealed important information regarding Karuk culture and history. As a result of this district's association with events that have made a significant pattern of our history, its association with the lives of persons significant to our past, and the fact that it has yielded information important in American prehistory, this district was determined eligible for listing in the NRHP under criteria A, B, and D on April 3, 1978.

- **P-12-003719:** First recorded in 1978 by R. E. Burke, this resource was identified through ethnographic research as a sacred medicine place, known as *Kusnachanimnam*. Within this location, priests are thought to have made fire and smoked tobacco as an offering for the World Renewal Ceremony. As a result, this site is understood to be a contributing element to the NRHP listed Karuk *Panamenik* World Renewal Ceremony District (resource P-12-003123).
- **P-12-003726:** First recorded in 1978 by R. E. Burke, this resource was identified through ethnographic research as a village site named *Tishannik*. At a dance place next to this site, Karuk priests would conduct the Deerskin Dance on the 9th day of the World Renewal Ceremony. The priest would sit under a madrone tree near the sawmill near Camp Creek below Orleans, make fire, and smoke from a pipe. On the evening of the 9th day, the priest would travel from this madrone tree, cross Camp Creek on two small logs, and begin the Deerskin dance, which involved high stepping and other leg movements. This village site is understood to be a contributing element to the NRHP listed Karuk *Panamenik* World Renewal Ceremony District (resource P-12-003123).

Historic-Era Map and Aerial Photograph Analysis

HELIX reviewed historic-era maps covering the APE, including a 1914 Map of Humboldt County by J. N. Lentell, an Atlas of Humboldt County California from 1921, and General Land Office Maps from 1883, 1936, and 1982 to find information on prehistoric and historic uses of the project area. General Land Office maps from 1936 show the project vicinity as divided into several mining plots, including the "Oak Ridge Placer," the "Salstrom and Co's Placer," the "Graham & Co. Placer," the Haines Placer," and the "Petersen Placer" but no other details regarding the placement of structures, water conveyances, or mines is apparent on either of these maps. Historic-era aerial photographs (1947, 1973, 1983, 2005, 2009, 2010, 2012, 2014, 2016, and 2018) were examined to provide an understanding of the APE's historic land use (NETROnline 2024). Historic-era aeriels of the study area revealed that sometime between 1947 and 1973, the project vicinity was cleared and made ready for the development of houses in between and along the loop formed by Placer Drive and Camp Creek Road. By 1983, there are several residences adjacent to these roads, and development of the area appears to have continued until 1998, when the project vicinity appears to have taken on its current character as a moderately populated residential neighborhood. No evidence of prehistoric activity or occupation, or historic period activity or occupation (beyond the fact that the project vicinity was divided in placer mining areas during the early to mid-20th century, and that residences adjacent to the APE, which are not anticipated to be impacted by project activities, were built between 1973 and 1983), was revealed through HELIX's historic map and aerial photograph analysis.

Native American Heritage Commission Sacred Lands File Search

In November 2023, HELIX requested that the NAHC conduct a search of their Sacred Lands File (SLF) for the presence of Native American sacred sites or human remains in the vicinity of the APE. A written response received from the NAHC on December 19, 2023, stated that the results of the SLF search were negative, but that the absence of specific site information in the SLF does not necessarily indicate the absence of cultural resources in a project area. Further, the letter recommended that HELIX reach out to several Native American points of contact, who might have information to provide regarding cultural resources within the currently proposed APE. On January 4, 2024, HELIX sent letters to all 10 Native American contacts that were recommended by the NAHC as potential sources of information related to cultural resources in the vicinity of the project area. These Native American points of contact included:

- Virgil Moorehead, Chairperson, Big Lagoon Rancheria
- Garth Sundberg, Chairperson, Cher-Ae Heights Indian Community of the Trinidad Rancheria
- Keduescha Lara-Colegrove, Tribal Historic Preservation Officer, Hoopa Valley Tribe
- Bill Tripp, Department of Natural Resources, Karuk Tribe
- Russell Attebery, Chairperson, Karuk Tribe
- Alex Watts-Tobin, Tribal Historic Preservation Officer, Karuk Tribe
- Roy Hall, Chairperson, Shasta Nation
- Rosie Clayburn, Tribal Historic Preservation Officer, Yurok Tribe
- Yurok Tribe, NAGPRA Coordinator
- Joe James, Chairperson, Yurok Tribe

As of the date of the CRA, no responses have been received from these Native American contacts.

Pedestrian Survey

HELIX archaeologist Jentin Joe surveyed the APE on November 21, 2023, in coordination with Karuk Tribal Monitor Nick Neekich-Hillman. The pedestrian survey involved the systematic investigation of all accessible portions of the APE's ground surface by walking in parallel 15-meter transects. In total, 26.4 acres of the APE were surveyed in this fashion. Private residences within the APE, including those along Placer Drive, Forest Service Road 12N01, Highway 96, Camp Creek Road, and Lower Camp Creek Road, were surveyed via opportunistic examination, rather than formal transect lines. In this way, private property boundaries were respected, but the surveying archaeologist was able to visually inspect the front and/or back lawns of the properties located along the project area's roadways. Karuk Tribal Monitor Neekich-Hillman also specifically requested that a small (0.79 acre) near the center of the APE not be surveyed due to its sensitivity.

During the pedestrian survey, the ground surface was examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, fire-affected rock, prehistoric ceramics), soil discoloration that

might indicate the presence of a prehistoric cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations, wells) or historic-era debris (e.g., metal, glass, ceramics). Ground disturbances such as landscape modifications and cut banks were also visually inspected.

Ground surface visibility in the surveyable areas of the APE proved to be poor (20 to 30 percent visibility) due to the presence of either dense grasses or, in the case of the areas adjacent to either side of Camp Creek (located in the northeastern quadrant of the APE), large amounts of leaf litter and other types of dense vegetation including poison oak (Photograph 1). In other portions of the APE, paved roadways, planed and graveled rights-of-way, and private driveways obstructed views of the native ground surface. These roadways within the APE indicate that the area has been heavily developed in the mid-to-late 20th century. The presence of private residences along virtually every road within the APE also speaks to a high level of more recent development within large portions of the APE.

The field survey prioritized the inspection of the areas within the four previously recorded resources (P-12-002448, P-12-003123, P-12-003719, and P-12-003726) were documented. Narrative notes, locational information, and photographs were collected and recorded onto the appropriate Department of Parks and Recreation (DPR) forms for each of the locations reported by the NWIC to contain (or to have once contained) cultural resources. A narrative description of the condition of each of these reported resource locations at the time of HELIX's survey is provided below, while copies of the complete DPR forms, with photographs of each resource location, can be found in the CRA.

- **Resource P-12-002448** – when HELIX surveyed the reported location for this resource, the location proved to be entirely paved over by Highway 96 (Photographs 2 and 3). After a thorough inspection of the area, no new cultural resources were found. This site is an ethnographic site with no prior recorded artifacts. While the site was originally recorded in 1977 as a sacred medicine place that served a role in the Karuk World Renewal Ceremony, by the time of its recording, the resource was noted to lie beneath the southern edge of Highway 96 road fill, and the old hollow madrone tree used by a Karo priest during the ceremony was noted to be absent. The recording archaeologist was also unable to find any other cultural resources associated with the site. This site was revisited in 2009 by K. Ross of Far Western Anthropological Research Group, and no cultural materials were observed.
- **Resource P-12-003123** – is a district, which is reported by records on file with the NWIC as encompassing the entirety of APE (Photograph 8). As the resource is a district, there is no one resource or location that encapsulates or embodies the entire district. Three of the 21 contributing elements of this district (P-12-002448, P-12-003719, and P-12-003726) lie within the currently proposed APE and were examined during HELIX's survey of the APE to assess their condition. From previously conducted ethnographic research and documentation, it is clear that this district is of paramount importance to the Karuk.

The survey indicated that there has been extensive development, land clearance, and modification throughout the APE since the proto-historic period, specifically related to roadway construction, residential construction, and utility installation.

- **Resource P-12-003719** – when HELIX surveyed the reported location for this resource, Karuk Tribal Monitor Nick Neekich-Hillman accompanied the effort and stated that this location serves as part of a trail that is used for the sacred Karuk World Renewal Ceremony. Mr. Neekich-

Hillman was hesitant to lead HELIX staff further into the resource past where it intersected with the APE due to the sensitivity of the area and cultural proscriptions against non-tribal members accessing the location. Conditions within the portion of the resource, which overlapped with the current APE, comprised short mowed grass associated with residences to the south of Forest Service Road 12N01, the Forest Service Road itself, the right-of-way to the north of the roadway, about 10 feet of cut grass extending to the north from the right-of-way, and a line of medium-sized shrubs and trees (Photographs 5 and 6). A small metal water tank was also noted to the north of the roadway within the reported portion of resource P-12-003719 within the APE, but this item was clearly not associated with Resource P-12-003719. Ultimately, HELIX's survey of the reported location of resource P-12-003719 did not reveal the presence of any features or artifacts associated with the resource.

- **Resource P-12-003726** - On the date of the survey of this resource's location, HELIX staff encountered a series of private residences to the east of Placer Drive (to the west of Camp Creek), and along the west side of Lower Camp Creek Road (located just east of Camp Creek), within the eastern edge of the APE. The private residences located to either side of Camp Creek were found to consist of cleared and landscaped lawns with cut grass and modern residential structures. The majority of the reported site location for resource P-12-003726 appeared to be occupied by a single private residential property located just to the west of Camp Creek, and just to the east of Lower Camp Creek Road (a small roadway that traverses to the north from its connection with Highway 96). Utility poles were apparent on this property. The Camp Creek drainage in the APE was inspected, as previous recordation of resource P-12-003726 made mention of Karuk spiritual leaders crossing the creek in this vicinity as part of the World Renewal Ceremony. Examination of the creek banks in this area revealed a corridor that was densely populated with riparian vegetation, which made close inspection of the ground surface on the creek banks difficult (ground surface visibility ranged from 20 to 40 percent). Ultimately, no physical traces of resource P-12-003726 were observed within the recorded location for this resource during HELIX's examination of the area.

HELIX prepared updated DPR 523 forms for each of the four resources (P-12-002448, P-12-003123, P-12-003719, and P-12-003726) located within the APE. Due to the cultural sensitivity of these tribal resources, and to respect the privacy and wishes of the Karuk Tribe, to whom these resources are sacred, the CRA and all completed DPR forms have been marked as confidential. Copies of all completed DPR forms are, however, retained on file at HELIX, and will be made available to the NWIC. Copies of the forms can also be made available upon request, pending permission of release from the Karuk Tribe.

Beyond these four previously recorded resources (P-12-002448, P-12-003123, P-12-003719, and P-12-003726), the HELIX field survey did not identify any additional prehistoric or historic-era cultural resources within the APE.

Impact Analysis

- a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less than significant impact with mitigation. Based on the results of the CRA, HELIX finds the APE to have a high cultural sensitivity. This conclusion is based on several factors including:

- the presence of the NRHP listed Karuk *Panamenik* Ceremonial District (P-12-003123) and three contributing elements of this district, including *Kusnachanimnam* (P-12-003719), *Tishannik* (P-12-003726), and a sacred medicine place associated with the Karuk World Renewal Ceremony (P-12-002448) within the APE;
- the presence of ten additional prehistoric/protohistoric sites within 0.5 mile of the APE that are associated with Karuk occupation and ceremonies; and,
- the presence of seven historic sites within 0.5 mile of the APE that are associated with historic mining activity and historic period occupation.

Due to the high cultural sensitivity, Mitigation Measure CUL-1 and CUL-2 would be implemented, which would require archaeological and tribal construction monitoring. Additionally, as outlined in Section 8.XVIII, *Tribal Cultural Resources*, the Karuk Tribe engaged in the AB 52 consultation process and provided a letter from the Karuk Tribe THPO and the Karuk Tribe Inadvertent Discovery Plan, included as Appendix E to this Initial Study. The letter noted that the project as designed does avoid known sensitive areas and stays mostly within already-disturbed areas. However, there exists potential for the discovery of previously unknown archaeological resources during project construction. In the event of an inadvertent archaeological discovery, Mitigation Measure CUL-3 would be implemented. With implementation of Mitigation Measure CUL-1 through CUL-3, the impact on cultural resources, including historical and archaeological resources, would be less than significant for question a) and b).

Mitigation Measure CUL-1: Archaeological Construction Monitoring

Due to the presence of numerous prehistoric and historic-era cultural resources both within the APE and in the project vicinity, a qualified archaeologist shall be retained to conduct Cultural Resource Monitoring during ground-disturbing activities associated with the project (including but not limited to grubbing, grading, shearing, and excavation). The on-site archaeologist shall then be able to examine newly exposed soils for cultural remains and/or changes in colors in exposed soils that might indicate the presence of archaeological materials. This Cultural Resource Monitor shall have “stop work” authority in the event that they believe they have encountered cultural materials and shall take daily notes and photographs documenting the construction activities observed and any cultural resources that are encountered. At the conclusion of the project, the Cultural Resource Monitor shall also provide a final monitoring report that summarizes the construction activities observed and any cultural concerns that were noted during the construction effort.

Mitigation Measure CUL-2: Tribal Construction Monitoring

Due to the presence of the NRHP-listed Karuk *Panamenik* Ceremonial District contributing elements within the APE, as well as the proximity of the APE’s ten additional prehistoric sites within 0.5 mile of the APE, a Native American Monitor from the Karuk Tribe shall be retained to conduct tribal monitoring during initial ground-disturbing activities associated with the project (including but not limited to grubbing, grading, shearing, and excavation). This Native American Monitor shall then be able to examine newly exposed soils for cultural remains and or changes in colors in exposed soils that might indicate the presence of archaeological materials or other culturally sensitive materials. This Monitor shall have “stop work” authority in the event that they believe they have encountered cultural or otherwise sensitive materials and shall take daily notes and photographs documenting the construction activities observed and any cultural resources that are encountered. At the conclusion of the project,

this Monitor shall also provide a final monitoring report that summarizes the construction activities observed and any cultural concerns that were noted during the construction effort.

Mitigation Measure CUL-3: Inadvertent Archaeological Discovery

The following Point of Contact (POC) shall be notified immediately upon the inadvertent discovery of a potentially significant archaeological find:

- Lead or On-Site Contractor(s) whose activities led to inadvertent discovery, or whose on-going work may impact significant finds. Tribal Monitor has authority to immediately halt ground disturbing activities if potentially significant finds are discovered.
 - Alex R. Watts-Tobin, Ph.D., Tribal Historic Preservation Officer, Karuk Tribe at (530) 627-3446.
1. Ground disturbing activities shall be immediately stopped if potentially significant prehistoric (Native American) archaeological artifacts or constitutes are discovered. Examples include, but are not limited to, prehistoric artifacts (chipped stone or obsidian, arrow points, ground stone mortars and pestles), culturally altered ash-stained midden soils, concentrations of fire-cracked rock and/or burned or charred organic materials. Ground-disturbing project activities may continue in other areas that are outside of the discovery locals.
 2. An “exclusion zone” where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone by the monitor.
 3. The discovery locale shall be secured (e.g., 24-hour surveillance) in consultation with the THPO if considered prudent to avoid further disturbances or maintain order if sensitive remains are exposed
 4. The monitor shall be responsible for immediately contacting by telephone the designated POCs to report the find and initiate the consultation process for its treatment and disposition:
 - Alex R. Watts-Tobin, Ph.D., Tribal Historic Preservation Officer, Karuk Tribe at (530) 627-3446.

And in cases where a known or suspected Native American burial or skeletal remains are uncovered, the following contacts shall also be notified:

- Siskiyou County Corner – Phone (530) 842-8300
 - Humbolt County Corner – Phone (707) 445-7242
 - Native American Heritage Commission (NAHC) in Sacramento (916) 653-4082
5. Ground disturbing project work at the find locality shall be suspended temporarily while the landowner’s Consulting Professional Archaeologist¹ conducts a field assessment and consults with the THPO, Lead Agency, or his/her designated representative and if applicable, State OHP staff, to determine appropriate treatment and disposition of the find. Ideally, a Treatment Plan may be

¹ Qualified Professional Archaeologist: means an individual that meets the Secretary of the Interior’s Professional Standards for an Archaeologist Principal Investigator and/or are listed as Registered Professional Archaeologists (see website at www.rpanet.org).

decided within three working days of discovery notification. Where a project can be modified to avoid disturbing the find (e.g., through project redesign), this shall be the preferred option. Should human remains be encountered, the provisions of State laws shall apply (see below). The Treatment Plan shall reference appropriate laws and include provisions of analyses, reporting, and final disposition of data recovery documentation and any collected artifacts or other archaeological constituents. Ideally, the field phase of the Treatment Plan may be accomplished within five (5) business days after its approval; however, circumstances may require longer periods for data recovery.

6. The landowner, its employees and agents including Contractors, shall be obligated to protect significant cultural resource discoveries and may be subject to prosecution if applicable State or Federal laws are violated. In no event shall unauthorized persons collect artifacts.
 7. Any and all inadvertent discoveries shall be considered strictly confidential, with information about their location and nature being disclosed only to those with a need to know.
- c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less than significant impact with mitigation. As outlined in Section 8.XVIII, *Tribal Cultural Resources*, the Karuk Tribe engaged in the AB 52 consultation process and provided a letter from the Karuk Tribe THPO and the Karuk Tribe Inadvertent Discovery Plan, included as Appendix E to this Initial Study. The letter noted that the project as designed does avoid known sensitive areas and stays mostly within already-disturbed areas. However, there exists a potential for the discovery of previously unknown Native American Remains and Grave Goods during project construction. In the event of an inadvertent discovery of Native American remains and/or grave goods, Mitigation Measure CUL-4 would be implemented. With the implementation of Mitigation Measure CUL-4, the impact would be less than significant.

Mitigation Measure CUL-4: Inadvertent Discovery of Native American Remains and Grave Goods

The following policies and procedures for treatment and disposition of inadvertently discovered Native American remains shall apply.

1. If human remains are encountered, they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern of affiliated Native Americans. Information about such a discovery shall be held in confidence by all project personnel on a need-to-know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.
2. Violators of Section 7050.5 of the California Health and Safety Code may be subject to prosecution to the full extent of applicable law (felony offense). In the event that known or suspected Native American remains are encountered, the above procedures of SOP Part A for Inadvertent Archaeological Discovery (General) shall be followed (including notifications to those identified in A-4(a-e)), in addition to the provisions of California law (Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the California Public Resources Code), as follows.
3. The Coroner has two (2) working days to examine the remains after being notified of the discovery. If the remains are Native American, the Coroner has 24 hours (2 days) to notify the NAHC.

4. The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) of the deceased Native American. (Note: NAHC policy holds that the Native American Monitor will not be designated the MLD.)
5. Within 24 hours (2 days) of their notification by the NAHC, the MLD will be permitted by the property owner of the discovery locale to inspect the discovery site if they so choose.
6. Within 24 hours (2 days) of their notification by the NAHC, the MLD may recommend to the property owner or his/her designated agent, as applicable, the means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those treatments recommended by the MLD may be considered and carried out (i.e., no photographs, analyses, etc. without MLD agreement).
7. If the landowner does not accept the descendant's recommendations, the owner or descendant may request mediation by the NAHC.
8. Discuss and confer mans the meaningful and timely discussion with careful consideration of the views of each party's cultural values and, where feasible, seeking agreement.
9. Whenever the NAHC is unable to identify an MLD, or the MLD identified fails to make a recommendation, or the property owner rejects the recommendation of the MLD and mediation between the parties by NAHC fails to provide measures acceptable to the property owner, then the property owner shall cause the re-burial of the human remains and associated grave offerings with appropriate dignity on the property in a location not subject to further subsurface disturbance.

VI. ENERGY

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project:				
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 efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, electric service providers and community choice aggregators. In 2020, the California power mix totaled 272,576 gigawatt hours. In-State generation accounted for 51 percent of the State's power mix. The remaining electricity came from out-of-State imports (CEC 2021a). **Table 7.**

Table 7
CALIFORNIA ELECTRICITY SOURCES 2020

Fuel Type	Percent of California Power
Coal	2.74
Large Hydro	12.21
Natural Gas	37.06
Nuclear	9.33
Oil	0.01
Other (Petroleum Coke/Waste Heat)	0.19
Renewables (Excluding Large Hydro)	33.09
Unspecified	5.36

Source: CEC 2021a

Natural gas provides the largest portion of the total in-State capacity and electricity generation in California, with nearly 45 percent of the natural gas burned in California used for electricity generation in a typical year. Much of the remainder is consumed in the residential, industrial, and commercial sectors for uses such as cooking, space heating, and as an alternative transportation fuel. In 2012, total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet per year (bcf/year), up from 2,196 bcf/year in 2010 (CEC 2021b).

Transportation accounts for a major portion of California's energy budget. Automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. In 2015, 15.1 billion gallons of

gasoline were sold in California (CEC 2021c). Diesel fuel is the second most consumed fuel in California, used by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats, and farm and construction equipment. In 2015, 4.2-billion gallons of diesel were sold in California (CEC 2021d).

Impact Analysis

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than significant impact. Under the proposed project, existing water distribution piping would be demolished or abandoned in place and replaced with new water alignment piping. Energy consumed for project construction would primarily consist of fuels in the form of diesel and gasoline. Fuel consumption would result from: the use of on-road and off-highway trucks for the transportation of construction materials and water; construction worker vehicles traveling to and from the project site; and from the use of off-road construction equipment. While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction.

As discussed in Section 8.III. Air Quality and Section 8.VIII. Greenhouse Gas Emissions, operation of the project would not require installation of new electrical equipment. Additionally, the project would not require an increase in facility maintenance beyond what currently exists; therefore, there would be no increase in operational VMT. The proposed project would include the replacement of water distribution mains with new piping that meets current standards for size, material, and construction to provide a more reliable water system that is less prone to leaks. The project would also include installation of water meters at each service to encourage water conservation and assist with leak detection. By reducing water leaks within the system, energy usage could be decreased compared to existing conditions. Therefore, the impact would be less than significant.

- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than significant impact. See the discussion under question a) above. The proposed project would not result in a substantial new demand for energy resources nor conflict with or obstruct any State or local plan for renewable energy or energy efficiency. Therefore, the impact would be less than significant.

VII. GEOLOGY AND SOILS

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project:				
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial 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 waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Seismicity

Humboldt County is located within two of the highest of five seismic risk zones specified by the Uniform Building Code. The area near Cape Mendocino is a complex, seismically active region, where three crustal plates intersect to form the Mendocino Triple Junction (County 2017).

Surface Fault Rupture

Surface fault rupture is a particular type of seismic hazard that is specifically addressed by State legislation, the Alquist-Priolo Earthquake Fault Zoning Act. Humboldt County has a number of fault zones mapped under this law (County 2017).

Liquefaction, Landslides, and Subsidence

Ground shaking gives rise to two secondary natural hazards, liquefaction, and landslides. Liquefaction involves a sudden loss in strength of a water-saturated soil, and results in temporary transformation of the soil into a fluid mass. Recent alluvial flood plain soils and coastal sand deposits exhibit the highest liquefaction hazard (County 2017).

Ground shaking can induce landslides, especially under saturated conditions. However, landslides can also occur without ground shaking. During the winter months when we see higher volumes of precipitation, water can travel through earthen layers and saturate soils or remain stagnant in pockets formed between rock and soil. This water can then freeze and expand creating larger separations in soil types or geologic formations. Once thawed, these separations can then cause landslides in areas with steep terrain and topography (County 2017).

Geologic subsidence is the sinking of the Earth's surface due to various natural processes or human activities (County 2017).

Tsunamis

Seismic activity such as earthquakes, tectonic movement, and volcanic activity can generate tsunamis through the displacement of large amounts of water. Humboldt County coastline borders the Pacific Ocean. This risk is higher for locations surrounding the Pacific Ocean given a higher volume of volcanic activity and plate movement, known as the Circum-Pacific Belt, or Ring of Fire (County 2017). The project site is not located within the Tsunami Hazard Zone (CDC 2023a).

Soils

According to the NRCS Web Soil Survey, the project site includes the following soil mapping units (NRCS 2024a):

- Typic Xerofluvents-Riverwash association, 2-10 percent slopes
- Pits and Dumps
- Hugo family, moderately deep, 50 to 70 percent

Typic Xerofluvents-Riverwash association, 2 to 10 percent slopes soils occur on base slopes, alluvial fans, and toeslopes. The depth of the water table is greater than 80 inches. Typic Xerofluvents-Riverwash association soils are not on the State Hydric Soils List for Humboldt County (NRCS 2024b).

Pit and Dump soils occur on terraces, foot slopes and risers and consists of gravelly alluvium. The depth of the water table is greater than 80-inches. Pit and Dump soils are not on the State Hydric Soils List for Humboldt County (NRCS 2024b).

Hugo family, moderately deep, 50 to 70 percent slopes soils occur on mountains, black slope, and mountain flank. The depth of the water table is greater than 80 inches. Hugo family, moderately deep soils are not on the State Hydric Soils List for Humboldt County (NRCS 2024b).

Impact Analysis

- 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?
 - ii. Strong seismic ground shaking?

Less than significant impact. According to the California Department of Conservation (CDC) Earthquake Hazards Zone Application (EQ Zapp) Map, there are no known active faults crossing the project site, and the project site is not located within an Alquist-Priolo Earthquake Fault Zone (CDC 2023b). According to the Fault Activity Map of California, prepared by the California Geological Survey, the closest Quaternary fault to the site is indicated to be the Surpur Creek Fault, located approximately 25 miles west of the project site. Additionally, the project would be constructed in accordance with standards imposed by the County and in compliance with the California Building Code (CBC) requirements.

Therefore, the project would not expose people or structures to substantial adverse effects of seismic events and the impact would be less than significant for questions a.i) and a.ii).

- iii. Seismic-related ground failure, including liquefaction?

Less than significant impact. Liquefaction is a phenomenon whereby unconsolidated and/or near-saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in temporary, fluid-like behavior of the soil. Soil liquefaction causes ground failure that can damage roads, pipelines, underground cables, and buildings with shallow foundations.

As noted in question a.i) and a.ii), the proposed project would be constructed in accordance with standards imposed by the County and with CBC requirements. Additionally, according to the CDC EQ Zapp Map, the proposed project is not located within a liquefaction zone (CDC 2023b). Therefore, as liquefaction poses a very low risk of adversely affecting the project site or proposed improvements, the impact would be less than significant.

- iv. Landslides?

Less than significant impact. The proposed project would replace an existing water distribution system as well as replace 38 existing water service mains. The proposed project would also install new non-potable fire hydrants at approximately 500 ft intervals along Camp Creek Road and Placer Drive.

The proposed new water alignment piping, water meters, and fire hydrants would be located in a relatively flat area. Additionally, according to the CDC EQ Zapp Map, the proposed project is not located

within a landslide zone (CDC 2023b). Therefore, landslides post a low risk to the proposed project area and the impact would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant impact. Under the proposed project, existing piping would be demolished or abandoned in placed and replaced with new water alignment piping. A turnout would be installed at the bottom of Lower Camp Creek Road for future consolidation with the OCSD and for water system redundancy. New non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains.

Projects resulting in one or more acre of ground disturbance require a General Construction Activity Stormwater Permit and a National Pollutant Discharge Elimination System (NPDES) permit from the SWRCB. Use of the permit requires the preparation of a stormwater pollution prevention program (SWPPP) for approval by the SWRCB. The SWPPP would contain BMP to control construction-related erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat and reduce potential impacts to water quality during construction of the project. With implementation of BMP, the impact relating to soil erosion would be less than significant.

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?

Less than significant impact. The proposed project is not located on a geologic unit or soil type that is known to be or documented as unstable, and no soil mapping unit on the project site are on the State Hydric List for Humboldt County (NRCS 2024b). As noted under a-i) through a-iii), the project site is not located within an Alquist-Priolo Earthquake Fault Zone or within a Liquefaction Zone (CDC 2023b). Additionally, the proposed project would be constructed in accordance with standards imposed by the County and with CBC requirements. Therefore, the proposed project would not be expected to cause instability of any geologic unit or soil, and impact would be less than significant.

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?

Less than significant impact. According to the NRCS Web Soil Survey, the project site includes the following soil mapping units (NRCS 2024a): Typic Xerofluvents-Riverwash association, 2-10 percent slopes, Pits and Dumps, and Hugo family, moderately deep, 50 to 70 percent. The CBC provides soil classification guidelines for expansive soils. The proposed project would be constructed in accordance with standards and guidelines imposed by the County and CBC. Therefore, the impact would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No impact. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. The proposed project would not include the construction of any septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than significant impact with mitigation. No previous surveys conducted in the project area have identified the project site as sensitive for paleontological resources or other geologically sensitive resources, nor have testing or ground disturbing activities performed to date uncovered any paleontological resources or geologically sensitive resources. While the likelihood encountering paleontological resources and other geologically sensitive resources is considered low, project-related ground disturbing activities could affect the integrity of a previously unknown paleontological or other geologically sensitive resource, resulting in a substantial change in the significance of the resource. Therefore, the proposed project could result in potentially significant impacts to paleontological resources. Implementation of Mitigation Measure GEO-1 would reduce potentially significant impacts to a less than significant level.

Mitigation Measure GEO-1: Identification of Paleontological Resource During Project Construction

In the event a paleontological or other geologically sensitive resources (such as fossils or fossil formations) are identified during any phase of project construction, all excavations within 100-ft of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at Humboldt County who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the County shall implement those measures which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code Section 21083.2

VIII. GREENHOUSE GAS EMISSIONS

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

CalEEMod version 2022.1 was used to quantify project-generated construction emissions. The model output sheets are included in Appendix B to this Initial Study.

Environmental Setting

Global climate change refers to changes in average climatic conditions on Earth, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as greenhouse gases (GHG) because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth's atmosphere.

GHG are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with: (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The GHG defined under California's Assembly Bill (AB) 32, described below, include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Estimates of GHG emissions are commonly presented in carbon dioxide equivalents (CO₂e), which weigh each gas by its global warming potential (GWP). Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted. GHG emissions quantities in this analysis are presented in metric tons (MT) of CO₂e. For consistency with United Nations Standards, modeling, and reporting of GHGs in California and the U.S. use the GWPs defined in the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (IPCC 2007): CO₂ – 1; CH₄ – 25; N₂O – 298.

GHG Reduction Regulations and Plans

Executive Order S-3-05: On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions

to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Executive Orders are not laws and can only provide the governor's direction to State agencies to act within their authority to reinforce existing laws.

Assembly Bill 32 – Global Warming Solution Act of 2006: The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that CARB develop and enforce regulations for the reporting and verification of Statewide GHG emissions. CARB is directed by AB 32 to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

Executive Order B-30-15: On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California achieved the target of reducing GHGs emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

Senate Bill 32: Signed into law by Governor Brown on September 8, 2016, Senate Bill (SB) 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a Statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

Assembly Bill 197: A condition of approval for SB 32 was the passage of AB 197. AB 197 requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over CARB through the addition of two legislatively appointed members to the CARB Board and the establishment a legislative committee to make recommendations about CARB programs to the legislature.

Assembly Bill 1493- Vehicular Emissions of Greenhouse Gases: AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero emission vehicles into a single packet of standards called Advanced Clean Cars (CARB 2024).

Executive Order S-01-07: This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a Statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation

fuels be established for California and directs CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010.

Although challenged in 2011, the Ninth Circuit reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. Therefore, CARB is continuing to implement the LCFS Statewide.

Executive Order N-79-20: EO N-79-20, signed by Governor Newsom on September 23, 2020, establishes three goals for the implementation of zero emissions vehicles in California: first, 100 percent of in-State sales of new passenger cars and trucks will be zero-emissions by 2035; second, 100 percent of medium- and heavy-duty vehicles in the State will be zero-emissions vehicles by 2045 for all operations where feasible, and by 2035 for drayage trucks; and third, 100 percent of off-road vehicles and equipment will be zero emissions by 2035 where feasible.

Assembly Bill 1279: Approved by Governor Newsom on September 16, 2022, AB 1279, the California Climate Crisis Act, declares the policy of the State to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, Statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. AB 1279 anticipates achieving these policies through direct GHG emissions reductions, removal of CO₂ from the atmosphere (carbon capture), and almost complete transition away from fossil fuels.

California Air Resources Board: The Scoping Plan is a strategy CARB develops and updates at least once every five years, as required by AB 32. It lays out the transformations needed across our society and economy to reduce emissions and reach our climate targets. The current 2022 Scoping Plan is the third update to the original plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 mandate of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual. The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG targets. The 2013 Scoping Plan assessed progress toward achieving the 2020 mandate and made the case for addressing short-lived climate pollutants (SLCPs). The 2017 Scoping Plan also assessed the progress toward achieving the 2020 limit and provided a technologically feasible and cost-effective path to achieving the SB 32 mandate of reducing GHGs by at least 40 percent below 1990 levels by 2030.

On December 15, 2022, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels; further reductions in SLCPs; support for sustainable development; increased action on natural and working lands to reduce emissions and sequester carbon; and the capture and storage of carbon (CARB 2022).

Humboldt County: The County of Humboldt completed a draft Climate Action Plan for their General Plan Update in January 2012 (County 2012). The plan contained GHG reduction strategies designed to achieve the goal of limiting greenhouse gas emissions to 1990 emissions levels by 2020. The NCUAQMD

and Humboldt County have not adopted any thresholds of significance for measuring the impact of GHG emissions generated by a proposed project.

Impact Analysis

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than significant impact. The NCUAQMD and Humboldt County have not adopted any thresholds of significance for evaluating the impact of GHG emissions generated by a proposed project. This section includes a discussion of potential GHG emissions impacts with an emphasis on project features which would reduce GHG emissions.

CalEEMod was used to quantify project-generated construction emissions. The model output sheets are included in Appendix B. Operational emissions were not modeled using CalEEMod as it is assumed operation of the new pipeline alignment would not produce operational emissions beyond emissions from operation of the existing water system.

Construction

Construction GHG emissions are generated by vehicle engine exhaust from construction equipment, on-road hauling trucks, vendor trips, and worker commuting trips. The proposed project is relatively small, and construction would be short term (less than one year). All construction equipment and commercial trucks would be maintained to meet current emissions standards as required by CARB.

GHG emissions were calculated using CalEEMod and the results of the construction GHG emissions calculations are shown below in **Table 8**.

Table 8
CONSTRUCTION GHG EMISSIONS

Year of Emissions	Emissions (MT CO ₂ e)
2026	89.8

Source: CalEEMod output (Appendix B)

GHG = greenhouse gas; MT = metric tons; CO₂e = carbon dioxide equivalent

Based on the small size of the project and the short duration of construction activities (less than 1 year), impacts associated with GHG emissions generated from construction would be less than significant.

Operation

Operation of the project would not require installation of new electrical equipment. Additionally, the project would not require an increase in facility maintenance beyond what currently exists; therefore, there would be no increase in operational VMT. The proposed project would include the replacement of water distribution mains with new piping that meets current standards for size, material, and construction to provide a more reliable water system that is less prone to leaks. The project would also include installation of water meters at each service to encourage water conservation and assist with leak detection. By reducing water leaks within the system, energy usage could be decreased compared to

existing conditions. The project would not result in operational GHG emissions beyond emissions from operation of the existing water system.

Therefore, the proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and the impact would be less than significant.

- b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than significant impact. The proposed project was evaluated against the following applicable plans, policies, and regulations:

Humboldt County Draft Climate Action Plan: The County's 2012 Draft Climate Action Plan contains strategies for reducing GHG emissions. This project, as proposed, is consistent with the following GHG reduction strategies listed in the County of Humboldt Climate Action Plan:

- a) *Foster land use intensity near, along with connectivity to, retail and employment centers and services to reduce vehicle miles traveled and increase the efficiency of delivery services through adoption and implementation of focused growth principles and policies.*

The project setting consists of a small rural community. The project would provide a more reliable water system that is less prone to leaks, encourage water conservation, allow higher fire flows and volumes, and provide for water system redundancy. The workforce during construction is anticipated to live locally in southern Humboldt County and commute to and from the site. During operation, the same level of employment currently utilized to maintain the existing infrastructure would be required and there would be no increase in operational VMT. VMT would slightly increase during construction but would return to baseline conditions following construction.

- b) *Conserve natural lands for carbon sequestration.*

The project would install fire hydrants on raw water piping that would allow for higher fire flows and volumes that the current system can provide. Installation of water supplies for firefighting would help to protect adjacent forested lands from wildfire threat.

- c) *Reduce length and frequency of vehicle trips.*

See response to strategy a), above.

- d) *Promote the revitalization of communities in transition due to the decline of resource-based industries.*

The project would provide a more reliable water system that is less prone to leaks, encourage water conservation, allow higher fire flows and volumes, and provide for water system redundancy. These improvements would enhance the quality of life and safety in the community of Orleans.

- e) *Ensure that land use decisions conserve, enhance, and manage water resources on a sustainable basis to assure sufficient clean water for beneficial uses and future generations.*

The project would provide a more reliable water system that is less prone to leaks, encourage water conservation, allow higher fire flows and volumes, and provide for water system redundancy.

Therefore, the proposed project would not conflict with the Humboldt County Draft Climate Action Plan.

CARB Scoping Plan: As described above, the 2022 CARB Scoping Plan contains plans, policies, and measures to achieve State mandated targets to achieve carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045. The project would not result in long-term increases in VMT. The proposed project would include the replacement of water distribution mains with new piping that meets current standards for size, material, and construction to provide a more reliable water system that is less prone to leaks. The project would also include installation of water meters at each service to encourage water conservation and assist with leak detection. By reducing water leaks within the system, energy usage could be decreased compared to existing conditions. Therefore, the proposed project would not conflict with the 2022 CARB Scoping Plan.

In summary, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and impact would be less than significant.

IX. HAZARDS AND HAZARDOUS MATERIALS

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise 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"/>

Environmental Setting

Hazardous materials and hazardous wastes are subject to extensive federal, State, and local regulations to protect public health and the environment. These regulations provide definitions of hazardous materials; establish reporting requirements; set guidelines for handling, storage, transport, and disposal of hazardous wastes; and require health and safety provisions for workers and the public. The major federal, State, and regional agencies enforcing these regulations are USEPA (U.S. Environmental Protection Agency) and the Occupational Safety and Health Administration; California Department of Toxic Substances Control (DTSC); California Department of Industrial Relations, California Division of Occupational Safety and Health; California Governor's Office of Emergency Services; and NCUAQMD.

The site is not shown as containing hazardous materials or being involved in any cleanup or monitoring programs. The DTSC EnviroStor mapper indicated no cleanup or monitoring programs on the site or in

the area (DTSC 2023). The State Water Resource Control Board Geotracker did not indicate the presence of a site in the vicinity of the project (SWRCB 2023).

The nearest school to the project site is Orleans Elementary School, located at 38016 California 96, Orleans, CA 95556, approximately 1.4-miles east of the project site. The nearest airport to the site is the Hoopa Airport, located approximately 27-miles to the south.

According to California Department of Fire and Forestry (CALFIRE) Fire Hazard Severity Zone Mapper, the project site is within a Very High Fire Hazard Severity Zone within a State Responsibility Area (SRA) (CALFIRE 2023).

Impact Analysis

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 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?

Less than significant impact. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. During project construction, oil, gasoline, diesel fuel, paints, solvents, and other hazardous materials may be used. If spilled, these substances could pose a risk to the environment and to human health. However, the routine transport, use, and disposal of hazardous materials are subject to local, State, and federal regulations to minimize risk and exposure. Compliance with local, State, and federal regulations would reduce the impact to a less than significant level for questions a) and b).

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No impact. There are no schools within one-quarter mile of the project site. The nearest school to the project site is Orleans Elementary School, located at 38016 California 96, Orleans, CA 95556, approximately 1.4-miles east of the project site. Due to this distance, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25-mile of an existing or proposed school. Therefore, no impact would occur.

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No impact. The project site is not included on a list of hazardous materials sites reporting to the DTSC (DTSC 2023) or SWRCB (SWRCB 2023). As there are no hazardous materials concerns currently on or near the project site, implementation of the proposed project would not create a significant hazard to the public or the environment as a result. No impact would occur.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No impact. The nearest airport or airstrip not maintained by the County is Hoopa Airport, located approximately 27 miles south of the project site. The nearest airport maintained by the County is the California Redwood Coast – Humboldt County Airport, located approximately 35 miles southwest of the project site. The project site is not located within an airport land use plan area (County 2021). Therefore, the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area. No impact would occur.

- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. The project would comply with the requirements of CBC and CAL FIRE regulations including those regarding emergency vehicle access, turnarounds, and defensible space. The project site is located within the Mid-Klamath Wildfire Planning Unit. Evacuation routes would depend on the location of the community at risk and law enforcement recommendations based on fire behavior, wind patterns, traffic, and ingress of emergency vehicles. The determination for the locations of these sites is normally made by the Humboldt County Emergency Operations Center Incident Commander in cooperation with an incident Management Team (County 2019). SR 96 would, in most cases, serve as the primary evacuation route for the project area.

The proposed project is accessed via Camp Creek Road, Lower Camp Creek Road, and an existing private driveway, which are all directly connected to the main primary evacuation route, SR 96. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. Construction of the water alignment piping would mainly be constructed within County ROW and existing easements; however, a portion of the Camp Creek Crossing Alignment would require a District 1 Caltrans encroachment permit. Additionally, as the new water main and construction of the new water main would be located within and along Humboldt County roadways (Placer Drive and Lower Camp Creek Road), an encroachment permit would be required by the County prior to the start of construction. A new utility easement would be required for piping east of Placer Drive on the larger parcel owned by the KTHA (APN 529-141-037). All other water mains would be installed within the County ROW, Caltrans ROW or existing easements. In compliance with required permits and easements, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Therefore, the impact would be less than significant.

- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less than significant impact. According to CALFIRE, the project site is in a Fire Hazard Severity Zone of “Very High” within a State Responsibility Area (CALFIRE 2023). The proposed project would comply with all CALFIRE SRA requirements including those for emergency vehicle access, turnarounds, and defensible space. New non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. The new fire hydrants would be installed on raw water piping, which would allow for higher fire flows and volumes than the current system can provide. Additionally, the project would maintain current levels of service, would not be growth inducing, and would not create any new

residences or occupied structures in an area susceptible to wildfire. Therefore, the impact would be less than significant. See also the discussion of wildfire in Section 8.XX of this Initial Study

X. HYDROLOGY AND WATER QUALITY

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project:				
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 off- site?	<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 resources of polluted runoff?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

A Preliminary Engineering Report (PER) was prepared by Water Works Engineering on November 13, 2023. The PER is included as Appendix D to this ISMND.

Environmental Setting

Federal Emergency Management Agency (FEMA) flood insurance rate maps were reviewed for the project's proximity to a 100-year floodplain (FEMA 2023). The proposed project is on FEMA panel #06023C0275F, effective 11/4/2016. The project is located within FEMA Flood Zone D, which is an area with possible, but undetermined, flood hazards. No official analysis of flood hazard has been conducted for the area. As the project area is not specifically identified as a hazard area, there are no floodplain requirements for buildings or structures. However, because a portion of the water alignment piping would be constructed underneath an existing bridge that crosses Camp Creek, the County confirmed that it would be within a SMA. Per Humboldt County Code section 314-61.1.9.1.9, essential public

projects are exempt from special SMA permitting requirements. Therefore, since the project is for public utilities, which provides an essential public service, it would likely be exempt from SMA permitting requirements. Additionally, the proposed project is outside the jurisdictional area of the Central Valley Flood Protection Board and does not require any floodplain permitting (PES 2023).

Impact Analysis

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than significant impact. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. A turnout would be installed at the bottom of Lower Camp Creek Road for future consolidation with the OCSO and for water system redundancy. New non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains.

The only grading proposed as part of the project would include any minor alterations necessary to accommodate new or upgraded features. However, the proposed project has the potential to temporarily degrade water quality due to increased erosion during project construction as the proposed project would require over one acre of grading on the project site. Projects resulting in one or more acre of ground disturbance require a General Construction Activity Stormwater Permit and a NPDES permit from the SWRCB. Use of the permit requires the preparation of a SWPPP for approval by the SWRCB. The SWPPP would contain BMP to control construction-related erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat and reduce potential impacts to water quality during construction of the project. The SWPPP submitted to the SWRCB with the Notice of Intent (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.

Compliance with SWRCB permit conditions ensures that the project would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality, and impact would be less than significant.

- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than significant impact. Currently, there is one medium-priority basin, the Eel River Valley groundwater basin, within Humboldt County (County 2017). That basin is located over 40 air miles southwest of the project site. The other 13 mapped groundwater basins in the County have been given a “very low” priority, although the groundwater basin boundaries and prioritizations could change in the future based on local habitat considerations, stream flows and improved hydrologic and geologic information (County 2017).

The proposed water alignment piping would be mainly subterranean and would be constructed within existing easements and ROW, existing culvert crossing, existing driveways, and underneath an existing Caltrans bridge. The use of groundwater is not anticipated for construction of the proposed project. Following construction, the project would not utilize groundwater and would not result in an increase in

population or employment that would indirectly increase groundwater demand. Therefore, the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. The impact would be less than significant.

- 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?

Less than significant impact. Construction of the proposed project would require grading and excavation that would disturb soils and increase the potential for erosion. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. The proposed water alignment piping would be mainly subterranean and would be constructed within existing easements and ROW, existing culvert crossing, existing driveways, and underneath an existing Caltrans bridge. The proposed project was designed to avoid drainage within the project area through construction of the water alignment piping within disturbed areas and underneath an existing bridge.

As the proposed project would disturb over one acre of soil, a SWPPP would be prepared and implemented, as discussed in question a). The SWPPP would contain BMP to control construction-related erosion and sedimentation, prevent damage to streams, watercourses, and aquatic habitat, and reduce potential impacts to water quality during construction of the project. Therefore, in compliance with SWRCB permit conditions, the impact would be less than significant.

- ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?
- iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?
- iv. Impede or redirect flood flows?

Less than significant impact. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. A turnout would be installed at the bottom of Lower Camp Creek Road for future consolidation with the OCSD and for water system redundancy. New non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains.

The proposed water alignment piping would be mainly subterranean and would be constructed within existing easements and ROW, existing culvert crossing, existing driveways, and underneath an existing Caltrans bridge. The proposed project was designed to avoid drainage within the project area through construction of the water alignment piping within disturbed areas and underneath an existing bridge.

No official analysis of flood hazard has been conducted for the area. As the project area is not specifically identified as a hazard area, there are no floodplain requirements for buildings or structures. However, because a portion of the water alignment piping would be constructed underneath an existing bridge that crosses Camp Creek, the County confirmed that it would be within an SMA. Per Humboldt

County Code section 314-61.1.9.1.9, essential public projects are exempt from special SMA permitting requirements. Therefore, since the project is for public utilities, which provides an essential public service, it would likely be exempt from SMA permitting requirements. Additionally, the proposed project is outside the jurisdictional area of the Central Valley Flood Protection Board and does not require any floodplain permitting (PES 2023).

As discussed in question a), the proposed project would disturb greater than one acre and would be required to prepare and implement a SWPPP and associated BMP. Therefore, the proposed project would not result in flooding on- or off-site, create or contribute to new runoff, or significantly impede or redirect flood flows. Therefore, impacts would be less than significant for questions c(ii), c(iii), or c(iv).

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than significant impact. The project is not in an area that is at risk from seiche or tsunamis. The proposed project is on FEMA panel #06023C0275F, effective 11/4/2016. The project is located within FEMA Flood Zone D, which is an area with possible, but undetermined, flood hazards. No official analysis of flood hazard has been conducted for the area. As the project area is not specifically identified as a hazard area, there are no floodplain requirements for buildings or structures. However, because a portion of the water alignment piping would be constructed underneath an existing bridge that crosses Camp Creek, the County confirmed that it would be within an SMA. Per Humboldt County Code section 314-61.1.9.1.9, essential public projects are exempt from special SMA permitting requirements. Therefore, since the project is for public utilities, which provides an essential public service, it would likely be exempt from SMA permitting requirements. Additionally, the proposed project is outside the jurisdictional area of the Central Valley Flood Protection Board and does not require any floodplain permitting (PES 2023). Therefore, the proposed project would not risk release of pollutants due to project inundation from seiche, tsunami, or flood hazard. The impact would be less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than significant impact. The project is located within the area covered by the North Coast Regional Water Quality Basin Plan and would not conflict with or obstruct its implementation (NCRWQCB 2023). Construction activities would feature standard BMP, including temporary erosion and runoff control measures that minimize the potential for erosion and storm water runoff.

The project is not located in an area with a sustainable groundwater management plan in place, as the Sustainable Groundwater Management Act only applies to groundwater basins designated as medium or high priority. Currently there is one medium-priority basin, the Eel River Valley groundwater basin, within Humboldt County (County 2017). That basin is located over 40 air miles southwest of the project site. Therefore, the proposed project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. The impact would be less than significant.

XI. LAND USE AND PLANNING

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause significant environmental impact due to a conflict with any 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"/>

Environmental Setting

The General Plan land use designations for the project area are Conservation Floodway (CF), and Residential Estates, 1 to 5-acre minimum.

The General Plan designation of CF applies to the channels of river and streams, including the areas which carry normal flood waters or the area between existing or planned levees, dikes or other such flood control features, and in which agricultural and limited recreational uses may be desirable or permissible. The RE designation is used for lands adjacent to urban areas or rural communities with limited public services but suitable for single-family residential use. It is also intended as a transition from urban development to rural lands. This designation is commonly used in water-only service areas. The RE designation has a density range of 1 to 5-acres per unit with a maximum floor area ratio (FAR) or 0.20 (County 2017).

The project area has a zoning designation of Unclassified (U). Land uses surrounding the project site include U.S Forest Service Lands and residential land.

Section 314-8.1 states that all of the unincorporated areas of the County not otherwise zoned are designated as the Unclassified Zone. This area has not been sufficiently studied to justify precise zoning classifications. Principal permitted uses include one-family dwelling, general agriculture, rooming, and boarding of not more than two persons, and manufactured homes. All other uses not specified in the subsection, Principal Permitted Uses, may be permitted upon the granting of a Use Permit.

Impact Analysis

a) Physically divide an established community?

No impact. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains. New non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive.

During installation of new water services, service to each property would be temporarily shut off for up to 4 hours. Property owners would be notified in advance of the shutdown. Temporary piping would be

used where necessary to limit the shutdown duration. The proposed project would not significantly expand the built footprint of the existing distribution system, and therefore would not divide an established community. No impact would occur.

- b) Cause significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than significant impact. The proposed project would include updates to an existing distribution. The proposed project would not significantly expand the built footprint of the existing distribution system, and the type and intensity of use would continue without significant change relative to existing conditions. Vegetation clearing would be limited to the minimum extent necessary to ensure site access and safety, and no removal of trees is proposed.

The proposed pipeline alignments are predominantly within existing water easements and County ROW in the Crawford Hill Subdivision. However, there are no known utility easements east of Placer Drive serving the properties along Camp Creek Road and Lower Camp Creek Road. A new utility easement would be required for piping east of Placer Drive on the larger parcel owned by the KTHA (APN 529-141-037). All other water mains would be installed within the County ROW, Caltrans ROW or existing easements. Permitting for the project would be required to comply with CEQA, Caltrans, and Humboldt County. Expected permitting requirements for the proposed project are summarized in Table 2. In compliance with the required easements and permits, the impact would be less than significant.

XII. MINERAL RESOURCES

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

Environmental Setting

Humboldt County has a wealth of mineral resources. Over ninety extraction sites produce sand and gravel, hard rock, and metals essential for the economic well-being of the County (County 2017).

Impact Analysis

- 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?
- 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?

No impact. The project site does not include any mineral resources (CDC 2023b). Additionally, the project site is not within or adjacent to any active mining operations (CDC 2023c). Therefore, implementation of the project would not result in the loss of availability of mineral resources or locally important mineral resource recovery site, and no impact would occur for questions a) and b).

XIII. NOISE

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project result in:				
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 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 or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Noise Metrics

All noise-level and sound-level values presented herein are expressed in terms of decibels (dB), with A weighting, abbreviated “dBA,” to approximate the hearing sensitivity of humans. Time averaged noise levels of one hour are expressed by the symbol “ L_{EQ} ” unless a different time period is specified. Maximum noise levels are expressed by the symbol “ L_{MAX} .”

Because decibels are logarithmic units, S_{PL} cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an S_{PL} of 70 dBA when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1 dBA changes in sound levels, when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000 Hertz [Hz]–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. It is widely accepted, however, that people begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dBA increase is generally perceived as a distinctly noticeable increase, and a 10 dBA increase is generally perceived as a doubling of loudness.

Vibration Metrics

Groundborne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. Sources of groundborne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Peak particle velocity (PPV) is commonly used to quantify vibration amplitude. The PPV, with units of inches per second, is defined as the maximum instantaneous positive or negative peak of the vibration wave.

Regulatory Setting

The noise standards in the Humboldt County General Plan are based on EPA recommendations. Section 3240 of the 2017 General Plan states: “The Environmental Protection Agency identifies 45 Day-Night average sound level (Ldn) indoors and 55 Ldn outdoors as the maximum level below which no effects on public health and welfare occur. Ldn is the Day-Night Noise Level. Ldn is the average sound level in decibels, excluding frequencies beyond the range of the human ear, during a 24-hour period with a 10 dB weighting applied to nighttime sound levels. A standard construction wood frame house reduces noise transmission by 15 dB. Since interior noise levels for residences are not to exceed 45 dB, the maximum acceptable exterior noise level for residences is 60 dB without any additional insulation being required. Of course, this would vary depending on the land use designation, adjacent uses, distance to noise source, and intervening topography, vegetation, and other buffers” (County 2017). Since Ldn is a daily average, allowable noise levels can increase in relation to shorter periods of time. As stated in Section 3240, “Fences, landscaping, and noise insulation can be used to mitigate the hazards of excessive noise levels” (County 2017).

The existing County noise standard utilizes an averaging mechanism (dBA Ldn) applicable to activities that generate sound sources averaged over a 24-hour period of time. This type of measurement is commonly used for measuring highway noise or industrial operations. A ten-decibel addition is added to noise levels occurring at nighttime – between 10:00 p.m. and 7:00 a.m. Utilizing a typical standard of 45 dBA Ldn interior noise level allows for a maximum of 60 dBA Ldn for ‘normally acceptable’ exterior levels.

Impact Analysis

- 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 applicable standards of other agencies?

Less than significant impact with mitigation.

Construction

Construction activities would result in a temporary increase in noise levels in the area. The County has not established standards for allowable short-term construction noise levels. The nearest sensitive receptors to any of the proposed project improvements are single-family residences approximately 50 feet from the proposed water alignment piping along Placer Drive. Nighttime construction activity could result in disturbance of sleep for residents near project improvement locations resulting in a potentially significant noise impact. Mitigation Measure NOI-1 would limit construction hours and days and would require standard maintenance of tools and equipment to reduce noise levels. Therefore, with

implementation of Mitigation Measure NOI-1, potentially significant impacts from construction noise would be reduced to a less than significant level.

Operation

Operation of the project would not require installation of new electrical or other noise-generating equipment. Additionally, the project would not require an increase in facility maintenance beyond what currently exists; therefore, there would be no increase in operational VMT. Therefore, long-term operation of the project would not result in increases in noise over existing conditions and the impact would be less than significant.

With implementation of Mitigation Measure NOI-01, construction or operation of the proposed project would not expose persons to or result in the generation of temporary or permanent noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standard of other agencies. The impact would be less than significant with implementation of Mitigation Measure NOI-1.

Mitigation Measure NOI-1: Construction Related Noise

The following shall be implemented during construction activities:

- The operation of tools or equipment used in construction, drilling, repair, alternation, or demolition shall occur between the hours of 8 a.m. and 5 p.m. Monday through Friday, and between 9 a.m. and 5 p.m. on Saturdays.
- No heavy equipment related to construction activities shall be allowed on Sundays or holidays.
- All stationery and construction equipment shall be maintained in good working order and fitted with factor approved muffler systems.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact with mitigation.

Excessive ground-borne vibration would occur if construction-related ground-borne vibration exceeds the “distinctly perceptible” vibration annoyance potential criteria for disruption of sleep of 0.035 inch per second PPV for steady-state sources or exceeds the damage potential criteria of 0.4 inches per second PPV for residential buildings in good repair with gypsum board walls (Caltrans 2020).

Construction

The most prominent source of vibration anticipated during project construction would be a vibratory roller used for soil and/or pavement compaction. A vibratory roller could be used as close as 50 feet from the closest off-site residential structure. According to Caltrans, a vibratory roller creates a PPV of 0.210 inches per second at 25 feet (Caltrans 2020). At 50 feet, a vibratory roller would create a PPV of 0.098 inches per second.² This would be less than the threshold of 0.4 inches per second PPV for

² Equipment PPV = Reference PPV * (25/D)ⁿ (inches per second), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through the ground); formula from Caltrans 2020.

damage to residential buildings in good repair. However, the vibration levels from vibratory roller would exceed what is considered a “distinctly perceptible” level for humans of 0.035 inches per second PPV, and the Caltrans threshold for vibrations impacting buildings where people normally sleep, resulting in a potentially significant vibration impact. Mitigation Measure NOI-1, described above, would limit project construction to the hours from 8 a.m. and 5 p.m. Monday through Friday, and from 9 a.m. and 5 p.m. on Saturdays. Implementation of Mitigation Measure NOI-1 would reduce the construction vibration impact to a less than significant level.

Operation

Long-term operation of the project would not involve the use of heavy machinery or ground disturbing activities that would result in excessive groundborne vibration or groundborne noise levels. The project would not require installation of new electrical equipment and would not require an increase in facility maintenance beyond what currently exists. Project operational vibration impacts would be less than significant.

Therefore, with implementation of Mitigation Measure NOI-1, construction or operation of the proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. The impact would be less than significant with mitigation.

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No impact. The nearest airport or airstrip not maintained by the County is Hoopa Airport, located approximately 27 miles south of the project site. The nearest airport maintained by the County is the California Redwood Coast – Humboldt County Airport, located approximately 35 miles southwest of the project site. The project site is not located within an airport land use plan area (County 2021). Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels. No impact would occur.

XIV. POPULATION AND HOUSING

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

Environmental Analysis

Humboldt County is a rural county with a large land area and low population density. The community of Orleans is not a Census Designated Place within Humboldt County. According to the 2010 Census, the total population in Humboldt County was 134,623, an increase of 8,105 persons in the past decade (County 2017). **Table 9** includes the historic and projected population growth in the County from 1980 to 2040. The California Department of Finance projections indicate an anticipated average growth of 0.41 percent over the next 20 years which is lower than the 0.80 percent annual growth experienced in the past 30 years.

Table 9
HISTORIC AND PROJECTED POPULATION GROWTH IN HUMBOLDT COUNTY, 1980-2040

Year	Total County Population	Population of Unincorporated Areas	% of Total Population in Unincorporated Areas	Average Annual Increase (Countywide Total)	Total % Change over Period (Countywide Total)
1980	108,525	59,046	54.4		
1990	119,118	62,169	52.2	0.94	9.76
2000	126,518	67,236	53.1	0.60	6.21
2010	134,623	71,916	53.4	0.62	6.41
2016	135,116	71,830	53.2	0.06	0.37
2020	139,033	73,912	53.2	0.72	2.90
2030	140,608	74,750	53.2	0.11	1.13
2040	138,307	73,526	53.2	-0.16	-1.64

Source: County 2017

Impact Analysis

- a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than significant impact. Growth inducing impacts are generally caused by projects that have a direct or indirect effect on economic growth, population growth, or when the project taxes community

service facilities which require upgrades beyond the existing remaining capacity. Under the proposed project, existing distribution would be demolished or abandoned in place and replaced with new water alignment piping. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains. It is anticipated that the workforce for construction of the proposed project would be drawn from the existing population in northern Humboldt County and that they would maintain in their current residences and commute to work. No long-term jobs are expected to be created as a result of this project. Therefore, the project would not induce a substantial unplanned population, and the impact would be less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No impact. The proposed project would replace an existing water distribution with a new water alignment piping and a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains. The project would not induce any population growth, raise rents or property values significantly, or otherwise make housing prohibitive for current residents. During installation of new water services, service to each property would be temporarily shut off for up to 4 hours. Property owners would be notified in advance of the shutdown. Temporary piping would be used where necessary to limit the shutdown duration. Therefore, replacement housing would not be required, and no impact would occur.

XV. PUBLIC SERVICES

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

Environmental Setting

Fire Protection

Fire protection in Humboldt County includes one County Service Area, five Community Service Districts, sixteen Fire Protection Districts (FPDs), one Resort Improvement District, and two city fire departments. There are also 18 non-profit corporations which are volunteer fire departments not associated with a district. All but four of these departments are staffed entirely by volunteers (County 2017). The Orleans Volunteer Fire Department is the nearest fire department and is located at 38162 California 96, Orleans, CA 95556, approximately 1.0-mile east of the project site. The project site is located within an SRA served by CALFIRE. The nearest CALFIRE station is the CALFIRE Elk Camp Forest Fire Station, located at Bald Hills at Johnson Road, Orick, CA, 95555, approximately 38 miles east via SR 96.

Police Protection

The Humboldt County Sheriff's Office is responsible for law enforcement in the unincorporated area and provides a range of law enforcement services throughout the County as well, including criminal investigation, court services, and corrections (County 2017). The nearest police station is the Humboldt County Sheriff Office, Willow Creek Station located approximately 36-miles to the south by California 96 at 80 Country Club Drive, Willow Creek, CA 95573. Deputies assigned to the Willow Creek Station provide law enforcement services to northeastern part of Humboldt County including Willow creek, Hoopa, Orleans, Redwood Valley and other surrounding communities and work in cooperation with the Hoopa Valley Tribal Police Department and California Highway Patrol (County 2023b).

Schools

The project site is located within the Klamath-Trinity Joint Unified School District (District). The nearest school to the project site is Orleans Elementary School, located at 38016 California 96, Orleans, CA 95556, approximately 1.4-miles east of the project site.

Parks

Within the County boundaries, there are federal and State parks, 16 County parks and beaches operated by the Humboldt County Parks Division, recreational areas and reserves, city parks, and parks operated by special districts and non-profit organizations (County 2017). The Six Rivers National Forest surrounds the project site and borders the project parcel to the west and north. The proposed project would not be constructed on State Park land.

Impact Analysis

a) Fire protection?

Less than significant impact. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains.

The site is located within an SRA served by CALFIRE, with additional protection provided by the Orleans Volunteer Fire Department. As part of the proposed project, new non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. Though the risk of ignition may be slightly increased during construction, such elevated risk would be temporary and short-term. No change in fire risk is projected post-construction relative to existing conditions.

All proposed structure modifications would comply with County fire code requirements and access would follow requirements by CALFIRE. The project would not create any long-term jobs and would not construct any large new facilities. Correspondingly, the project would not result in the need for new or physically altered fire protection facilities. The impact to fire protection services from the proposed project would be less than significant, and no mitigation would be necessary.

b) Police protection?

Less than significant impact. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains, and new non-potable fire hydrants would be installed along Camp Creek Road and Placer Drive. The potential for a minor increase in demand for police services may occur if a crime or accident occurs during construction; however, these minor public demands would not overburden the police services within the project area. Therefore, the impacts would be less than significant.

c) Schools?

No impact. As noted in Section 8.XIV, Population and Housing, the proposed project is not expected to have any growth-inducing effects and would therefore have no impact on enrollment of schools within

the District. As no new school facilities would be necessary to serve the proposed project, the project would have no impact on schools. No impact would occur.

d) Parks?

No impact. As noted in Section 8.XIV, Population and Housing, the proposed project would not directly or indirectly induce population growth and would not result in the need for new or expanded park and recreational facilities. The proposed project would not be constructed on State Park land. Therefore, no impact on park or recreational facilities would occur.

e) Other public facilities?

No impact. The project site is located in an area served by adequate police, fire, and emergency services. The proposed project would not increase the number of residents in the County and would therefore not cause an increase in demand for schools, parks, and other public facilities. Therefore, no impact would occur.

XVI. RECREATION

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

Environmental Setting

Approximately 1.4 million of the County's 2.3-million acres are used for agricultural and timber production. More than 550,000 acres are protected open space, forests, and recreation areas. Within the county boundaries, there are four federal parks and beaches; 10 State parks; and 16 county parks and beaches, recreational areas, and reserves. There is also considerable National Forest land, as well as a number of city parks and open spaces owned by non-profit conservation groups. Redwood National Park, Six Rivers National Forest, Redwoods State Park, and King Range National Conservation Area are all significant, protected forests (County 2017).

Impact Analysis

- a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than significant impact. The proposed project would not induce population growth or otherwise result in an increased demand for existing recreational facilities. The Six Rivers National Forest exists in the vicinity of the project site and borders the project parcel to the west and north. The proposed project would not be constructed on State park land. Therefore, the impact would be less than significant.

- 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?

No impact. The proposed project would not induce population growth or otherwise require the construction or expansion of recreational facilities. Further, the proposed project does not include construction of recreational facilities. Therefore, no impact would occur.

XVII. TRANSPORTATION

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project:				
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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<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"/>

Environmental Setting

The project is located in unincorporated Orleans area in Humboldt County, approximately one mile west of downtown Orleans. The proposed project site would be located on the northern side of SR 96.

Roadways

The roadway network in Humboldt County includes 1,400 miles of County maintained roads and city streets, 378 miles of State highways (including U.S. Highway 101), and numerous roadways on federal lands. The Humboldt County–maintained roadway system is primarily made up of two-lane roads that traverse varying degrees of flat, rolling, and mountainous terrain (County 2017). According to Caltrans, SR 96 is considered an eligible State Scenic Highway (Caltrans 2023). However, no officially designated State Scenic or County Scenic highways in Humboldt County exist near the project site.

Public Transportation

The following fixed-route systems serve the County’s public transit needs: Redwood Transit System, Eureka Transit System, Southern Humboldt Rural Transit System, Arcata & Mad River Transit System, Klamath/Trinity Non-Emergency Transportation, and Blue Lake Rancheria (County 2017).

Bicycle and Pedestrian Travel

Most facilities dedicated to bicycles and pedestrians are located in urban areas of the County, for example, the Hammond Trail in McKinleyville. In rural areas, pedestrians and bicyclists typically use County roads that lack sidewalks and bicycle lanes. Cyclists also use Caltrans-maintained State routes (County 2017).

Impact Analysis

- a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than significant impact. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. During installation of new water services, service to each property would be temporarily shut off for up to 4 hours. Property owners would be notified in advance of the shutdown. Temporary piping would be used where necessary to limit the shutdown duration. Project construction would be accomplished by a small number of workers and would result in a temporary and minimal increase in construction traffic. Construction activities would be carried out on-site and would not result in substantial adverse effects or conflicts with the local roadway system.

The operation of the project would not create any permanent new jobs or cause long-term changes in traffic volume or patterns. Therefore, the proposed project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, and impact would be less than significant.

- b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than significant impact. CEQA Guidelines Section 15064.3 requires that transportation impacts be analyzed based on VMT. If existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project's VMT qualitatively. Construction activities for the proposed project would be relatively small in scale and short-term in nature and would not constitute a significant impact on vehicle miles travelled.

Additionally, the project would not change vehicle miles travelled during project operation relative to existing conditions. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains. The present employees and their scheduled work hours would continue with the proposed project and there would be no significant change in vehicle miles travelled. The impact would be less than significant, and no mitigation would be required.

- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than significant impact. The proposed project is accessed via Camp Creek Road, Lower Camp Creek Road, and an existing private driveway, which are all located off SR 96. As noted in question d), the project would require a District 1 Caltrans encroachment permit and a County encroachment permit. A new utility easement would also be required for piping east of Placer Drive on the larger parcel owned by the KTHA (APN 529-141-037). All other water mains would be installed within the County ROW, Caltrans ROW or existing easements. Any additional traffic generated by construction activities would be short term and temporary in nature. The proposed project would not change the public road system in the area nor introduce permanent changes in traffic volume or composition. Therefore, the proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment). The impact would be less than significant, and no mitigation would be necessary.

d) Result in inadequate emergency access?

Less than significant impact. The project would comply with the requirements of CBC and CALFIRE regulations including those regarding emergency vehicle access, turnarounds, and defensible space. The project site is located within the Mid-Klamath Wildfire Planning Unit. Evacuation routes would depend on the location of the community at risk and law enforcement recommendations based on fire behavior, wind patterns, traffic, and ingress of emergency vehicles. The determination for the locations of these sites is normally made by the Humboldt County Emergency Operations Center Incident Commander in cooperation with an incident Management Team (County 2019). SR 96 would, in most cases, serve as the primary evacuation route.

The proposed project is accessed via Camp Creek Road, Lower Camp Creek Road, and an existing private driveway, which are all directly connected to the main primary evacuation route, SR 96. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. Construction of the water alignment piping would mainly be constructed within County ROW and existing easements; however, a portion of the Camp Creek Crossing Alignment would require a District 1 Caltrans encroachment permit. Additionally, as the new water main and construction of the new water main would be located within and along Humboldt County roadways (Placer Drive and Lower Camp Creek Road), an encroachment permit would be required by the County prior to the start of construction. A new utility easement would be required for piping east of Placer Drive on the larger parcel owned by the KTHA (APN 529-141-037). All other water mains would be installed within the County ROW, Caltrans ROW or existing easements. Therefore, in compliance with required permits and easements, the proposed project would not result in inadequate emergency access and the impact would be less than significant.

XVIII. TRIBAL CULTURAL RESOURCES

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

Environmental Setting

CEQA, as amended in 2014 by AB 52 requires that the City provide notice to any California Native American tribes that have requested notice of projects subject to CEQA review and consult with tribes that responded to the notice within 30 days of receipt with a request for consultation. Section 21073 of the PRC defines California Native American tribes as “a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004.” This includes both federally and non-federally recognized tribes.

The purpose of consultation is to identify tribal cultural resources (TCRs) that may be significantly impacted by the proposed project, and to allow the City to avoid or mitigate significant impacts prior to project approval and implementation. Section 21074(a) of the PRC defines TCRs for the purpose of CEQA as:

Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

- (a) *included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or,*

- (b) included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or,*
- (c) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.*

Because the first two criteria also meet the definition of a Historical Resource under CEQA, a TCR may also require additional consideration as an Historical Resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators and can only be identified by a culturally affiliated tribe, which has been determined under State law to be the subject matter expert for TCRs.

CEQA requires that the County initiate consultation with tribes at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures.

Therefore, in accordance with the requirements summarized above, the County carried out tribal consultation for the proposed project. On June 6, 2024, the County sent Tribal consultation letters to the Yurok Tribe and Karuk Tribe. On June 16, 2024, a Tribal representative from the Karuk Tribe emailed the County noting that the Tribe would like to enter consultation on the project. On August 7, 2024, the Karuk Tribe and the County met virtually to discuss consultation on the project. On October 28, 2024, a letter from the Karuk Tribe Tribal Historic Preservation Officer (THPO) was sent to the County noting that the Karuk Tribe THPO concurs with the proposed project with implementation of the Karuk Tribe Inadvertent Discovery Plan. The Karuk Tribe THPO letter and Inadvertent Discovery Plan are included as Appendix E to this Initial Study. Therefore, consultation with the Karuk Tribe concluded on October 28, 2024.

Impact Analysis

- a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?
 - ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less than significant impact with mitigation. As noted above, the Karuk Tribe engaged in the AB 52 consultation process and provided a letter from the Karuk Tribe THPO and the Karuk Tribe Inadvertent Discovery Plan, included as Appendix E to this Initial Study. The letter noted that the project as designed

does avoid known sensitive areas and stays mostly within already-disturbed areas. However, there exists a potential for the discovery of previously unknown archaeological resources and Native American remains and grave goods during project construction. In the event of an inadvertent archaeological discovery or an inadvertent discovery of Native American remains and grave goods, Mitigation Measures TCR-1 and TCR-2 would be implemented. With the implementation of Mitigation Measures TCR-1 and TCR-2, the impact would be less than significant for questions a)i. and a)ii.

Mitigation Measure TCR-1: Inadvertent Archaeological Discovery

The following Point of Contact (POC) shall be notified immediately upon the inadvertent discovery of a potentially significant archaeological find:

- Lead or On-Site Contractor(s) whose activities led to inadvertent discovery, or whose on-going work may impact significant finds. Tribal Monitor has authority to immediately halt ground disturbing activities if potentially significant finds are discovered.
 - Alex R. Watts-Tobin, Ph.D., Tribal Historic Preservation Officer, Karuk Tribe at (530) 627-3446
1. Ground disturbing activities shall be immediately stopped if potentially significant prehistoric (Native American) archaeological artifacts or constitutes are discovered. Examples include, but are not limited to, prehistoric artifacts (chipped stone or obsidian, arrow points, ground stone mortars and pestles), culturally altered ash-stained midden soils, concentrations of fire-cracked rock and/or burned or charred organic materials. Ground-disturbing project activities may continue in other areas that are outside of the discovery locals.
 2. An “exclusion zone” where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone by the monitor.
 3. The discovery locale shall be secured (e.g., 24-hour surveillance) in consultation with the THPO if considered prudent to avoid further disturbances or maintain order if sensitive remains are exposed
 4. The monitor shall be responsible for immediately contacting by telephone the designated POCs to report the find and initiate the consultation process for its treatment and disposition:
 - Alex R. Watts-Tobin, Ph.D., Tribal Historic Preservation Officer, Karuk Tribe at (530) 627-3446

And in cases where a known or suspected Native American burial or skeletal remains are uncovered, the following contacts shall also be notified:

- Siskiyou County Corner – Phone (530) 842-8300
- Humboldt County Corner – Phone (707) 445-7242
- Native American Heritage Commission (NAHC) in Sacramento (916) 653-4082

5. Ground disturbing project work at the find locality shall be suspended temporarily while the landowner's Consulting Professional Archaeologist³ conducts a field assessment and consults with the THPO, Lead Agency, or his/her designated representative and if applicable, State OHP staff, to determine appropriate treatment and disposition of the find. Ideally, a Treatment Plan may be decided within three working days of discovery notification. Where a project can be modified to avoid disturbing the find (e.g., through project redesign), this shall be the preferred option. Should human remains be encountered, the provisions of State laws shall apply (see below). The Treatment Plan shall reference appropriate laws and include provisions of analyses, reporting, and final disposition of data recovery documentation and any collected artifacts or other archaeological constituents. Ideally, the field phase of the Treatment Plan may be accomplished within five (5) business days after its approval; however, circumstances may require longer periods for data recovery.
6. The landowner, its employees and agents including Contractors, shall be obligated to protect significant cultural resource discoveries and may be subject to prosecution if applicable State or Federal laws are violated. In no event shall unauthorized persons collect artifacts.
7. Any and all inadvertent discoveries shall be considered strictly confidential, with information about their location and nature being disclosed only to those with a need to know.

Mitigation Measure TCR-2: Inadvertent Discovery of Native American Remains and Grave Goods

The following policies and procedures for treatment and disposition of inadvertently discovered Native American remains shall apply.

1. If human remains are encountered, they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern of affiliated Native Americans. Information about such a discovery shall be held in confidence by all project personnel on a need-to-know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.
2. Violators of Section 7050.5 of the California Health and Safety Code may be subject to prosecution to the full extent of applicable law (felony offense). In the event that known or suspected Native American remains are encountered, the above procedures of SOP Part A for Inadvertent Archaeological Discovery (General) shall be followed (including notifications to those identified in A-4(a-e)), in addition to the provisions of California law (Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the California Public Resources Code), as follows.
3. The Coroner has two (2) working days to examine the remains after being notified of the discovery. If the remains are Native American, the Coroner has 24 hours (2 days) to notify the NAHC.
4. The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) of the deceased Native American. (Note: NAHC policy holds that the Native American Monitor will not be designated the MLD.)

³ Qualified Professional Archaeologist: means an individual that meets the Secretary of the Interior's Professional Standards for an Archaeologist Principal Investigator and/or are listed as Registered Professional Archaeologists (see website at www.rpanet.org).

5. Within 24 hours (2 days) of their notification by the NAHC, the MLD will be permitted by the property owner of the discovery locale to inspect the discovery site if they so choose.
6. Within 24 hours (2 days) of their notification by the NAHC, the MLD may recommend to the property owner or his/her designated agent, as applicable, the means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those treatments recommended by the MLD may be considered and carried out (i.e., no photographs, analyses, etc. without MLD agreement).
7. If the landowner does not accept the descendant's recommendations, the owner or descendant may request mediation by the NAHC.
8. Discuss and confer mans the meaningful and timely discussion with careful consideration of the views of each party's cultural values and, where feasible, seeking agreement.
9. Whenever the NAHC is unable to identify an MLD, or the MLD identified fails to make a recommendation, or the property owner rejects the recommendation of the MLD and mediation between the parties by NAHC fails to provide measures acceptable to the property owner, then the property owner shall cause the re-burial of the human remains and associated grave offerings with appropriate dignity on the property in a location not subject to further subsurface disturbance.

XIX. UTILITIES AND SERVICE SYSTEMS

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

Environmental SettingWater and Wastewater

There are 17 cities and special districts in Humboldt County that currently provide wastewater services, 14 of which operate wastewater collection systems and treatment plants; the remaining three operate only collection systems. In addition, there are two privately owned water and wastewater systems in company towns that are not regulated by the California Public Utilities Commission, and that are transitioning to municipal systems. At least two additional special districts are considering developing new wastewater systems to address public health concerns in their community. The remainder of the County is served by on-site septic systems. Almost all of the wastewater service providers also provide water service. In addition, there are 18 other entities that provide water service, including cities, special districts, and public utility companies (County 2017).

Most water and wastewater systems in the County were constructed using grant funds in the 1950s and 1960s. In general, the systems are quite old and deteriorating and need improvement. Without exception, all service providers face the need to invest in maintenance and upgrades required to keep their systems in compliance with State standards.

Electricity and Natural Gas

Electricity and natural gas in the project area are served by Pacific Gas and Electric.

Telecommunications

As a rural area with a dispersed population base, Humboldt County lags in its access to reliable telecommunications services, as compared to urban centers such as the San Francisco Bay Area. In fact, several communities on the Yurok Reservation are still without basic telephone service (County 2017).

Impact Analysis

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than significant impact. Under the proposed project, existing distribution would be demolished or abandoned in place and replaced with new water alignment piping. A turnout would be installed at the bottom of Lower Camp Creek Road for future consolidation with the OCSD and for water system redundancy. New non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains. The potential impacts resulting from construction of the new water alignment piping are analyzed throughout the Initial Study. With the mitigation measures proposed throughout this Initial Study, the impact would be less than significant.

Additionally, the proposed project would not require or result in the relocation or construction of new or expanded wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities that would cause significant environmental effects. Therefore, the impact would be less than significant.

- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than significant impact. Due to the age and condition of the existing water mains, frequent repairs are necessary to provide residents with a reliable water supply. Since the water services are unmetered, it makes it difficult to identify leaks in the systems and also to encourage conservation. The proposed project would replace water distribution mains with new piping that meets current standards for size, material, and construction to provide a more reliable water system that is less prone to leaks. The project would also install water meters at each service to encourage water conservation and assist with leak detection. By eliminating or reducing sources of water loss in the water system and water meters, the demand for water would be reduced since less water would be wasted through leaks in the system. Additionally, a turnout would be installed at the bottom of Lower Camp Creek Road for future consolidation with the OCSD and for water system redundancy. Therefore, the proposed project would have sufficient water supplies available to serve the project during normal, dry, and multiple dry years. The impact would be less than significant.

- c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than significant impact. The proposed project would supply existing customers based on current levels of demand; the amount of water supplied and consumed would not significantly change relative to existing conditions. The project would not increase the production of wastewater. Therefore, the impact would be less than significant.

- 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?

Less than significant impact. The proposed project would generate solid waste, primarily during construction.

Construction

Construction of the project would result in a temporary increase in solid waste disposal needs associated with demolition and construction wastes. Waste generated from construction activities would include demolished piping and excess construction materials. Construction waste that would not be abandoned in place would be legally disposed of at a local transfer station. The County, through Humboldt Waste Management Authority (HWMA), has been trucking its solid waste approximately 175 miles to two out-of-county landfills. One third of this waste is shipped to Dry Creek landfill near Medford, Oregon under a long-term contract which expires in November 2016. Beginning in June 2014 the remaining two thirds of solid waste will be hauled by Solid Waste of Willits to the Potrero Hills landfill located in Solano County, California (County 2017). Solid waste generated by the project would represent a small fraction of the daily permitted tonnage of these landfill facilities. Disposal of waste materials generated during construction activities would be required to comply with applicable federal, State, and local regulations. Solid waste generated by construction of the project would be similar to other comparable construction projects in the region or state. There are no unusual project characteristics that would result in the generation of solid waste in excess of State or local standards or in excess of the capacity of local infrastructure. Due to the temporary nature of the proposed construction activity, it would not have the potential to impair attainment of solid waste reduction goals. Therefore, the impact would be less than significant.

Operation

Following construction, minimal solid waste would be generated by project operation. Solid waste would be associated with maintenance and operation of the new water system and with incidental trash from staff. Therefore, operation of the proposed project would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure and a less than significant impact would occur.

- e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than significant impact. The California Integrated Waste Management Act of 1989 (Public Resources Code [PRC] Division 30), enacted through AB 939 and modified by subsequent legislation, required all California cities and counties to implement programs to divert waste from landfills (Public

Resources Code Section 41780). Compliance with AB 939 is determined by the California Department of Resources, Recycling, and Recovery, formerly known as the California Integrated Waste Management Board (CIWMB). Each county is required to prepare and submit an Integrated Waste Management Plan for expected solid waste generation within the county to the CIWMB. In 2012, the unincorporated area of Humboldt County met or exceeded the waste diversion mandate of 50 percent set by the Integrated Waste Management Act of 1989.

The proposed project would comply with all federal, State, and local statutes related to solid waste, including AB 939. This would include compliance with the HWMA's recycling, hazardous waste, and composting programs in the County to comply with AB 939. Therefore, in compliance with federal, State, and local statutes, the impact would be less than significant.

XX. WILDFIRE

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
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"/>

Environmental Setting

SB 1241 (2012) requires the legislative body of a city or county to adopt a comprehensive, long-term general plan that includes a safety element for the protection of the community from unreasonable risks associated with wildland and urban fires. The update of the safety element must address fire risks on land classified as SRA and on VHFHZ of Local Responsibility Area.

The Humboldt County General Plan section on Fire Hazards outlines policies that address and reduce fire risk in the County. Policies include improving subdivision design and building code conformance, increasing information exchange and education, and encouraging prescribed burning and native plant conservation (County 2017). The Humboldt County Community Wildfire Protection Plan (CWPP) gives further guidelines on how these policies will be implemented; the Mid-Klamath Planning Unit Action Plan (Unit 3) is the portion of the CWPP that encompasses the project area (County 2019).

The entire project area is located in the Mid-Klamath fire planning unit of Humboldt County. According to CALFIRE Fire Hazard Severity Zone Mapper, the project site is within a Very High Fire Hazard Severity Zone within an SRA (CALFIRE 2023). The Orleans Volunteer Fire Department is the nearest fire department and is located at 38162 California 96, Orleans, CA 95556, approximately 1.0-mile east of the project site. The project site is in an SRA served by CALFIRE. The nearest CALFIRE station is the CALFIRE Elk Camp Forest Fire Station, located at Bald Hills at Johnson Road, Orick, CA, 95555, approximately 38-miles east via SR 96.

Impact Analysis

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. The project would comply with the requirements of CBC and CALFIRE regulations including those regarding emergency vehicle access, turnarounds, and defensible space. The project site is located within the Mid-Klamath Wildfire Planning Unit. Evacuation routes would depend on the location of the community at risk and law enforcement recommendations based on fire behavior, wind patterns, traffic, and ingress of emergency vehicles. The determination for the locations of these sites is normally made by the Humboldt County Emergency Operations Center Incident Commander in cooperation with an incident Management Team (County 2019). SR 96 would, in most cases, serve as the primary evacuation route.

The proposed project is accessed via Camp Creek Road, Lower Camp Creek Road, and an existing private driveway, which are all directly connected to the main primary evacuation route, SR 96. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. Construction of the water alignment piping would mainly be constructed within County ROW and existing easements; however, a portion of the Camp Creek Crossing Alignment would require a District 1 Caltrans encroachment permit. Additionally, as the new water main and construction of the new water main would be located within and along Humboldt County roadways (Placer Drive and Lower Camp Creek Road), an encroachment permit would be required by the County prior to the start of construction. A new utility easement would be required for piping east of Placer Drive on the larger parcel owned by the KTHA (APN 529-141-037). All other water mains would be installed within the County ROW, Caltrans ROW or existing easements. Therefore, in compliance with required permits and easements, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan and the impact would be less than significant.

- 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?

Less than significant impact. According to CALFIRE Fire Hazard Severity Zone Mapper, the project site is within a Very High Fire Hazard Severity Zone within an SRA (CALFIRE 2023). The proposed project would replace an existing water distribution system as well as existing water service mains. The project would not induce growth nor involve the creation of new occupied structures within a wildfire hazard zone. Under the proposed project, new non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. The hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. The new fire hydrants would be installed on raw water piping, which would allow for higher fire flows and volumes than the current system can provide. All proposed project improvements would comply with the requirements of CBC and CALFIRE regulations. Therefore, the impact would be less than significant.

- 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?

Less than significant impact. Under the proposed project, existing distribution would be demolished or abandoned in placed and replaced with new water alignment piping. A turnout would be installed at the bottom of Lower Camp Creek Road for future consolidation with the OCS and for water system

redundancy. New non-potable fire hydrants would be installed at approximately 500 ft intervals along Camp Creek Road and Placer Drive. Additionally, a total of 38 new water services would be installed at each active and inactive property to replace the services of the existing water mains.

During construction and operation of the proposed facility, the presence of humans and associated equipment may expose the area to increased risk of fire ignition. However, staff and contractors would follow all best management practices to reduce fire risk, including avoiding smoking in non-designated areas; using spark arrestors as warranted; maintaining equipment in its proper working order; ensuring that all loads are properly secured and no chains or metal drag; avoiding work that could potentially produce sparks during red flag warnings; and adhering to all requirements for burn permits. Fire suppression equipment, including fire extinguishers and hand tools, would be available onsite for the containment of small, incipient fires if it is safe for workers to do so and they have received proper training in the use of such tools. The project would be required to comply with CAL FIRE SRA requirements during construction. Compliance with these requirements, along with the above measures, would reduce the impact to less than significant.

- 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?

Less than significant impact. The proposed project is on FEMA panel #06023C0275F, effective 11/4/2016. The project is located within FEMA Flood Zone D, which is an area with possible, but undetermined, flood hazards. No official analysis of flood hazard has been conducted for the area. As the project area is not specifically identified as a hazard area, there are no floodplain requirements for buildings or structures. However, because a portion of the water alignment piping would be constructed underneath an existing bridge that crosses Camp Creek, the County confirmed that it would be within an SMA. Per Humboldt County Code section 314-61.1.9.1.9, essential public projects are exempt from special SMA permitting requirements. Therefore, since the project is for public utilities, which provides an essential public service, it would likely be exempt from SMA permitting requirements. Additionally, the proposed project is outside the jurisdictional area of the Central Valley Flood Protection Board and does not require any floodplain permitting (PES 2023). However, the project is only focused on upgrading an existing water distribution system; it would not induce population growth nor introduce new facilities into the area beyond the level that currently exists. Therefore, people or structures would not be susceptible to significant new risks involving downstream flooding as a result of runoff, post-fire slope instability or drainage changes.

The proposed new water alignment piping, water meters, and fire hydrants would be located in a relatively flat area. Additionally, according to the CDC EQ Zapp Map, the proposed project is not located within a landslide zone (CDC 2023b). Therefore, the proposed project would not 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, and impact would be less than significant.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially significant impact	Less than significant impact with mitigation	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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than significant impact with mitigation. The preceding analysis indicates that the proposed project has the potential to adversely affect biological and cultural resources. See Sections 8.IV, 8.V, and 8.XVIII of this Initial Study for discussion of the proposed project’s potential impacts on these environmental issue areas. With implementation of the mitigation measures identified in those Sections, and compliance with County and State programs and requirements identified in this report, impacts would be reduced to a less than significant level. No significant or potentially significant impacts would remain.

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?

Less than significant impact with mitigation. While the project would indirectly contribute to cumulative impacts associated with disturbance and infrastructure development in the region, these impacts have previously been evaluated by the County and considered in development of the County’s General Plan as set forth in this Initial Study. Key areas of concern are discussed in detail below.

Evaluation of cumulative biological resource impacts: Special-status plant and wildlife species have the potential to occur within the Study Area and be impacted by construction activities. However, the impact to special-status plant and wildlife species would be reduced to a less than significant level with implementation of Mitigation Measures BIO-1 through BIO-6. The SMA associated with Camp Creek is considered a sensitive habitat. The Humboldt County General Plan defines SMAs for perennial drainages, such as Camp Creek, as being a buffer of 100 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line, whichever is greater, on either side of perennial streams (Humboldt County 2017). The proposed project may encroach on the SMA for Camp Creek; however, Mitigation Measure BIO-7 would reduce potential impacts to less than significant. With the implementation of Mitigation Measures BIO-1 through BIO-7, the impacts would be reduced to a less than significant level and potentially cumulative impacts would be avoided.

Evaluation of cumulative cultural resource impacts: Based on the results of the CRA, HELIX finds the APE to have a high cultural sensitivity. Due to the high cultural sensitivity, Mitigation Measure CUL-1 and CUL-2 would be implemented, which would require archaeological and tribal construction monitoring. Additionally, as outlined in Section 8.XVIII, Tribal Cultural Resources, the Karuk Tribe engaged in the AB 52 consultation process and provided a letter from the Karuk Tribe THPO and the Karuk Tribe Inadvertent Discovery Plan, included as Appendix E to this Initial Study. The letter noted that the project as designed does avoid known sensitive areas and stays mostly within already-disturbed areas. However, there exists a potential for the discovery of previously unknown TCRs during project construction. In the event of an inadvertent archaeological discovery Mitigation Measure CUL-3 would be implemented. With implementation of Mitigation Measures CUL-1 through CUL-4, the impacts would be reduced to a less than significant level and potentially cumulative impacts would be avoided.

Evaluation of cumulative geology and soils impacts: No previous surveys conducted in the project area have identified the project site as sensitive for paleontological resources or other geologically sensitive resources, nor have testing or ground disturbing activities performed to date uncovered any paleontological resources or geologically sensitive resources. While the likelihood encountering paleontological resources and other geologically sensitive resources is considered low, project-related ground disturbing activities could affect the integrity of a previously unknown paleontological or other geologically sensitive resource, resulting in a substantial change in the significance of the resource. Therefore, the proposed project could result in potentially significant impacts to paleontological resources. With implementation of Mitigation Measure GEO-1, the impacts would be reduced to a less than significant level and potentially cumulative impacts would be avoided.

Evaluation of cumulative noise resource impacts: Construction activities would result in a temporary increase in noise levels in the area. The County has not established standards for allowable short-term construction noise levels. The nearest sensitive receptors to any of the proposed project improvements are single-family residences approximately 50 feet from the proposed water alignment piping along Placer Drive. Nighttime construction activity could result in disturbance of sleep for residents near project improvement locations resulting in a potentially significant noise impact. Mitigation Measure NOI-1 would limit project construction to the hours from 8 a.m. and 5 p.m. Monday through Friday, and from 9 a.m. and 5 p.m. on Saturdays and would require standard maintenance of tools and equipment to reduce noise levels. With implementation of Mitigation Measure NOI-1, the impacts would be reduced to a less than significant level and potentially cumulative impacts would be avoided.

Evaluation of cumulative tribal cultural resources impacts: The Karuk Tribe engaged in the AB 52 consultation process and provided a letter from the Karuk Tribe THPO and the Karuk Tribe Inadvertent Discovery Plan, included as Appendix E to this Initial Study. The letter noted that the project as designed does avoid known sensitive areas and stays mostly within already-disturbed areas. However, there exists a potential for the discovery of previously unknown TCRs during project construction. In the event of an inadvertent archaeological discovery or an inadvertent discovery of Native American remains and grave goods, Mitigation Measure TCR-1 and TCR-2 would be implemented. With implementation of Mitigation Measure TCR-1 and TCR-2, the impacts would be reduced to a less than significant level and potentially cumulative impacts would be avoided.

- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than significant impact. Due to site conditions, existing County regulations, and regulation of potential environmental impacts by other agencies, the proposed project would not have the potential to cause substantial adverse effects on human beings as demonstrated in the evaluation contained in this Initial Study. Therefore, the impact would be less than significant.

9.0 MITIGATION MONITORING AND REPORTING PROGRAM

A Mitigation Monitoring and Reporting Program (MMRP) has been prepared by the County per Section 15097 of the CEQA Guidelines and is presented in Appendix F.

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