DRAFT INITIAL STUDY/NEGATIVE DECLARATION
OLD MILL RANCH WATER SUPPLY PROJECT

November 2022

Prepared For:
Feather River Canyon Community Services District
P.O. Box 141
Twain, CA 95984

DFA Funding Agreement No. D1602036
DFA Project No. 3200078-001P

NV5

150902 Avenue of Science
Suite 200
San Diego, CA 92128

226117-0000132.07

NOTICE OF INTENT TO ADOPT AN INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Date: November 18, 2022
To: Interested Parties
SWRCB FA No.: D16-02036
From: Feather River Canyon Community Services District
RE: Old Mill Ranch Water Supply Project

Project Location and Description

The Feather River Canyon Community Services (FRCCSD) encompasses nine small water systems in eight non-contiguous areas in Plumas County known as Grey's Flat, Maple Leaf/Little Indian Creek, Old Mill Ranch, Paxton, Tobin, and Twain along SR-70. The FRCSSD Old Mill Ranch water system's approximate range of elevation is from 2,757 to 2,820 feet above sea level (asl).

In the Old Mill Ranch Community, water service is provided to approximately 24 residential service connections. The FRCSSD Old Mill Ranch water system consists of one active well, one unequipped well, one storage tank, distribution piping, and appurtenances.

The Water Supply Project (Project) consists of the conversion of the existing Old Mill Ranch water system to non-potable water use, and the addition of infrastructure including pipelines, transmission lines, equipping of well, and associated infrastructure for a new potable water system. The Project is proposed by FRCCSD and benefits the Old Mill Ranch community. FRCCSD anticipates receiving funding assistance to implement the Project from the Division of Financial Assistance of the State Water Resources Control Board

Declaration

FRCSSD has determined that the above project, with mitigation measures, would have no significant impact on the environment and is therefore exempt from the requirement of an environmental impact report. The determination is based on the attached Draft Initial Study and the following findings:

1. The Project will not degrade environmental quality, substantially reduce habitat, cause a wildlife population to drop below self-sustaining levels, reduce the number or restrict the range of special-status species, or eliminate important examples of California history or prehistory.
2. The Project does not have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
3. The Project will not have impacts that are individually limited but cumulatively considerable.
4. The Project will not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.
5. No substantial evidence exists that the Project will have a negative or adverse effect on the environment.
6. The Project incorporates all applicable mitigation measures or environmental commitments identified in the Draft Initial Study (attached).

7. This draft Mitigated Negative Declaration reflects the independent judgment of the lead agency.

Mitigation Monitoring and Reporting Program

A draft Mitigation Monitoring and Reporting Program (MMRP) was prepared for the project and made part of the draft Mitigated Negative Declaration to address and mitigate potential impacts to biological and cultural resources, and to air quality, noise, and soils conditions.

Public Workshop

A public workshop will be held as part of Board of Directors meeting at 5pm, on December 13, 2022, in the Twain area at the location noted in that meeting's agenda. During this presentation, the proposed project, and the anticipated mitigation measures to address potential impacts will be presented.

Public Hearing

Feather River Canyon Community Services District anticipates conducting a public hearing as part of its regular board meeting at 5pm, on January 10, 2023, in the Twain area at the location noted in that meeting's agenda. The Board of Directors of the Feather River Community Services District will consider the adoption of the CEQA Initial Study and Mitigated Negative Declaration and a Mitigation Monitoring and Reporting Program pursuant to the California Environmental Quality Act (CEQA), and will authorize filing of a Notice of Determination, for the Water Supply Project.

Document Review

The Initial Study and Mitigated Negative Declaration document are available for public review in person during normal business hours at the Plumas County Library (445 Jackson Street, Quincy, CA 95971), at the webportal of State of California's Office of Planning and Research (https://ceqanet.opr.ca.gov/), and upon request of FRCCSD at reynrick1@comcast.net.

The public comment period will be until 5pm pm on December 27, 2022.

Submit comments to:

By mail,
Feather River Canyon Community Services District
P.O. Box 141
Twain, CA 95984

Attn: Rick Reynolds, Project Coordinator

By email,
reynrick1@comcast.net

Please utilize this subject line with correspondence: FRCCSD – Old Mill Ranch – CEQA Comment

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1 INTRODUCTION AND PROJECT DESCRIPTION

The Feather River Canyon Community Services District's (FRCCSD) is proposing new water infrastructure for the existing Old Mill Ranch water system (OMRWS) that includes a new well, treatment facility, transmission pipeline, storage tank, distribution system, and water meters and utilizing the old water system for non-potable water for landscape.

1.1 PROJECT LOCATION

The FRCCSD operates a public water system known as the Old Mill Ranch water system (OMRWS) that provides drinking water to approximately 40 residents about one mile west of the unincorporated town of Twain, located in Plumas County, California (Figure 1). The nearly new infrastructure will be private parcels and public right of way south of the intersection of Old Mill Drive and State Route 70 (SR-70). The OMRWS (Public Water System No. CA3200078) was incorporated in 1983 to provide domestic water service to the residents within its service area. The water system provides service to approximately 23 residential service connections and no commercial or industrial connections.

Legend

State Boundary

Proposed Project location

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

N V 5

1 W DEER VALLEY ROAD
BUILDING 2, SUITE 305
PHOENIX, ARIZONA 85027
Tel: 623.374.6637 Fax: 623.738.3690

PROJECT LOCATION

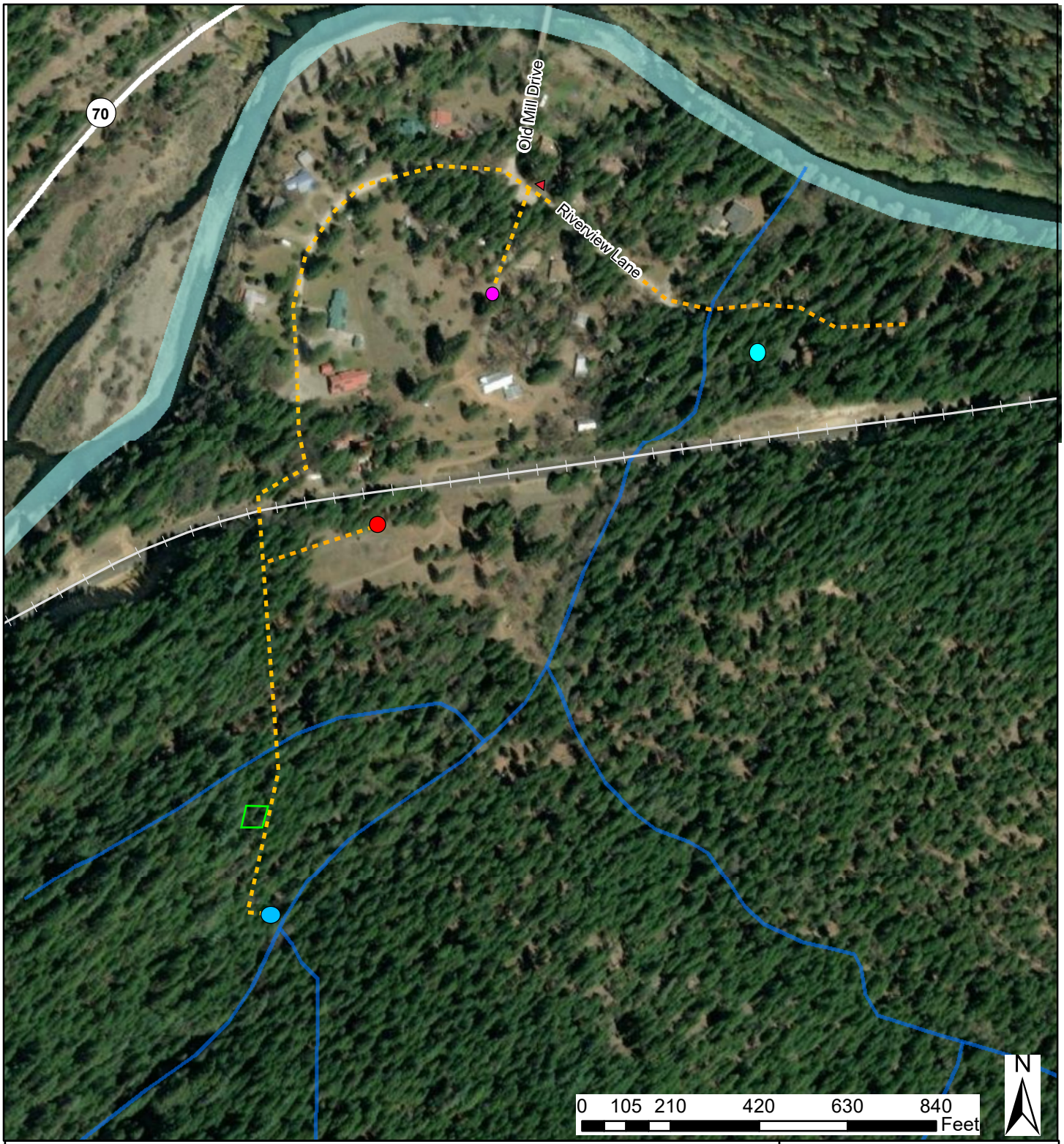
INTIAL STUDY/
MITIGATED NEGATIVE DECLARATION

FIGURE 1

FOR:
FEATHER RIVER CANYON COMMUNITY SERVICE DISTRICT

DES: LAB	DR: LAB	CHK: MM
PROJECT NO. 226117-0000132.07	DATE: 9/27/2022	SHT 1 OF 1

Document Path: N:\226117-0000132.07 - Feather River Canyon Community Services District_FRCCSD\2.0_Technical Information\2.10_GIS



Legend

- California Rail Network
- East Branch of North Fork Feather River
- Mill Creek
- Storage Tank
- Steel Pipes
- Well No.1
- Chlorinator Building
- Blowoff Valve
- Test hole TH-B2
- Fire Hydrant

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community,HERE, ESRI, Gamin, USGS, EPA, NPS, CDTP FAO, NOAA, USGS

N V 5

1 W DEER VALLEY ROAD
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Tel: 623.374.6637 Fax: 623.738.3690

PROJECT SITE

INTIAL STUDY/
MITIGATED NEGATIVE DECLARATION

FIGURE 2

FOR:
FEATHER RIVER CANYON COMMUNITY SERVICE DISTRICT

DES: LAB	DR: LAB	CHK: MM
PROJECT NO. 226117-0000132.07	DATE: 9/27/2022	SHT 1 OF 1

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1.2 PROJECT BACKGROUND

Wells and Water Quality

The OMRWS owns, operates, and maintains one permitted production well, Well No.1, that is supplied by groundwater. The well is located on an easement (Doc. No. 2009-0009369) located on APN 002-430-011. Well No.1 was installed in 2008 to replace a surface water supply system. Well No. 1 was drilled to 182 feet (ft) and constructed with a six-inch (in) diameter polyvinyl chloride (PVC) casing. Well No. 1 has had repeated issue regarding exceedances for maximum contaminant levels (MCLs) for iron, manganese, and arsenic. In 2013, Well No.1 was damaged but is still permitted for public use.

Well No. 1 experienced a break in the screen which allowed the gravel pack to enter the well. As a result, a test hole (TH-B2) was drilled in 2018 to allow of water quality sampling. TH-B2 was drilled to a depth of 342 ft below ground surface (bgs) and located on APN 002-451-008. The test hole was then fitted with a 6-inch diameter steel well casing; however, TH-B2 has not been equipped with a pump/motor and is not operational. The OMRWS does not currently comply with California law for California Code of Regulation (CCR), Title 22, Section 64449 for MCL Compliance for Drinking Water Standards.

Well No. 1 has an oversized pump/motor. The pump/motor has a capacity of 39 gallons per minute (gpm), while the maximum day demand (MDD) requires a flowrate of approximately 12.3 gpm. Because the pump/motor meets the MDD, the pump/motor results in a greater horsepower (hp) draw than is required. Well No.1 also has a manual transfer switch that allows for the connection of a backup generator to allow the system to operate during power outages.

The FRCCSD OMRWS relies on Well No. 1 as its sole active source of supply. The OMRWS does not have active outside, standby, or emergency water supply source should its only existing water sources, Well No. 1, fail. The OMRWS has no interconnections with water agencies and the closest water system is located one mile away in Twain. Under law, water systems using only groundwater shall have a minimum of two approved sources of groundwater and that both sources meet the MDD with the highest-capacity source offline (California Code of Regulation (CCR), Title 22, Section 64554(c)). The OMRWS does not satisfy this requirement because there is only one active or approved source and supply of water. To satisfy California law, test hole TH-B2 will be finished as a well and then permitted to be operated as an approved source of supply by Plumas County Department of Environmental Health.

Table 1. OMRWS Potable Water Wells

Well Name	Permitted Status	PS Code	Pumping Rate (gpm)	Pump Motor Size (hp)	Well Depth (feet)	Well Casing Diameter (inches)	Well Age (years)
Well No.1	Active	N/A	39	UNK	168	PVC/6”	14
Well TH-B2	Inactive	N/A	N/A	UNK	342	Steel/6”	3

Storage Tank

The OMRWS has one existing, bolted, steel storage tank with a capacity of 66,000 gallons that was installed in 2009. The tank occupies an easement (Doc. No.2009-0009369) at APN 002-430-011 with an elevation of 2,970 ft.

The storage tank does not meet regulatory criteria for MDD per the California Waterworks CCR, Title 22, Section 64554(a). This section states that public water systems with less than 1,000 service connections must have storage capacity equal or greater than the MDD in the system as a whole and in each individual pressure zone. The MDD required is 18,000 gallons. Additionally, the storage tank must adhere to Plumas County Code of Ordinances (Title 9, Chapter 4, Article 10, Section 9.4.10002) Emergency Water for Fire Protection. The code requires water systems to be equal or exceed the National Fire Protection Association (NFPA) Standard 1142 "Standards on Water Supplies for Suburban and Rural Fire Fighting" (2012). To adhere to the code, the OMRWS must have a storage volume of 76,000 gallons of water at a rate of 1,000 gpm. The total storage volume combined, as required by the California Waterworks and the NFPA, must be 94,000 gallons. The OMRWS does not satisfy this requirement because the storage tank only has a capacity of 66,000 gallons. Therefore, to adhere to the county and state requirements, additional storage tanks will be installed.

Table 2. OMRWS Storage Requirements

Criteria	Volume (gallons)
MDD	18,000
NFPA	76,000
Storage Required (MDD + NFPA)	96,000
Storage Available Currently	66,000
Additional Storage Needed	30,000

Distribution System

The OMRWS's distribution system is approximately 60 years old. The distribution system consists of 3,800 ft of water pipelines with varying diameters of 1 to 8 inches. Because the distribution system is aged, it has experienced failures in the recent years. The distribution system will be replaced with a new system of piping.

Water Meters

None of the OMRWS service connections are currently metered. Water meters will be installed to incorporate water usage for periodic billing purposes and early detection of leaks.

1.3 PROJECT DESCRIPTION

To address the FRCCSD OMRWS's regular MCL exceedances of arsenic, iron, and manganese and system deficiencies, several components presented in the Preliminary Engineering Report (PER Draft 2022) will be implemented. The Project includes the following components:

Equip Well TH-B2 and Build a Treatment Building

This Project component will include installing a pump/motor and column piping to equip test hole TH-B2 as a well and construct a new treatment system at the same location. Test hole TH-B2 is located on APN 002-451-008 owned by the Old Mill Ranch homeowner's association (HOA). The FRCCSD will need to obtain an easement agreement or purchase the property from the HOA to equip test hole TH-B2 as a well.

To adhere to the California Waterworks MDD Standard, the new pump/motor for the proposed TH-B2 well will be a 2-hp pump/motor to supply 19 gpm. Pacific Gas and Electric (PG&E) will install new electrical service, providing power to the proposed TH-B2 well and the treatment system. The new building for the new treatment system will have a footprint of 24 by 24 feet and an area of approximately 576 square feet. The roof will adhere to the snow load in the area of 40 pounds per square foot (psf) for the roof design and 58 psf for the ground design (Building Department 2016). The treatment system will use filtration and coagulation technology to remove arsenic, iron, and manganese. The filter will consist of a 36-inch-diameter vessel which will operate at a flow-through rate of 0.6 gpm/ft^2. The water will then be treated by the addition of ferric chloride for coagulation, followed by sodium hypochlorite for disinfection. The treatment system will generally consist of chemical injection equipment, coagulation/filtration process, disinfection, and a backwash storage tank.

New Storage Tanks

This Project proposes two storage tanks to be added, keeping the existing, single storage tank in service, to supply the proposed non-potable system. This will increase the storage volume from approximately 66,000 gallons to approximately 90,000 gallons. This addition ensures that the FRCCSD meets the storage volume requirements for the NFPA fire standards and the California Waterworks Standards for MDD. Construction activities related to storage tanks will be confined to APN 002-430-011 and an easement is to be obtained at the private property.

Utilizing the freeboard calculations in American Water Works Association (AWWA) D103, seismic design parameters would require approximately 2.5 ft of freeboard in the proposed tanks. This level of freeboard is required to protect the structural integrity of the tank's roof structure during a seismic event. To provide the necessary storage volume and freeboard, each proposed tank would have an approximate diameter of 12.5 ft with a sidewall height of approximately 16 ft above the reinforced concrete foundation. Each tank would be placed on and supported by a reinforced concrete ring wall foundation. A retraining wall will be constructed to support the western, downslope faced portion of the tank site. The tanks' exterior will have a low gloss, forest green-like color to match the surrounding motif. Each tank would have a storage capacity of approximately 12,000 gallons. This proposed total storage capacity would ensure that the OMRWS meets MDD and fire standard volume requirements. At least one storage tank will remain in service during construction of the new storage tanks.

FRCCSD will undertake a professional geotechnical investigation that will be consistent with CEQA requirements prior to construction to confirm overexcavation and recompaction requirements, gather other subsurface data, and perform a professional assessment of the site. Overexcavation at the tank site is initially anticipated to be approximately 6 feet below the existing surface.

New Distribution System

This Proposed Project component will address the aging and deteriorating distribution system, frequent water leaks, and improve the distribution water quality and pressure by replacing the existing distribution system. The distribution pipelines will use C-900 PVC. The pipelines would total approximately 4,950 linear feet (~0.93 miles) to completely replace the distribution system. To meet the minimum diameter requirements by the California Waterworks Standards, the water main size will be six inches. The transmission pipeline will have isolation valves, blowoff valves, and air-release/vacuum valves along its alignment The existing distribution system will not be used for potable water but will be used for the transportation of non-potable water. Trenching techniques will be applied to install the transmission pipeline. The trench depths will be approximately four to six ft and have a width of approximately 3 ft. Installation of the system beneath the railroad tracks will use jack-and-bore methods.

Construction of the distribution system will be performed within the residential properties (APNs 002-430-011, 002-460-009, 002-460-005, 002-451-006, 002-451-007, 002-451-008 and 002-451-009) and public right-of-way (ROW) along Rearview Lane and Old Mill Drive. The installation of the distribution system and restoration and resurfacing of disturbed areas will follow Plumas County standards. FRCCSD or its contractor will obtain an encroachment permit from the County's Public Works Department prior to construction.

New Transmission Pipeline

This Project component will include construction of a dedicated transmission pipeline from the proposed TH-B2 well to the proposed water storage tanks. The transmission pipeline from TH-B2 to the storage tanks will be located in various APNs. The length of the pipeline would be approximately 1,500 linear feet (LF), with a diameter of approximately three inches using 80 PVC piping. The transmission pipeline will have isolation valves, blowoff valves, and air-release/vacuum. The transmission pipeline will not be connected to existing or proposed fire hydrants or water services. Trenching will be used to install most of the transmission pipeline. At the railroad tracks, the new transmission pipeline will be installed via jack and bore methods. The trench will be approximately four to six ft deep and approximate three ft wide. Installation of the transmission pipeline beneath the railroad tracks will use jack and bore methods. A new communication conduit between the proposed well (TH-B2) and the proposed tank site will be installed parallel and adjacent to the transmission pipeline.

The transmission line would be aligned parallel to the distribution system piping to be replaced within various APNs. FRCCSD, or its contractor, will obtain an encroachment permit from the County prior to initiating construction.

New Raw Water Transmission Pipeline

This Project component will include construction of a dedicated transmission pipeline from the existing water system, to be converted to a non-potable system, to the new treatment facility. This will allow the existing, permitted well, Well No.1, to continue as a potable water supply source. The transmission pipeline from non-potable system to the treatment building will be located within public right of way and the parcel on which the treatment facility will be located (APN 002-451-008. The length of the pipeline would be approximately 100 linear feet (LF), using 3-inch diameter pipeline. The transmission pipeline will not be connected to existing or proposed fire hydrants or water services. The FRCCSD, or its contractor, will obtain an encroachment permit from the County prior to initiating construction, for work within County right of way.

New Water Meters

This Project component includes the installation and construction of water meters along existing and proposed services at the residential service connections property lines. The water meters boxes will have a footprint of approximately 3 ft by 5 ft and a depth of 3 ft. Meter boxes will be underlain by a layer of rock. Two shut off valves will be installed inside and one on each side of the meter box. The meters will be equipped with remote read capabilities allowing FRCCSD operators to collect customers water consumption data on a period and as-needed basis. A new services line for non-potable water to outdoor demand locations (e.g. sprinklers) will be installed. Each meter (non-potable and potable) will have a backflow-prevention-device installed.

Table 3 - Permits/Requirements and Associated Agencies

Agency	Permit/Requirement
Plumas County Department of Environmental Health	Domestic Water Supply Permit Amendment
Plumas County Department of Public Works	Encroachment Permits Excavation Permits
Pacific Gas and Electric (PG&E)	Electrical Service for New Well and Treatment Facility
California State Water Resources Control Board - Division of Financial Assistance (DFA)	Project Funding
Plumas County Planning Department	Setback Variance Application Use of APN 002-451-008 for Non-residential Purposes

1.4 POTENTIAL ENVIRONMENTAL EFFECTS`

The Proposed Project could potentially result in one or more of the following significant environmental effects; however, proposed mitigation measures will reduce effects to less than significant:

☐	Aesthetic	☐	Agriculture/Forestry Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Energy
☒	Geology/Soils	☐	Greenhouse Gas Emissions	☒	Hazards/Hazardous Materials
☒	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
☒	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☐	Transportation	☒	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	☐	Mandatory Findings of Significance

2 EVALUATION OF ENVIRONMENTAL IMPACTS

The 2021 California Environmental Quality Act (CEQA) Statute and Guidelines (AEP 2021) suggests that the following criteria be used when evaluating effects using the environmental checklist. These criteria have been used in this Initial Study.

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the 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 will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "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 EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe 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.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. The explanation of each issue should identify:
    a. the significance criteria or threshold, if any, used to evaluate each question; and
    b. the mitigation measure identified, if any, to reduce the impact to less than significance

2.1 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

_____	_____
Signature	Date
_____	_____
Printed Name	For

3 ENVIRONMENTAL CHECKLIST:

3.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
AESTHETICS. Except as provided in Public Resources Code Section 21099, Would the Project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings along a State scenic highway?	☐	☐	☐	☒
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?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1 REGULATORY SETTING

State Laws, Regulations, and Policies

California Scenic Highway Program

In 1963, the California State Legislature established the California Scenic Highway Program, a provision of the Streets and Highways Code, to preserve and enhance the natural beauty of California (California Department of Transportation (Caltrans) 2015). The state highway system includes designated scenic highways and those that are eligible for designation as scenic highways.

Local Laws, Regulations, and Policies

The Plumas County 2035 General Plan (General Plan 2013) contains goals and policies to protecting scenic areas and routes. The General Plan's Land Use Element classifies different zoning districts by land use designation as scenic areas, historic areas, and scenic roads.

3.1.2 ENVIRONMENTAL SETTING

The Project area is near the town of Twain, in the heart of the County of Plumas. Twain and Old Mill Ranch are surrounded by forestland, rural residential properties, and the Feather River. The Project site includes land zoned by Plumas County as general forest (GF), secondary suburban (S-3), and Rural-20 acre (R-20) (Plumas County Zoning 2022). The visual quality of most of the Project area is variously affected by the existing rural developments, such as residences and roads, railroad, and forestland and is generally considered to be scenic. Local landscapes were significantly impacted by the 2021 Quincy Fire, although the Old Mill Ranch was much less impacted. The Plumas County zones the Project site as Special Plan Scenic Area (SP-ScA) (Plumas County Zoning 2022). SP-ScAs are defined as administered and identified in the General Plan as to the qualities to be protected or preserved as Scenic Areas (ScA) (Plumas County Zoning 2022).

Visual Character and Quality of the Site

Rural residential housing, paved roads, a highway, a railroad, forestland, and the Feather River adjoin the Project area.

Light and Glare

Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments. Light that falls beyond the intended area of illumination is referred to as "light trespass." The most common cause of light trespass is spillover light, which occurs when a lighting source illuminates surfaces beyond the intended area, such as when building security lighting or parking lot lights shine onto neighboring properties. Spillover light can adversely affect light-sensitive uses, such as residences, at nighttime. Both light intensity and fixtures can affect the amount of any light spillover. Modern, energy-efficient fixtures that face downward, such as shielded light fixtures, are typically less obtrusive than older, upward-facing light fixtures.

Glare is caused by light reflections from pavement, vehicles, and building materials such as reflective glass, polished surfaces, or metallic architectural features. During daylight hours, the amount of glare depends on the intensity and direction of sunlight.

In general, the night sky in the Project area is not impacted. The most intense lighting in or near the Project sites is from the surrounding residential buildings and SR-70. The structures and infrastructure are continuous light sources, including the nighttime hours. Residential housing and vehicle headlights illuminate the surrounding roadways.

3.1.3 DISCUSSION OF IMPACTS

Will the Project:

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

Direct and Indirect Effects. The Project would have a surface and subsurface improvements. Visible surface improvements would consist of a new storage tank site and a new building to house the well (TH-B2) and treatment facility. The footprint of each of those sites would be less than one half of an acre. Other visible infrastructure would include new power poles and lines to provide power to the new building. New pipelines will generally be buried, except for appurtenances (e.g. valve can lids, fire hydrants) and an above ground segment that crosses Mill Creek. There is potential for construction-related effects on scenic vistas (e.g., staging, construction equipment, warning markers on roadways); however, upon completion of construction, the Project site will be similar to the existing viewscape. The Project components of two new storage tanks and a new treatment facility will have a slight effect on the scenic vista, although these are generally screened by existing vegetation and hillside topography. These improvements will not be visible from Highway 70 or most of the Old Mill Ranch residences. Therefore, effects on scenic vistas would be **less than significant**.

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

Direct and Indirect Effects. The Project is not located near a designated state scenic highway. Caltrans designates scenic highways. The closest designated state scenic highway is State Route 49 (SR-49) which is approximately 38 miles south from the Project area (Caltrans 2022). However, the closest eligible State scenic highway is SR-70 which is adjacent to the Project area (Caltrans 2022). The Project includes construction of new transmission lines and pipelines, new storage tanks, equipping a test hole, and a new treatment facility. The Project construction will not take place near or on the SR-70. The Project will not substantially damage scenic resources, including, but not limited to tress, rock outcroppings, and historic buildings along a State scenic highway. **No impact** would occur.

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?

Direct and Indirect Effects, Construction and Operation. The Proposed Project is located in a rural place near the town of Twain. The visual character of the site is mainly rural residences, general forest land, a highway, roads, an active railroad, and the Feather River. The Project construction may temporarily degrade the existing visual character or quality of public views on the site or surroundings (e.g., staging, construction equipment, warning markers on roadways). Upon completion of construction, the site will have a slightly larger footprint on the visual character because of two new storage tanks and a treatment facility building. The treatment facility building would have a footprint and height smaller than most nearby residences, and will have a exterior motif that is compatible with the surrounding properties. The Project site is zoned by the County as a SP-ScA (Plumas County Zoning 2022). Therefore, the Project will need to follow the Special Plan Review regulations. The Special plan review regulations (Plumas County Zoning 2022) include:

(a) No physical aspect of a property regulated by the Special Plan (SP) Area shall be altered in any way without special plan review and approval as set forth in subsection b.
(b) (1) SP review shall be conducted by the SP- Review Committee. The Planning Department shall conduct the SP-Review for those areas that do not have a SP-Review Committee.
(2) The requirements of each SP Area shall be adopted into the general plan. SP review shall ensure compliance with the requirements of the applicable SP Area.

Therefore, the Project would need to contact the Plumas County Planning Department to conduct a SP review to ensure the Project does not degrade the qualities of the scenic area (ScA). **A less than significant impact** would occur.

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

Direct and Indirect Effects, Construction and Operation. The only light or glare which currently affects the views in the area of the Proposed Project are those of rural residential housing and light from headlights on the nearby highway and railroad. There is a possibility for a new source of lighting if nighttime construction were necessary. However, nighttime construction is not proposed for the Project. Upon completion of construction, most Project elements do not include a new source of light. The storage tank site will not be equipped with lights. The treatment facility building will be equipped with manually activated interior and exterior lights, which would be activated during emergency or enduring repairs and maintenance at the site. There would be no new or substantial source of lighting or glare. **No impact** would occur.

3.2 AGRICULTURE AND FORESTRY RESOURCES

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:				

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code [PRC] Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
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?	☐	☐	☒	☐

3.2.1 REGULATORY SETTING

State Laws, Regulations, and Policies

California Department of Conservation

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation (DOC) as an optional model to use in assessing impacts on agriculture and farmland. The Farmland Monitoring and Mapping Program (FMMP) contains maps and statistical data regarding California's agriculture resources including the zoning of farmland. In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection (CalFire) regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

Williamson Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is a non-mandated State program for counties and cities to preserve agricultural land and discourage the

premature conversion of agricultural land to urban uses. The DOC Division of Land Resource Protection (DLRP) provides Williamson Act maps and maps of important farmland for counties in California, including Plumas County. Each map indicates areas of urban/built-up land in addition to illustrating the locations of various agricultural-related (Williamson Act or farmland designation) categories (DOC DLRP 2022).

Local Laws, Regulations, and Policies

The Plumas County 2035 General Plan Agriculture and Forestry Element contains goals and policies to protect and preserve the agriculture use of the County, including the zoning of land for such purposes.

3.2.2 ENVIRONMENTAL SETTING

The regional character of the Project is classified as timberland by the County. Plumas County zones the Project site as Secondary Suburban (S-3), General Forest (GF), and Rural-20 acre (R-20) (Plumas County Zoning 2022). There is no land classification from the DOC FMMP because the Important Farmland Finder has not yet evaluated the Project area (DOC 2016).

3.2.3 DISCUSSION OF IMPACTRS

Will the Proposed Project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency, to non-agricultural use?

Direct and Indirect Effects. The Project has not been evaluated by the DOC California Important Farmland Finder under the FMMP. However, the land is classified by the County as Secondary Suburban (S-3), General Forest (GF), and Rural-20 acre (R-20) (Plumas County Zoning 2022). The Project land is not classified as farmland by the County. Most project components will be constructed within traveled rights of way. No prime farmland, unique farmland, or farmland of statewide importance would be converted to non-agricultural use. **No impact** would occur.

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

Direct and Indirect Effects. The Project has not been evaluated by the DOC California Important Farmland Finder under the FMMP. However, the land is classified by the County as Secondary Suburban (S-3), General Forest (GF), and Rural-20 acre (R-20) (Plumas County Zoning 2022). The Plumas County 2035 General Plan classifies William Act Contracts as land zoned as agriculture preserves that qualify for inclusion (General Plan 2013). Most project components will be constructed within traveled rights of way. The Project is not classified or near any lands classified as agriculture or agriculture preserves. **No impact** would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

Direct and Indirect Effects, Construction and Operation. Under Public Resource Code (PCR) 122209(g) states that forest land is defined as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetic, fish and wildlife, biodiversity, water quality, and other public benefits. Plumas County zones the Project area as Secondary Suburban (S-3), Rural 20-acre (R-20), and General Forest (GF) (Plumas County Zoning 2022). The Project is zoned in land classified as GF, not in land zoned as timberland or timberland zoned. The Project would not conflict with existing zoning for, or cause rezoning of timberland or timberland zoned Timberland Production. However, the Project will have a temporary effect on forestland during construction. During construction, the transmission pipeline and distribution system will be applied through trenching in some land classified as GF land. In general, the transmission pipeline will be constructed along a jeep trail that does not contain trees or vegetation. The distribution pipelines will be constructed along the jeep trail and along public rights of way for travel. In limited locations, including the storage tank site and in the parcel on which the treatment facility will be constructed, there will be impact to forested areas on private parcels, including the removal of some saplings and mature trees. Upon completion of construction, the transmission pipeline and distribution system are not anticipated to have any long-term environmental impacts on the land with the exception of some incur root damage as a result of installation. The Project will return to a similar footprint. **A less than significant impact** would occur.

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

Direct and Indirect Effects, Construction and Operation. As discussed above, the Project site is zoned in part, as forest land (Plumas County Zoning 2022). The Project will not result in minimal loss of forest land and conversion of forest land to non- forest use (Land Use 2022). In two areas (new storage tank site and treatment facility building site, some saplings and mature trees will be removed. In other areas, there will be a temporary disturbance to forestland during construction, but upon completion, those areas will return to a similar footprint. Upon completion of construction, the two proposed storage tanks and proposed treatment facility will be above ground. Other project elements (pipelines, transmission lines, water meters) will be located subsurface. **A less than significant** 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?

Direct and Indirect Effects. The Project would not involve other changes in the existing environment which, due to their location or nature, that could result in conversion of Farmland to non- agricultural use, or conversion of forest land to non-forest use. Minor loss of forested land (less than one acre) would occur at the storage tank and treatment building sites, which are located on private lands. The Project will update, enhance, and add existing and new water infrastructure and upon completion, will have a slightly larger footprint. **A less than significant** would occur.

3.3 AIR QUALITY

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
AIR QUALITY. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

3.3.1 REGULATORY SETTING

Federal Laws, Regulations, and Policies

Clean Air Act

The Clean Air Act (CAA) is implemented by the U.S. Environmental Protection Agency (USEPA) and sets ambient air limits, the National Ambient Air Quality Standards (NAAQS), for six criteria pollutants: particulate matter of aerodynamic radius of 10 micrometers or less (PM10), particulate matter of aerodynamic radius of 2.5 micrometers or less (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO_2), ground-level ozone, and lead. Of these criteria pollutants, particulate matter and ground-level ozone pose the greatest threats to human health.

State Laws, Regulations, and Policies

California Air Resources Board

The California Air Resources Board (CARB) sets standards for criteria pollutants in California that are more stringent than the NAAQS and include the following additional contaminants: visibility-reducing

particles, hydrogen sulfide, sulfates, and vinyl chloride. The Project is located in the Sierra Nevada Region and in Plumas National Forest in Plumas County (Figure 1).

General Conformity Rule

Section 176(c) of the CAA provides that federal agencies cannot engage, support, or provide financial assistance for licensing, permitting, or approving any project unless the project conforms to the applicable State Implementation Plans (SIP). Under CAA Section 176(c) requirements, USEPA promulgated 40 Code of Federal Regulations (CFR) Part 51, Subpart W, and 40 CFR Part 93, Subpart B, "Determining Conformity of General Federal Actions to State or Federal Implementation Plans" (see 58 Federal Register (FR) 63214 (November 30, 1993), as amended; 75 FR 17272 (April 5, 2010) and 75 FR 17274.) These regulations, commonly referred to as the General Conformity Rule, apply to all federal actions except for those federal actions that are specifically excluded from review (e.g., stationary-source emissions) or are related to transportation plans, programs, and projects under Title 23 U.S. Code (USC) or the Federal Transit Act, which are subject to Transportation Conformity.

In states that have an approved SIP revision adopting General Conformity regulations, 40 CFR Part 51, Subpart W, applies; in states that do not have an approved SIP revision adopting General Conformity regulations, 40 CFR Part 93, Subpart B, applies. The Project sites are located in an area of California with approved SIPs adopting General Conformity regulations.

The General Conformity Rule is used to determine if federal actions meet the requirements of the CAA and the applicable SIP by ensuring that air emissions related to the action do not:

- Cause or contribute to new violations of a NAAQS;
- Increase the frequency or severity of any existing violation of a NAAQS; or
- Delay timely attainment of a NAAQS or interim emission reduction.

A conformity determination under the General Conformity Rule is required if the federal agency determines that the action would occur in a nonattainment or maintenance area; no specific exemptions apply to the action; the action is not included in the federal agency's "presumed to conform" list; emissions from the proposed action are not within the approved emissions budget for an applicable facility; and the total direct and indirect emissions of a pollutant (or its precursors) are at or above the de minimis levels established in the General Conformity Rule (75 FR 17274).

Six methods are available for demonstrating conformity:

1. Document that the emissions from the action are identified and accounted for in the SIP;
2. Obtain a statement from the applicable state or local air quality agency indicating that the emissions from the action, along with all other emissions in the area, would not exceed the budget for those emissions in the SIP;
3. Obtain from the local Metropolitan Planning Organization a statement indicating that the emissions are included in transportation plan modeling;
4. Obtain agreement from the state to include the emissions in the SIP;
5. Conduct air quality modeling to demonstrate that the emissions would not cause or contribute to a violation of the NAAQS; this modeling option is not available for areas in nonattainment for ozone or NO_2 and some $PM_{2.5}$ areas; or
6. Mitigate or offset the increase in emissions; offset emissions must be offset to zero for ozone precursors, nitrogen dioxide and PM, not to the de minimis levels.

In addition, federal activities may not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emissions reductions toward attainment. The Project is subject to review under the General Conformity Rule. At this time a formal General Conformity determination is not presented, but a comparison to de minimis thresholds is discussed as an indication of the potential General Conformity applicability and/or determination which will need to occur prior to the start of construction.

Toxic Air Pollutants

USEPA and CARB regulate various stationary sources, area sources, and mobile sources. USEPA has regulations involving performance standards for specific sources that may release toxic air contaminants (TACs), known as hazardous air pollutants (HAPs) at the federal level. In addition, USEPA has regulations involving emission criteria for off-road sources such as emergency generators, construction equipment, and vehicles. CARB has been granted permission to establish emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB also establishes passenger vehicle fuel specifications. Airborne Toxic Control Measures (ATCMs), including the following relevant measures, are implemented to address sources of TACs:

- ATCM for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower (hp) and Greater.

Local Laws, Regulations, and Policies

The Northern Sierra Air Quality Management District

The Northern Sierra Air Quality Management District (NSAQMD) is the air quality in district that manages the rules and regulations for multiple cities in the Plumas and Sierra Counties and Nevada, including the Project are. The NSAQMD has not adopted plans to address ozone and particulate matter issues in the Project area but has established Rules for the Project area to adhere by (NSAQMD 2022).

During construction, Rule 413 is in effect. Rule 413 administers attainment pollutant increments, so as that the Pollution Control Officer will deny authority to construct if the analysis in Rule 408 and 415 causes levels that exceed the baseline (Table 4) (NSAQMD 2022). Rule 408 states that the Air Pollution Control Officer shall determine if the project or modification will exceed baseline increments of attainment pollutants. If the Officer deems that the Project will exceed baseline increments, the Officer will have the project conduct a pollutant modeling under Rule 407 (NSAQMD 2022).

Table 4. Attainment Pollutant Increments

Pollutant	Monitoring Interval	Maximum Allowable Class (micrograms per cubic meter) Class I	Class II	Class III
Particulate Matter	Annual Geometric Mean	5	19	37
	24- hour Maximum	10	37	75
Sulfur Dioxide	Annual Arithmetic Mean	2	20	40
	24-hour Maximum	5	91	82
	3-hour Maximum	25	512	400
Ozone	1-hour Maximum	20	40	80
Oxides of Nitrogen	Annual Average	10	20	40
Hydrocarbons (corrected for methane)	3-hour Maximum	20	40	80
Lead	Calendar Quarter Average	0.6		

Source: Plumas County 2013

The Plumas County 2035 General Plan (Plumas County 2013) does not include goals and policies surrounding air quality in the County.

3.3.2 ENVIRONMENTAL SETTING

The primary pollution sources in the vicinity of the Project area are vehicles from SR-70, railroad, and nearby residential properties. The primary contribution of particulate material or ozone of the Project will be made during construction. During normal operation of the facilities, there will be no change in air quality during operation of the nearly new water treatment systems (see section 1.4) that would produce particulate matter (PM) or added pollutants to the ozone. FRCCSD's OMRWS has an existing backup generator that contributes pollutants to the ozone, but the generator will not be modified..

3.3.3 DISCUSSION OF IMPACTS

Would the Project:

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

Direct and Indirect Effects. The Project would not conflict with or obstruct implementation of the NSAQMD. **No impact** would occur relative to this issue.

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?

Direct and Indirect Effects. Implementation of the Project would not result in criteria pollutant emissions. The Project would provide enhancements and additional infrastructure for a small water system to accommodate existing rural developments; as such, it would not generate additional

population growth that could generate air pollutant emissions that would contribute to a cumulatively considerable impact. Use of the proposed generator would be for essential water supply facilities (well and treatment facility), and would be used during prolonged power outages and periodic testing. **No impact** would occur relative to this issue.

c) Expose sensitive receptors to substantial pollutant concentrations?

Direct and Indirect Effects, Construction and Operations. Sensitive receptors (i.e., children, senior citizens, and acutely or chronically ill people), are more susceptible to the effects of air pollution than the general population. Land uses considered as sensitive receptors typically include residences, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. During the short-term construction periods associated with the Project, diesel exhaust particulate matter will be generated by construction equipment and vehicles. Diesel exhaust particulate matter is known by the State of California to include carcinogenic compounds, and long-term exposure to diesel exhaust emissions has the potential to result in adverse health effects. The risks associated with exposure to carcinogenic substances are typically based on a lifetime of chronic exposure, which defined in the California Air Pollution Control Officers' Associated Air Toxics "Hot Spots" Program Risk Assessment Guidelines as 24 hours per day, 7 days per week, 365 days per year, for 70 years.

Additionally, dust would be generated during construction. Excavating, grading, and leveling would occur throughout the Project construction and would expose sensitive receptors to dust. Therefore, implementation of **MM AIR-1** and **MM HWQ-1** (see Section 3.10.3) would minimize the potential on sensitive receptors. Upon completion of the Proposed Project, no substantial pollution to sensitive receptors would occur, the area would return to a similar footprint. Accordingly, given the short-term nature of the Project's construction period, potential impacts related to exposure of existing sensitive receptors to substantial pollutant concentrations (including diesel exhaust) would be **less than significant** with the implementation of **MM AIR-1** and **MM HWQ-1,** and upon completion of construction no sensitive receptors would be exposed to pollutant concentrations.

MITIGATION MEASURE AIR-1: Prior to the commencement of grading activities, FRCCSD shall require the contractor hired to complete the grading activities to prepare a construction emissions reduction plan that meets the requirements of NSAQMD, Plumas County, and CARB. The construction emissions reductions plan shall be submitted to the NSAQMD for review and approval. FRCCSD shall ensure that all required permits from the NSAQMD have been issued prior to commencement of grading activities.

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

Direct and Indirect Effects, Construction and Operation. The Project would not result in indirect effects related to odors. The Project does not include off-site components or facilitate additional projects that would generate new sources of odor. There is a proposed 600-gallon holding tank for liquid sludge and backwash water produce during the filtration of the water. However, no odor is expected to come from the tank. During construction, there is a possibility for odors from construction activities (diesel exhaust, asphalt, etc.). However, upon completion of the construction, the area will return to a similar footprint. **A less than significant impact** would occur relative to this issue.

3.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
BIOLOGICAL RESOURCES. Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community as identified in local or regional plans, policies, or regulations, or by CDFW or USFWS?	☐	☐	☒	☐
c) Have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or State HCP?	☐	☐	☒	☐

3.4.1 REGULATORY SETTING

Federal Laws, Regulations, and Policies

Endangered Species Act

The Endangered Species Act (ESA) (16 USC § 1531 et seq.; 50 CFR Parts 17 and 222) provides for conservation of species that are endangered or threatened throughout all or a substantial portion of their range, as well as protection of the habitats on which they depend. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. In general, USFWS manages terrestrial and freshwater species, whereas NMFS manages marine and anadromous species.

Section 9 of the ESA and its implementing regulations prohibit the "take" of any fish or wildlife species listed under the ESA as endangered or threatened, unless otherwise authorized by federal regulations. The ESA defines the term "take" to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC § 1532). Section 7 of the ESA (16 USC § 1531 et seq.) outlines the procedures for federal interagency cooperation to conserve federally-listed species and designated critical habitats. Section 10(a)(1)(B) of the ESA provides a process by which nonfederal entities may obtain an incidental take permit from USFWS or NMFS for otherwise lawful activities that incidentally may result in "take" of endangered or threatened species, subject to specific conditions.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC Chapter 7, Subchapter II) protects migratory birds. Most actions that result in take, or the permanent or temporary possession of, a migratory bird, or the parts, nests, or eggs of such a bird, constitute violations of the MBTA. The MBTA also prohibits destruction of occupied nests. USFWS is responsible for overseeing compliance with the MBTA.

Executive Order 11990, Protection of Wetlands

Executive Order (EO) 11990 provides for protection of wetlands from federal or federally approved projects when a practicable alternative is available. If impacts on wetlands cannot be avoided, all practicable measures to minimize harm must be included. US Army Corps of Engineers (USACE) is the administering agency.

Federal Land Policy and Management Act of 1976

Public land managed by the US Department of the Interior, Bureau of Land Management (BLM) is regulated under the Federal Land Policy and Management Act of 1976 (FLPMA). Under this regulation, the BLM develop Resource Management Plans (RMPs) that direct BLM District Offices in the sustainable, best use of the biological resources of the public land. For the Project, nearby public land falls under the jurisdiction of the BLM Northern California District and the Eagle Lake Field Office (BLM 2022).

State Laws, Regulations, and Policies

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) manages California's fish, wildlife, plant resources, and the habitats which they depend on. The CDFW has 7 Regions throughout the state:

- Region 1 Northern Region
- Region 2 Northern Central Region
- Region 3 Bay Delta Region
- Region 4 Central Region
- Region 5 South Coast Region
- Region 6 Inland Deserts Region
- Region 7 Marina Region

The Project is located in Region 2 the Northern Central Region. The Northern Central Region is comprised of Alpine, Amador, Butte, Calaveras, Colusa, El Dorado, Glenn, Lake, Nevada, Placer, Plumas, Sacramento, San Joaquin, Sierra, Sutter, Yolo and Yuba counties (CDFW 2022).

California Fish and Game Code

The California Fish and Game Code (F&G) includes various statutes that protect biological resources, including the Native Plant Protection Act of 1977 (NPPA) and the California Endangered Species Act (CESA). The NPPA (F&G §§ 1900-1913) authorizes the Fish and Game Commission to designate plants as endangered or rare and prohibits take of any such plants, except as authorized in limited circumstances.

CESA (F&G §§ 2050–2098) prohibits state agencies from approving a project that would jeopardize the continued existence of a species listed under CESA as endangered or threatened. F&G § 2080 prohibits the take of any species that is state listed as endangered or threatened, or designated as a candidate for such listing. The California Department of Fish and Wildlife (CDFW) may issue an incidental take permit authorizing take of listed and candidate species if that take is incidental to an otherwise lawful activity, subject to specified conditions. F&G §§ 3503, 3513, and 3800 protect native and migratory birds, including their active or inactive nests and eggs, from all forms of take. In addition, F&G §§ 3511, 4700, 5050, and 5515 identify species that are fully protected from all forms of take. F&G Section 3511 lists fully protected birds, § 5515 lists fully protected fish, § 4700 lists fully protected mammals, and § 5050 lists fully protected amphibians.

Local Laws, Regulations, and Policies

The Plumas County 2035 General Plan (General Plan 2013) contains goals and policies to protect the biological resources of the County. Goal 7.2 is to protect the County's biological resources and include policies to protect habitats, land, streams, species, native plant species, wetlands, and streams (Plumas County 2013).

3.4.2 ENVIRONMENTAL SETTING

In 2022, Gallaway Enterprises was contracted by FRCCSD to complete a biological investigation of the Project area consistent in scale with the CEQA Initial Study and NEPA. In February of 2022, Gallaway Enterprises staff performed a reconnaissance-level field survey that located principal land uses along with the constituent plants and animals and analyzed potential Project impacts based on biotic and aquatic resources for the Biological Resources Assessment. The field investigation included aquatic resources or aquatic special-status species. The data and conclusions to these efforts are contained in the Biological Resources Assessment (Appendix B) attached to this document.

The environmental setting of the Project site, and associated survey area, is generally a scattered rural residential neighborhood adjacent to the Feather River and the active railroad. The biotic habitats are urban/barren habitats associated with existing residential development, montane hardwood-conifer habitat, and annual grassland. Urban habitat is primarily ornamental landscaping with the possible incorporation of native tree species. Barren habitat is classified as non-vegetated soil, rock, and gravel. The aquatic habitats associated with the Project area is classified as a riverine habitat. A riverine habitat is typified by running rivers and streams with variable flow rates, bed and bank substrates, and oxygen levels that provide conditions for variety of wildlife and plant species (Appendix B). The various vegetation and species for each biotic and aquatic habitat is contained in the Biological Resources Assessment, attached to this document (Appendix B).

Twenty special-status plant species are known to exist within the region of the Project area (Appendix B, Table 1). However, there are no special status plant species within the Project site because of the lack of suitable habitat. In addition, there are eighteen special status animal species known to exist within the regional vicinity (Appendix B, Table 1). Twelve of these special-status animal species are absent or unlikely to occur due to lack of suitable habitat, the Project locations elevational range, or they have been eradicated from the region. Gallaway identified the Project area as a potential suitable habitat for the foothill yellow-legged frog (FYLF), Sierra Nevada yellow-legged frog (SNYLF), bald eagle, northern goshawk, willow flycatcher, pallid bat, and several avian species protected under the MBTA and F&G as endangered, threatened, or special-status wildlife. (Appendix B).

There will be no effect to potential special-status botanical species in the Project site. There is potential for the construction to impact the endangered, threatened, and special-status, but with mitigation measures would reduce or eliminate Project impacts to the species to be less than significant under CEQA and NEPA. There are no designated critical habitats or sensitive natural communities (SNCs) within the Project site. (Appendix B).

In February and August 2022, Gallaway Enterprises staff performed a reconnaissance-level field survey that delineated aquatic resources, including waters of the United States (WOTUS) and waters of the State (WOTS). The boundaries of non-tidal, non-wetland waters, when present, were delineated at the ordinary high-water mark (OHWM) as defined in 33 Code of Federal Regulations (CFR) 328.3. The OHWM represents the limits of USACE's jurisdiction over non-tidal waters in the absence of adjacent wetlands (33 CFR 328.04). The data and conclusions to these efforts are contained in the Draft Delineation of Aquatic Resources (Appendix C) attached to this document.

There are 11 features identified as "other waters of the United States" (OW). OW are seasonal or perennial water bodies that include lakes, stream channels, ephemeral and intermittent drainages,

ponds, and other surface water features that exhibit an ordinary high-water mark, but do not have positive indicators for wetland parameters (hydrophytic, vegetation, hydric soil, and wetland hydrology) (Appendix C). Five features are branched perennial drainages and six are ephemeral drainages. No WOTUS wetlands are located within the Project site. (Appendix C).

3.4.3 DISCUSSION OF IMPACTS

Would the Project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Direct and Indirect Effects, Construction. The Biological Resources Assessment (Gallaway 2022) recognized impacts the Project may have through habitat modifications during construction on various species (Appendix B). First, the Project has the potential to impact the SNYLF and FYLF (Appendix B). To comply and avoid the potential for construct-related disturbance/effect on the SNYLF and FYLF, the Project will implement **Mitigation Measure (MM) BIO-1.**

> **MM BIO-1:** To avoid and minimize the potential for construction-related mortality/disturbance of the SNYLF and FYLF a qualified biologist shall conduct protocol-level surveys for both the SNYLF and FYLF to determine presence or absence of the species in the APE. SNYLF is listed as endangered under the ESA and the North Feather DPS of FYLF is a proposed threatened species. A Biological Assessment for Section 7 consultation with the USFWS would be prepared to assess impacts to SNYLF and FYLF, including impacts to aquatic and upland habitat. Conservation measures to protect both species will be issued by USFWS in the Biological Opinion. If SNYLF and/or FYLF individuals are determined to be present within the APE, then an Incidental Take Permit (ITP) from CDFW will be required prior to the initiation of any Project activities as both species are listed as threatened under California Endangered Species Act (CESA). If SNYLF and/or FYLF individuals are determined to be present within the BSA, then an Incidental Take Permit (ITP) from CDFW will be required prior to the initiation of any Project activities to comply with the CESA.

Second, the Project site has potential effect on the bald eagle, northern goshawk, migratory birds and raptors and the willow flycatcher (Appendix B). To comply with the MBTA and avoid the potential for construct-related disturbance/effect on nesting birds, the Project will implement **MM BIO-2** for the bald eagle, northern goshawk, migratory birds and raptors and **MM BIO-3** for the willow flycatcher.

> **MM BIO-2**: To avoid and minimize the potential for construction-related mortality/disturbance of the bald eagle, northern goshawk, and migratory birds and raptors the Project will be implemented outside of the bird nesting season (the season is typically defined as February 1st to August 31st). If construction is to take place between February and August, a qualified biologist will conduct pre-construction survey(s) with 250 feet of the APE within 7 days prior to the start of Project activities. Should any active nest of migratory or raptors be discovered, where Project impacts would occur, the biologist will identify a suitable construction-free buffer around the nest. This buffer will be identified by species, nest type, and tolerance to disturbance. Construction

shall be prohibited in the buffer zone until the young have fledged and are capable of foraging independently. A qualified biologist shall monitor the nests once per week and a report will be submitted to the CEQA lead agency weekly. If an active nest of a bald eagle or northern goshawk is observed, the CDFW shall be consulted prior to the initiation of Project activities.

MM BIO-3: To avoid and minimize the potential for construction-related mortality/disturbance of the willow flycatcher, the Project will be implemented outside of the willow flycatcher breeding season (typically defined as June 1st through September 30th). At least 2 protocol-level surveys shall be conducted during the specified time frames in accordance with *A Willow Flycatcher Survey Protocol for California* (Appendix B). If an active willow flycatcher nest is identified during protocol-level surveys, then CDFW must be consulted prior to the initiation of any Project activities.

Lastly, the Project site has potential effect on the pallid bat (Appendix B). To minimize potential impacts to the pallid bat, the Project will implement **MM BIO-2**.

MM BIO-4: To avoid and minimize the potential for construction-related mortality/disturbance of the pallid bat, the Project will remove or fell mature trees outside of the bat maternity season (remove trees between September 1st and March 15th). Trees should be removed at dusk to minimize impacts to the roosting bats.

Overall, with implementation of these mitigation measures, the Project impacts relative to this issue would be ***less than significant***.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community as identified in local or regional plans, policies, or regulations, or by CDFW or USFWS?

Direct and Indirect Effects. There are no designated critical habitats, sensitive natural communities (SNCs), or riparian habitats within the Project site (Appendix B). There will be **no impact** relative to this issue.

c) Have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Direct and Indirect Effects, Construction. The proposed pipeline that crosses Mill Creek along Riverview Lane will be installed above ground adjacent to the existing culvert. No other facilities are proposed to cross a wetland area. However, access to the proposed storage tank site and to the transmission pipeline alignment south of the railroad tracks will involve personnel and equipment crossing Mill Creek. Construction equipment will not be permitted to repeatedly cross Mill Creek; after equipment has arrived at this portion of the project site, it will generally be required to stay until completion of construction of the storage tank and the transmission pipeline south of the railroad tracks. **MM BIO-5** is required. With the implementation of **MM BIO-5,** impacts would be **less than significant**.

MM BIO-5: A jurisdictional determination by the US Army Corps of Engineers will be required to identify any waters of the US within the project boundaries Prior to any discharge or fill material

into WOTUS, authorization under a Nationwide Permit or Individual Permit shall be obtained from the USACE (CWA §404). For fill requiring a USACE permit, a water quality certification from the RWQCB (CWA §401) shall also be obtained prior to discharge of dredged or fill material. Prior to any activities that would obstruct the flow of or alter the bed, channel, or bank of any perennial, intermittent, or ephemeral creeks, notification of streambed alteration shall be submitted to the CDFW, and, if required, a Lake and Streambed Alteration Agreement (F&G § 1602) shall be obtained.

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?

Direct and Indirect Effects. The Project site is mainly composed of rural residential housing, roads, active railroad, existing water infrastructure, and the Feather River. There is not a native wildlife nursery site in the Project site. The Project area could allow for habitat movement. The Biological Resources Assessment did not analyze for native resident or migratory wildlife corridors (Appendix B). It is unknown if the Project would interfere substantially with movement of native resident or migratory wildlife corridors. However, the Project elements are mainly comprised of subsurface components except for the two proposed storage tanks and the proposed treatment facility, which would not be located in or adjacent to waterways. There would be a **less than significant** impact to movement of native resident, migratory fish, or wildlife species.

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

Direct and Indirect Effects. In accordance with Goal 7.2, Biological Resources, of the Plumas County 2035 General Plan, the Project does not conflict with any local policies or ordinances. The Proposed Project plans to add and modify water system infrastructure to the OMRWS. The Project will have no effect on biological resources pursuant to Goal 7.2. There would be **less than significant** impact relative to this issue.

f) Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or State HCP?

Direct and Indirect Effects. According to the CDFW's California Natural Community Conservation Plans, there are no NCCPs in Plumas County (CDFW 2019). There are no local HCPs but there are Important Species Habitats listed in Plumas County Draft Environmental Impact Report (State Clearinghouse No.2012012016) in Figure 4.11-2 (DEIR 2012). The Project is located in an Important Species Habitat for the Deer Winter Range (DEIR 2012). However, the Project elements are mainly comprised of subsurface components except for the two proposed storage tanks and the proposed treatment facility. There would be a **less than significant** impact to Important Species Habitat or NCCP.

3.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
CULTURAL RESOURCES. Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

3.5.1 REGULATORY SETTING

Federal Laws, Regulations, and Policies

If federal funding in the form of State Revolving Funds are applied to this project, the National Environmental Policy Act requires that the National Historic Preservation Act and the Archeological and Historic Preservation Act (AHPA) applies to this project.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) embodies a long-standing national policy to preserve historic sites, buildings, structures, districts and objects of national, state, tribal, local, and regional significance and, among other things, to protect such historic properties from adverse impacts caused by activities undertaken or funded by federal agencies. The NHPA is administered by the Department of the Interior (DOI) and the Advisory Council on Historic Preservation (the Council). The Council implements section 106 of the NHPA and has promulgated regulations for consultation regarding how to determine the effects of federal agency undertakings on historic properties (36 C.F.R. Part 800). Although under certain circumstances the Council may become directly involved in such consultations, the procedures generally call for consultation between the federal agency and relevant state or tribal historic preservation officers (SHPOs and THPOs) and other interested parties.

The intent of the AHPA is to limit the loss of important historical data that would result from federal, or federally authorized, construction activities. Unlike section 106 of the NHPA, which principally addresses adverse effects to historic properties identified within a project area prior to project initiation, the requirements of the AHPA are typically invoked when historic properties are discovered after the project has begun and potential adverse effects may occur.

State Laws, Regulations, and Policies

CEQA and CEQA Guidelines

Section 21083.2 of the California Public Resources Code (Public Resources Code) requires that the lead agency determine whether a project may have a significant effect on unique archaeological resources. A unique archaeological resource is defined in the Public Resources Code as an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it:

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

Measures to avoid, conserve, preserve, or mitigate significant effects on these resources are also provided under Public Resources Code § 21083.2.

Section 15064.5 of the CEQA Guidelines notes that "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Substantial adverse changes include physical changes to the historical resource or to its immediate surroundings, such that the significance of the historical resource would be materially impaired. CEQA lead agencies are expected to identify potentially feasible measures to mitigate significant adverse changes in the significance of a historical resource before they approve such projects. Historical resources are those that are:

- Listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (Public Resources Code §5024.1[k]);
- Included in a local register of historic resources (Public Resources Code §5020.1) or identified as significant in an historic resource survey meeting the requirements of Public Resources Code §5024.1(g); or
- Determined by a lead agency to be historically significant.

CEQA Guidelines § 15064.5 also prescribes the processes and procedures found under Health and Safety Code § 7050.5 and Public Resources Code § 5097.95 for addressing the existence of, or probable likelihood of, Native American human remains, as well as the unexpected discovery of any human remains within the Project site. This includes consultation with the appropriate Native American tribes.

CEQA Guidelines § 15126.4 provides further guidance about minimizing effects to historical resources through the application of mitigation measures. Mitigation measures must be legally binding and fully enforceable.

California Register of Historical Resources

Public Resources Code § 5024.1 establishes the CRHR. The register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed as or determined to be eligible for listing in the National Register of Historic Places (NRHP), including properties evaluated under Section 106 of the National Historic Preservation Act (NHPA). The criteria for listing are similar to those of the NRHP. Criteria for listing in the CRHR include resources that:

- Are associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Are associated with the lives of persons important in our past;
- Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or
- Have yielded, or may be likely to yield, information important in prehistory or history.

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

Local Regulations and Policies

Plumas County General Plan

The Plumas County 2035 General Plan (Plumas County 2013) contains goals and policies to protect the cultural and paleontological resources. The Plan administers policies under Goal 7.5, Cultural and Historical Resources, which encourages the protect and preservation of historic and prehistoric TCRs that are important to Native American history for various reasons (Plumas County 2035).

Plumas National Forest Heritage Resources Program

The Plumas National Forest is responsible for the stewardship of the region's heritage resources. The program administers cultural, educational, and scientific value to the resources while complying with federal historic preservation laws and management strategies (USFS 2022*).*

3.5.2 ENVIRONMENTAL SETTING

In 2022, Paleowest, LLC (Paleowest) was contracted by FRCCSD to perform an archeological and historical resources investigation of the Project area consistent in scale with a CEQA Initial Study. In March of 2022, Paleowest staff performed a site pedestrian survey. The data and conclusions to these efforts are contained in the Cultural Report, attached to this document (Appendix D).

The Project lies in vicinity of the Sierra Nevada Region near but not within the Plumas County National Forest, which is near the ethnographic range of the Mountain Maidu. The ethnolinguistic group is known as the Maidu which refers to the Mountain Maidu or Northeaster Maidu. The term Konkow refers to the ethnolinguistic group of Northwester Maidu whose territory was west of the area of potential effect (APE). Maidu, which has four dialects, was spoked by people living 50 miles southwest of the APE. The Maiduan people lived in villages in the high mountain meadows and valleys, where winter would allow permanent establishment. The villages koyo-mkawi, Konkau, and Yu'dow were located west of the APE. (Appendix D).

Spanish exploration of the Feather River began in the early 1800s, when Captain Luis Arguëllo explored the Feather River in 1820. He named the Feather River, *El Rio de las Plumas* which translates to the River of Feathers. During 1851, fur trapper and trader, James Beckwourth discovered and named Beckwourth Pass and travel much of the Sierras. Remote and heavily forested nature of the Plumas National Forest kept settlers away until the gold rush. In 1848, gold was discovered at Sutter's Mill in Coloma in California. This new discovery of gold sparked interest and the population of California increased from 4,000 to 500,000 in just two years (1848-1850). (Appendix D).

Establishment of Plumas County came when gold seekers sought to mine Feather River tributary creeks. They cut mule and wagon roads to placer mines. Temporary camps were erected, ditches were constructed, and tailings were produced for placer mining. Ditches dug by the gold seekers were labeled on historic-era Glo survey plats by creeks. In 1905, the Western Pacific Railroad opened private local use of timber for commercial timber harvesting. Commercial timber harvesting increased settlement and economic prosperity for Plumas County. (Appendix D).

The pedestrian survey identified three previous unrecorded Historic Period resources: the Old Mill Creek culvert, Old Mill Road, and a historic-era wooden water tank and one recorded Historic Period ditch. These four resources are ubiquitous in California and lack historic significance, and are not eligible for listing under any NRHP or CRHR criteria. No archaeological resources were identified within the Project area during the intensive pedestrian survey. In addition, the record searches conducted in support of the Project from the NAHC indicate that no sacred or TCRs have been previously recorded within the APE. These findings along with a review of resources indicate that the potential for subsurface cultural resource and archaeological deposits is low to moderate. (Appendix D).

3.5.3 DISCUSSION OF IMPACTS

Would the Project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Direct and Indirect Effects. As described above, four historical resources were identified in the APE. Three unrecorded historical resources (the Old Mill Creek culvert, Old Mill Road, and a historic-era wooden water tank) and one recorded Historic resource (a ditch). However, Paleowest determined that none of the four resources are defined in Section 15064.5 because the resources are not eligible under the CRHR or NRHP (Appendix D). The Project does not plan to alter or modify any of the four resources. The Project would be **no impact** to known historic resources.

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

Direct and Indirect Effects, Construction. During the pedestrian survey of the APE, Paleowest did not identify any archaeological resources pursuant to 15064.5 (Appendix D). However, excavation and construction activities, regardless of depth, could result in findings of archaeological resources (Native American stone tools, pottery, animal bone and stone flakes, historical bottles, ceramic dishes, iron tools, cooking utensils, bricks, nails, coins, and buttons, fire pits or charcoal

concentrations, stone and brick building foundations, stone or brick lined water cisterns). In the unlikely event that archaeological resources are encountered during project development, **MM CUL-1** would be implemented (Appendix D). Assuming that this mitigation happened, **no significant impact** would occur.

MM CUL-1: During ground disturbing activities, if any event that archaeological deposits, concentration of artifacts, or culturally modified soil deposits (including trash pits older than 45 years) are discovered, all work on the affected site must stop until a Secretary of the Interior (SOI) qualified archaeologist views the finds and makes a preliminary evaluation. Examples of archaeological discoveries includes:

- Native American stone tools, pottery, animal bone, and stone flakes
- Historic Period bottles, ceramic dishes, iron tools, cooking utensils, bricks, nails, coins, and buttons
- Fire pits or charcoal concentrations containing Native American or historic Period artifacts
- Stone or brick building foundations; stone or brick lined water cisterns

If warranted, further archaeological work in the APE should be performed.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Direct and Indirect Effects, Construction. During the cultural resource investigation, no evidence of human burial or remains was identified (Appendix D). However, excavation and construction activities, regardless of depth, could result in findings of human remains. In the unlikely event that human remains are encountered during project development, **MM CUL-2** would be implemented. Assuming that this mitigation happened, **no significant impact** would occur.

MM CUL-2: State law prescribes measures that must be taken in the event that any human remains are discovered. If human remains are discovered, Section 7050.5 of the California Health and Safety Code requires that the County Coroner be immediately notified of the discovery and no further excavation or disturbance of the site or nearby area may occur (100-foot buffer) until the County Coroner has determined, within two working days of notification of the discovery, the nature of the remains. If the Coroner determines that the remains are, or are believed to be, Native American, he or she is required to notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The MLD would then determine, in consultation with the property owner, the disposition of the human remains. Compliance with state and federal law would ensure that no impacts occur to any human remains that may be discovered on site.

3.6 ENERGY

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
ENERGY. 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?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

3.6.1 REGULATORY SETTING

State Laws, Regulations, and Policies

CEQA and CEQA Guidelines

The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

1. decreasing overall per capita energy consumption,
2. decreasing reliance on fossil fuels such as coal, natural gas and oil, and
3. increasing reliance on renewable energy sources.

In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy (see Public Resources Code section 21100(b)(3)). Energy conservation implies that a project's cost effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, cost effectiveness may be determined more by energy efficiency than by initial dollar costs. A lead agency may consider the extent to which an energy source serving the project has already undergone environmental review that adequately analyzed and mitigated the effects of energy production.

Local Laws, Regulations, and Policies

The Plumas County 2035 General Plan (Plumas County 2013) contains a specific goals and policies surrounding energy to ensure the consumption conservation, efficient use, economics, and environmental management practices of energy.

3.6.2 ENVIRONMENTAL SETTING

Power infrastructure changes are limited to utility (Pacific Gas and Electric Company, PG&E) power supply (above ground and underground) for the new treatment system, the proposed TH-B2 well with pump/motorThe new well will consume a commensurate volume of energy as the existing well. Because there will be no significant change in water consumption, there will not be significant changes to energy consumption. Use of the new well will, however, result in an attenuation of energy consumption. Energy consumption (and water production) will increase due to the new treatment facility, which will generate some waste which is not currently generated. The system will see energy savings from reduced motor starts/stops.

3.6.3 DISCUSSION OF IMPACTS

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?

Direct and Indirect Effects, Construction and Operation. Construction activities would require the use of gasoline, diesel fuel, other fuels, and electricity in order to be completed. Energy usage during construction typically involves the use of motor vehicles both for transportation of workers and equipment but also for direct construction actions such as the use of cranes, excavators, and trucks. This one-time energy expenditure required to construct the project would be non-recoverable. However, energy needs for project construction would be temporary and would not require additional capacity or increase peak or base period demands for electricity or other forms of energy. Additional energy usage would occur as power for tools and equipment used on-site; including but not limited to gas generators, air compressors, air handlers and filters, and other typical direct construction energy uses.

The Project elements include equipping of the test hole TH-B2 with a 2 hp motor/pump to supply 19 gpm, which will require energy. Because water consumption patterns will not change as a result of the Project, there will not be a significant change in total energy consumption. Energy consumption (and water production) will increase due to the new treatment facility, which will generate some waste which is not currently generated. The Proposed Project would not conflict with or obstruct a state plan for renewable energy or energy efficiency. The Project would contribute to higher energy efficiency through updates and enhancements of the old and new water system. Potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation would be ***less than significant***

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

Direct and Indirect Effects, Construction and Operation. The Project would not conflict with or obstruct a state for renewable energy or energy efficiency during or upon the completion of construction. The Project elements do not interfere with the Plumas County 2035 General Plan goals and policies surrounding renewable energy or energy efficiency. **No impact** would occur.

3.7 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. 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?; or				
strong seismic ground shaking?; or				
ii) seismic-related ground failure, including liquefaction?; or				
iii) landslides?				
b) Result in substantial soil erosion or loss of topsoil?	☐	☐	☒	☐
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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

3.7.1 REGULATORY SETTING

Federal Laws, Regulations, and Policies

The National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) and creation of the National Earthquake Hazards Reduction Program (NEHRP) established a long-term earthquake risk reduction program to better understand, predict, and mitigate risks associated with seismic events. Four federal agencies are responsible for coordinating activities under NEHRP; U.S. Geological Survey (USGS); National Science Foundation (NSF); Federal Emergency Management Agency (FEMA); and National Institute of Standards and Technology (NIST). Since its inception, NEHRP has shifted its focus from earthquake prediction to hazard reduction. The current program objectives (NEHRP 2018) are as follows:

- Developing effective measures to reduce earthquake hazards;
- Promoting the adoption of earthquake hazard reduction activities by federal, state, and local governments, national building standards and model building code organizations, engineers, architects, building owners, and others who play a role in planning and constructing buildings, bridges, structures, and critical infrastructure or "lifelines";
- Improving the basic understanding of earthquakes and their effects on people and infrastructure through interdisciplinary research involving engineering, natural sciences, and social, economic, and decision sciences; and
- Developing and maintaining the USGS seismic monitoring system (Advanced National Seismic System); the NSF-funded project aimed at improving materials, designs, and construction techniques (George E. Brown Jr. Network for Earthquake Engineering Simulation); and the global earthquake monitoring network (Global Seismic Network).

Implementation of NEHRP objectives is accomplished primarily through original research, publications, and recommendations and guidelines for state, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

State Laws, Regulations, and Policies

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code § 2621 et seq.) was passed to reduce the risk to life and property from surface faulting in California. The Alquist-Priolo Act prohibits construction of most types of structures intended for human occupancy on the surface traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are "sufficiently active" and "well defined." Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code §§ 2690–2699.6) establishes statewide minimum public safety standards for mitigation of earthquake hazards. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other seismic hazards, and cities and counties are required to regulate development within mapped seismic hazard zones. In addition, the act addresses not only seismically induced hazards but also expansive soils, settlement, and slope stability. Under the Seismic Hazards Mapping Act, cities and counties may withhold the development permits for a site within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

California Building Standards Code

Title 24 CCR, also known as the California Building Standards Code (CBC), specifies standards for geologic and seismic hazards other than surface faulting. These codes are administered and updated by the California Building Standards Commission. The CBC specifies criteria for open excavation, seismic design, and load-bearing capacity directly related to construction in California.

Local Laws, Regulations, and Policies

The Plumas County 2035 General Plan (Plumas County 2013) contains goals and policies to protect the public from seismic hazards due to the active and potentially active fault segments, an undetermined number of buried faults occurring with Plumas County.

3.7.2 ENVIRONMENTAL SETTING

The Project is located in northern central Plumas County in the vicinity of the Plumas National Forest in the Sierra Nevada Mountains. The Project area is unevaluated for Alquist Priolo Fault Zones or Traces, Landslide Zones, or Liquefaction Zones by the DOC (DOC 2021). The are no regionally extensive fault trends that control the topography in the Project area (DOC 2021). However, there is an Alquist Priolo Fault Traces known as the Honey Lake Fault Zone approximately 40 miles northeast of the Project area near Honey Lake. The Project does not include any housing, structures, or buildings that would result in risk of life, however the proposed treatment facility and two proposed water tanks could risk property.

3.7.3 DISCUSSION OF IMPACTS

Would the Project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

Direct and Indirect Effects. The Project does not look to build residential or commercial structures that could involve loss, injury, or death to people. The Project's proposed structures (storage tanks and treatment facility building) would not be occupied structures. Water operators and contracted personnel would visit the sites periodically, but would not be present full time. The Project area is within an active seismic area in northern California. However, the Project site is located within the Twain quadrant of the DOC California Earthquake Hazards Zone Application, but the DOC has not evaluated the quadrant area (DOC 2021). It is unknown if the Project site is underlain by active, potentially active, or inactive faults, or within a Alquist-Priolo Earthquake Zone. Therefore, **MM GEO-1** shall be implemented to determine if the Project area is within active, potentially active, or inactive faults, or within a Alquist-Priolo Earthquake Zone. With **MM GEO-1,** the Project would have a ***less than significant impact***.

MITIGATION MEASURE- GEO-1: Prior to earthmoving activities, a certified geotechnical engineer or equivalent, shall preform a final geotechnical evaluation of the soils. The evaluation will follow the requirements of California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2. related to expansive soils and soil conditions. The structural design, tests and inspections, and soils and foundation standards will be in accordance with requirements from California Building Code Title 24, Part, 2, Chapter 16, 17, and 18. The final geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures, including threats from liquefaction, subsidence, lateral spreading, or collapse. The grading and improvement plan for each phase of the project shall be designed in accordance with the recommendations provided in the final geotechnical evaluation.

ii. Strong seismic ground shaking?

Direct and Indirect Effects. As discussed above (a(i)), given the location of the Project, it could be subjected to potential seismic hazards, including rupture, ground shaking, and ground failure. However, the area has not been evaluated. Therefore, **MM GEO-1** shall be implemented to determine if the Project area is within active, potentially active, or inactive faults, or within a Alquist-Priolo Earthquake Zone that would cause seismic ground shaking. With **MM GEO-1,** the Project would have a ***less than significant impact***.

iii. Seismic-related ground failure, including liquefaction?

Direct and Indirect Effects. Seismically-induced liquefaction of soils is a potential geologic hazard, given the proximity of the Honey Lake Fault Zones (DOC 2021). **MM GEO-1** shall be implemented to determine if the Project area is within an area susceptible for ground failure, including liquefaction. With **MM GEO-1**, the Project would have a ***less than significant impact***.

iv. Landslides?

Direct and Indirect Effects. Given the topography of the site there is no indication that landslides would affect the Project. Potential adverse effects, including the risk of loss, injury, or death involving from seismically induced ground rupture, ground shaking, ground failure, or landslides is unknown due to the Project area has not been evaluated. **MM GEO-1** shall be implemented to determine if the Project area could be affected by landslides. With **MM GEO-1,** the Project would have **a *less than significant impact***.

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

Direct and Indirect Effects, Construction and Operations. The Project would not result in permanent substantial soil erosion or the loss of topsoil. Construction activities (trenching and excavation) would result in temporary soil disturbance throughout the Project site. Disturbed soils would be exposed to erosion during construction as soils loosen and become susceptible to the effects of wind and precipitation events. However, the Project's soils have not been evaluated. In order to evaluate the conditions and erosion of the soils, **MM GEO-1** will be implemented. With the implementation of **MM GEO-1**, substantial soil erosion or loss of topsoil 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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Direct and Indirect Effects. The Project site has not been evaluated for geologic units or for soil that is unstable. To determine what lies beneath the Project site **MM GEO-1** will be implemented. With MM GEO-1, a ***less than significant*** impact will occur.

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?

Direct and Indirect Effects. The Proposed Project site has not been evaluated for expansive soils as defined in Table 18-1 B of the Uniform Building Code (1994). To determine what soils are located within the Proposed Project site, **MM GEO-1** will be implemented. With MM GEO-1, a ***less than significant*** impact will occur.

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

Direct and Indirect Effects. The project does not involve the construction of septic tanks or alternative wastewater disposal systems. **No impact** would occur.

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

3.8 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
GREENHOUSE GAS EMISSIONS. Would the Project:				
a) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions?	☐	☐	☐	☒

3.8.1 REGULATORY SETTING

State Laws, Regulations, and Policies

Assembly Bill 32

The California Global Warming Solutions Act (AB 32) was passed in 2006 to limit GHG emissions at the state level. The Act set emissions limits to cut the states GHG emissions from 1990 to 2020 through the annual reporting program of GHG emissions for significant sources (CARB 2018).

Local Laws, Regulations, and Policies

The Plumas County 2035 General Plan (Plumas County 2013) has implemented goals and policies for the reduction of GHG emissions throughout the County under the Conservation & Open Space Element.

3.8.2 ENVIRONMENTAL SETTING

Climate change results from the accumulation in the atmosphere of GHGs, which are produced primarily by the burning of fossil fuels for energy. Because GHGs (carbon dioxide (CO_2), methane (CH_4), and nitrous oxide) persist and mix in the atmosphere, emissions anywhere in the world affect the climate everywhere in the world. GHG emissions are typically reported in terms of carbon dioxide equivalents (CO_2e) which converts all GHGs to an equivalent basis taking into account their global warming potential compared to CO_2.

Anthropogenic (human-caused) emissions of GHGs are widely accepted in the scientific community as contributing to global warming. Temperature increases associated with climate change are expected to adversely affect plant and animal species, cause ocean acidification and sea level rise, affect water supplies, affect agriculture, and harm public health. Global climate change is already affecting ecosystems and societies throughout the world. Climate change adaptation refers to the

efforts undertaken by societies and ecosystems to adjust to and prepare for current and future climate change, thereby reducing vulnerability to those changes. Human adaptation has occurred naturally over history; people move to more suitable living locations, adjust food sources, and more recently, change energy sources. Similarly, plant and animal species also adapt over time to changing conditions; they migrate or alter behaviors in accordance with changing climates, food sources, and predators.

Many national, as well as local and regional, governments are implementing adaptive practices to address changes in climate, as well as planning for expected future impacts from climate change. Some examples of adaptations that are already in practice or under consideration include conserving water and minimizing runoff with climate-appropriate landscaping, capturing excess rainfall to minimize flooding and maintain a constant water supply through dry spells and droughts, protecting valuable resources and infrastructure from flood damage and sea level rise, and using water-efficient appliances. In 2014, the USEPA adopted a Climate Change Adaptation Plan, which identifies vulnerabilities from climate change, and provides guiding principles for adaptation and performance measures, California has an adopted statewide Climate Adaptation Strategy and its update, the Safeguarding California Plan, which combined summarize climate change impacts, recommend adaptation strategies, and make realistic sector-1 specific recommendations for the nine sectors identified in the plans, including water and energy sectors.

From 2019, the transportation sector of the California economy was the largest source of emissions, accounting for approximately 40 percent of the total emissions. Passenger vehicles accounted for more than 70 percent of emissions in the transportation sector. The industrial sector accounted for approximately 21 percent of the total emissions, and emissions from electricity generation were about 15 percent of the total. The rest of the emissions are made up of various sources (CARB 2022).

The NSAQMD controls regulations of air quality in the Project area. The Project is located in Plumas County in a rural place near the unincorporated town of Twain. The area adheres to the County's 2035 General Plan (Plumas County 2013) that contains goals and policies in accordance with NSAQMD to reduce greenhouse gas emissions.

3.8.3 DISCUSSION OF IMPACTS

Would the Project:

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

Direct and Indirect Effects, Construction and Operation. Plumas County provides goals and policies to reduce GHG emissions. The Proposed Project would be consistent with all applicable goals and policies, particularly Goal 7.10 on Climate Change which includes policies 7.10.1 and 7.10.2 (Plumas County 2013). Goal 7.10 states that the County is to address climate change and manage its effect in order to meet or exceed state requirements for reductions in GHG emissions. Policy 7.10.1 states that the County will inventory and monitor GHG emissions consistent with the NSAQMD or state guidelines Policy 7.10.2 states the County shall establish a Climate Action Plan that has strategies for increasing energy, efficiency, carbon sequestration, GHG emissions reductions, and land use/transportation strategies that follow appropriate climate change regulations (e.g. AB 32).

The Proposed Project would not significantly increase the generation of emissions upon completion of construction because water production and distribution operations would be similar to the current operations. The well sites and electrical improvements and replacements of storage tanks could improve distribution operations and potentially reduce the long-term operational emissions, which could result in a slight decrease in GHG emissions over the long term. GHG emissions resulting from construction activities would be short term and minor. The existing and proposed generator, required to provide power to essential water supply facilities during extended grid power outages, will only operate during extended power outages and periodic testing. The operation of the proposed treatment facility, well, and storage tanks will generate approximately one additional vehicle trip per day. Chemical delivery and sludge disposal related to treatment facility operation will generate approximately two additional vehicle trips per month. The Proposed Project would not generate greenhouse gas emissions, either directly or indirectly that would have a significant effect on the environment, and potential impacts from GHG emissions would be **less than significant.**

Direct and Indirect Effects, Construction and Operation.

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

Direct and Indirect Effects. As discussed above, the Project would not generate significant emissions of GHGs and, therefore, the Project would not conflict with the Plumas County General Plan nor NSAQMD in regards to reducing GHG emissions. **No impact** would occur.

3.9 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS. Would the Project:				
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?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?				
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?	☐	☐	☐	☒
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

3.9.1 REGULATORY 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; Occupational Safety and Health Administration (OSHA); California Department of Toxic Substances Control (DTSC); California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA); California Governor's Office of Emergency Services (Cal OES); State Water Resources Control Board (SWRCB); Central Valley Regional Water Quality Control Board (Central Valley RWQCB); and NSAQMD.

Federal Laws, Regulations, and Policies

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also called the Superfund Act; 42 USC § 9601 et seq.) is intended to protect the public and the environment from the effects of past hazardous waste disposal activities and new hazardous material spills. Under CERCLA, USEPA has the authority to seek the parties responsible for hazardous materials releases and to ensure their cooperation in site remediation. CERCLA also provides federal funding (through the "Superfund") for the remediation of hazardous materials contamination. The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499) amends some provisions of CERCLA and provides for a Community Right-to-Know program.

The California Department of Toxic (DTSC) is responsible for implementing the RCRA program as well as California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency (CUPA) program, the California

Environmental Protection Agency (Cal/EPA) has in turn delegated enforcement authority to the County of Los Angeles (County) for state law regulating hazardous waste producers or generators.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (RCRA; 42 USC § 6901 et seq.), as amended by the Hazardous and Solid Waste Amendments of 1984, is the primary federal law for the regulation of solid waste and hazardous waste in the United States. These laws provide for the "cradle-to-grave" regulation of hazardous wastes, including generation, transportation, treatment, storage, and disposal. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed of.

USEPA has primary responsibility for implementing RCRA, but individual states are encouraged to seek authorization to implement some or all RCRA provisions. California received authority to implement the RCRA program in August 1992. DTSC is responsible for implementing the RCRA program in California, in addition to California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law.

Spill Prevention, Control, and Countermeasure Rule

USEPA's Spill Prevention, Control, and Countermeasure (SPCC) Rule (40 CFR, Part 112) apply to facilities with a single above-ground storage tank (AST) with a storage capacity greater than 660 gallons, or multiple tanks with a combined capacity greater than 1,320 gallons. The rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans.

Occupational Safety and Health Administration

OSHA is responsible at the federal level for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA), also known as SARA Title III, was enacted in October 1986. This law requires any infrastructure at the state and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. EPCRA Sections 301 through 312 are administered by EPA's Office of Emergency Management. EPA's Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, SARA Title III is implemented through CalARP.

State Laws, Regulations, and Policies

Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65

The Safe Drinking Water and Toxic Enforcement Act of 1986, more commonly known as Proposition 65, protects the state's drinking water sources from contamination with chemicals known to cause cancer, birth defects, or other reproductive harm. Proposition 65 also requires businesses to inform the public about exposure to such chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. In accordance with Proposition 65, the California Governor's Office publishes, at least annually, a list of such chemicals. The Office of Environmental Health Hazard Assessment (OEHHA), an agency under the California Environmental Protection Agency (CalEPA), is the Lead Agency for implementation of the Proposition 65 program. Proposition 65 is enforced through the California Attorney General's Office; however, district and city attorneys and any individual acting in the public interest may also file a lawsuit against a business alleged to be in violation of Proposition 65 regulations.

California Occupational Safety and Health Administration

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in California. Cal/OSHA regulations pertaining to the use of hazardous materials in the workplace (CCR Title 8) include requirements for safety training, availability of safety equipment, accident and illness prevention programs, warnings about exposure to hazardous substances, and preparation of emergency action and fire prevention plans. Hazard communication program regulations that are enforced by Cal/OSHA require workplaces to maintain procedures for identifying and labeling hazardous substances, inform workers about the hazards associated with hazardous substances and their handling, and prepare health and safety plans to protect workers at hazardous waste sites. Employers also must make material safety data sheets available to employees and document employee information and training programs. In addition, Cal/OSHA has established maximum permissible radiofrequency (RF) radiation exposure limits for workers (Title 8 CCR § 5085(b)) and requires warning signs where RF radiation may exceed the specified limits (Title 8 CCR § 5085(c)).

Cal/OSHA's Lead in Construction Standard is contained in Title 8, Section 1532.1 of the California Code of Regulations. The regulations address all of the following areas: permissible exposure limits (PELs); exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection (MRP); employee information, training, and certification; signage; record keeping; monitoring; and agency notification.

California Accidental Release Prevention

The purpose of the California Accidental Release Prevention (CalARP) program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. In accordance with this program, businesses that handle more than a threshold quantity of regulated substance are required to develop a risk management plan (RMP). This RMP must provide a detailed analysis of potential risk factors and associated mitigation measures that can be implemented to reduce accident potential. Certified Unified Program Agencies (CUPAs) implement the CalARP program through review of RMPs, facility inspections, and public access to information that is not confidential or trade secret.

California Health and Safety Code and Code of Regulations

California Health and Safety Code Chapter 6.95 and 19 California Code of Regulations Section 2729 set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on site. A business that uses hazardous materials or a mixture containing hazardous materials must establish and implement a business plan if the hazardous material is handled in certain quantities.

State Asbestos-Containing Materials (ACM) Regulations

State-level agencies, in conjunction with the USEPA and OSHA, regulate removal, abatement, and transport procedures for asbestos-containing materials. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations and medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure. Finally, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos.

California Building Code

The State of California provided a minimum standard for building design through the 2010 California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations (CCR). The 2010 CBC is based on the 1997 Uniform Building Code, but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBC. Typical fire safety requirements of the CBC include: the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

California Fire Code (2010)

California Code of Regulations, Title 24, also known as the California Building Standards Code, contains the California Fire Code (CFC), included as Part 9 of that title. Updated every three years, the CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. The Plumas County Fire Districts (local, private, federal) provide fire protection services for all of Plumas County (Project Area) and as such, implements and enforces the CFC in the Project Area.

Local Laws, Regulations, and Policies

California Certified Unified Program Agencies

CalEPA oversees California's Unified Program through California Certified Unified Program Agencies (CUPA). The program protects Californians from hazardous waste and hazardous materials by ensuring local regulatory agencies consistently apply statewide standards when they issue permits, conduct inspections and engage in enforcement activities. The Unified Program is a consolidation of multiple environmental and emergency management programs.

The Plumas County Environmental Health Department is the Certified Unified Program Agency (CUPA) for the Project area. The Plumas County CUPA has jurisdiction of all unincorporated and incorporated areas of the County.

3.9.2 ENVIRONMENTAL SETTING

The Project does not expect to generate any reportable quantities of hazardous materials. According to the DTSC mapping tool EnviroStor, there are no active hazardous waste clean-up sites within the 10,000 feet of the Project area (DTSC 2022). There are two cases of closed cleanup programs for an oil pond and tank line spill in Keddie approximately 7 miles east of the Project and another case closed cleanup program for a diesel spill 5 miles west of the Project (DTSC 2022). There are no active or inactive cleanup sites or permitted sites within 10,000 feet of the Project site (DTSC 2022).

The Project plans to construct a new treatment facility which will include treatment units utilizing coagulation and filtration technology. Chemicals to be utilized in the treatment process for the removal of arsenic, iron, and manganese will include a coagulant (ferric chloride, $FeCl_3$, or approximate equivalent). Liquid sodium hypochlorite will be utilized for disinfection purposes. These materials will purchased in bulk from a regional supplier and delivered to the treatment facility building approximately monthly. Ferric chloride is a corrosive substance that will be stored at the treatment building in a non-metallic vessel with secondary containment. Sodium hypochlorite (12.5% bleach, NSF 60 approved) will be transported and stored in a plastic tub.

Liquid sludge waste will be produced from the filter and coagulation treatment. Based on laboratory testing, the liquid sludge was determined as non-hazardous and may be disposed of as non-hazardous (PER Draft 2022). The liquid sludge and backwash water will be placed in a 600-gallon holding tank at the treatment facility building, where the sludge can settle, and the backwash water can be reclaimed (PER Draft 2022). It is estimated that the treatment system will produce approximately 397 gallons of non-dewatered sludge per month (PER Draft 2022). The sludge can be disposed of at a nearby waste management (WM) site. The closest WM site is located in Quincy, approximately 16 miles from the Project site.

3.9.3 DISCUSSION OF IMPACTS

Would the Project:

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

Direct and Indirect Effects, Construction and Operation. As discussed above in Section 3.9.2, the Project will produce liquid sludge from backwash treatment, but laboratory testing has determined the sludge non-hazardous. The sludge will need to be transported approximately monthly, but since the sludge is deemed non-hazardous will not expose the public or environment to a significant hazard.

During, construction would involve use of toxic or hazardous substances typical for construction related activities (e.g., oil, vehicle fuels, construction equipment, hydraulic fluids, and solvents) which could result in exposure to the public or the environment in the event of a spill or leak. **MM HAZ-1** is proposed to minimize potential impacts during construction. With this MM in place, the Proposed Project is expected to have no significant direct or indirect effect on hazards and hazardous materials. Upon completion of the Proposed Project, operations would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. With the implementation of **MM HAZ-1**, a **less than significant impact** would occur.

> **Mitigation Measure HAZ-1**: Halt construction work if potentially hazardous materials are encountered. All construction contractors shall immediately stop all surface or subsurface activities in the event that potentially hazardous materials are encountered, an odor is identified, or considerably stained soil is visible. Contractors shall follow all applicable local, state, and federal regulations regarding discovery, response, disposal, and remediation for hazardous materials encountered during the construction process. These requirements shall be included in the contractor specifications. If any hazardous materials, waste sites, or vapor intrusion risks are identified prior to or during construction, a qualified professional, in consultation with appropriate regulatory agencies, will develop and implement a plan to remediate the contamination and properly dispose of the contaminated material. If material imports are proposed, the contractor shall furnish FRCCSD the appropriate documentation certifying that the imported materials are free of contamination.

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?

Direct and Indirect Effects, Construction and Operation. As discussed above in Section 3.9.2, the Project will produce liquid sludge from backwash treatment, but laboratory testing has determined the sludge non-hazardous. The sludge will need to be transported approximately monthly, but since the sludge is deemed non-hazardous will not expose the public or environment to a significant hazard.

The Project construction would involve use of toxic or hazardous substances typical for construction related activities (e.g., oil, vehicle fuels, construction equipment, hydraulic fluids, and solvents) which could result in exposure to the public or the environment in the event of a spill or leak. As such,

there is the possibility of accidental releases (e.g., spilling of hydraulic fluid or diesel fuel from construction maintenance activities) during pipeline installation. **MM HAZ-1** is proposed to minimize potential impacts. With this MM in place, the Project is expected to have a ***less than significant impact*** on hazards and hazardous materials.

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

Direct and Indirect Effects. There is no existing or proposed school within one-quarter mile of the Project. Quincy Elementary School and Quincy Jr./Snr. High School, owned and maintained by the Plumas County Unified School District, is approximately 16 southeast of the Project. **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?

Direct and Indirect Effects. The Project is not 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. The Project is expected to have **no impact** on hazards and hazardous materials.

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?

Direct and Indirect Effects. No public airports are located in the vicinity of the project. The closest airport is located approximately 16 miles southeast (Quincy-Gansner Spanish Creek Airfeild-201). **No impact** would occur relative to this issue.

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

Direct and Indirect Effects. During construction, the Project could potentially impart or physically interfere with an adopted emergency response plan or emergency evacuation plan. The trenching for the distribution system would temporarily impair traffic on SR-70 as vehicles enter and exit the site and on Mill Creek and Riverview Lane. If deemed necessary by the FRCCSD, prior to construction, they will develop and implement a traffic control plan in accordance with the County. After the completion of the Project, the operations would return to similar footprint and would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. A **less than significant impact** would occur relative to this issue.

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

Direct and Indirect Effects. The Project is located within an area within a High Fire Hazard Severity Zone (FHZS) (OSFM 2022). The Project does not include construction of residential or commercial property that could potential exposure of people or structures, either directly or indirectly, to a

significant risk of loss, injury or death involving wildland fires. The Project will have a similar footprint of structures except the construction of a new building around the treatment system and the two new storage tanks. These new structures would not expose people, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. **A less than significant impact** would occur relative to this issue.

3.10 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY. Would the Project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
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?; or	☐	☒	☐	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?; or	☐	☒	☐	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?; or	☐	☒	☐	☐
iv) impede or redirect flood flows?	☐	☒	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐

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

3.10.1 REGULATORY SETTING

Federal Laws, Regulations, and Policies

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The key sections pertaining to water quality regulation for the Project are CWA § 303 and § 402.

Section 303(d) - Listing of Impaired Water Bodies

Under CWA § 303(d), states are required to identify "impaired water bodies" (those not meeting established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for development of control plans to improve water quality. United States Environmental Protection Agency (USEPA) then approves the state's recommended list of impaired waters or adds and/or removes water bodies.

Section 402 - National Pollutant Discharge Elimination System (NPDES) Permits for Stormwater Discharge

CWA § 402 regulates construction-related stormwater discharges to surface waters through the NPDES. The NPDES is officially administered by USEPA. In California, USEPA has delegated its authority to the California State Water Resources Control Board (SWRCB); the SWRCB in turn delegates implementation responsibility to the nine Regional Water Quality Control Boards (RWQCB), as discussed with regard to the Porter-Cologne Water Quality Control Act below.

Under the Statewide General Construction Activity permit, discharges of stormwater from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for stormwater discharges or to be covered by the General Permit. Coverage by the General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB and developing and implementing a Storm Water Pollution Prevention Plan (SWPPP). Each applicant under the General Construction Activity Permit must ensure that a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must list BMPs implemented on the construction site to protect stormwater runoff, and must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a monitoring plan if the site discharges directly to a water body listed on the State's 303(d) list of impaired waters

Municipal Separate Stormwater Sewer System (MS4) Permitting Program

The SWRCB regulates stormwater discharges from MS4s through its Municipal Storm Water Permitting Program. Permits are issued under two phases depending on the size of the urbanized area/municipality. Phase I MS4 permits are issued for medium (population between 100,000 and 250,000 people) and large (population of 250,000 people or more) municipalities, and are often issued to a group of co-permittees within a metropolitan area. Phase I permits have been issued since 1990. In 2003, the SWRCB issued the first statewide Phase II MS4 General Permit, which applies to smaller municipalities (generally population less than 100,000 but greater than 50,000, or as specified by SWRCB).

Federal Emergency Management Agency

FEMA produces flood insurance rate maps that identify special flood hazard areas. The maps further classify these areas into "zones" that broadly characterize the potential risk of an area being inundated by a 100-year or 500-year flood in any given year.

Wild and Scenic Rivers Act

In 1968, Congress created the National Wild and Scenic Rivers System Act to designate and preserve certain rivers in a free-flowing condition for the enjoyment of present and future generations. Designated wild and scenic rivers have outstanding natural, cultural, and recreational values and are administered by a federal or state agency. Rivers are classified as wild, scenic, or recreational with the wild classification indicating river areas that are not impounded, only accessible by trail, and have unpolluted waters and essentially primitive watersheds or shorelines. The scenic and recreational classifications indicate rivers with perhaps more development or accessibility and/or past impoundment or diversion.

State Laws, Regulations, and Policies

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (known as the Porter-Cologne Act), passed in 1969, dovetails with the CWA (see discussion of the CWA above). It established the SWRCB and divided the state into nine regions, each overseen by the California Regional Water Quality Control Board (RWQCB). The SWRCB is the primary state agency responsible for protecting the quality of the state's surface water and groundwater supplies. However, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA §§ 401, 402, and 303(d). In general, the SWRCB manages water rights and regulates statewide water quality, whereas the RWQCBs focus on water quality within their respective regions. The Proposed Project is located in the Central Valley RWQCB Region-5 (R-5).

The Porter-Cologne Act requires the RWQCBs to develop water quality control plans (also known as Basin Plans) that designate beneficial uses of California's major surface water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a water body - i.e., the reasons why the water body is considered valuable. Water quality objectives reflect the standards necessary to

protect and support those beneficial uses. Basin Plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met. Under the Porter-Cologne Act, Basin Plans must be updated every 3 years.

Groundwater Ambient Monitoring and Assessment

The Groundwater Ambient Monitoring and Assessment (GAMA) Program is California's comprehensive groundwater quality monitoring program that was created by the SWRCB (State Water Board) in 2000. It was later expanded by Assembly Bill 599 - the Groundwater Quality Monitoring Act of 2001. The main goals of GAMA are to:

- Improve statewide comprehensive groundwater monitoring.
- Increase the availability to the general public of groundwater quality and contamination information.

Senate Bill 1263

New public water systems applicants must prepare a Preliminary Technical Report for review and acceptance by the SWRCB at least 6 months prior to the construction of any water related construction.

Local Laws, Regulations, and Policies

Plumas County Environmental Health Department

The Plumas County Environmental Health Department regulates enforcement as the state certified local primary agency (LPA) by the California Department of Public Health (CDPH) for hydrology and water quality.

Public Water Systems Program

The Public Water System Program ensures safe and potable drinking water to residents in Plumas County (Public Water System Program 2022). The Environmental Health Department also oversees and has authority for small water systems. A public water system is defined as a system that provides potable drinking water that has 15 or more service connections or regularly serves 25 individuals daily for at least 60 days (Public Water System Program 2022). The Project plans work on an existing small community water system (CWS) (PWS No. 3200078). A CWS is defined as a system that supplies water the same population year-round and serves at least 25 people at their primary residences or 15 residences that are primary residences (e.g. municipalities, mobile home park, sub-divisions) (Public Water System Program 2022). The Public Water System Program has water system application, domestic supply application checklist, and Bacteriological Sample Siting Plan (BSSP) (Public Water System Program 2022).

Water Quality Protection Program

The Environmental Health Department oversees and administers the Water Quality Protection Program. The program protects and ensures the quality of groundwater. The program activities include monitoring quality of select aquifers and regulation of various drilling and boring projects. The program is in charge of water well construction applications.

Upper Feather River Watershed

The Project is located in the Upper Feather River (UFR) Watershed. The UFR is also part of the UFR Integrated Regional Water Management (IRWM) program. The UFR IRWM program is stakeholder drive collaboration and interested partners in the headwaters of the Feather River (UFR Watershed 2022).

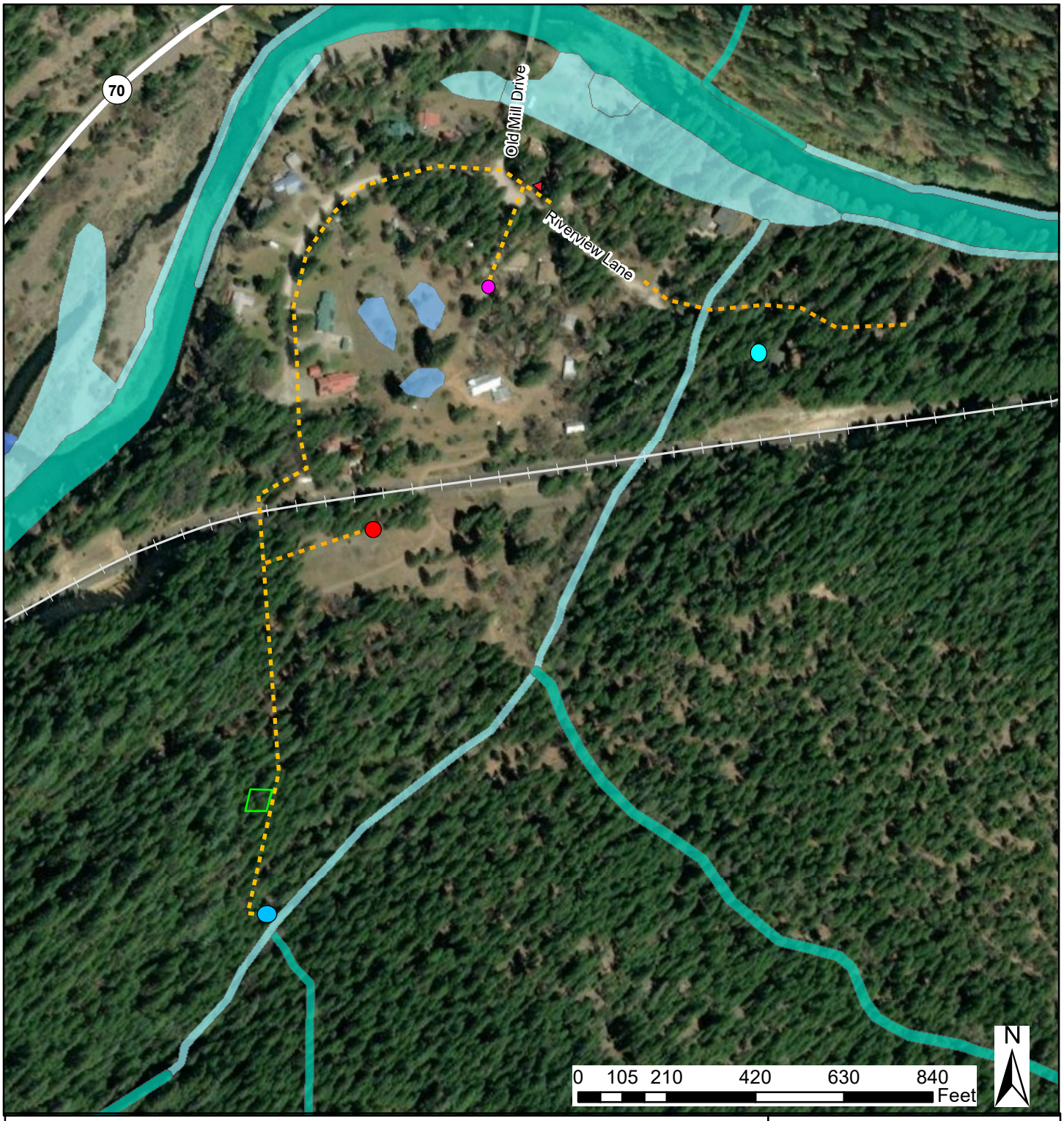
Plumas County General Plan

The Plumas County 2035 General Plan (Plumas County 2013) contains and goals and policies to regulate the hydrology and water quality of the County.

3.10.2 ENVIRONMENTAL SETTING

The Project is located adjacent to the Feather River (Figure 2). According to the United States Fish and Wildlife Service's (USFWS) National Inventory of Wetlands, the Proposed Project does have wetlands located nearby (Figure 3). Riverine, freshwater ponds, Freshwater Forested/Shrub Wetlands, and Freshwater Emergent Wetlands are located near or in the Project site (Figure 3) (USFWS 2022). A flood map search for Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) confirms that the Project is located in panel ID number 06063C0625E (Figure 4). The panel confirms the Project area has been mapped by FEMA for flood zone hazards, and the Project area is located in a Zone A Special Flood Hazard Area (FEMA 2008). Zone A is defined as a zone without base flood elevation (BFE) (FEMA 2008). Plumas County also has no flood zone hazard maps available for this area. Additionally, the Proposed Project area is not situated over a U.S. Environmental Protection Agency (USEPA) sole source aquifer (USEPA 2022).

The OMRWS serves 23 residential service connections with a population of approximately 40 residents. The OMRWS currently has only one active well (Well No.1) that was drilled approximately 14 years ago. There are bacteriological issues and California Regulatory issues that the Project will address. The Project plans to install a nearly new potable water system. The Project elements include equipping test hole TH-B2 to a well along with the construction of a new treatment facility (see section 1.4). The Project will install a new distribution system, transmission lines, water meters, and two new storage tanks (see section 1.4). This Project will provide potable water through the nearly new water system to the existing service connections which will resolve water quality violations of the regulations of the State of California and the County's Environmental Health Department, and will address storage requirements per NFPA Standard 1142. The old system will be utilized as transportation of non-potable water for irrigation of outdoor spaces and as a backup supply for the potable system.



Legend

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- California Rail Network
- Freshwater Pond
- Lake
- Riverine
- Fire Hydrant
- Blowoff Valve
- Storage Tank
- Steel Pipes
- Well No.1
- Chlorinator Building

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community,HERE, GARMIN, USFWS, NSST,EPA, Gamin, USGS, EPA,NPS, CDTP

N V 5
1 W DEER VALLEY ROAD
BUILDING 2, SUITE 305
PHOENIX, ARIZONA 85027
Tel: 623.374.6637 Fax: 623.738.3690

WETLAND MAP

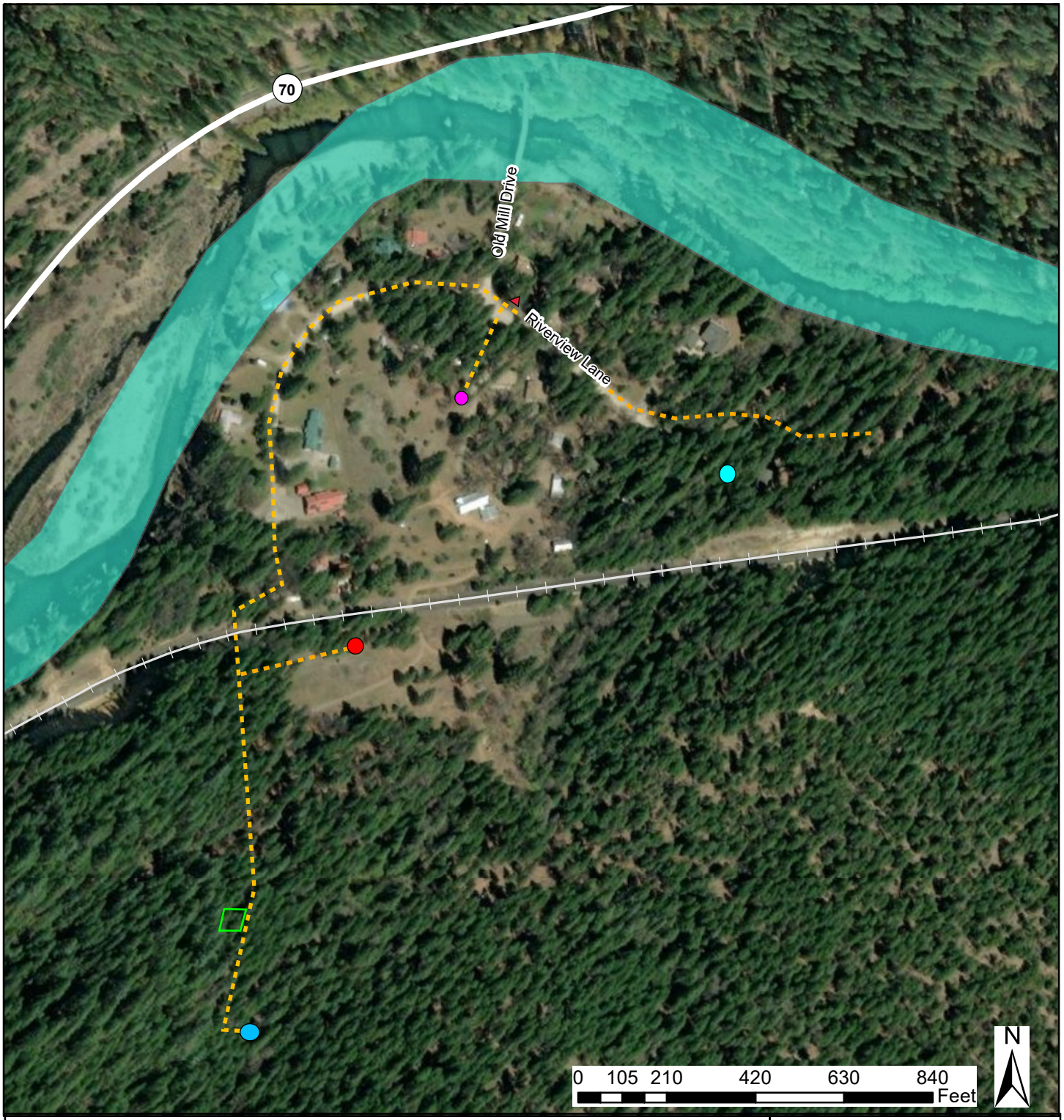
INTIAL STUDY/
MITIGATED NEGATIVE DECLARATION

FIGURE 3

FOR:
FEATHER RIVER CANYON COMMUNITY SERVICE DISTRICT

DES: LAB	DR: LAB	CHK: MM
PROJECT NO. 226117-0000132.07	DATE: 9/27/2022	SHT 1 OF 1

Document Path: N:\226117-0000132.07 - Feather River Canyon Community Services District_FRCCSD\2.0_Technical Information\2.10_GIS



Legend

Special Flood Hazard Area
Zone A
California Rail Network
Fire Hydrant
Storage Tank
Blowoff Valve
Well No.1
Test hole TH-B2
Steel Pipelines
Chlorinator Building

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, FEMA, USDA Farm Service Agency

NV5
1 W DEER VALLEY ROAD
BUILDING 2, SUITE 305
PHOENIX, ARIZONA 85027
Tel: 623.374.6637 Fax: 623.738.3690

FLOODPLAIN MAP

INTIAL STUDY/
MITIGATED NEGATIVE DECLARATION

FIGURE 4

PROJECT NO. 226117-0000132.07 | DATE: 9/27/2022

FOR:
FEATHER RIVER CANYON COMMUNITY SERVICE DISTRICT

DES: LAB | DR: LAB | CHK: MM

SHT 1 OF 1

Document Path: N:\226117-0000132.07 - Feather River Canyon Community Services District_FRCCSD\2.0_Technical Information\2.10_GIS

3.10.3 DISCUSSION OF IMPACTS

Would the Project:

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

Direct and Indirect Effects, Construction and Operation. The Project aims to address concentrations of arsenic, manganese, and iron that exceed the maximum contaminant level (MCL) set by the State of California and the federal government and other California Code of Regulations (CCR). In 2014, the OMRWS received an inspection report from Plumas County Environmental Health Department that the OMRWS was not addressing MCLs for iron and manganese, which are in violation of CCR, Title 22, Section 64449. In addition, as mentioned in the Project Background (Section 1.2), the OMRWS is in violation of CCR, Title 22, Sections 64554(a) and 64554(c) for storage capacity and source capacity, respectively. The NFPA Standard requires a fire storage volume of 60,000 gallons, which OMRWS cannot provide in addition to the maximum day water system demand volume,. Advancing the Project will address the deficiencies related to MCLs and will also address compliance mandates from the State of California and the NFPA. During construction, there is potential for contaminants to affect surface or groundwater quality (fuels, sediments, and debris). Therefore, **MM HWQ-1** is proposed to minimize potential impacts. With this mitigation measure in place, the Proposed Project is expected to have no significant direct or indirect effect on surface or groundwater quality during construction. Upon completion of the Project, no impact on surface or groundwater quality would result from normal operations. The Project would have a **less than significant impact** with implementation of **MM HWQ-1**.

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

Direct and Indirect Effects, Construction and Operation. The Project would not decrease groundwater supplies or interfere substantially with groundwater recharge. The Project aims to improve drinking water quality and supply source redundancy for existing OMRWS service connections, address the State Regulatory compliance, and NFPA storage volume standards. The total volume of water extracted from groundwater will insignificantly change as a result of the Project. The Project would obtain water from the existing Well No. 1 for non-potable purposes and potable drinking water will come from a new, redundant water source (test hole TH-B2). Groundwater extraction patterns will not change as a result of this Project. Test hole TH-B2 will be equipped and permitted by Plumas County Environmental Health Department as part of OMRWS's water supply permit amendment. **A less than significant impact** would occur relative to this issue.

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;

Direct and Indirect Effects, Construction and Operation. The Project construction could cause temporary disturbance on or off-site, but with **MM HWQ-1**, would limit erosion or siltation on or off-

site to **less than significant** levels. Upon completion, the Project would return to a similar footprint and would not contribute to erosion or siltation on or off-site.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Direct and Indirect Effects, Construction and Operation. During construction, there is potential for construction to increase rate or amount of surface runoff, but with **MM HWQ-1**, would limit surface water runoff to **less than significant** levels. Upon completion, the Project would return to a similar footprint and would not contribute to increasing rates of surface runoff which could 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 sources of polluted runoff;

Direct and Indirect Effects, Construction and Operation. During construction, the Project could create polluted runoff due to construction equipment and sediments. However, with **MM HWQ-1**, there would be limited polluted runoff. Upon completion, the Project would return to a similar footprint and would not contribute to exceeding runoff or polluted runoff. The impact would be **less than significant**.

iv. or impede or redirect flood flows?

Direct and Indirect Effects, Construction and Operation. During construction, there could be impediment or redirection of flood flows, however with implementation of MM HWQ-1, there would be no impediment of flood flows. Upon completion of the Project, the footprint of impervious surface at the Project site will increase slightly due to the construction of a new treatment facility/building, equipping of test well TH-B2, and the footprint of the new storage tanks, but will not redirect or impede flood flows. With implementation of **MM HWQ-1** the Project would have a **less than significant impact** relative to this issue.

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

Direct and Indirect Effects. As discussed in Section 3.10.2, a flood map search for Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel ID number 06063C0625E shows the Project area is located in a Zone A Special Flood Hazard Area (FEMA 2008). Zone A is defined as a zone without base flood elevation (BFE) (FEMA 2008). The Project is well inland and no threat for tsunami is present. There are no nearby bodies of water that could produce seiche. The closest upgradient body of water is Lake Almanor approximately 13 miles north and Butte Valley Reservoir approximately 8 miles north of the Project and both are hydrologically disconnected from the site. **A less than significant impact** would occur relative to this issue.

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

Direct and Indirect Effects. The region of the RWQCB is the Central Valley Region (R-5) which covers the Project area. The Project would not conflict with or obstruct implementation of the Water Quality

Control Plan for the Central Valley Region (RWQCB 2022). According to the Department of Water Resources (DWR) the Project site is not located in a groundwater basin (DWR 2022).

The Upper Feather River Integrated Regional Water Management Plan notes primary objectives of improving water quality and water supply reliability, including for disadvantaged communities. The proposed Project aims to meet those objectives.

Therefore, there are no direct or indirect effects of the Project that would conflict with a potential sustainable groundwater management plan (SGMP) or groundwater sustainability agency/plans. **No impact** would occur relative to this issue.

MITIGATION MEASURE HWQ-1: The FRCCSD will assess the receiving water vulnerability and develop a Stormwater Pollution Prevention Plan (SWPPP) that complies with the requirements of the NPDES General Construction Permit (Order 2009-0009-DWQ as amended by 2010 0014-DWQ and 2012-006-DWQ) based on the project-specific risk level. The SWPPP shall identify specific actions and best management practices (BMPs) relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions, local jurisdictional requirements and shall be reviewed and approved by FRCCSD prior to commencement of work.

The SWPPP shall be prepared by a qualified SWPPP developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (e.g., inadvertent petroleum release) is required to determine the adequacy of the measure.

The SWPPP shall also address other project-specific water quality threats, as required for individual improvements including but not limited to, temporary dewatering, hydrostatic testing, well drilling and development, and other resource permits as required under the Federal Clean Water Act, County Grading Ordnance, and State Fish and Game Code, as applicable. Construction and post-construction BMPs will be designed to avoid the creation of standing water and potential mosquito breeding habitats.

3.11 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
LAND USE AND PLANNING. Would the Project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a 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?	☐	☐	☒	☐

3.11.1 REGULATORY SETTING

Federal Laws, Regulations, and Policies

Federal Land Policy and Management Act of 1976

Public land managed by the US Department of the Interior, Bureau of Land Management (BLM) is regulated under the Federal Land Policy and Management Act of 1976 (FLPMA). Under this regulation, the BLM develop Resource Management Plans (RMPs) that direct BLM District Offices in the sustainable, best use of the biological resources of the public land. For the Potential Project, nearby public land falls under the jurisdiction of the BLM Northern California District Office (Eagle Lake Field Office) (BLM 2022).

Local Laws, Regulations, and Policies

The Plumas County 2035 General Plan (Plumas County 2013) contains goals and policies to administer the land use of the County, including zoning of land for such purposes.

3.11.2 ENVIRONMENTAL SETTING

The Project is located on land in authorized ROW easement grant for the Bureau of Land Management (BLM 2022). Most of the land surrounding the Project area is land classified by the BLM under the Taylor Grazing Act (BLM 2022). The proposed use of land for the Project is compatible with the Plumas County 2035 General Plan (General Plan 2013).

3.11.3 DISCUSSION OF IMPACTS

Would the Proposed Project:

a) Physically divide an established community?

Direct and Indirect Effects. The Project would not physically divide an established community. The Proposed Project area is a lightly populated, unincorporated, rural place near the unincorporated town of Twain. Construction would cause minimal disruption to the community and the Project would have no impact after completion. The Proposed Project will consist of enhancements to the old water system and additions for a new potable water system. The location and footprint of existing and proposed facilities will be slightly larger but will not divide an established community. **No impact** would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Direct and Indirect Effects. The Project location is zoned by Plumas County as Secondary Suburban (S-3), General Forest (GF), and Rural-20 acre (R-20) (Plumas County Zoning 2022). The Project will be consistent with the Plumas County 2035 General Plan (Plumas County 2013) when the FRCCSD applies for a Special Use Permit. The Project will have a slightly larger impact on the community characteristics, due to the addition of Project elements such as two new storage tanks and a new treatment system. The land needed for the new infrastructure will require the FRCCSD to obtain new easement(s) or purchase a parcel from the Old Mill Ranch HOA for the building to house TH-B2 and the treatment facility (APN 002-451-008, and an easement for access and facilities on APN 002-430-011. Additionally, the transmission and distribution lines that will go underneath the railroad will require the FRCCSD to obtain a permit from the Union Pacific Railroad (UPRR).

The proposed uses of two parcels for the project (APN 002-451-008 for treatment facility building and APN 002-430-011 for new storage tanks) do not comport with their respective zoning. The proposed uses of these parcels are generally considered utility (storage tanks, wells, treatment building). The treatment facility building site is zoned S-3 (Secondary Suburban Zone), which generally allows low density residential use, and does not allow utility use. The parcel on which the new storage tanks would be located is zoned R-20 (rural Zone), which generally allows low density residential use. The proposed utility uses for these parcels can be authorized following the issuance of a Special Use Permit by Plumas County. FRCCSD will apply to Plumas County for a Special Use Permit for the proposed uses at these parcels.

The pipelines and storage tanks will not impact its respective parcel's overall use. This parcel comprises 91 acres, of which the storage tank site will occupy less than a half acre. The proposed treatment facility building will be located on a currently vacant parcel. The proposed building will be have a size comparable to modest residence in the area, and will have vehicle trips and noise generation less impactful than a typical residence in the area. Therefore, a **less than significant impact** would occur.

3.12 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
MINERAL RESOURCES. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.12.1 REGULATORY SETTING

State Laws, Regulations, and Policies

California Surface Mining and Reclamation Act

The federal Surface Mining and Reclamation Control Act of 1975 (SMACRA) requires that the State Mining and Geology Board identify, map, and classify land throughout California that contain regionally significant mineral resources. Designations of land areas are assigned by the CDC and California Geological Survey (CGS) following analysis of geologic reports and maps, field investigations, and using information about the locations of active sand and gravel mining operations (Miller 1993). Local jurisdictions are required to enact planning procedures to guide mineral conservation and extraction at particular sites, and to incorporate mineral resource management policies into their general plans.

Department of Conservation, Division of Oil, Gas & Geothermal Resources (DOGGR)

The DOGGR oversees the drilling, operation, maintenance, and closing of oil, natural gas, and geothermal wells. The division is intended to protect the environment, prevent pollution, and ensure public safety.

Local Laws, Regulations, and Policies

To manage mining resources, the County has incorporated mineral resource information into the Plumas County 2035 General Plan (Plumas County 2013). The General Plan contains goal 7.4 which encourages the production and conservations minerals and includes policies for this goal (Plumas County 2013). Locations of mineral resources are not identified or made available by the County. Oil and gas resources have not been identified in the General Plan.

3.12.2 ENVIRONMENTAL SETTING

The Proposed Project sites are zoned by the Plumas County as Secondary Suburban (S-3), General Forest (GF), and Rural-20 acre (R-20) (Plumas County Zoning 2013). As mentioned above, the County has not identified or made available areas of mineral resources. The FRCCSD will check with the Plumas County Planning Department to ensure the Project site is not located in a mineral resource zone.

3.12.3 DISCUSSION OF IMPACTS

Would the Proposed 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?

Direct and Indirect Effects. The Project site is not located on known mineral resources that would be of value to the region. **No impact** would occur.

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?

Direct and Indirect Effects. The Plumas County 2035 General Plan contains goals and policies surrounding the mineral resources. Particularly, Goal 7.4 Mineral Resources and policies 7.41-7.4.7. Goal 7.4 states that the County will encourage production and conservation of minerals while preserving recreation, water resources, air quality, agriculture and timber resources, aesthetics and wildlife and fisheries habitat protection (Plumas County 2013). The Project adheres to the goals and policies of the County's General Plan. However, as stated above, there are no known locally-important mineral resources in the Project area. **No impact** would occur.

3.13 NOISE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE. Would the Project:				
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?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

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?	☐	☐	☐	☒

3.13.1 REGULATORY SETTING

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies for construction-related noise and vibration apply to the Proposed Project. However, the Federal Transit Administration (FTA) Guidelines for Construction Vibration in Transit Noise and Vibration Impact Assessment state that for evaluating daytime construction noise impacts in outdoor areas, a noise threshold of 90 decibels A (dBA) equivalent sound level (L_{eq}) should be used for residential areas (FTA 2006).

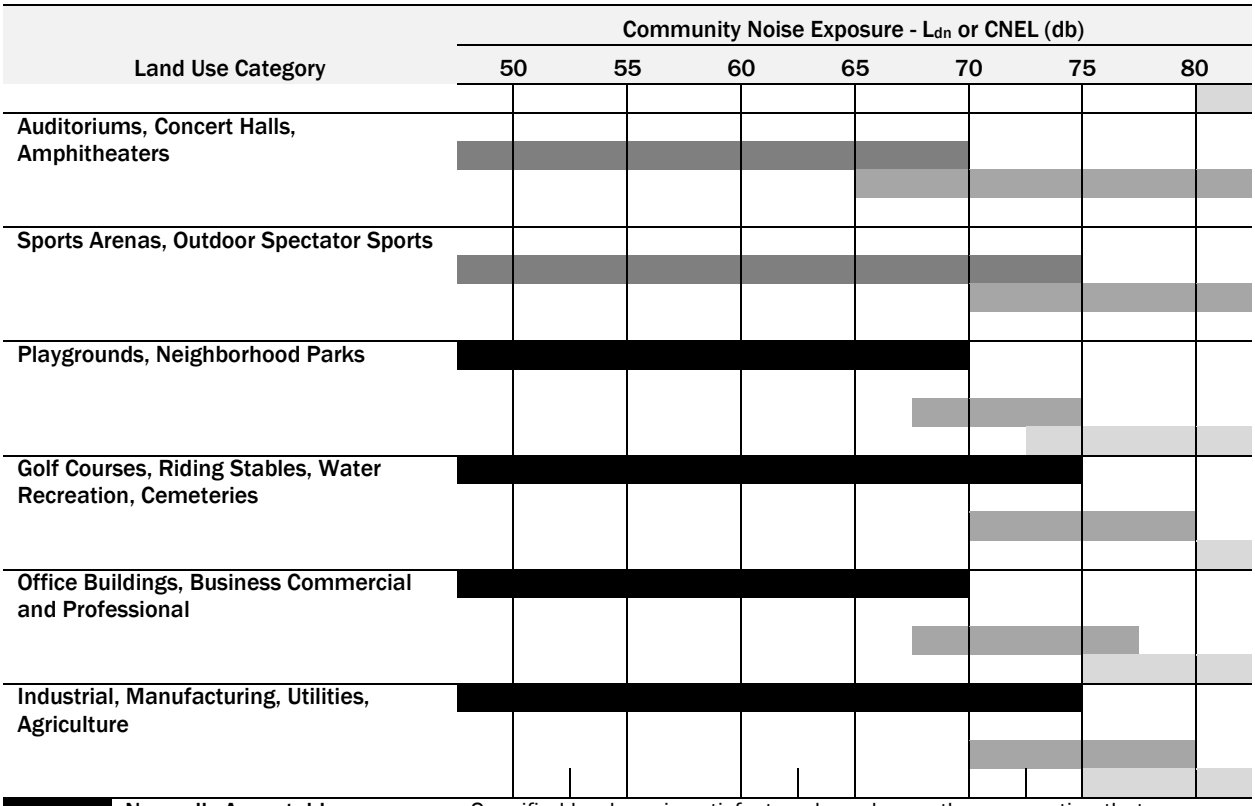
For construction vibration effects, the FTA guidelines use an annoyance threshold of 80 vibration velocity in decibles (V;dB) for infrequent events (fewer than 30 vibration events per day) and a damage threshold of 0.3 inch per second (in/sec) peak particle velocity (PPV) for engineered concrete and masonry structures and 0.12 in/sec PPV for buildings extremely susceptible to vibration damage (FTA 2006).

State Laws, Regulations, and Policies

California requires each local government entity to implement a noise element as part of its general plan. California Administrative Code, Title 4, presents guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The state land use compatibility guidelines are listed in Table 5.

Table 5- State Land Use Compatibility Standards for Community Noise Environment

Land Use Category	Community Noise Exposure - L_{dn} or CNEL (db)						
	50	55	60	65	70	75	80
Residential – Low Density Single Family, Duplex, Mobile Homes							
Residential - Multi-Family							
Transient Lodging – Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							



Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable	New construction or development generally should not be undertaken.

Local Laws, Regulations and Policies

The Plumas County 2035 General Plan (Plumas County 2013) regulates permissible noise levels in the unincorporated area of the Project. The General Plan discusses normally and conditionally acceptable and normally and clearly unacceptable noise exposures (Plumas County 2013). The General Plan also lists the maximum allowable noise exposure for construction noise listed in Table 6.

Table 6. Maximum Allowable Noise Exposure Within Planning Areas-Construction Noise

Land Use Designation	Time Period	Noise Level (dB)	
		L_{eq}	L_{max}
Residential	7 am to 7 pm	55	75
	7 pm to 10 pm	50	65
	10 pm to 7 am	45	60
Commercial and Public Facilities	7 am to 7 pm		90
	7 pm to 7 am		75
Industrial	Anytime		90

Source: Plumas County 2013

3.13.2 ENVIRONMENTAL SETTING

Noise levels generated by a point source decrease at a rate of approximately 6 dBA per doubling of distance from the source. Therefore, if a particular point source generates average noise levels of 89 dBA at 50 feet, L_{eq} would be 83 dBA at 100 feet, 77 dBA at 200 feet, 71 dBA at 400 feet, and so on. This calculated reduction in noise level is based on the loss of energy resulting from the geometric spreading of the sound wave as it leaves the source and travels outward. For example, to characterize noise levels associated with construction activities, it is important to understand the highest level of noise generated by the construction equipment. The Federal Highway Administration (FHWA) Roadway Construction Noise Model produced estimates of the L_{max} of typical construction equipment and provides the noise levels at distances of 50 and 200 feet (FHWA 2006).

Table 7. Typical Noise Levels of Construction Equipment

Equipment Type	Typical Sounds Level at 50 ft (dBA)
Backhoe	80
Bulldozer	85
Compactor	82
Compressor	81
Concrete Mixer	85
Concrete Pump	82
Crane, Derrick	88
Crane, Mobile	83
Loader	85
Pavement Breaker	88
Paver	89
Pile Driver, Impact	101
Pump	76
Roller	74
Truck	88

Source: FHWA 2006

3.13.3 DISCUSSION OF IMPACTS

Would the Project:

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?

Direct Effects, Construction. There are multiple residence in proximity (within approximately 80 feet) to the Project. Most of the residences in the project area will have pipeline construction at the adjoining street (Riverview Lane, Old Mill Drive). The treatment facility building (located on the eastern portion of Riverview Lane) will be located approximately 200' feet from the nearest residence, which is located on an adjoining parcel. Noise impacts associated with construction of the Project would be temporary in nature. Construction would involve equipping of test hole TH-B2, new treatment facility building, new transmission lines, new distribution system, new storage tanks, trenching, pipe installation, backfilling, and repaving activities. The loudest construction activity associated with the Proposed Project would be digging trenches using a backhoe. Caltrans standard specifications provides information that can be considered in determining whether construction would result in adverse noise impacts. The specification states:

- Do not exceed 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Equip an internal combustion engine with the manufacturer-recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler. (Caltrans 2020)

The Caltrans dBA levels are not consistent with the Plumas County 2035 General Plan (Plumas County 2013). Therefore, Mitigation Measure NV-1 shall be implemented, which would reduce any impact due to noise from construction to ***less than significant***.

Direct Effects, Operation. There would be no permanent increase of ambient noise generated by the Project. The Project proposes a submersible constant speed motor/pump to equip test hole TH-B2 and a new treatment facility, which generally are considered not to be noise producing. These facilities will be enclosed in a new building, which would further attenuate noise generation. Intermittent noise generating activities would include the new generator at the treatment facility building (during extended power outages and periodic testing), chemical deliveries to the site, and hauling of waste from the site. These vehicle trips would occur approximately monthly. The water system operator would visit the site approximately daily. Deliveries would occur during normal working hours (generally between 8am and 5pm). Larger noise producing events would occur during well repair/rehabilitation efforts, which would occur approximately every 3-5 years, and may extend beyond the normal working hours. The Proposed Project would result in a slightly increased noise footprint with the new treatment facility operation but would not in excess of the Plumas County General Plan, ***a less than significant impact*** is relative to the issue.

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

Direct and Indirect Effects, Construction and Operation. During construction some amount of temporary groundborne vibration would occur, primarily during excavation. There would be no permanent increase of excessive groundborne vibration or groundborne noise levels generated by the Project upon completion. Implementation of **Mitigation Measure NV-1** would ensure there would

be ***a less than significant direct impact*** due to groundborne vibration or groundborne noise from the Project.

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?

Direct and Indirect Effects. The Proposed Project is not located within the vicinity of a private airstrip or an airport land use plan. The nearest airstrip is 8 miles southeast (Quincy-Gansner Spanish Creek Airfeild- 201). ***No impact*** would occur relative to this issue.

MM NV-1: The Construction Contractor shall demonstrate to the satisfaction of the FRCCSD Project Manager that the following noise control techniques are implemented during the clearing, demolition, grading and construction phases of the Project:

- Heavy equipment repair and contractor staging shall be conducted at sites as far as practical from nearby residences. Construction equipment, including vehicles, generators and compressors, shall be maintained in proper operating condition and shall be equipped with manufacturers' standard noise control devices or better (e.g., mufflers, acoustical lagging, and/or engine enclosures).
- Temporary sound barriers (or curtains), stockpiles of excavated materials, or other effective shielding or enclosure techniques shall be used where construction noise would exceed 90 dBA within less than 50 feet from a noise sensitive receptor.
- Construction work, including on-site equipment maintenance and repair, shall be limited to the hours specified in the County noise ordinance.
- Electrical power shall be supplied from commercial power supply, wherever feasible, in order to avoid or minimize the use of engine-driven generators.
- Electrically powered equipment shall be used instead of pneumatic or internal-combustion powered equipment, where feasible.
- Unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes) shall be prohibited.
- Operating equipment shall be designed to comply with all applicable local, state, and federal noise regulations.
- Construction site and access road speed limits shall be established and enforced during the construction period.
- If lighted traffic control devices are to be located within 500 feet of residences, the devices shall be powered by batteries, solar power, or similar sources, and not by an internal combustion engine.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- No project-related public address or music system shall be audible at any adjacent sensitive receptor.

3.14 POPULATION & HOUSING

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
POPULATION & HOUSING. 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.14.1 REGULATORY SETTING

State Laws, Regulations, and Policies

No federal or state regulations impact this resource.

Local Laws, Regulations, and Policies

The Plumas County General Plan Housing Element (Housing Element 2019) provides goals and policies, and to ensure that County's character and quality of life are available to all residents during the present and future.

3.14.2 ENVIRONMENTAL SETTING

The Project is in a rural place near the town of Twain in Plumas County and is located approximately 11 miles southeast of the town of Quincy. Twain is located in the in central Plumas County. The Project area is on the outer sphere of the town and the land is zoned by Plumas County as Secondary Suburban (S-3), General Forest (GF), and Rural-20 acre (R-20) (Plumas County Zoning 2022). There are scattered rural housing, SR-70, and forest landscape in the Project area.

Housing in unincorporated Plumas County includes,

Unincorporated Plumas County 2018

Population	17,803
Households	7,388
Household Size (Average)	2.06

Source: Housing Element 2019

The demographic composition of Plumas County in 2021 was,

Percent of Race and Hispanic Origin in Plumas County

White alone	90.4
Black or African American alone	1.2
American Indian and Alaska Native alone	3.2
Asian Alone	1.1
Native Hawaiian and Other Pacific Islander alone	0.2
Two or more Races	3.9
Hispanic or Latino	10.3
White Alone, not Hispanic or Latino	82.1

Source: United States Census Bureau 2021

3.14.3 DISCUSSION OF IMPACTS

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)?

Direct and Indirect Impact, Construction and Operation. The Project would not directly induce substantial population growth because it does not involve construction of new residential buildings and businesses, expand roads, or other infrastructure into areas that are not designated for development in the County. The Project may indirectly incentivize limited population growth as the local public water supply would no longer be out of compliance with fire flow storage volume and water supply reliability for the OMRWS. However, this outcome is unlikely. Therefore, a **less than significant impact** would occur.

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

Direct and Indirect Impact, Construction and Operation. The Project site is located on the outer sphere of the town of Twain, which is a rural community along SR-70**.** The Project involves the construction of a new water treatment facility, two storage tanks, well equipping, electrical improvements, new distribution system, transmission lines, and new water meters for the OMRWS. These facilities would the water system infrastructure footprint, but would do so in currently unoccupiedor low density rural residential parcels, Plumas County ROW.. Therefore, it would not displace any existing people or housing that would necessitate the construction of replacement housing elsewhere. **No impact** would occur.

3.15 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES. Would the Project:				
a) Result in substantial adverse impacts associated with the provision or need for new or physically altered public services, the construction of which could cause significant physical environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

3.15.1 REGULATORY SETTING

State Laws, Regulations, and Policies

No federal or state regulations impact this resource.

Local Laws, Regulations, and Policies

The Plumas County 2035 General Plan assures that public services are available to all residents in the County.

3.15.2 ENVIRONMENTAL SETTING

The Project is in a rural place near the town of Twain in Plumas County. The town of Twain is adjacent to rural towns of Belden and Indian Falls. The County of Plumas borders Tehama, Butte, and Yuba Counties to the west; Sierra County to the south; and Shasta and Lassen County to the north. The Project is located in a rural place served by County and local responders.

Plumas County Fire District

The Plumas County Fire Districts include local, private, and federal fire station locations that serve the Project area and other portions of Plumas County (Plumas County Fire Districts 2022). The closet fire stations are Gansner Bar Fire Station governed by the United States Forest Service (USFS)

located at 575 Caribou Road, Belden, CA 95915, approximately 8 miles west of the Proposed Project.

Plumas County Sheriff's Office

Police services are provided to the Project area through the Plumas County Sheriff's Office (Plumas County Sheriff/Coroner 2022). The Plumas County Sheriff's Office is located approximately 8 miles southeast of the Project site at 1400 East Main Street, Quincy, CA 95971.

Plumas Unified School District

The Project area is education served through the Plumas County Office of Education (PCOE) by the Plumas Unified School District. There are four elementary schools, four middle schools/high schools (PCOE 2022). Quincy Elementary School and Quincy Jr./Sr. High School are the closest schools located near the Project area. The schools are located, approximately 11 miles southeast of the Project in the Town of Quincy.

California State Parks

The Project area is located in the Sierra District of the California State Parks (CADPR 2020). The closest state park is Plumas Eureka State Park located approximately 30 miles southeast of the Project area.

Parks and Recreation

Plumas County has no designated department that establishes or oversees parks and recreation in the County. However, in the town of Quincy, approximately 11 miles southeast of the Project area, the Central Plumas Recreation and Park District (CPRPD) has facilities including a park, pool, skate park, and a sports annex (CPRPD 2022).

3.15.3 DISCUSSION OF IMPACTS

Would the Proposed Project:

a) Result in substantial adverse impacts associated with the provision or need for new or physically altered public services, the construction of which could cause significant physical environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services?

Direct and Indirect Impact, Construction and Operation. The Project does not involve residential or commercial development that would generate new population and that would cause an increase in demand for public services and facilities, including fire and police protection, schools, parks, or other public facilities. The Project plans to update and enhance the drinking water infrastructure of the OMRWS to serve potable and non-potable water to its service connections. The fire flow storage capacities and reliability of the water system will increase as a result of the Project and would be a long-term benefit to the OMRWS customers. The Project may indirectly incentivize limited population growth as the local public water supply would no longer be out of compliance regarding bacteriological issues, fire suppression, and water supply reliability. There is possibility for some

disturbance to local roads during construction. If deemed necessary, it is recommended that the FRCCSD, prior to construction, develop and implement a traffic control plan in accordance with Plumas County Department of Public Works. Upon completion of the Proposed Project, there would be **no impact** that would affect public services and or ratio, response, or other performance objectives relative to the issue.

3.16 RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
RECREATION. 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?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.16.1 REGULATORY SETTING

State Laws, Regulations, and Policies

No federal or state regulations impact this resource.

Local Laws, Regulations, and Policies

The Plumas County 2035 General Plan (Plumas County 2013) contains goals and policies that protect and emphasize recreation.

3.16.2 ENVIRONMENTAL SETTING

There are no neighborhood and regional parks or other recreational facilities near the Project. Plumas County has no designated department that establishes or oversees parks and recreation in the County. However, in the town of Quincy, approximately 11 miles southeast of the Project area, the Central Plumas Recreation and Park District (CPRPD) has facilities including a park, pool, skate park, and a sports annex (CPRPD 2022).

3.16.3 DISCUSSION OF IMPACTS

Would the Project:

a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration would occur or be accelerated?
b) Include new recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Direct and Indirect Effects. The Project would not involve residential or commercial development that would generate an increase population. However, there is a possibility for indirect population growth due to reliability and updates of the OMRWS. An increase in use of existing neighborhood and regional parks or other recreational facilities is unlikely. The Project looks to update and enhance the OMRWS to provide non-potable and potable water to its service connections and ensure better stability and fire flow. The Proposed Project would not include recreational facilities or require the construction or expansion of recreational facilities; therefore, the Project will have **no impact** related to recreation.

3.17 TRANSPORTATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
TRANSPORTATION. Would the Project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

3.17.1 REGULATORY SETTING

State Laws, Regulations, and Policies

Caltrans manages the state highway system and ramp interchange intersections. The state agency is also responsible for highway, bridge, and rail transportation planning, construction, and maintenance.

CEQA Guidelines section 15064.3, subdivision (b), specifies the criteria for determining the significance of transportation impacts. Vehicle miles traveled (VMT) is "generally" the best measurement of transportation impacts, thus allowing agencies room to tailor their analyses to include other measures if appropriate. The guidelines describe factors that might indicate whether a project's VMT is less than significant or not and gives examples of projects that might have less-than-significant impacts with respect to VMT, such as projects that would result in decreased VMT.

Local Laws, Regulations, and Policies

Plumas County Regional Transportation Plan

The Plumas County Regional Transportation Plan (RTP) is administered by the Plumas County Transportation Commission (PCTC). The RTP is updated every five years and the goal is to enforce goals and policies related to transportation, assess current and forecast conditions, and deal with financials for transportation projects (Plumas County 2013). The 2020 RTP has six goals surrounding the support, safety, achievement, and promotion surrounding transportation (RTP 2020).

3.17.2 ENVIRONMENTAL SETTING

The Project area is located adjacent to SR-70. Construction will commence on Plumas County ROW in the residential streets Riverview Lane and Mill Creek. The Project would include trenching on these residential streets for a new distribution system and transmission lines. The trench will be approximately 4 to 6 inches wide and 3 inches deep.

3.17.3 DISCUSSION OF IMPACTS

Would the Project:

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

Direct and Indirect Effects, Construction and Operation. The Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Temporary delays during construction might be experienced by traffic along SR-70, as vehicles enter and exit the site, and Mill Creek and Riverview Lane as excavation takes place. However, this would be no more of a burden than normal use of the road by heavy construction in other parts of the region. Upon completion of construction, there is no foreseeable impact to a program, plan, ordinance, or policy surrounding the circulation system,

including transit, roadway, bicycle and pedestrian facilities. ***A less than significant impact*** would occur.

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

Direct and Indirect Impact. The Project is not a transportation project and would not be expected to significantly change or increase VMT in the vicinity. VMTs may increase slightly due to chemical deliveries and sludge hauling, but the two monthly vehicle trip increase would not be significant. ***No impact*** would occur relative to this issue.

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

Direct and Indirect Impact, Operation. The Project is not a transportation project. No facilities other than the electrical utility service and water pipelines system will be constructed underground in the Plumas County ROW roads. The other Project components, including water storage tanks and treatment facility, will not be located on roads. The Project components would not be expected to increase roadway hazards. ***No impact*** would occur relative to this issue.

d) Result in inadequate emergency access?

Direct and Indirect Impact, Construction and Operation. The Project is not a transportation project. No facilities other than the electrical utility service and water pipeline system will be constructed underground in the Plumas County ROW roads. The other Project components, including water storage tanks and treatment facility, will not be located on roads. The Project components would not be expected to increase roadway hazards. However, during construction, there is a possibility for disruption to emergency access due to excavation. If deemed necessary, it is recommended that the FRCCSD, prior to construction, develop and implement a traffic control plan in accordance with the County. A **less than significant** impact would occur relative to this issue.

3.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
TRIBAL CULTURAL RESOURCES. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) 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	☐	☐	☒	☐
b) 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?	☐	☒	☐	☐

3.18.1 REGULATORY SETTING

State Laws, Regulations, and Policies

Assembly Bill 52

Assembly Bill (AB) 52, which was approved in September 2014 and which went into effect on July 1, 2015, requires that state lead agencies consult with any California Native American tribe that is traditionally and culturally affiliated with the geographic area of a project, if so requested by the tribe. The bill, chaptered in Public Resources Code § 21084.2, also specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource (TCR) is a project that may have a significant effect on the environment. TCRs are further defined under Public Resources Code § 21074 as follows:

- A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and
- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as

defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

On September 27, 2022, FRCCSD sent letters via certified mail (United States Postal Service, USPS) to seven tribes offering consultation regarding the proposed Project in accordance with AB52. FRCCSD sent letters to these seven tribes, as these were tribes identified by the Native American Heritage Commission that may have knowledge of cultural resources in the Project area (PaleoWest 2022). The tribes included Susanville Indian Rancheria, Estom Yumeka Maidu Tribe of the Enterprise Rancheria, United Auburn Indian Community of the Auburn Rancheria, Tsi Akim Maidu, Washoe Tribe of Nevada and California, Mooretown Rancheria of Maidu Indians, and the Greenville Rancheria of Maidu Indians. Responses were requested by October 31, 2022.

The USPS confirmed delivery of the September 27, 2022 correspondence for each tribe except for the Tsi Akim Maidu and Estom Yumeka Maidu tribes. USPS returned FRCCSD's mailing to the Tsi Akim Maidu tribe, noting the mailing as undeliverable and that the Tribe had left no forwarding address. FRCCSD attempted telephonic outreach to the Tsi Akim Maidu tribe, but connection was not completed due to the tribe's disconnected telephone. FRCCSD's correspondence to Estom Yumeka Maidu Tribe was not delivered. FRCCSD contacted the tribe by telephone and confirmed the mailing address and sent a follow-up correspondence on October 17, 2022 (see below).

Three responses to FRCCSD's September 27, 2022 outreach were received (United Auburn Indian Community and the Washoe Tribe of Nevada and California). The United Auburn Indian Community wrote that the Project area falls outside of the area of the Tribe's traditional and cultural affiliations. The Washoe Tribe of Nevada and California spoke with FRCCSD's Project Coordinator that it would defer to other tribes (Greenville Rancheria of Maidu Indians) for comment/consultation. The Mooretown Rancheria of Maidu Indians wrote a letter to FRCCSD noting that it did not know of cultural resources in the project area, but requested that FRCCSD contact the Tribe if new information or human remains were discovered.

FRCCSD sent follow-up correspondence on October 17, 2022 via USPS certified mail to the remaining tribes. USPS confirmed delivery. However, FRCCSD received no received no further feedback by early November 2022.

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to newly chaptered § 21080.3.2 of the Public Resources Code, or according to § 21084.3. Section 21084.3 of the Public Resources Code identifies mitigation measures that include avoidance and preservation of TCRs and treating TCRs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

3.18.2 ENVIRONMENTAL SETTING

See Section 3.5 – Cultural Resources for a description of the potential tribal cultural resources found in the vicinity of the Project.

3.18.3 DISCUSSION OF IMPACTS

Would the Project:

a) 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

Direct and Indirect Effects, Construction. TCRs listed or eligible for listing on the California Register of Historical Resources were not identified in the Project area. However, four Historical Resources, not eligible for CRHR and NRHP, were identified (See Section 3.5.3 (a) and Appendix C for additional information on identification efforts). **A less than significant** would occur.

b) 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.

Direct and Indirect Effects, Construction. While no known tribal cultural resources were identified in the Project area, there is a possibility that pre-colonial archaeological resources could be found during project construction and ground-disturbing activities have the potential to result in the discovery of, or unanticipated damage to, archaeological contexts and human remains, and this possibility cannot be totally eliminated (Appendix C). Consequently, there is a potential for significant impacts on TCRs. Implementation of the stop work and treatment procedures to avoid and minimize potential impacts as described in **MM CUL-1 and MM CUL-2** (Section 3.5.3) would reduce the potential impacts to **less than significant** with mitigation incorporated.

3.19 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITIES AND SERVICE SYSTEMS. 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?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
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?				
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?	☐	☐	☒	☐
e) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

3.19.1 REGULATORY SETTING

Federal Laws, Regulations, and Policies

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (RCRA; 42 USC § 6901 et seq.), as amended by the Hazardous and Solid Waste Amendments of 1984, is the primary federal law for the regulation of solid waste in the United States.

USEPA has primary responsibility for implementing RCRA, but individual states are encouraged to seek authorization to implement some or all RCRA provisions. California received authority to implement the RCRA program in August 1992.

State Laws, Regulations, and Policies

Solid Waste

Department of Resources Recycling and Recovery

The Department of Resources Recycling and Recovery (CalRecycle), a department of CalEPA, administers and provides oversight for all of California's state-managed non-hazardous waste handling and recycling programs.

Assembly Bill 939

Assembly Bill 939 (Integrated Solid Waste Management Act of 1989; Public Resources Code 40050 et seq.) established an integrated waste-management system that focused on source reduction, recycling, composting, and land disposal of waste. AB 939 required every California city and county to divert 50 percent of its waste from landfills by the year 2000. Compliance with AB 939 is measured in part by comparing solid waste disposal rates for a jurisdiction with target disposal rates. Actual rates at or below target rates are consistent with AB 939. AB 939 also requires California counties to show 15 years of disposal capacity for all jurisdictions in the county or show a plan to transform or divert its waste.

Assembly Bill 341

Assembly Bill 341 (Chapter 476, Statutes of 2011) increased the statewide solid waste diversion goal to 75 percent by 2020. The law also mandates recycling for commercial and multifamily residential land uses as well as schools and school districts. Section 5.408 of the 2013 California Green Building Standards Code (Title 24, California Code of Regulations, Part 11) requires that at least 50 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

Water and Wastewater Utilities

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (known as the Porter-Cologne Act), passed in 1969, dovetails with the CWA (see discussion of the CWA above). It established the SWRCB and divided the state into nine regions, each overseen by an RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the state's surface water and groundwater supplies. However, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA §§ 401, 402, and 303(d). In general, the SWRCB manages water rights and regulates statewide water quality, whereas the RWQCBs focus on water quality within their respective regions.

The Porter-Cologne Act requires the RWQCBs to develop water quality control plans (also known as Basin Plans) that designate beneficial uses of California's major surface water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a water body - i.e., the reasons why the water body is considered valuable. Water quality objectives reflect the standards necessary to protect and support those beneficial uses. Basin Plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met. Under the Porter-Cologne Act, Basin Plans must be updated every 3 years. Local water providers are subject to the Division of Drinking Water (DDW) of the SWRCB; Plumas County Department of Environmental Health is the regulatory agency of FRCCSD's OMRWS and issues the State drinking water supply permits.

Proposition 218

Proposition 218 restricts local government's ability to raise most forms of revenue. Proposition 218 requires that agencies, such as FRCCSD, put all assessments, charges and user fees out to a vote prior to creation or increase. In most cases, the vote requires individual notices be mailed to affected property owners. A formal protest hearing is also required to move forward with the charge or increase. FRCCSD currently does not bill its customers based on volumetric consumption of water. With the installation of meters, FRCCSD would change its water billing formula to incorporate volumetric-based calculation of periodic customer bills.

Local Laws, Regulations, and Policies

Plumas County Solid Waste Program

The Plumas County Solid Waste Program is administered by the Solid Waste Division of the Plumas County Department of Public Works (PCDPW). The program's goals encompass various aspects including cost efficiency, reducing the amount of waste disposed in landfills, ensuring continuous

development of various services (recycling, composting, waste transfer, and disposal facilities), and providing safe and efficient handling of hazardous and special waste (Solid Waste 2022). The PCDPW is responsible for ensuring that the Plumas County Solid Waste Program is administered in compliance with local, State and Federal regulations.

Liquid Waste Program

The Plumas County Environmental Health Department oversees the Liquid Waste Program for the County and administers the design, construction, and installation of on-site wastewater treatment systems and holding tanks (Liquid Waste 2022). The Liquid Waste Program protects the public of the County from exposure to contaminated wastewater, promotes proper treatment, and disposal of all sewage, while prevent pollution of surface and groundwater (Liquid Waste 2022).

3.19.2 ENVIRONMENTAL SETTING

In Plumas County, solid waste collection services are provided by two Franchise contracts that provide collection and disposable services for solid waste and recyclable materials. The contracts are between the County and Feather River Disposal and Intermountain Disposal (Solid Waste 2022). Approximately 11 miles southeast of the Project area there is the East Quincy Transfer Station that is run by WM and is open to the public for solid waste disposal and recycling. East Quincy Transfer station is located at 29 Abernethy Lane, Quincy, CA. Electricity and gas are provided to the Project area by PG&E. The Old Mill Ranch community does not have a community wastewater collection, treatment or disposal system. All dwellings within OMRWS are serviced by individual septic tanks.

3.19.3 DISCUSSION OF IMPACTS

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.

Direct and Indirect Effects, Construction and Operations. Some limited temporary disruption of water utility services may occur because of construction. However, these impacts would likely be limited to a few hours during construction in the middle of the day on weekdays, and service reliability and fire flow storage volume will be increased following completion of construction. Upon completion of the Project, no expansion of water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications is needed because of the Project. The Project plans to equip a test hole (TH-B2) as a second source of groundwater and construct two additional storage tanks to adhere to California Law (see Section 1.4). The Project will also add new transmission lines, new pipelines, a new treatment system for the proposed and existing wells, and water meters as described in Section 1.4.

With the installation of water meters, FRCCSD would modify its periodic customer billing formula to include the volume of water consumed in its periodic customer billing calculation. FRCCSD anticipates proceeding with the change in customer billing formulas in accordance with Proposition 218 requirements. FRCCSD will undertake an analysis to develop rates for proposed potable and non-potable periodic customer billing.

Therefore, the Project would not require or result in 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 A **less than significant impact** would occur.

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

Direct and Indirect Effects, Construction and Operations. The Project will not generate any new permanent demands on existing water supplies. As discussed above (a), the Project plans to equip a test hole (TH-B2) to adhere to California Law that states water systems relying on groundwater shall have a minimum of two sources. The OMRWS currently only has one well, Well No.1, which has bacteriological issues and has shown signs of physical deterioration. Due to the system's configuration, the new well (TH-B2) will be equipped and will become the primary source of potable water to the community. Well No. 1 will remain a permitted potable water supply source, however its supply will normally be utilized for non-potable uses. As a result of the project, the OMRWS customers will have two water supply sources: non-potable for outdoor use and potable for indoor use. This configuration will reduce chemical purchase requirements, volumes of sludge to be hauled offsite, and utilization of treatment media. In the event that OMRWS's new well (TH-B2) is out of service for planned or unplanned maintenance, the Well No. 1 will provide water as a backup source of water, traveling through the non-potable system to the proposed treatment facility. The sole, existing permitted well (Well No.1) is approximately 14 years old. The Project also proposes a new treatment facility. The new treatment facility would require a minor increase in the production of water to accommodate treatment system backwashing. The water system infrastructure improvements would not result in a significant additional water usage by customers. Temporary use of water would be required during construction, but it is well within the normal daily usage variability of the water utility. A **less than significant impact** would occur.

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?

Direct and Indirect Effects, Construction and Operations. The Project will not add wastewater demands to the wastewater treatment provider. The Project does not add residential or commercial units. Existing residential and commercial units dispose of wastewater through individual septic systems. Therefore, no wastewater treatment provider will be impacted. **No impact** would occur relative to this issue.

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?

Direct and Indirect Effects, Construction and Operations. The Project will not add to solid waste demands or generate excessive solid waste. The treatment system will generate non-hazardous liquid sludge from backwash from the proposed treatment facility (PER Draft 2022). However, this liquid sludge will be placed in an onsite holding tank at the treatment facility building, and then can be transferred to a disposal facility, likely in Quincy, approximately 20 miles southeast of Old Mill Ranch. The sludge will need to be disposed of approximately monthly. **A less than significant** would occur.

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

Direct and Indirect Effects, Construction and Operations. The Project will not add permanently to solid waste demands or generate excessive solid waste. Minimal generation of solid waste would occur during construction, but it is well within the normal daily generation variability of the community and will not impose a burden on local facilities. Liquid waste would be produced from the treatment system backwash, as discussed above, however this will not impact local facilities. A **less than significant *impact*** would occur relative to this issue.

3.20 WILDFIRE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
WILDFIRE 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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.20.1 REGULATORY SETTING

State Laws, Regulations, and Policies

CalFIRE Wildland Fire Management

The Office of the State Fire Marshal and the California Department of Forestry and Fire Protection (CalFIRE) administer state policies regarding wildland fire safety. Construction contractors must comply with the following requirements in the Public Resources Code during construction activities at any sites with forest-, brush-, or grass-covered land:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code § 4442).
- Appropriate fire-suppression equipment must be maintained from April 1 to December 1, the highest-danger period for fires (Public Resources Code § 4428).
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire suppression equipment (Public Resources Code § 4427).
- On days when a burning permit is required, portable tools powered by gasoline fueled internal combustion engines must not be used within 25 feet of any flammable materials (Public Resources Code § 4431).

CEQA and CEQA Guidelines

Senate Bill 1241 (Kehoe, 2012) required the Office of Planning and Research, the Natural Resources Agency, and CalFire to develop "amendments to the initial study checklist of the [CEQA Guidelines] for the inclusion of questions related to fire hazard impacts for projects located on lands classified as state responsibility areas, as defined in section 4102, and on lands classified as very high fire hazard severity zones, as defined in subdivision (i) of section 51177 of the Government Code."

Local Laws, Regulations, and Policies

National Fire Protection Association Firewise Communities Program

The National Fire Protection Association Firewise Communities Program (Firewise Communities) encourages local solutions and planning for wildfire safety with residents, community leaders, planners, developers, firefighters, and others through promoting community-wide responsibility. The program is co-sponsored by the USDA Forest Service, United States Department of Interior, and National Association of State Foresters (Firewise Communities 2022). The program is administered in the County through the Plumas County FireSafe Council (Plumas County FireSafe Council 2022). The Plumas County FireSafe Council implements the Plumas County Community Wildfire Protection Plan (Plumas County 2013).

Plumas County General Plan

The Plumas County 2035 General Plan (Plumas County 2013) discusses goals and policies to minimize or eliminate the risk concerning wildfires under Goal 6.1.

3.20.2 ENVIRONMENTAL SETTING

The region surrounding the Project site is zoned as having a Very High Fire Hazard Severity Zone (FHSZ) in a state responsibility area (SRA) (COSFM 2021). Surrounding the Project area is a Very

High FHSZ and areas of no zoning at all (COSFM 2021). The areas surrounding the Project area are of federal state responsibility (SRA) (COSFM 2021). The closest fire stations are Gansner Bar Fire Station governed by the United States Forest Service (USFS) located at 575 Caribou Road, Belden, CA 95915, approximately 8 miles west of the Project. The areas surrounding the Old Mill Ranch community were severely impacted in 2020 by the Quincy Fire.

3.20.3 DISCUSSION OF IMPACTS

Would the Project:

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

Direct and Indirect Effects, Construction and Operation. The Project site is located within an area with a High FHSZ (COSFM 2021). The existing and proposed facilities will be located within already existing parcels and new parcels. Upon completion of the Project, the area with return to a slightly larger footprint due to the addition of two new storage tanks and a water treatment system. Neither of these above-ground facilities will be constructed within a transportation route. During construction, there is a possibility for the construction activity to interfere with local roads and indirectly affect an emergency response or evacuation plan. If deemed necessary, it is recommended that the FRCCSD, prior to construction, develop and implement a traffic control plan in accordance with the County. However, upon completion of the construction, there would be ***no impact*** on an emergency response or evacuation plan.

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?

Direct and Indirect Effects. The Project area is located on lands of Very High FHSZ in both SRA and FRA (OSFM 2022). However, the Project would not exacerbate wildfire risks (OSFM 2022). The Project plans to update and enhance the drinking water infrastructure of the OMRWS to serve potable and non-potable water to its service connections. The fire flow capabilities and reliability of the water system will increase as a result of the Project and would be a long-term benefit to the OMRWS service connections. According to Google Earth Pro, the average slope across the Project area is approximately 10.5% to 11.2% (Google Earth Pro 2022). Slope and other factors would not expose project occupants or contribute to the uncontrolled spread of a wildfire. There would be ***no impact***.

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?

Direct and Indirect Effects, Construction and Operation. The Project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, utility power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment. The Project would improve fire protection for the Old Mill Ranch community through the construction of a more reliable and capable water delivery and storage infrastructure. The Project will construct two new storage tanks to provide potable water

storage, allowing the existing tank storage to be used for fire suppression storage. ***No impact*** would occur relative to this issue.

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?

Direct and Indirect Effects. The Project does not plan to construct residential, commercial, or service structures that could expose people or structures to significant risks. The Project would not significantly alter the drainage, runoff, or post-fire slop instability of the area. The average slope across the Project area is less than 12% (Google Earth Pro 2022). The new storage tanks will be located at an elevation above the Old Mill Ranch community, on a hillside. The proposed storage volume is approximately 30,000 gallons. The tanks would be separated from the Old Mill Ranch community by Mill Creek and the Union Pacific Railroad. Should the tanks fail abruptly, water would flow through Mill Creek to Feather River, without impacting residences. Therefore, with the Project plans and slope ***no impact*** would occur relative to this issue.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE.				
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?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

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?

Direct Effects, Construction and Operations. There may be potential for limited displacement of and impact to wildlife during construction. Most improvements are located within public roadways or within already impacted sites adjacent to public roadways. Existing human activity has already impacted much of the Proposed Project area (roadways, residences, and railroad). Five biological mitigation measures are proposed (MM Bio-1 through MM Bio-5), including consultation with the U.S. Fish and Wildlife Service, to ensure that the Project has no unusual effects on listed species.

No known representations of California history or prehistory have been found in the area. Any unanticipated discoveries of historical or prehistorical resources would be mitigated by MMs CUL-1 and CUL-2. With the five biological mitigation measures and two cultural resources mitigation measures noted herein, the Project's impacts to listed species would reduce to **less than significant** levels.

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

No reasonably foreseeable future actions were found (Plumas County, Upper Feather River Integrated Regional Water Management Plan, Caltrans 2022) that are expected to provide cumulative impacts.

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

There will be some inconvenience experienced by local residents and travelers on public roads, along with minimal noise and dust generation during construction activities. However, the implementation of MM AIR-1 and NV-1 is expected to mitigate potential harm or impact. Impacts from hazardous materials are expected to be mitigated by MM HAZ-1. Impacts to water resources are expected to be mitigated by HWQ-1. During operations, the distribution system will return to the current effects with some important improvements in reliability and service. All on all, if the proposed mitigation measures are implemented as part of the Proposed Project, a **less than significant impact** is expected.

4 MITIGATION MONITORING AND REPORTING PROGRAM

4.1 PURPOSE OF PROJECT

The FRCCSD's OMRWS operates a small community water system that provides service to approximately 23 service connections and approximately 40 residents. The Project is located a mile west of the unincorporated town of Twain, located in the Sierra Nevada Region, in the Plumas National Forest, in Plumas County, California (Figure 1). Infrastructure improvements and installation of new infrastructure will be made to the OMRWS. OMRWS (Public Water System No. CA3200078) was incorporated in 1983 to provide potable water service within its service area.

The OMRWS's water is supplied entirely by groundwater. The FRCCSD owns, operates, and maintains one permitted production well, Well No. 1. This well is located on a recorded easement at APN 002-430-011 (Doc. No. 2009-0009369). Test hole TH-B2 is located a quarter-mile south of Well No. 1 and is proposed to be equipped as well so that the water can permitted for potable use. TH-B2 is located at APN 002-451-008 and the FRCCSD will need to obtain an easement or purchase the land from the Old Mill Ranch HOA.

The existing Well No. 1 has a unknown size motor/pump. The pump capacity is 39 gpm and discharges through a distribution system to a single storage tank, while the maximum day demand (MDD) requires a flowrate of approximately 12.3 gpm.

The OMRWS does not have an active outside standby or emergency water supply source should the existing well fail. The OMRWS has no current interconnections with water agencies. The nearest water system is Twain, located approximately one mile from OMRWS's service area.

The improvement objectives for the OMRWS's potable water system are as follows:

1. Address the OMRWS's regular exceedances of the MCL for arsenic, manganese, and iron that address the 2014 inspection report from the Plumas County Environmental Health Department and pursuant to CCR, Title 22, Section 64449.
2. Construct an entirely new potable water system and retire the old system for non-potable water to the residences outside/irrigation.
3. Equip test hole TH-B2 to a well to provide a permitted, second source of potable water for the FRCCSD's OMRWS to comply with CCR, Title 22, Section 64554(c).
4. Add two additional storage tanks to the single storage tank to provide greater storage capacity for MDD and fire flow/suppression system to comply with NFPA Standard 1142.
5. Construct a new treatment system adjacent to proposed well TH-B2 and utilize coagulation/filtering for potable water.
6. Add new distribution pipelines to provide the appropriate diameter, fire hydrants, and sufficient number of isolation valves that meet the linear distance on the main lines.
7. Add new transmission lines to provide transportation of water from non-potable system to treatment system and from the proposed well TH-B2 to proposed storage tanks.

8. Install water meters at service connections to improve water usage for billing and leak detection.
9. Improve water supply system reliability and redundancy, communication systems, and infrastructure access.

4.2 REGULATORY FRAMEWORK

California Public Resources Code Section 21081.6 and California Code of Regulations Title 14, Chapter 3, Section 15097 require public agencies to adopt mitigation monitoring or reporting plans when they approve projects under a Mitigated Negative Declaration (MND). The reporting and monitoring plans must be adopted when a public agency makes its findings pursuant to CEQA so that the mitigation requirements can be made conditions of project approval.

4.3 FORMAT OF THIS PLAN

The Mitigation Monitoring and Reporting Program (MMRP) provides a summary of the mitigation measures included in the Proposed Project includes a statement of the impact discussed in the Initial Study/ Mitigated Negative Declaration (IS/MND) and the corresponding mitigation measure. The mitigation measure is followed by a description of implementation including: the criteria used to determine the effectiveness of the mitigation, the timeframe for implementation, and the party responsible for implementing, monitoring, and reporting the success of the measure.

Implementation of each mitigation measure is ultimately the responsibility of the California Environmental Quality Act (CEQA) Lead Agency; however, the delegated responsibility is shared by FRCCSD and their construction contractors. The mitigation measures in this plan contains a “Verified By” signature line, which will be signed by the FRCCSD project manager when the measure has been fully implemented. The proof of implementation and success of the mitigation shall be reported to the Lead Agency’s contact person. No further actions or monitoring are necessary for the implementation or effectiveness of the measure.

4.4 IMPACTS AND MITIGATION MEASURES

4.4.1 MITIGATION MEASURE AIR-1

Summary: The potential exists for the generation of fugitive dust because of excavation and other earth-moving construction activities.

Mitigation Measure- AIR-1: Prior to the commencement of grading activities, the FRCCSD shall require the contractor hired to complete the grading activities to prepare a construction emissions reduction plan that meets the requirements of NSAQMD, Plumas County, and CARB. The construction emissions reductions plan shall be submitted to the NSAQMD for review and approval. FRCCSD shall ensure that all required permits from the NSAQMD have been issued prior to commencement of grading activities.

Implementation: The contractor hired to complete the grading activity shall submit the construction emissions reduction plan to FRCCSD, who shall submit the plan to the County and NSAQMD for review and approval. Monitoring of the plan shall be accomplished by the contract and documented in daily reports to FRCCSD.

Timing: Prior to earthmoving activity.

Monitoring and Reporting: **Monitoring and Reporting:** FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure.

Verified By:

_____ _____

Feather River Canyon Community Services District Date:
Project Manager

4.4.2 MITIGATION MEASURE BIO-1

Summary: During the Biological Resources Assessment (Appendix B), no evidence of FYLF or SNYLF were identified in the APE; however, portions of the Project site are a suitable habitat for the FYLF or SNYLF, therefore Mitigation Measure BIO-1 would be implemented to minimize or eliminate risk to the FYLF or SNYLF.

> **Mitigation Measure BIO-1:** To avoid and minimize the potential for construction-related mortality/disturbance of the SNYLF and FYLF a qualified biologist shall conduct protocol-level surveys for both the SNYLF and FYLF to determine presence or absence of the species in the APE prior to construction. SNYLF is listed as endangered under the ESA and the North Feather DPS of FYLF is a proposed threatened species. A Biological Assessment for Section 7 consultation with the USFWS would be required to assess impacts to SNYLF and FYLF, including impacts to aquatic and upland habitat. Conservation measures to protect both species will be issued by USFWS in the Biological Opinion. If SNYLF and/or FYLF individuals are determined to be present within the APE, then an Incidental Take Permit (ITP) from CDFW will be required prior to the initiation of any Project activities as both species are listed as threatened under California Endangered Species Act (CESA). If SNYLF and/or FYLF individuals are determined to be present within the BSA, then an Incidental Take Permit (ITP) from CDFW will be required prior to the initiation of any Project activities to comply with the CESA.

Implementation: Prior to Project activities, a qualified biologist shall conduct protocol-level surveys for both the SNYLF and FYLF to determine presence or absence of the species in the APE. A Biological Assessment for Section 7 consultation with the USFWS would be required to assess impacts to SNYLF and FYLF, including impacts to aquatic and upland habitat. Conservation measures to protect both species will be issued by USFWS in the Biological Opinion. If SNYLF and/or FYLF individuals are determined to be present within the APE, then an Incidental Take Permit (ITP) from CDFW will be required prior to the initiation of any Project activities as both species are listed as threatened under California Endangered Species Act (CESA). If SNYLF and/or FYLF individuals are determined to be present within the BSA, then an Incidental Take Permit (ITP) from CDFW will be required prior to the initiation of any Project activities to comply with the CESA

Timing: Prior to construction activity.

Effectiveness Criteria: The biologist's report(s). Reports shall be maintained in the Project file.

Monitoring and Reporting: FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure.

Verified By:

_____ _____

Feather River Canyon Community Services District Project Manager

Date:

4.4.3 MITIGATION MEASURE BIO-2

Summary: During the Biological Resources Assessment (Appendix B), no evidence of bald eagle, northern goshawk, and migratory birds and raptors were identified in the APE; however, the Project site is a suitable habitat for the bald eagle, northern goshawk, and migratory birds and raptors, therefore Mitigation Measure BIO-2 would be implemented to minimize or eliminate risk to the bald eagle, northern goshawk, and migratory birds and raptors.

> **Mitigation Measure BIO-2:** To avoid and minimize the potential for construction-related mortality/disturbance of the bald eagle, northern goshawk, and migratory birds and raptors the Project will be implemented outside of the bird nesting season (typically defined as February 1st to August 31st). If construction is to take place between February and August, a qualified biologist will conduct pre-construction survey(s) with 250 feet of the APE within 7 days prior to the start of Project activities. Should any active nest of migratory or raptors be discovered, where Project impacts would occur, the biologist will identify a suitable construction-free buffer around the nest. This buffer will be identified by species, nest type, and tolerance to disturbance. Construction shall be prohibited in the buffer zone until the young have fledged and are capable of foraging independently. A qualified biologist shall monitor the nests once per week and a report will be submitted to the CEQA lead agency weekly. If an active nest of a bald eagle or northern goshawk is observed, the CDFW shall be consulted with prior to the initiation of Project activities.

Implementation: If construction is to take place between February and August, a qualified biologist will conduct pre-construction survey(s) with 250 feet of the APE within 7 days prior to the start of Project activities. Should any active nest of migratory or raptors be discovered, where Project impacts would occur, the biologist will identify a suitable construction-free buffer around the nest. This buffer will be identified by species, nest type, and tolerance to disturbance. Construction shall be prohibited in the buffer zone until the young have fledged and are capable of foraging independently. A qualified biologist shall monitor the nests once per week and a report will be submitted to the CEQA lead agency weekly. If an active nest of a bald eagle or northern goshawk is observed, the CDFW shall be consulted with prior to the initiation of Project activities.

Timing: 7 days prior to construction activities.

Effectiveness Criteria: The biologist's report(s). Reports shall be maintained in the Project file.

Monitoring and Reporting: FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure.

Verified By:

_____ _____

Feather River Canyon Community Services District Date:
Project Manager

4.4.4 MITIGATION MEASURE BIO-3

Summary: During the Biological Resources Assessment (Appendix B), no evidence of willow flycatchers were identified in the APE; however, the Project site is a suitable habitat for the willow flycatcher, therefore Mitigation Measure BIO-3 would be implemented to minimize or eliminate risk to the willow flycatcher.

> **Mitigation Measure BIO-3:** To avoid and minimize the potential for construction-related mortality/disturbance of the willow flycatcher the Project will be implemented outside of the willow flycatcher breeding season (typically defined as June 1st through September 30th). At least 2 protocol-level surveys shall be conducted during the specified time frames in accordance with *A Willow Flycatcher Survey Protocol for California* (Appendix B). If an active willow flycatcher nest is identified during protocol-level surveys, then CDFW must be consulted prior to the initiation of any Project activities.

Implementation: At least 2 protocol-level surveys shall be conducted during the specified time frames in accordance with *A Willow Flycatcher Survey Protocol for California* (Appendix B). If an active willow flycatcher nest is identified during protocol-level surveys, then CDFW must be consulted prior to the initiation of any Project activities.

Timing: Prior to construction activity.

Effectiveness Criteria: The biologist's report(s). Reports shall be maintained in the Project file.

Monitoring and Reporting: FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure.

Verified By:

_____ _____

Feather River Canyon Community Services District Date:
Project Manager

4.4.5 MITIGATION MEASURE BIO-4

Summary: During the Biological Resources Assessment (Appendix B), no evidence pallid bats were identified in the APE; however, the Project site is a suitable habitat for the pallid bat, therefore Mitigation Measure BIO-4 would be implemented to minimize or eliminate risk to the pallid bat.

Mitigation Measure BIO-4: To avoid and minimize the potential for construction-related mortality/disturbance of the pallid bat, the Project will remove or fell mature trees outside of the bat maternity season (remove during September 1st to March 15th). Trees should be removed at dusk to minimize impacts to the roosting bats.

Implementation: To avoid and minimize the potential for construction-related mortality/disturbance of the pallid bat the Project will remove or fell mature trees outside of the bat maternity season (remove during September 1st to March 15th). Trees should be removed at dusk to minimize impacts to the roosting bats.

Timing: During construction activity.

Effectiveness Criteria: The biologist's report(s). Reports shall be maintained in the Project file.

Monitoring and Reporting: FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure.

Verified By:

_____ _____

Feather River Canyon Community Services District Project Manager

Date:

4.4.6 MITIGATION MEASURE BIO-5

Summary: During the Draft Delineation of Aquatic Resources (Appendix B), 11 features identified as potentially Waters of the US were identified in the APE; therefore, Mitigation Measure BIO-5 would be implemented to minimize or eliminate risk if any Project activities are to occur within the OHWM or result in fill or discharge to any WOTUS (intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, vernal pools or natural ponds).

Mitigation Measure BIO-5: A jurisdictional determination by the US Army Corps of Engineers will be required to identify any waters of the US within the project boundaries. Prior to any discharge or fill material into WOTUS, authorization under a Nationwide Permit or Individual Permit shall be obtained from the USACE (CWA §404). For fill requiring a USACE permit, a water quality certification from the RWQCB (CWA §401) shall also be obtained prior to discharge of dredged or fill material. Prior to any activities that would obstruct the flow of or alter the bed, channel, or bank of any perennial, intermittent, or ephemeral creeks, notification of streambed alteration shall be submitted to the CDFW, and, if required, a Lake and Streambed Alteration Agreement (F&G § 1602) shall be obtained.

Implementation: A jurisdictional determination by the US Army Corps of Engineers will be required to identify any waters of the US within the project boundaries. Prior to any discharge or fill material into WOTUS, authorization under a Nationwide Permit or Individual Permit shall be obtained from the USACE (CWA §404). For fill requiring a USACE permit, a water quality certification from the RWQCB (CWA §401) shall also be obtained prior to discharge of dredged or fill material. Prior to any activities that would obstruct the flow of or alter the bed, channel, or bank of any perennial, intermittent, or ephemeral creeks, notification of streambed alteration shall be submitted to the CDFW, and, if required, a Lake and Streambed Alteration Agreement (F&G § 1602) shall be obtained.

Timing: Prior to construction activity.

Effectiveness Criteria: The USACE, RWQCB, CDFW's report(s). Reports shall be maintained in the Project file.

Monitoring and Reporting: FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure.

Verified By:

_____ _____

Feather River Canyon Community Services District Project Manager

Date:

4.4.7 MITIGATION MEASURE CUL-1

Summary: During the cultural resources investigation, no evidence of human burial or remains was identified; however, in the unlikely event that human remains are encountered during project development, Mitigation Measure CUL-1 would be implemented.

Mitigation Measure CUL-1: During ground disturbing activities, if any event that archaeological deposits, concentration of artifacts, or culturally modified soil deposits (including trash pits older than 45 years) are discovered, all work on the affected site must stop until a Secretary of the Interior (SOI) qualified archaeologist views the finds and makes a preliminary evaluation. Examples of archaeological discoveries includes:

- Native American stone tools, pottery, animal bone, and stone flakes
- Historic Period bottles, ceramic dishes, iron tools, cooking utensils, bricks, nails, coins, and buttons
- Fire pits or charcoal concentrations containing Native American or historic Period artifacts
- Stone or brick building foundations; stone or brick lined water cisterns

If warranted, further archaeological work in the APE should be performed.

Implementation: If a discovery occurs, all work must stop until a Secretary of the Interior (SOI) qualified archaeologist views the finds and makes a preliminary evaluation. If warranted, further archaeological work in the APE should be performed. FRCCSD to retain an archeologist in the event of a resource discovery.

Timing: During construction activity.

Effectiveness Criteria: The archeologist's report(s). Reports shall be maintained in the Project file.

Monitoring and Reporting: FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure.

Verified By:

_____ _____

Feather River Canyon Community Services District Project Manager

Date:

4.4.8 MITIGATION MEASURE CUL-2

Summary: During the cultural resources investigation, no evidence of human burial or remains was identified; however, in the unlikely event that human remains are encountered during project development, Mitigation Measure CUL-2 would be implemented.

Mitigation Measure CUL-2: State law prescribes measures that must be taken in the event that any human remains are discovered. If human remains are discovered, Section 7050.5 of the California Health and Safety Code requires that the County Coroner be immediately notified of the discovery and no further excavation or disturbance of the site or nearby area may occur (100-foot buffer) until the County Coroner has determined, within two working days of notification of the discovery, the nature of the remains. If the Coroner determines that the remains are, or are believed to be, Native American, he or she is required to notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The MLD would then determine, in consultation with the property owner, the disposition of the human remains. Compliance with state and federal law would ensure that no impacts occur to any human remains that may be discovered on site.

Implementation: In the event that pre-contact cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, local and affiliated Native American groups shall be contacted. If any such find occurs, local and affiliated Native American groups shall be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to allow tribal input with regard to significance and treatment.

Timing: During construction activity.

Effectiveness Criteria: The archeologist's report(s). Reports shall be maintained in the Project file.

Monitoring and Reporting: FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure.

Verified By:

_____ _____

Feather River Canyon Community Services District Project Manager

Date:

4.4.9 MITIGATION MEASURE GEO-1

Summary: No geotechnical investigation was developed prior to the IS/MND. Prior to earthmoving activity, the FRCCSD will implement Mitigation Measure GEO-1 to evaluate the soils and include design recommendations so that conditions do not pose a threat to the health and safety of people or structures, including threats from liquefaction, subsidence, lateral spreading, or collapse

Mitigation Measure- GEO-1: Prior to earthmoving activities, a certified geotechnical engineer or equivalent, shall preform a final geotechnical evaluation of the soils. The evaluation will follow the requirements of California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2. related to expansive soils and soil conditions. The structural design, tests and inspections, and soils and foundation standards will be in accordance with requirements from California Building Code Title 24, Part, 2, Chapter 16, 17, and 18. The final geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures, including threats from liquefaction, subsidence, lateral spreading, or collapse. The grading and improvement plan for each phase of the project shall be designed in accordance with the recommendations provided in the final geotechnical evaluation.

Implementation: The Geotechnical Investigation shall be prepared by a qualified geotechnical engineer, or equivalent. The evaluation will follow the requirements of California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2. related to expansive soils and soil conditions. The structural design, tests and inspections, and soils and foundation standards will be in accordance with requirements from California Building Code Title 24, Part, 2, Chapter 16, 17, and 18. The final geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures, including threats from liquefaction, subsidence, lateral spreading, or collapse.

Timing: Prior to earthmoving activity.

Monitoring and Reporting: **Monitoring and Reporting:** FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure.

Verified By:

_____ _____

Feather River Canyon Community Services District Date:
Project Manager

4.4.10 MITIGATION MEASURE HAZ-1

Summary: The Project is not 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, it would not create a significant hazard to the public or the environment. Mitigation Measure HAZ-1 is proposed to minimize potential impacts.

Mitigation Measure HAZ-1: Halt all construction work if potentially hazardous materials are encountered**.** All construction contractors shall immediately stop all surface or subsurface activities in the event that potentially hazardous materials are encountered, an odor is identified, or considerably stained soil is visible. Contractors shall follow all applicable local, state, and federal regulations regarding discovery, response, disposal, and remediation for hazardous materials encountered during the construction process. These requirements shall be included in the contractor specifications.

Implementation: If any hazardous materials, waste sites, or vapor intrusion risks are identified prior to or during construction, a qualified professional, in consultation with appropriate regulatory agencies, will develop and implement a plan to remediate the contamination and properly dispose of the contaminated material.

If material imports are proposed, the contractor shall furnish FRCCSD appropriate documentation certifying that the imported materials are free of contamination.

Timing: During construction activity.

Effectiveness Criteria: The hazardous waste professionals report(s). Reports shall be maintained in the Project file.

Monitoring and Reporting: FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure. These files shall be provided to the State Water Resources Control Board following completion of construction upon request.

Verified By:

_____ _____

Feather River Canyon Community Services District Project Manager

Date:

4.4.11 MITIGATION MEASURE HWQ-1

Summary: Mitigation Measure HWQ-1 is proposed to minimize potential impacts to off-site surface water quality.

Mitigation Measure HWQ-1: The FRCCSD will assess the receiving water vulnerability and develop a SWPPP that complies with the requirements of the NPDES General Construction Permit (Order 2009-0009-DWQ as amended by 2010 0014-DWQ and 2012-006-DWQ) based on the project-specific risk level. The SWPPP shall identify specific actions and best management practices (BMPs) relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions, local jurisdictional requirements and shall be reviewed and approved by FRCCSD prior to commencement of work.

The SWPPP shall be prepared by a qualified SWPPP developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (e.g., inadvertent petroleum release) is required to determine adequacy of the measure.

The SWPPP shall also address other project-specific water quality threats, as required for individual improvements including but not limited to, temporary dewatering, hydrostatic testing, and other resources permits as required under the Federal Clean Water Act, County Grading Ordnance, and State Fish and Game Code, as applicable. Construction and post-construction BMPs will be designed to avoid the creation of standing water and potential mosquito breeding habitat.

Implementation: The SWPPP shall be prepared by a qualified SWPPP developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (e.g., inadvertent petroleum release) is required to determine adequacy of the measure.

Timing: During construction activity.

Effectiveness Criteria: The BMP performance reports shall determine effectiveness of the SWPPP. Reports shall be maintained in the Project file.

Monitoring and Reporting: FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure. These files shall be provided to the State Water Resources Control Board following completion of construction upon request.

Verified By:

_____ _____

Feather River Canyon Community Services District
Project Manager

Date:

4.4.12 MITIGATION MEASURE NV-1

Summary: During construction some amount of temporary noise groundborne vibration might occur, primarily during excavation.

Mitigation Measure NV-1 : The Construction Contractor shall demonstrate to the satisfaction of the FRCCSD Project Manager that the following noise control techniques are implemented during the clearing, demolition, grading and construction phases of projects within 200 feet of residential land uses.

- Heavy equipment repair and contractor staging shall be conducted at sites as far as practical from nearby residences. Construction equipment, including vehicles, generators and compressors, shall be maintained in proper operating condition and shall be equipped with manufacturers' standard noise control devices or better (e.g., mufflers, acoustical lagging, and/or engine enclosures).
- Temporary sound barriers (or curtains), stockpiles of excavated materials, or other effective shielding or enclosure techniques shall be used where construction noise would exceed 90 dBA within less than 50 feet from a noise sensitive receptor.
- Construction work, including on-site equipment maintenance and repair, shall be limited to the hours specified in the noise ordinance of the affected jurisdiction(s).
- Electrical power shall be supplied from commercial power supply, wherever feasible, in order to avoid or minimize the use of engine-driven generators.
- Electrically powered equipment shall be used instead of pneumatic or internal-combustion powered equipment, where feasible.
- Unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes) shall be prohibited.
- Operating equipment shall be designed to comply with all applicable local, state, and federal noise regulations.
- Construction site and access road speed limits shall be established and enforced during the construction period.
- If lighted traffic control devices are to be located within 500 feet of residences, the devices shall be powered by batteries, solar power, or similar sources, and not by an internal combustion engine.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- No project-related public address or music system shall be audible at any adjacent sensitive receptor.

Implementation: The construction contractors shall provide advance notice, between 2 and 4 weeks prior to construction, by mail to all residents or property owners within 200 feet of the alignment. The announcement shall state specifically where and when construction will occur in the area. If construction delays of more than 7 days occur, an additional notice shall be made, either in person or by mail. FRCCSD shall publish a notice of impending construction on the FRCCSD website, stating when and where construction will occur.

The construction contractors shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring residents about noise and other construction disturbance. The construction contractors shall also establish a program for receiving questions or

complaints during construction and develop procedures for responding to callers. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public in accordance with the information above.

If material imports are proposed, the contractor shall furnish FRCCSD appropriate documentation certifying that the imported materials are free of contamination.

Timing: During construction activity.

Effectiveness Criteria: The construction contractor material submittal(s). Submittals related to imported material shall be maintained in the environmental portions of the Project file.

Monitoring and Reporting: FRCCSD will prepare and keep on file documentation verifying the implementation of the above-referenced measure. These files shall be provided to the State Water Resources Control Board following completion of construction upon request.

Verified By:

_____ _____

Feather River Canyon Community Services District Date:
Project Manager

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6 LIST OF PREPARERS

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James F. Owens, P.E., ...Engineer
Shen Huang, P.E., ... Engineer
Jerome Watts, P.E., ... Engineer

APPENDIX A

PRELIMINARY ENGINEERING REPORT- PROJECT DRAWINGS

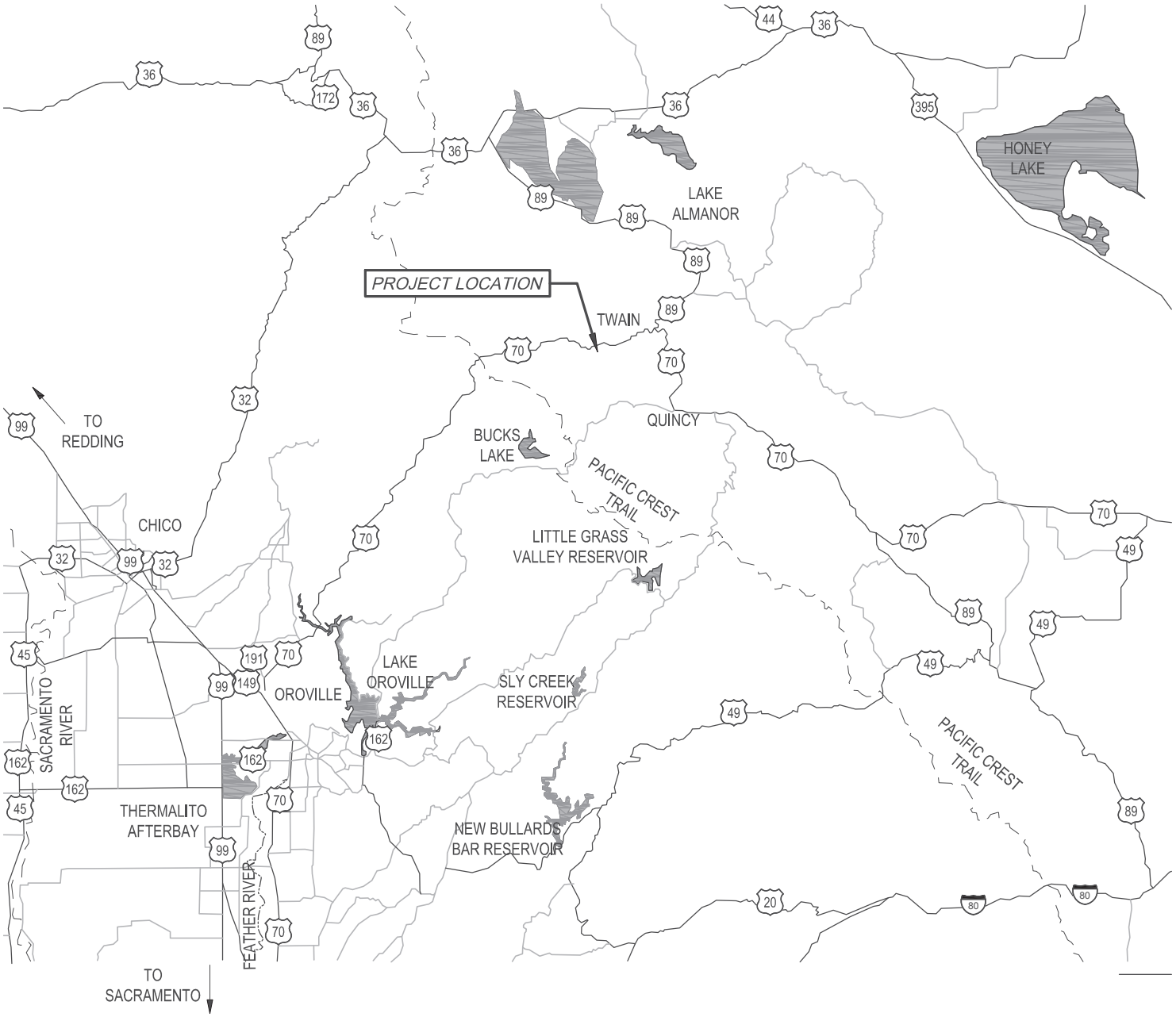


FIGURE 1

FEATHER RIVER CANYON
COMMUNITY SERVICES DISTRICT

WATER SYSTEM IMPROVEMENTS
PRELIMINARY ENGINEERING REPORT

LOCATION MAP

N:\226117-0000132.07 Feather River\CADD\Figures\PER\Fig1-Location.dwg SD 10/1/2020

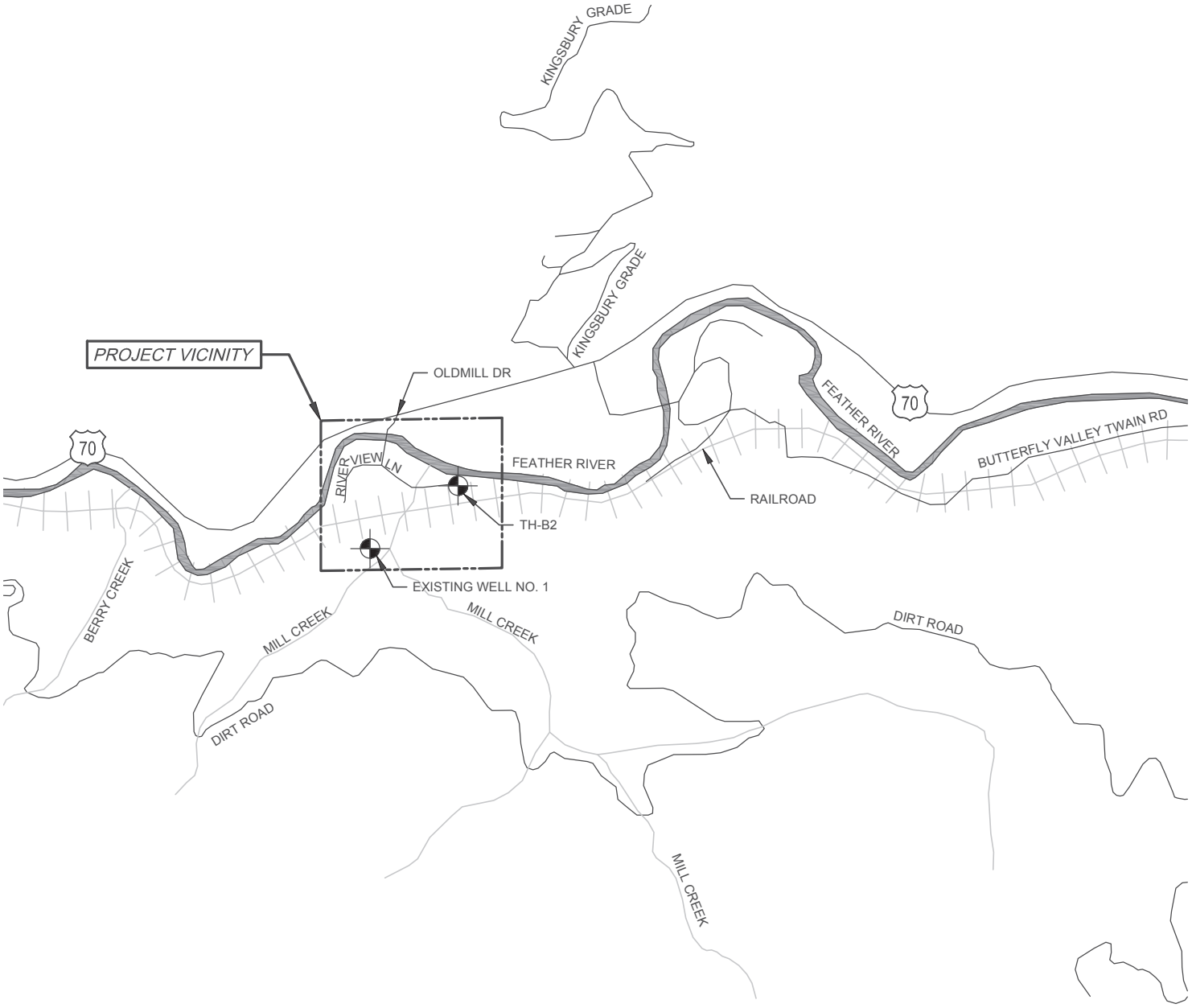


FIGURE 2

FEATHER RIVER CANYON
COMMUNITY SERVICES DISTRICT

WATER SYSTEM IMPROVEMENTS
PRELIMINARY ENGINEERING REPORT

VICINITY MAP

N

NOT TO SCALE

N:\226117-0000132.07 Feather River\CADD\Figures\PER\Fig2-Vicinity.dwg SD 9/29/2020

FIGURE 3

FEATHER RIVER CANYON
COMMUNITY SERVICES DISTRICT

WATER SYSTEM IMPROVEMENTS
PRELIMINARY ENGINEERING REPORT

LOCATION OF NEARBY WELLS

N|V|5

N:\226117-0000132.07 Feather River\CADD\Figures\PER\Fig3_NearbyWells.dwg JCP 9/29/2020

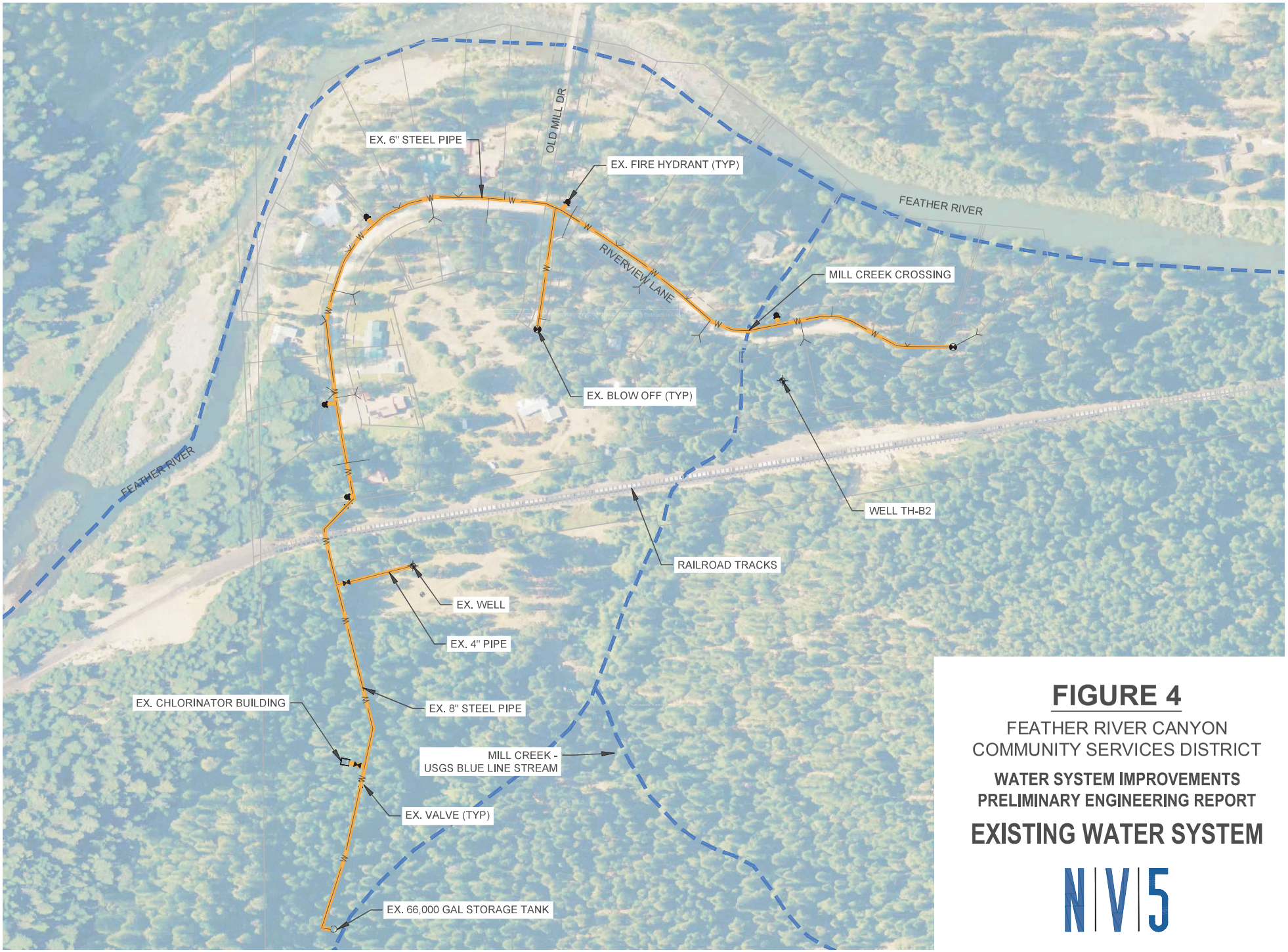


FIGURE 4

FEATHER RIVER CANYON
COMMUNITY SERVICES DISTRICT

WATER SYSTEM IMPROVEMENTS
PRELIMINARY ENGINEERING REPORT

EXISTING WATER SYSTEM

N|V|5

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevation** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevation (BFEs) shown on this map apply only landward of 0.0° North American Vertical Datum (NAVD). Users of this FIRM should be aware that coastal flood elevations may also be provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this community. Elevations shown in the Summary of Stillwater Elevations table should be used for construction, and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map is Universal Transverse Mercator (UTM) zone 10. The **horizontal datum** is NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242,** or visit their website at www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12000 from aerial photography dated 3-8-1998 or later.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

An accompanying Flood Insurance Study report, Letters of Map Revision or Letters of Map Amendment revising portions of this panel, and digital versions of this PANEL may be available. Contact the **FEMA Map Service Center** at the following phone numbers and Internet address for information on all related products available from FEMA:

Phone: 800-358-9616
FAX: 800-358-9620
www.fema.gov/msc

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at www.fema.gov.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report may reflect stream channel distances that differ from what is shown on this map.

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0625E

FIRM

FLOOD INSURANCE RATE MAP

PLUMAS COUNTY,
CALIFORNIA AND
INCORPORATED AREAS

PANEL 625 OF 1650

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

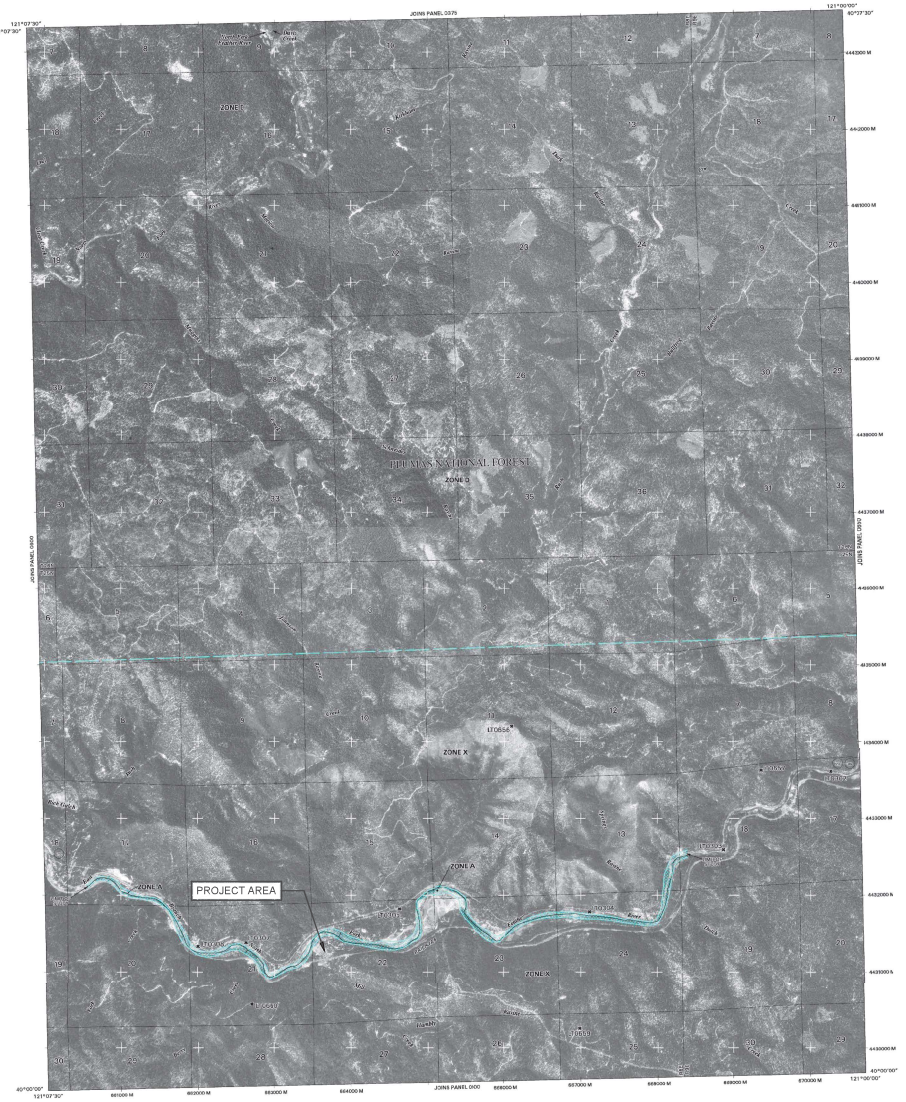
COMMUNITY	NUMBER	PANEL	SUFFIX
PLUMAS COUNTY, UNINCORPORATED AREAS	060344	0625	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06063C0625E

EFFECTIVE DATE:
MARCH 2, 2005

Federal Emergency Management Agency



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A No base flood elevations determined.

ZONE AE Base flood elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.

ZONE A99 Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no base flood elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increase in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or velocities.
513 Base Flood Elevation line and value; elevation in feet*
(EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

A — A Cross Section Line
23 — 23 Transect Line
97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4276000M 1000-meter Universal Transverse Mercator grid values, zone 10
600000 FT 5000-foot grid ticks
DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 River Mile

MAP REPOSITORY
Refer to Repository Listing on Index Map

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
MARCH 2, 2005

EFFECTIVE DATE(S) OF REVISIONS TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.

MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
500 0 600 1200 METERS

FIGURE 5

FEATHER RIVER CANYON
COMMUNITY SERVICES DISTRICT

WATER SYSTEM IMPROVEMENTS
PRELIMINARY ENGINEERING REPORT

FEMA MAP

N|V|5

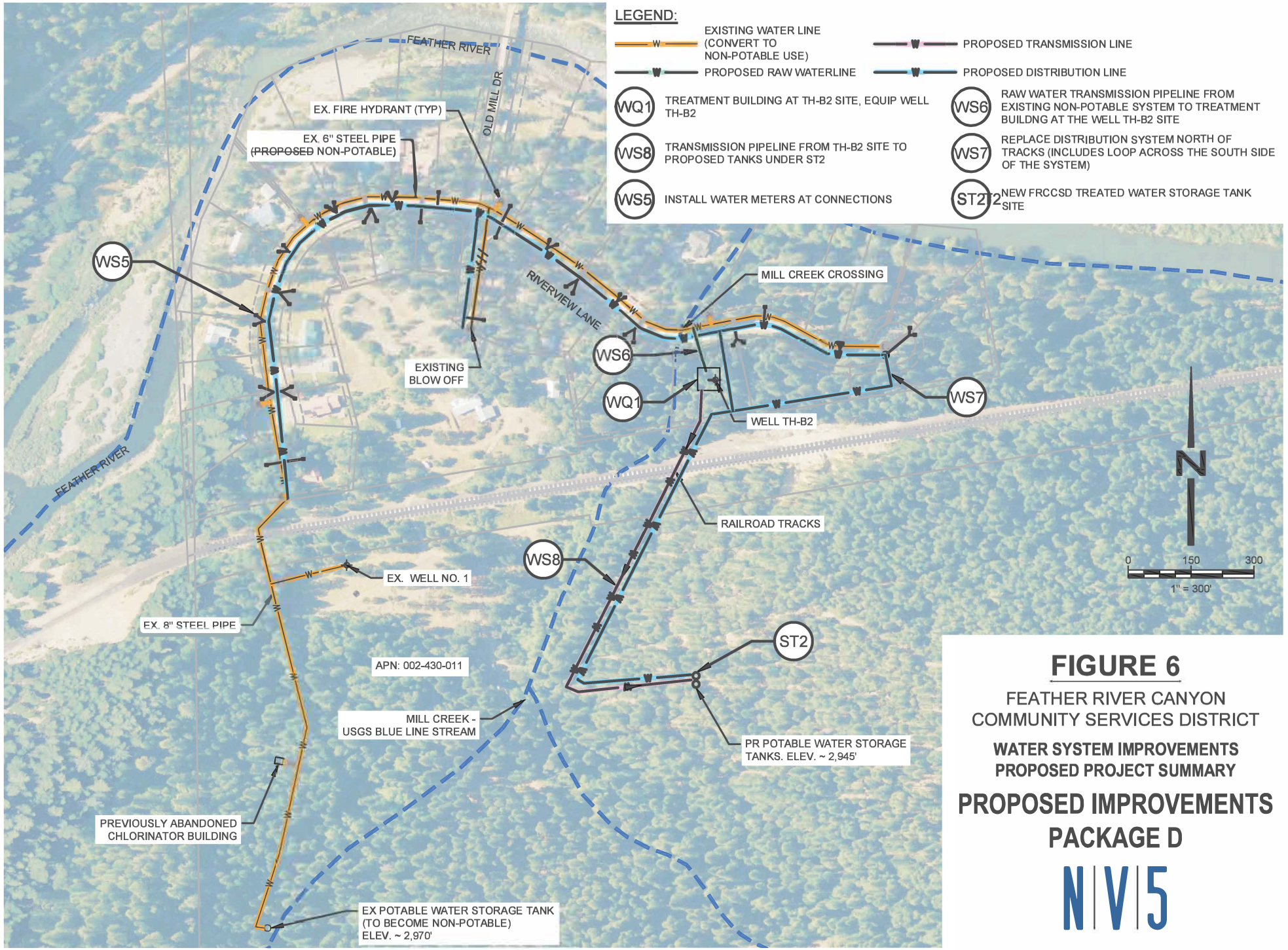


FIGURE 6

FEATHER RIVER CANYON COMMUNITY SERVICES DISTRICT

WATER SYSTEM IMPROVEMENTS
PROPOSED PROJECT SUMMARY

PROPOSED IMPROVEMENTS PACKAGE D

NV5

APPENDIX B

BIOLGICAL RESOURCES ASSESSMENT

gallaway
ENTERPRISES

117 Meyers Street, Suite 120, Chico CA 95928

BIOLOGICAL RESOURCES ASSESSMENT

Aquatic and Terrestrial Wildlife, and Botanical Resources

Feather River Canyon Community Services District

Old Mill Ranch Water System Improvement Project

Plumas County, California

September 2022

Prepared for:
Rick Reynolds
Feather River Canyon Community Services District
P.O. Box 141
Twain, CA 95984
(830) 593-5446

Prepared by:
Gallaway Enterprises
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(530) 332-9909
www.gallawayenterprises.com

CONTENTS

FIGURES

TABLES

APPENDICES

BIOLOGICAL RESOURCES ASSESSMENT

Old Mill Ranch Water System Improvement Project

Project Location:

Plumas County, California
Section 22, Township 25N, Range 8E

INTRODUCTION

Purpose and Overview

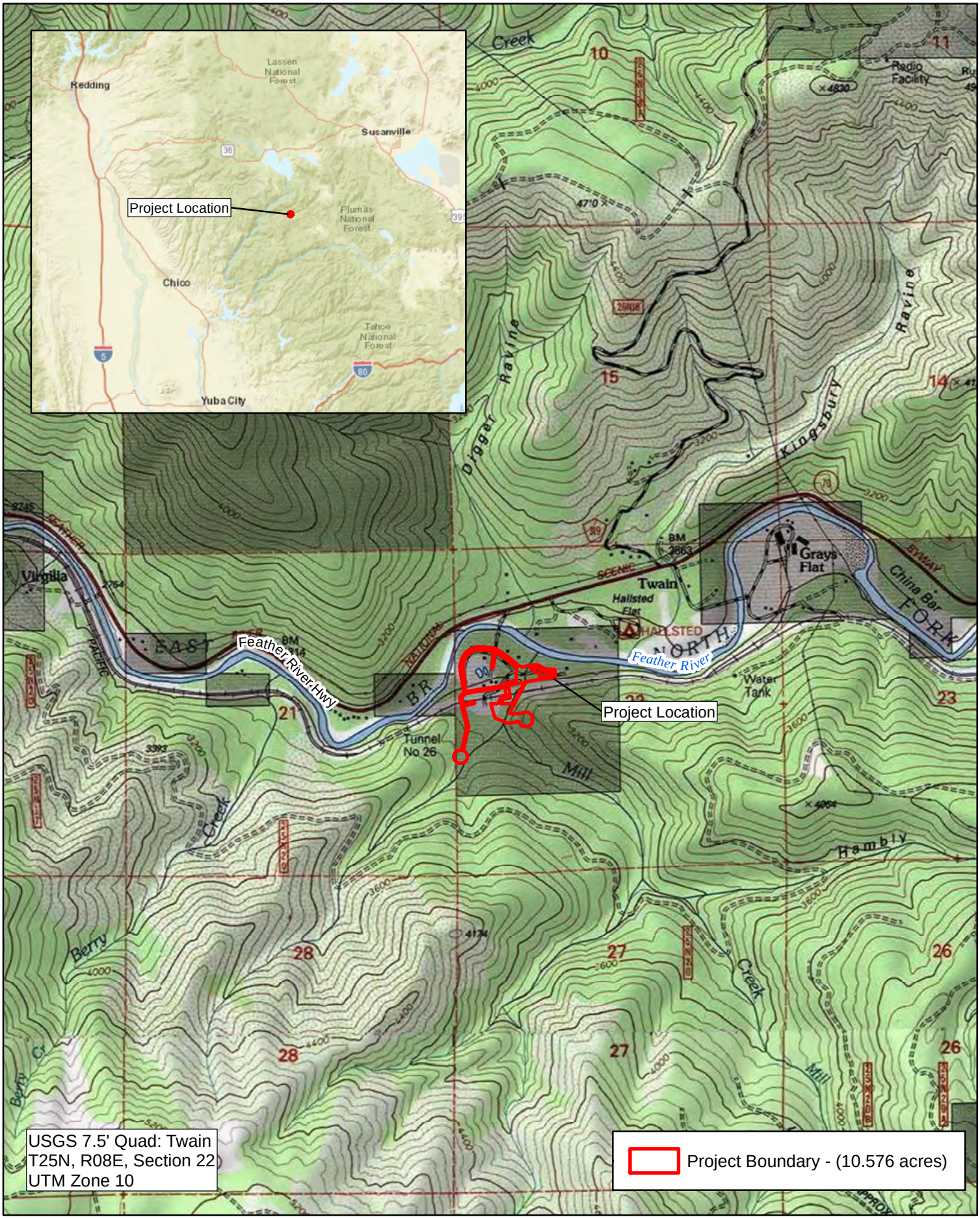
The purpose of this biological resources assessment (BRA) is to document the endangered, threatened, sensitive, and rare species and their habitats that occur or may occur in the biological survey area (BSA) of the Old Mill Ranch Water System Improvement Project (Project) area located in Twain, Plumas County, California (**Figure 1**). The Project area is located within a rural residential community that is located adjacent to the Feather River. The Project area is approximately 11 acres.

The BSA is the area where the focus of the biological assessments and surveys are conducted (**Figure 2**) and encompasses all areas that are anticipated to be impacted by the Project. Gallaway Enterprises conducted biological and botanical habitat assessments within the BSA to evaluate site conditions and the potential for biological and botanical species to occur. Other primary references consulted include species lists and information gathered using United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system, California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) inventory of rare and endangered plants, and literature review. The results of the BRA are the findings of habitat assessments and the recommendations for avoidance and minimization measures.

Project Location and Environmental Setting

The BSA is located within Plumas County, south of the East Branch North Fork Feather River, and is accessible from Highway 70 via Old Mill Drive. The BSA falls within the United States Geological Survey (USGS) "Twain" 7.5-minute quadrangle; Section 22, Township 25N, Range 8E; latitude 40.013764, longitude -121.079693. The area surrounding the BSA consists of montane hardwood-conifer habitat, with the Feather River directly adjacent to the north.

The BSA encompasses the existing and proposed alignments of the utility water lines, with the addition of a minimum 15-foot buffer on either side of the proposed route for the utility installation and a minimum 100-foot buffer surrounding the area of the existing and proposed water tanks. The BSA is bisected horizontally by a Union Pacific railway. Perennial drainages, including Mill Creek, flow south to north through the BSA and Mill Creek is tributary to the Feather River. The portion of the BSA north of the



1:24,000

0 0.25 0.5 Miles

NORTH

Data Sources: ESRI, FRCCSD, USGS, NV5

Old Mill Ranch Water System Improvement Project
Regional Location
Figure 1

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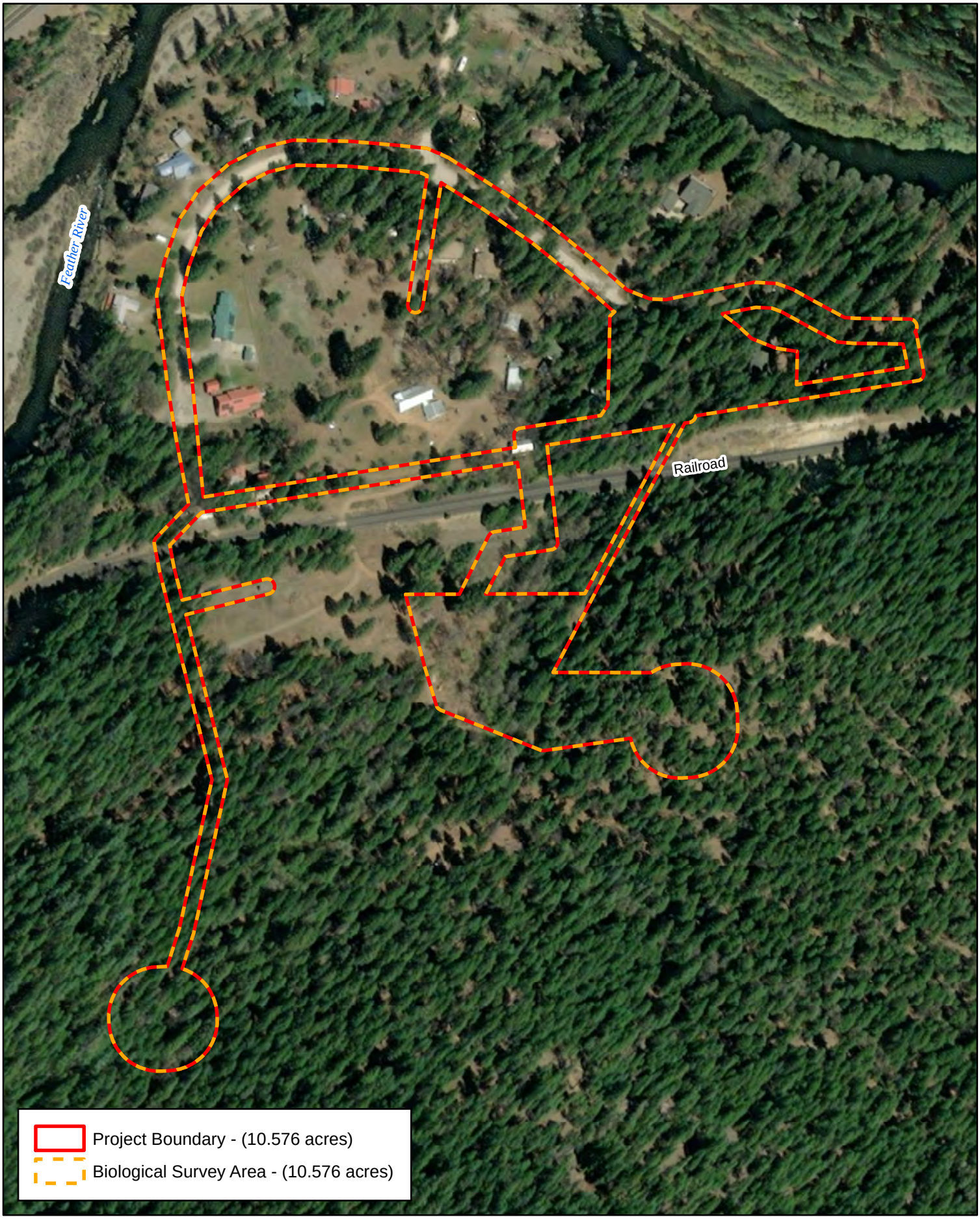
GE: #21-130 Map Date: 8/29/2022



NORTH

1:3,000

0 150 300 Feet

Data Sources: ESRI, FRCCSD, NV5, Maxar 04/19/2021 & 10/30/2020

Old Mill Ranch Water System Improvement Project
Biological Survey Area
Figure 2

gallaway ENTERPRISES

GE: #21-130 Map Date: 08/29/2022

railway occurs on relatively flat terrain adjacent to the Feather River and is dominated by the urban and barren habitats associated with the existing residential development. The portions of the BSA south of the railway are dominated by moderate to steep sloped montane hardwood-conifer habitat and a few patches of open annual grassland. The average annual precipitation for the area is 40.15 inches and the average temperature is 50.1° F (WRCC 2022).

Project Description

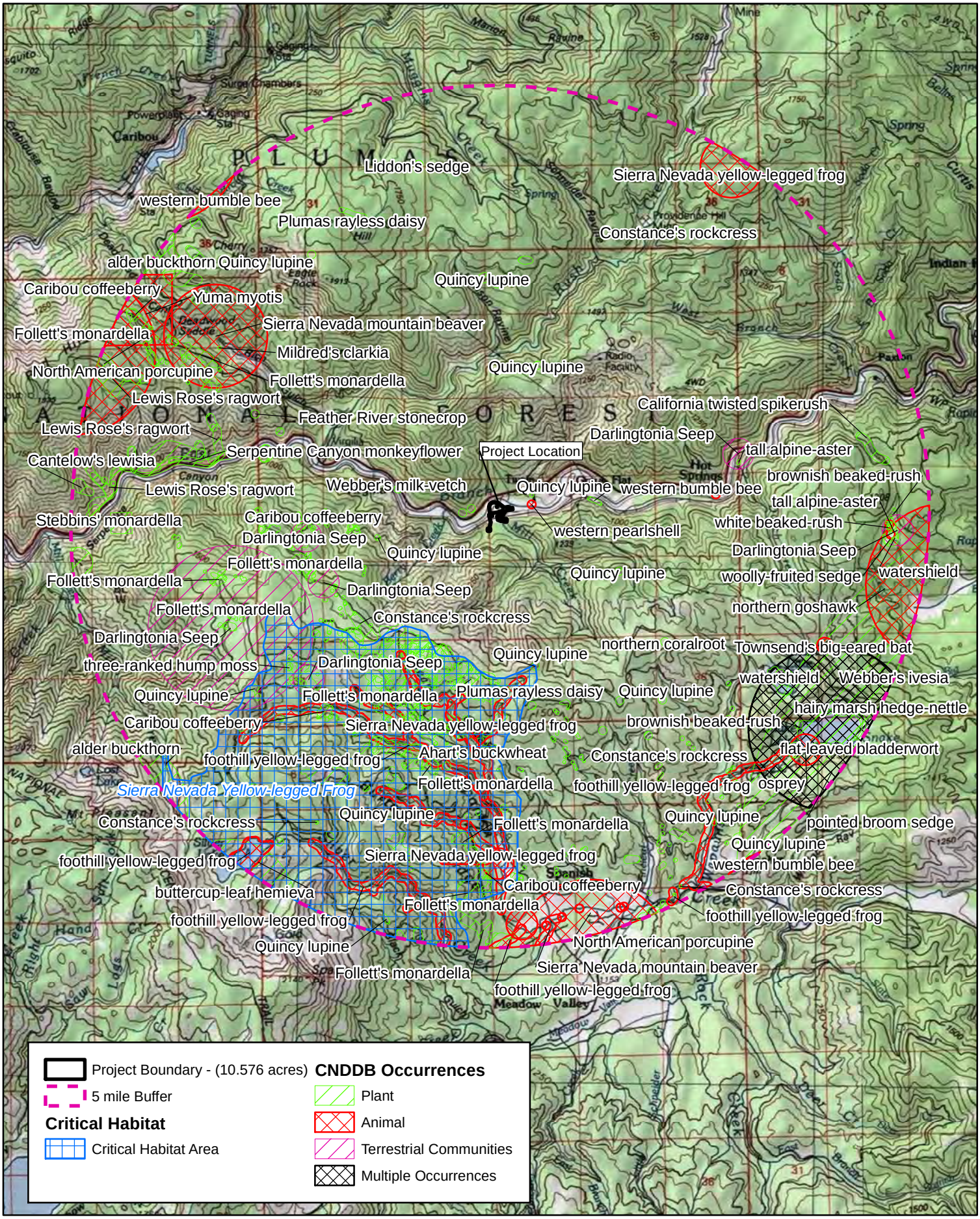
The Project is proposed by the Feather River Canyon Community Services District (FRCCSD). As a part of the Project, the FRCCSD proposes construction of a new water utility system on the hillside southeast of the community, upslope of Mill Creek, and the repair and update of existing water utilities to continue to serve the rural residential community. The Project's water utilities consist of uphill water cisterns and associated piping for a water delivery system (**Appendix A: Proposed Improvements Map**).

METHODS

References Consulted

Gallaway Enterprises obtained lists of special-status species that occur in the vicinity of the BSA. The CDFW CNDDB and USFWS and National Marine Fisheries Service (NMFS) critical habitat Geographic Information System (GIS) shapefiles were also consulted, and a map was created showing special-status species and critical habitat occurrences within a 5-mile radius of the BSA (**Figure 3**). Other primary sources of information regarding the potential occurrence of special-status species and their habitats within the BSA are:

- The USFWS IPaC Official Species List for the Project area, February 11, 2022, Project Code: 2022-0006755 (**Appendix B: Official Species Lists**);
- The results of a species record search of the CDFW CNDDB RareFind 5 for the 7.5-minute USGS "Twain" (4012111), "Caribou" (4012112), "Bucks Lake" (3912182), "Meadow Valley" (3912181), "Quincy" (3912088), and "Crescent Mills" (4012018) quadrangles (**Appendix B: Official Species Lists**);
- The review of the CNPS Inventory of Rare and Endangered Vascular Plants of California for the 7.5-minute USGS "Twain" (4012111), "Caribou" (4012112), "Bucks Lake" (3912182), "Meadow Valley" (3912181), "Quincy" (3912088), and "Crescent Mills" (4012018) quadrangles (**Appendix B: Official Species Lists**);
- USFWS Critical Habitat Portal, February 11, 2022;
- Results from the biological and botanical habitat assessments conducted by Gallaway Enterprises on February 9 and August 25, 2022 (**Appendix C: Observed Species List; Appendix D: Project Site Photos**); and
- Results from the draft delineation of aquatic resources conducted by Gallaway Enterprises on February 9 and August 25, 2022 (**Appendix E: Draft Delineation of Aquatic Resources Map**).



NORTH

1:95,000

0 1 2 Miles

Data Sources: ESRI, CDFW, CNDDB, USGS, NV5, USFS

Old Mill Ranch Water System Improvement Project
CNDDB Occurrences
Figure 3

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GE: #21-130 Map Date: 08/29/2022

Special-Status Species

Special-status species that have potential to occur in the BSA are those that fall into one of the following categories:

- Listed as threatened or endangered, or are proposed or candidates for listing under the California Endangered Species Act (CESA, 14 California Code of Regulations 670.5) or the Federal Endangered Species Act (ESA, 50 Code of Federal Regulations 17.12);
- Listed as a Species of Special Concern (SSC) by CDFW or protected under the California Fish and Game Code (CFGC) (e.g., Fully Protected species);
- Ranked by the CNPS as 1A, 1B, or 2;
- Protected under the Migratory Bird Treaty Act (MBTA);
- Protected under the Bald and Golden Eagle Protection Act; or
- Species that are otherwise protected under policies or ordinances at the local or regional level as required by the California Environmental Quality Act (CEQA §15380).

Critical Habitat

The ESA requires that critical habitat be designated for all species listed under the ESA. Critical habitat is designated for areas that provide essential habitat elements that enable a species' survival and which are occupied by the species during the species' listing under the ESA. Areas outside of the species' range of occupancy during the time of its listing can also be determined as critical habitat if the agency decides that the area is essential to the conservation of the species.

The USFWS Critical Habitat Portal was accessed on February 11, 2022 to determine whether designated critical habitat occurs within or adjacent to the BSA. Appropriate Federal Registers were also used to confirm the presence or absence of critical habitat.

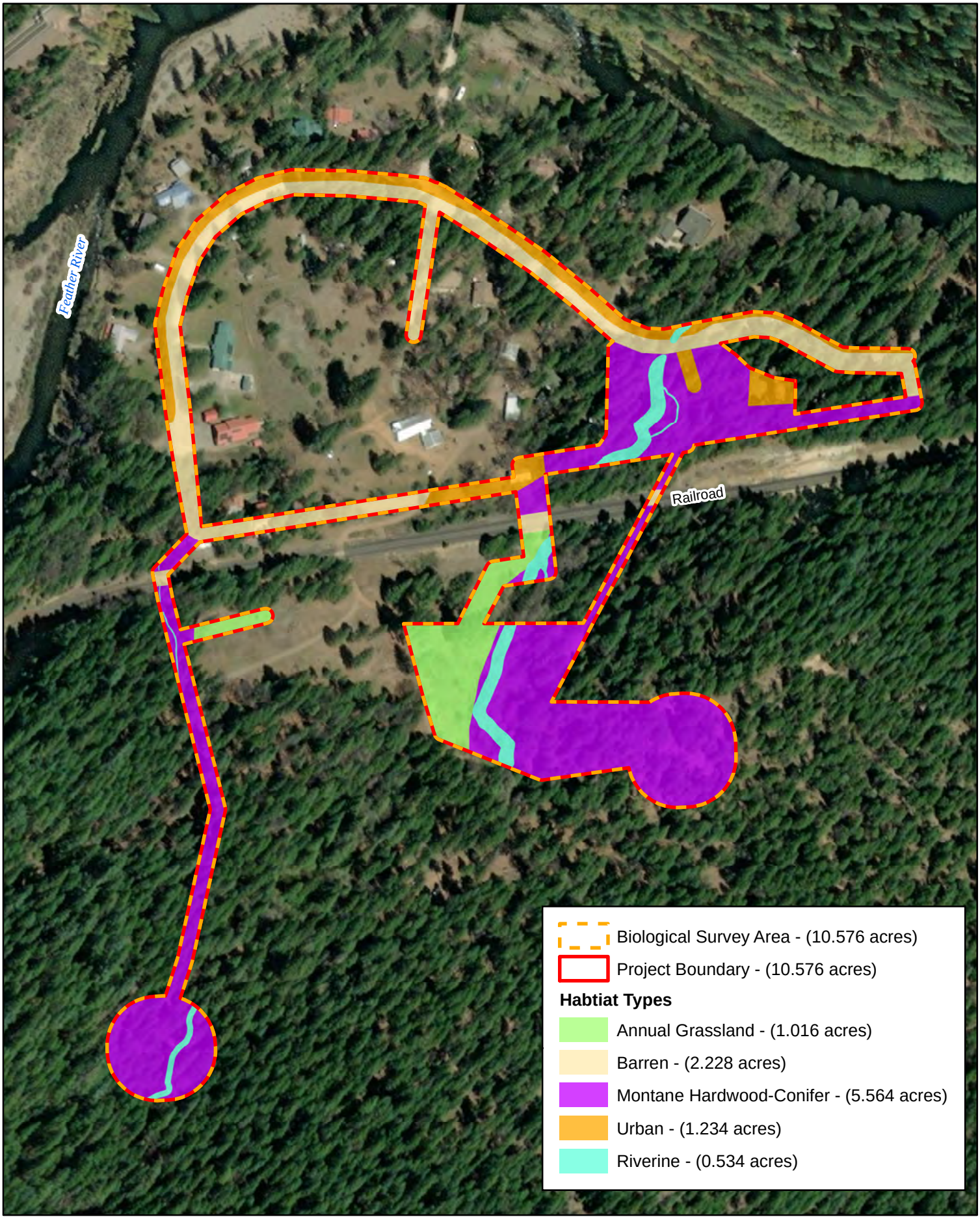
Sensitive Natural Communities

Sensitive Natural Communities (SNCs) are monitored by CDFW with the goal of preserving these areas of habitat that are rare or ecologically important. Many SNCs are designated as such because they represent a historical landscape and are typically preserved as valued components of California's diverse habitat assemblage.

Habitat Assessments and Protocol-level Rare Plant Survey

Habitat assessments were conducted within the BSA by Gallaway Enterprises staff (**Figure 4**). A biological habitat assessment was conducted by Biologist Laurens Kuypers and a botanical habitat assessment was conducted by Senior Botanist Elena Gregg on February 9, 2022. An additional site visit was conducted by Mrs. Gregg on August 25, 2022.

Habitat assessments for botanical and wildlife species were conducted to determine the suitable habitat elements for special-status species within the BSA. The habitat assessments were conducted by walking the entire BSA, where accessible, and recording observed species and specific habitat types and elements. Any habitat of special-status species was evaluated for quality based on vegetation composition and



NORTH

1:3,000

0 150 300 Feet

Data Sources: ESRI, FRCCSD, NV5, Maxar 04/19/2021 & 10/30/2020

Old Mill Ranch Water System Improvement Project
Habitat Types
Figure 4

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GE: #21-130 Map Date: 09/02/2022

structure, physical features (e.g., soils, elevation), microclimate, surrounding area, presence of predatory species and available resources (e.g., prey items, nesting substrates), and land use patterns.

Additionally, Mrs. Gregg conducted a protocol-level rare plant survey for all plant species with blooming periods that overlapped the August 25, 2022 field survey date. The survey was conducted by walking in all accessible areas of the BSA and taking inventory of observed botanical species and habitat elements. A Trimble Global Positioning System (GPS) unit was on hand to record the location, extent, and estimated number of individuals of any special-status plant populations observed within the BSA. A list of all plant species observed during the surveys is included in **Appendix C**.

RESULTS

Habitat Types

The habitat types present within the BSA have been classified, as detailed below, to follow the California Wildlife Habitat Relationships System classification scheme identified in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988). A map depicting the approximate extent of the habitat types within the BSA is included as **Figure 4**.

Aquatic Habitat

Riverine

Riverine habitat is distinguished by running rivers and streams with variable flow rates, bed and bank substrates, and oxygen levels that provide aquatic conditions for a variety of wildlife and plant species. Riverine habitat within the BSA occurs as perennial drainages, including Mill Creek, and a few ephemeral drainages that intersect the BSA in multiple locations. The perennial drainages that intersect with the BSA are vegetated with scouring rush (*Equisetum hyemale*), California spikenard (*Aralia californica*), scattered arroyo willow (*Salix lasiolepis*), red osier dogwood (*Cornus sericea* ssp. *sericea*), and white alder (*Alnus rhombifolia*). The vegetation growing in association with the riverine habitat occurs within the drainage features, resulting in an immediate transition from riverine vegetation to the adjacent upland annual grassland and montane hardwood-conifer. A few ephemeral drainages also occur in the BSA. Although these drainages are classified as riverine habitat herein, they did not exhibit typical riverine characteristics and lacked vegetation.

Vegetation Communities

Montane Hardwood-Conifer

The southern portions of the BSA are dominated by montane hardwood-conifer habitat. This habitat type is typically diverse in structure, with a mix of hardwoods, conifers, and shrubs. Within the BSA the montane hardwood-conifer habitat was dominated by ponderosa pine (*Pinus ponderosa*) with scattered douglas-fir (*Pseudotsuga menziesii* var. *menziesii*), incense cedar (*Calocedrus decurrens*), black oak (*Quercus kelloggii*), and canyon live oak (*Quercus chrysolepis*). The southwest stand of montane hardwood-conifer trees within the BSA sustained significant fire damage during the recent 2021 Dixie Fire;

therefore, the understory and the lower to mid canopy is mostly non-existent and there is currently no shrub layer. In the burned western section, white-vained wintergreen (*Pyrola picta*) was observed within the BSA. Areas dominated with shrubs on the east side of the BSA are sparse, consisting of a few scattered and partially burned manazanita (*Arctostaphylos* spp.). Montane hardwood-conifer habitat provides wildlife habitat for a variety of species such as acorn woodpecker (*Melanerpes formicivorus*), western gray squirrel (*Sciurus griseus*), mountain quail (*Oreortyx pictus*), California ground squirrel (*Otospermophilus beecheyi*). Herptiles occur on the forest floor, with amphibians utilizing moist conditions on north slopes or with debris-cover, and reptiles such as western fence lizard (*Sceloporus occidentalis*) and western rattlesnake (*Crotalus viridis*) occurring throughout along exposed slopes and rocky outcroppings (Mayer and Laudenslayer 1988).

Annual Grassland

Annual grasslands occur on open, flat to gently rolling lands and are dominated by grasses and annual plants, with the dominant species varying depending on the climate and soils. Annual grassland occurs in the relatively flat portions of the BSA south of the railway and were relatively disturbed areas. The vegetation within the disturbed annual grassland habitat present was typically dominated by yellow star-thistle (*Centaurea solstitialis*), bulbous bluegrass (*Poa bulbosa*), wooly mullein (*Verbascum thapsus*), Harford melic (*Melica harfordii*), blue wildrye (*Elymus glaucus*), California rayless daisy (*Erigeron inornatus* var. *inornatus*), California goldenrod (*Solidago velutina* ssp. *californica*), bachelor's button (*Centaurea cyanus*), and grand collomia (*Collomia grandiflora*). A variety of ground-nesting avian species, reptiles, and small mammals use grassland habitat for breeding, while many other wildlife species use it primarily for foraging and require other habitat characteristics such as rocky outcroppings, cliffs, caves, or ponds to find shelter and cover. Common species found utilizing this habitat type include western fence lizards, common garter snakes (*Thamnophis elegans*), California ground squirrels, jackrabbits (*Lepus californicus*), and a variety of foraging and ground-nesting bird species.

Urban

The vegetation of urban habitat is variable in structure and species composition including primarily ornamental landscaping; however, urban habitat can also incorporate native tree species. Urban habitat occurs within the BSA along the edges of the roads and driveways of the residential community in the northern portion of the BSA. The vegetation of the urban habitat within the BSA consists of manicured lawn turf, ornamental hedges, and a continuation of the surrounding montane hardwood-conifer habitat, including incense cedar and ponderosa pines. Urban vegetation provides a habitat for wide variety of wildlife species; particularly for species that have high tolerance of human disturbance, such as corvids (*Corvus* spp.), house sparrow (*Passer domesticus*), raccoon (*Procyon lotor*), and feral cats (*Felis catus*).

Non-vegetated Habitat

Barren

Barren habitat is typified by non-vegetated soil, rock, and gravel. Barren habitat occurring throughout the BSA consists of roads and unpaved driveways within and around the residential community and along the railway. While barren habitat generally does not provide high quality habitat to wildlife, some native

reptiles, such as western fence lizard (*Sceloporus occidentalis*), and birds, such as killdeer (*Charadrius vociferous*), may utilize these areas for breeding.

Critical Habitat

There is no designated critical habitat within the BSA.

Sensitive Natural Communities

No SNCs occur within the BSA.

Special-Status Species

A summary of special-status species assessed for potential occurrence within the BSA based on the USFWS IPaC species list, CNDDB species list, and the CNPS inventory of rare and endangered plants within the "Twain" (4012111), "Caribou" (4012112), "Bucks Lake" (3912182), "Meadow Valley" (3912181), "Quincy" (3912088), and "Crescent Mills" (4012018) USGS 7.5-minute quadrangles is presented in **Table 1**. Potential for occurrence was determined by reviewing database queries from federal and state agencies, performing surveys, and evaluating habitat characteristics.

Table 1. Special-status species and their potential to occur in the BSA of the Old Mill Ranch Water System Improvement Project, Plumas County, CA

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
PLANTS			
Ahart's buckwheat (*Eriogonum umbellatum* var. *ahartii*)	_/_/1B.2	Serpentinite in cismontane woodland, chaparral. On slopes, in openings. (Blooming Period [BP]: Jun – Sep)	None. There are no suitable soils present within the BSA.
Alder buckthorn (*Rhamnus alnifolia*)	_/_/2B.2	Usually occurs in wetlands and may occur in meadows and seeps, montane coniferous riparian scrub. (BP: May – Jul)	None. There is no suitable habitat within the BSA.
Brownish beaked-rush *(Rhynchospora capitellata)*	_/_/2B.2	Meadows and seeps, marshes and swamps in montane coniferous forest. (BP: Jul – Aug)	None. There is not suitable wet habitat within the BSA.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
Buttercup-leaf hemieva (*Hemieva ranunculifolia*)	_/_/2B.2	occurs in generally rocky or granitic substrate in old-growth red fir and upper montane coniferous forest, meadows and seeps. (BP: Jun – Aug)	None. The BSA does not contain red fir old growth or suitable mesic granitic soil conditions.
California twisted spikerush (*Eleocharis torticulmis*)	_/_/1B.3	Bogs and fens, meadows and seeps, lower montane coniferous forest. (BP: Jun – Jul)	None. There is not suitable wet habitat within the BSA.
Cantelow's lewisia *(Lewisia cantelovii)*	_/_/1B.2	Mesic rock outcrops and wet cliffs, usually in moss or clubmoss; on granitic or sometimes serpentine soil. (BP: May – Oct)	None. The BSA lacks suitable rocky habitat and species was not observed during the protocol-level survey.
Canyon Creek stonecrop (*Sedum paradisum ssp. paradisum*)	_/_/1B.3	Rock faces, in crevices of exposed granite. Subalpine and lover montane coniferous forest, mixed evergreen and broad-leafed upland forest, and chaparral. (BP: May – Jun)	None. The BSA does not contain suitable exposed rocky habitat for this species.
Caribou coffeeberry *(Frangula purshiana* ssp. *ultramafica)*	_/_/1B.2	On serpentinite soils in lower montane coniferous forest, upper montane coniferous forest, chaparral, meadows, and seeps. (BP: May – Jul)	None. The BSA does not contain suitable soils for this species.
Clifton's eremogone *(Eremogone cliftonii)*	_/_/1B.3	Occurs on weathered granitic soils and ultramafic substrates in openings within montane coniferous forest or chaparral. (BP: Apr – Sep)	None. The BSA does not contain suitable soils or exposed habitat and species was not observed during the protocol-level survey.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
Closed-throated beardtongue *(Penstemon personatus)*	_/_/1B.2	Usually on north-facing slopes in metavolcanic soils in montane coniferous forest, chaparral. (BP: Jun – Sep)	None. The BSA does not contain suitable soils and species was not observed during the protocol-level survey.
Contance's rockcress (*Boechera constancei*)	_/_/1B.1	Rocky slopes and outcrops of serpentine soils within montane coniferous forest and chaparral. (BP: May – Jul)	None. The BSA does not contain suitable soils or rocky outcrops for this species.
Dwarf resin birch (*Betula glandulosa*)	_/_/2B.2	Bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps, subalpine coniferous forest. (BP: May – Jul)	None. The BSA lacks adequate wetland features or mesic soil conditions for this species.
Feather River stonecrop *(Sedum albomarginatum)*	_/_/1B.2	In crevices and on ledges of serpentine outcrops and slopes in chaparral and lower montane coniferous forest. (BP: May – Jun)	None. Suitable rocky habitat or outcrops do not occur within the BSA.
Flat-leaved bladderwort (*Utricularia intermedia*)	_/_/2B.2	Carnivorous species occurring in meadows along margins of lakes, bogs and fens, marshland, wetlands, seeps, and vernal pools. (BP: Jul – Aug)	None. Suitable habitat does not occur within the BSA.
Follett's monardella (*Monardella follettii*)	_/_/1B.2	Open rocky slopes in lower montane coniferous forests, sometimes on serpentine soils and ultramafic substate. (BP: Jun – Sep)	None. Suitable openings or substrate do not occur within the BSA and species was not observed during the protocol-level survey.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
Hairy marsh hedge-nettle (*Stachys pilosa*)	_/_/2B.3	Meadows and seeps, sagebrush and Great Basin scrub usually associated with lake margins. (BP: Jun – Aug)	None. The BSA lacks adequate wetland conditions and species was not observed during the protocol-level survey.
Lewis Rose's ragwort *(Packera eurycephala* var. *lewisrosei)*	_/_/1B.2	Steep slopes and in canyons in serpentine soil, often along or near roads in cismontane woodland, lower montane coniferous forest, chaparral. (BP: Mar – Jul [Aug – Sep])	None. The BSA lacks suitable substrate and species was not observed during the protocol-level survey.
Liddon's sedge (*Carex petasata*)	_/_/2B.3	Dry to wet meadows, openings in broad-leafed upland forest, lower montane coniferous forest, pinyon, and juniper woodland. (BP: May – Jul)	None. The BSA lacks suitable openings or meadow habitat. The annual grassland in the BSA is either highly disturbed or too shaded to support this species (see pictures in **Appendix D**).
Long-leaved starwort (*Stellaria longifolia*)	_/_/2B.2	Bogs and fens, meadows and seeps, riparian woodland, upper montane coniferous forest. (BP: May – Aug)	None. The BSA lacks suitably wet habitat, there are no CNDDB records within a 5-mile radius and species was not observed during the protocol-level survey.
Mildred's clarkia *(Clarkia mildrediae* ssp. *mildrediae)*	_/_/1B.3	On decomposed granite; sometimes on roadsides in cismontane woodland and lower montane coniferous forest. (BP: May – Aug)	None. The BSA lacks suitable substrate on the road cuts present and species was not observed during the protocol-level survey.
Mud sedge (*Carex limosa*)	_/_/2B.2	Aquatic habitat along the margins of bogs and fens, freshwater marsh and swamps, soggy meadows, and seeps. (BP: Jun – Aug)	None. The BSA lacks adequate wetland features and species was not observed during the protocol-level survey.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
Northern coralroot (*Corallorhiza trifida*)	_/_/2B.1	Meadows and seeps in either open or partially shaded lower montane coniferous forests. (BP: Jun – Jul)	None. The BSA lacks adequate mesic soil conditions in the summer months.
Nuttall's ribbon-leaved pondweed (*Potamogeton epihydrus*)	_/_/2B.2	Occurs in freshwater aquatic habitat such as shallow water, ponds, lakes, streams, and irrigation ditches. (BP: [Jun] Jul – Sep)	None. The BSA lacks suitable slow-moving aquatic habitat and species was not observed during the protocol-level survey.
Plumas rayless daisy (*Erigeron lassenianus* var. *deficiens*)	_/_/1B.3	Lower montane coniferous forest within open gravely substrate. May occur in disturbed areas or in serpentine soils. (BP: Jun – Sep)	None. Species was not observed during the protocol-level survey.
Pointed broom sedge (*Carex scoparia var. scoparia*)	_/_/2B.2	Wet soils in open areas of freshwater marshes and swamps. (BP: Jul – Sep)	None. There is no suitable habitat and species was not observed during the protocol-level survey.
Rosy orthocarpus (*Orthocarpus bracteosus*)	_/_/2B.2	Meadows and seeps of mountainous habitat. (BP: Jun – Sep)	None. There is no suitable habitat and species was not observed during the protocol-level survey.
Serpentine Canyon monkeyflower (*Erythranthe percaulis*)	_/_/1B.1	Among rocky substrate and in soil pockets on wet cliffs and slopes, seeps, roadsides in ultramafic serpentine soils of chaparral and lower montane coniferous forest. (BP: [Mar] May [Jun])	None. Suitable soils do not occur within the BSA.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
Sheldon's sedge (*Carex sheldonii*)	_/_/2B.2	Moist meadows, lakeshores, creek banks, marshes and swamps in riparian scrub or lower montane coniferous forest. (BP: May – Aug)	None. The BSA lacks suitable moist habitat and species was not observed during the protocol-level survey.
Siskiyou Mountains huckleberry (*Vaccinium coccineum*)	_/_/3.3	Occurs on rocky slopes, ridges, and along wet meadows and bogs; often in serpentine soil and ultramafic soil conditions in montane coniferous forest (BP: Jun – Aug)	None. There is no suitable substrate for this species and species was not observed during the protocol-level survey.
Stebbins' monardella (*Monardella stebbinsii*)	_/_/1B.2	Ultramafic serpentine soils along steep slopes of loose rocky outcrops and talus in chaparral and in broadleaved upland forest and lower montane coniferous forest. (BP: Jul – Sep)	None. Suitable soil conditions do not occur within the BSA and species was not observed during the protocol-level survey.
Sticky pyrrocoma (*Pyrrocoma lucida*)	_/_/1B.2	Clay flats with alkali soils in meadows and along seeps of lower montane coniferous forest. (BP: Jul – Oct)	None. Suitable soil conditions do not occur within the BSA and species was not observed during the protocol-level survey.
Tall alpine-aster (*Oreostemma elatum*)	_/_/1B.2	Mesic soil conditions in bog and fens, and in meadows or with seeps within upper montane coniferous forest. (BP: Jun – Aug)	None. The BSA lacks suitable wet habitat conditions and species was not observed during the protocol-level survey.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
Watershield (*Brasenia schreberi*)	_/_/2B.3	Freshwater marshes and swamps, known from water bodies both natural and artificial in California (BP: Jun – Sep)	None. Suitable habitat for this species does not occur within the BSA and species was not observed during the protocol-level survey.
Webber's ivesia (*Ivesia webberi*)	FT/_/1B.1	Occurs in shallow, rocky and shrink-swell clay flats with sparse vegetation in volcanic soil generally with andesitic bedrock of lower montane coniferous forest, pinyon and juniper woodland, and sagebrush scrub. (BP: May – Jul)	None. Suitable clay flat openings and volcanic soil conditions do not occur within the BSA.
Webber's milk-vetch (*Astragalus webberi*)	_/_/1B.2	Brushy slopes and flats in lower montane coniferous and broadleaved upland forests. (BP: May – Jul)	None. The BSA lacks suitable brushy habitat and no *Astragalus* plants (seed pods would still be evident) were observed during the protocol-level survey.
White beaked-rush (*Rhynchospora alba*)	_/_/2B.2	Occurs in moderately acidic soils with minimal nutrients in freshwater marshes and wetlands, bogs and fens, and wetland-riparian habitat. (BP: Jun – Aug)	None. Suitable soil conditions and wet habitats do not occur within the BSA and species was not observed during the protocol-level survey.
Woolly-fruited sedge (*Carex lasiocarpa*)	_/_/2B.3	Grows in dense stands in sphagnum bogs, freshwater marsh, swamps, wetlands, and in monotypic stands along shorelines and lake margins. (BP: Jun – Jul)	None. Suitable habitat for this species does not occur within the BSA.
Yellow willowherb (*Epilobium luteum*)	_/_/2B.3	Meadows, wetlands, seeps, and streambanks in lower montane coniferous forest. (BP: Jul – Sep)	None. The BSA lack suitably wet streambank habitat and species was not observed during the protocol-level survey.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
INVERTEBRATES			
Monarch butterfly (*Danaus plexippus*)	FC/_/_	Egg and larval stage dependent upon milkweed. Adults migrate seasonally, amassing in in dense tree canopies; e.g., eucalyptus.	None. There is no suitable habitat nor any milkweed present within the BSA.
FISH			
Delta smelt *(Hypomesus transpacificus)*	FT/SE/_	Found only from the San Pablo Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo Counties.	None. The BSA is not within the range of Delta smelt, nor is there suitable habitat present.
HERPTILES			
California red-legged frog *(Rana draytonii)*	FT/SSC/_	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	None. The BSA lacks suitable habitat elements such as slow-moving or standing water and shrubby riparian vegetation. There are no known occurrences of this species within 25 miles of the BSA.
Foothill yellow-legged frog North Feather Distinct Population Segment (DPS) (*Rana boylii*)	FT/ST/_	Perennial, shallow streams and riffles with rocky substrates and partial shade; commonly found in canyons and narrow streams.	**Moderate**. The perennial drainages provide potentially suitable breeding habitat. There is potentially suitable aquatic nonbreeding habitat within the ephemeral drainages when water is present.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
Sierra Nevada yellow-legged frog (*Rana sierrae*)	FE/ST/_	Emerging after snowmelt in high elevation meadows, marshes, lakes, small pools and slow flowing streams. At lower elevations, occurs within rocky streams and wet meadows in coniferous forest. Occurs in close proximity to water with access to deeper, slow moving, perennial aquatic habitat for breeding.	**Moderate**. The perennial drainages provide potentially suitable breeding habitat. There is potentially suitable aquatic nonbreeding habitat within the ephemeral drainages when water is present.
Southern long-toed salamander (*Ambystoma macrodactylum sigillatum*)	_/SSC/_	Partly shaded snowmelt pools, and spring/melt fed ponds with woody debris complexity and low turbidity in mixed coniferous forest and alpine communities in the Sierra Nevada.	None. Suitable habitat for this species does not occur within the BSA.
BIRDS			
Bald eagle (*Haliaeetus leucocephalus*)	_/SE, FP/_	Coasts, large lakes, and river systems with open forests with large trees and snags.	**Moderate**. There are suitable nesting trees within the BSA, and the adjacent Feather River provides suitable foraging habitat.
Bank swallow (*Riparia riparia*)	_/ST/_	Requires vertical banks or cliffs w/ fine-textured sandy soil near streams, lakes, to dig nest burrow.	None. There is no suitable habitat for this species within the BSA.
Greater sandhill crane (*Antigone canadensis tabida*)	_/ST, FP/_	Nests in wetland habitats in northeastern California; winters in the Central Valley. Prefers grain fields within 4 miles of a shallow body of water used as a communal roost site; irrigated pasture used as loafing sites.	None. The BSA does not occur within the nesting range for this species, and suitable foraging and loafing sites do not occur within the BSA.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
Northern goshawk (*Accipiter gentilis*)	_/SSC/_	Prefers nest establishment in the lower canopy of large conifers or deciduous trees typically in contiguous stands old growth forests with relatively high canopy closure, sparse ground cover, along moderate north facing slopes.	**Low**. Potentially suitable nesting habitat within the BSA is marginal.
Willow flycatcher (*Empidonax traillii*)	_/SE/_	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; at 2,000 to 8,000 feet elevation.	**Low**. Potentially suitable nesting habitat within the BSA is marginal.
Yellow rail (*Conturnicops noveboracensis*)	_/SSC/_	Breeding range extends primarily throughout Canada, with a small, disjunct breeding range within wetland and marsh habitat in northeast California, north of Modoc and in south Oregon.	None. The BSA lacks suitable nesting habitat and the BSA occurs outside of the breeding range for this species.
MAMMALS			
American badger (*Taxidea taxus*)	_/SSC/_	Found in herbaceous, shrub, and open stages of most habitats with dry, friable soils. Preys on burrowing rodents and digs burrows.	None. No suitable denning habitat is present within the BSA.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
Pallid bat (*Antrozous pallidus*)	_/SSC/_	Rocky outcroppings to open, sparsely vegetated grasslands with nearby water source. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., cavities and exfoliating bark), and various human structures (i.e., bridges).	**Moderate**. The BSA contains potentially suitable roosting habitat.
Sierra Nevada mountain beaver (*Aplodontia rufa californica*)	_/SSC/_	Dense growth of small deciduous trees and shrubs, wet soil, and abundance of forbs in the Sierra Nevada and east slope. Needs dense understory for food and cover, soft soils for burrowing, and abundant supply of water.	None. The BSA has sustained significant fire disturbance and lacks suitable dense understory and burrowing habitat.
Sierra Nevada red fox (*Vulpes vulpes necator*)	_/ST/_	Historically found from the Cascades down to the Sierra Nevada. Found in a variety of habitats from wet meadows to forested areas. Uses dense vegetation and rocky areas for cover and den sites. Prefer forests interspersed with meadows or alpine fell-fields.	None. The BSA lacks optimal habitat conditions and no potential denning habitat was observed within the BSA. All CNDDB occurrences (# 247, #248, #249) recorded within 10 miles of the BSA were not verified occurrences of red fox.

Common Name *(Scientific Name)*	**Status** Fed/State/CNPS	**Associated Habitats**	**Potential for Occurrence**
Wolverine (*Gulo gulo*)	_/ST, FP/_	Found in the north coast mountains and the Sierra Nevada. Needs water source. Uses caves, logs, burrows for cover and den area. Hunts in more open areas. Can travel long distances.	None. Extremely rare. No suitable denning habitat is present within the BSA.
Townsend's big-eared bat *(Corynorhinus townsendii)*	_/SSC/_	Roost in caves and cave-like cavities, occasionally in bridges.	None. There is no suitable habitat within or adjacent to the BSA.

CODE DESIGNATIONS	
FE or FT = Federally listed or proposed as Endangered or Threatened **FC** = Federal Candidate Species **SE or ST=** State listed as Endangered or Threatened **SC** = State Candidate Species **SR** = State Rare Species **SSC** = State Species of Special Concern **FP** = State Fully Protected Species **SNC** = CDFW Sensitive Natural Community	**CNPS California Rare Plant Rank (CRPR):** **CRPR 1B** = Rare or Endangered in California or elsewhere **CRPR 2** = Rare or Endangered in California, more common elsewhere **CRPR 3** = More information is needed **CRPR 4** = Plants with limited distribution **0.1** = Seriously Threatened **0.2** = Fairly Threatened **0.3** = Not very Threatened
Potential for Occurrence: for plants it is considered the potential to occur during the survey period; for birds and bats it is considered the potential to breed, forage, roost, or over-winter in the BSA during migration. Any bird or bat species could fly over the BSA, but this is not considered a potential occurrence. The categories for the potential for occurrence include: **None:** The species or natural community is known not to occur and has no potential to occur in the BSA based on sufficient surveys, the lack suitable habitat, and/or the BSA is well outside of the known distribution of the species. **Low:** Potential habitat in the BSA is sub-marginal and/or the species is known to occur in the vicinity of the BSA. **Moderate:** Suitable habitat is present in the BSA and/or the species is known to occur in the vicinity of the BSA. Pre-construction surveys may be required. **High:** Habitat in the BSA is highly suitable for the species and there are reliable records close to the BSA, but the species was not observed. Pre-construction surveys required, with the exception of indicators for foraging habitat. **Known:** Species was detected in the BSA or a recent reliable record exists for the BSA.	

Endangered, Threatened, and Rare Plants

Based on the habitat assessment and protocol-level botanical survey conducted on February 9 and August 25, 2022, respectively, the BSA was determined to lack suitable habitat components for special-status

species and no special-status species were observed on the site**.** A complete list of plant species observed within the BSA can be found in **Appendix C**.

Endangered, Threatened, and Special-status Wildlife

Wildlife habitat assessments were conducted within the BSA on February 9, 2022. Potentially suitable habitat was identified for foothill yellow-legged frog, Sierra Nevada yellow-legged frog, bald eagle, northern goshawk, willow flycatcher, pallid bat, and several avian species protected under the MBTA and CFGC.

Foothill yellow-legged frog

The North Feather DPS of the foothill yellow-legged frog (FYLF) is listed as threatened under CESA and is a federal proposed threatened species. It is a gray-to-olive colored frog with occasional mottling or spots; it lacks the dorsolateral fold found in California red-legged frogs or the black eye strip common in Pacific tree frogs (*Pseudacris regilla*). The undersurfaces of the posterior abdomen and ventral surfaces of the rear legs are varying shades of yellow.

The range of the North Feather DPS extends from the southern Cascades to the northern Sierra Nevada transition zone, which includes Butte and Plumas counties. Suitable breeding habitat for FYLF consists of flowing, perennial water sources with a cobbly substrate and intermittent canopy cover. Foothill yellow-legged frogs utilize boulders and large cobble in streams for refuge and cover, basking, and depositing eggs. Breeding season begins at the end of the spring flood season, which can be between March and May depending on local conditions. Unlike most ranids (true frogs), breeding and egg-laying occurs in flowing streams and does not occur in the standing water of ponds or lakes.

In systems with large rivers and streams, non-breeding habitats are typically found along small tributary streams with adjacent riparian habitat. Most foothill yellow-legged frogs breed along mainstem water channels and overwinter along smaller tributaries of the mainstem channel. During the non-breeding season, the smaller tributaries, some of which may only flow during the wet winter season, provide refuge while the larger breeding channels may experience overbank flooding and high flows. Habitat elements that provide both refuge from winter peak flows and adequate moisture for foothill yellow-legged frogs include pools, springs, seeps, submerged root wads, undercut banks, and large boulders or debris at high-water lines (USFWS 2021).

Current threats facing FYLF include altered hydrology, nonnative species (especially bullfrog [*Rana catesbeiana*]), diseases, development, drought, wildlife, flood, and the effects of climate change (USFWS 2021).

CNDDB occurrences

There are six (6) CNDDB occurrences of FYLF within a 5-mile radius of the BSA (#226, 1269, 1270, 1271, 1284, 1368), all of which occur south of the BSA in streams within the Spanish Creek HUC10 watershed. The nearest occurrence (CNDDB #226) is located approximately 2 miles south of the BSA in Upper Bean Creek and was last observed in 2017. Several individuals were reported from multiple surveys from 1998 through 2017; two (2) of these individuals were found to be *R. boylii/R. sierrae* hybrids.

Status of foothill yellow-legged frog occurring in the BSA

The drainages that intersect the BSA in multiple locations provide potentially suitable conditions for FYLF when water is present. Perennial tributaries to the Feather River, including Mill Creek, may provide potentially suitable breeding and overwintering habitat. The unnamed ephemeral drainage does not provide suitable breeding habitat due to limited flow or dry conditions in late spring and summer; however, may provide potentially suitable overwintering habitat. There is moderate potential for FYLF to occur within the BSA.

Sierra Nevada yellow-legged frog

The Sierra Nevada yellow-legged frog (SNYLF) is listed as endangered under the ESA and threatened under the CESA. Typical habitat occurs at high elevations; usually ranging from about 4,500 to 12,000 feet. Suitable habitat includes permanent water bodies or those hydrologically connected with permanent water such as wet meadows, lakes, streams, rivers, tarns, perennial creeks, permanent plunge pools within intermittent creeks, and pools, such as a body of impounded water contained above a natural dam, and includes adjacent areas up to a distance of 82 feet. When water bodies occur within 984 feet of one another, as is typical of some high mountain lake habitats, suitable habitat for dispersal and movement includes the overland areas between lake shorelines. In mesic areas such as lake and meadow systems, the entire contiguous or proximate areas are suitable habitat for dispersal and foraging.

Mating and egg-laying occurs in perennial waters shortly after the snows have melted and adults have emerged from hibernation, which can be any time from May through August. The SNYLF requires conditions that allow for overwinter survival, including lakes or pools within streams that do not freeze to the bottom, or refugia within or adjacent to such systems (such as underwater crevices) so that overwintering tadpoles and frogs do not freeze or experience anoxic conditions during their winter dormancy period. Cover from terrestrial and avian predators and the absence of fish are also required in the aquatic environments where SNYLF are found.

CNDDB Occurrences

There are nine (9) CNDDB occurrences (#122, 223, 231, 233, 514, 727, 728, 729, 745) within 5 miles of the BSA. The nearest occurrences (#231, 514) are located approximately 2 miles south of the BSA in Bean Creek and were observed in 2006 and 2008.

Status of Sierra Nevada yellow-legged frog occurring in the BSA

The drainages that intersect the BSA in multiple locations provide potentially suitable conditions for SNYLF when water is present. Perennial tributaries to the Feather River, including Mill Creek, may provide potentially suitable breeding and overwintering habitat. The unnamed ephemeral drainage does not provide suitable breeding habitat due to limited flow or dry conditions in late spring and summer; however, may provide potentially suitable overwintering habitat. Undeveloped upland areas located between drainages and the Feather River may provide suitable habitat for dispersal and foraging. There is moderate potential for SNYLF to occur within the BSA.

Bald eagle

The bald eagle is State listed as endangered and is a Fully Protected species under the CESA. Bald eagles are large raptors that primarily hunt large aquatic ecosystems, frequenting large lakes, rivers, estuaries, reservoirs, and some coastal habitats. Although they are known to feed on carrion and hunt mammals, bald eagles primarily feed on fish, as well as larger birds such with waterfowl, gulls, and cormorants. Most commonly, bald eagles establish platform nests atop prominent snags and trees with damaged crowns, or within the upper canopy of coniferous and mixed old growth forests in proximity to a large body of water or river. Bald eagles typically nest in trees near water, but may use cliffs in the southwest United States, and have been reported to establish ground nests in Alaska. Breeding adults tend to utilize the familiar breeding territories and will often reuse the same nest for multiple seasons. The timing and dispersal from breeding territory varies between regional populations and between individuals. In the winter, California populations will mostly remain in the vicinity of their breeding territory and forage throughout their local range, whereas others may migrate hundreds of miles to wintering (non-nesting) territories such for several months. Bald eagle wintering territories are selected for its abundance of prey with suitable night roosts that offer isolation and thermal protection from seasonal winds.

CNDDB occurrences

There are no CNDDB occurrences of bald eagle within 5 miles of the BSA. The nearest CNDDB occurrence (#105) is located approximately 5.3 miles southeast of the BSA, where nesting behavior was last observed near Snake Lake in 1985.

Status of bald eagle occurring in the BSA

There is suitable nesting habitat for bald eagle in canopy of the montane hardwood-conifer forest that occurs throughout the BSA (**Figure 4**). Additionally, the Feather River canyon provides excellent foraging habitat for this species. There is moderate potential for bald eagle to occur within the BSA.

Northern goshawk

The northern goshawk (NOGO) is a California SSC. The NOGO is the largest of the three (3) accipiters of North America, possessing short, broad wings and a long, rounded tail. The NOGO prefer nest establishment in the lower canopy of large conifers or deciduous trees, typically in contiguous stands of old-growth forest with relatively high canopy closure and sparse ground cover along moderate north facing slopes. They often nest near forest openings such as meadows, forest clearings, logging trails, dirt roads, and fallen trees, potentially to aid in access to prey. The NOGO is an opportunistic predator; prey items consist of a variety of birds, mammals, and occasionally herptiles. Important habitat for NOGO includes forest with adequate snags, downed logs, woody debris, and shrubbery that provide resources for many species of NOGO prey.

CNDDB Occurrences

There is one (1) CNDDB occurrence of NOGO (#133) within 5 miles of the BSA. This occurrence was observed approximately 4 miles east of the BSA in Butterfly Valley, where nesting was observed in 1980.

Status of northern goshawk occurring in the BSA

There is potentially suitable nesting habitat for NOGO in the montane hardwood-conifer forest that occurs

in the BSA; particularly within the north-facing slope. Due to the mid-canopy of the montane hardwood-conifer habitat in the BSA having been severely burned in the recent Dixie Fire, there is low potential for NOGO to establish a nest in the BSA.

Willow flycatcher

Willow flycatcher (WIFL) is listed as endangered under CESA. The WIFL is a small, migratory passerine that was a locally common resident of willow-dominated riparian and meadow habitats across California, including the Sierra Nevadas. It is a common spring and fall migrate at lower elevations, primarily in riparian habitats throughout California exclusive of the north coast (Zeiner et al. 1990). All subspecies are known to winter in southwestern Mexico, south to Panama and to northwestern Columbia, preferring pacific slope, arid scrub, and brushland habitats (Fitzpatric 1980). Willow flycatchers prefer moist brush thickets, open second-growth, riparian woodland, especially with willow and buttonbush, wet meadows, and montane riparian habitats from 2,000 to 8,000 feet in elevation. The breeding range is widespread in California; however, breeding populations have been lost from most lower elevation riparian areas. Most of the remaining breeding populations occur in isolated mountain meadows of the Sierra Nevada and Cascades (Serena 1982, Harris et al. 1988). They forage either by aerially gleaning or hawking flying insects such wasps, bees, flies, beetles, and grasshoppers. They occasionally forage berries, such as elderberry and blackberries (Craig and Williams 1998).

CNDDB occurrences

There are no CNDDB occurrences of WIFL within 5 miles of the BSA. The nearest occurrence (CNDDB #74) was reported in 1990 and is located approximately 9 miles northeast of the BSA at Round Valley Lake.

Status of willow flycatcher occurring in the BSA

The BSA occurs within the elevational and breeding range of WIFL. The willow and white alder trees present may potentially provide suitable nesting habitat; however, due to the lack of optimal thicket nesting habitat, lack of nearby CNDDB occurrences, and the high level of disturbance from the residential community and railway intersecting the BSA, there is low potential for the WIFL to occur.

Pallid bat

Pallid bats are designated as a CDFW SSC. Pallid bats roost alone, in small groups (2 to 20 bats), or gregariously (hundreds of individuals). Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating Ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various human structures such as bridges (especially wooden and concrete girder designs), barns, porches, bat boxes, and human-occupied as well as vacant buildings. Roosts generally have unobstructed entrances/exits, are high above the ground, warm, and inaccessible to terrestrial predators. However, this species has also been found roosting on or near the ground under burlap sacks, stone piles, rags, and baseboards. Lewis 1996 found that pallid bats have low roost fidelity and both pregnant and lactating pallid bats changed roosts an average of once every 1.4 days throughout the summer. Overwintering roosts have relatively cool, stable temperatures and are located in protected structures beneath the forest canopy or on the ground, out of direct sunlight. In other parts of the species' range, males and females have been found hibernating alone or in small groups, wedged deeply into narrow

fissures in mines, caves, and buildings. At low latitudes, outdoor winter activity has been reported at temperatures between –5 and 10 °C (WBWG 2022).

CNDDB occurrences

There are no CNDDB occurrences of pallid bat within 5 miles of the BSA. The nearest occurrence (#405) is located approximately 8 miles southeast of the BSA, where a maternity roost was observed in the Highway 89 bridge in 2007.

Status of pallid bat occurring in the BSA

There are mature trees within the BSA that contain suitable habitat elements (e.g., cavities, peeling bark) and may provide suitable day roost habitat. There is moderate potential for pallid bats to occur within the BSA.

Migratory birds and raptors

Nesting birds are protected under the MBTA (16 USC 703) and the CFGC (§3503). The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e., exotic) species (50 Code of Federal Regulations §10.13). Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance has the potential to affect bird species protected by the MBTA.

The CFGC (§3503.5) states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFGC (§3503) also states that "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

CNDDB occurrences

The majority of migratory birds and raptors protected under the MBTA and CFGC are not recorded in the CNDDB because they are abundant and widespread.

Status of migratory birds and raptors occurring in the BSA

There is potentially suitable habitat for a variety of nesting avian species within the BSA.

REGULATORY FRAMEWORK

The following describes federal, state, and local environmental laws and policies that may be relevant if the BSA were to be developed or modified.

Federal

Waters of the United States, Clean Water Act, Section 404

The Corps and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into jurisdictional waters of the United States, under the Clean Water Act (§404). The term

"waters of the United States" is an encompassing term that includes "wetlands" and "other waters." Wetlands have been defined for regulatory purposes as follows: "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3, 40 CFR 230.3). Wetlands generally include swamps, marshes, bogs, and similar areas." Other waters of the United States are intermittent or perennial tributaries and impoundments including lakes, ponds, and other surface water features, that exhibit an ordinary high-water mark but lack positive indicators for one or more of the three wetland parameters (i.e., hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4).

The Corps may issue either individual permits on a case-by-case basis or general permits on a program level. General permits are pre-authorized and are issued to cover similar activities that are expected to cause only minimal adverse environmental effects. Nationwide permits are general permits issued to cover particular fill activities. All nationwide permits have general conditions that must be met for the permits to apply to a particular Project, as well as specific conditions that apply to each nationwide permit.

Clean Water Act, Section 401

The Clean Water Act (§401) requires water quality certification and authorization for placement of dredged or fill material in WOTUS. In accordance with the Clean Water Act (§401), criteria for allowable discharges into surface waters have been developed by the State Water Resources Control Board, Division of Water Quality. The resulting requirements are used as criteria in granting National Pollutant Discharge Elimination System (NPDES) permits or waivers, which are obtained through the Regional Water Quality Control Board (RWQCB) per the Clean Water Act (§402). Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the RWQCB. The RWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

Federal Endangered Species Act

The United States Congress passed the ESA in 1973 to protect species that are endangered or threatened with extinction. The ESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

Under the ESA, species may be listed as either "endangered" or "threatened." Endangered means a species is in danger of extinction throughout all or a significant portion of its range. Threatened means a species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. All species of plants and animals, except non-native species and pest insects, are eligible for listing as endangered or threatened. The USFWS also maintains a list of "candidate" species. Candidate species are species for which there is enough information to warrant proposing them for listing, but that have not yet been proposed. "Proposed" species are those that have been proposed for listing but have not yet been listed.

The ESA makes it unlawful to "take" a listed animal without a permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." Through regulations, the term "harm" is defined as "an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering."

Migratory Bird Treaty Act

The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e., exotic) species (50 Code of Federal Regulations §10.13).

State of California

California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the ESA but pertains to state-listed endangered and threatened species. The CESA requires state agencies to consult with the CDFW when preparing documents to comply with the California Environmental Quality Act (CEQA). The purpose is to ensure that the actions of the lead agency do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species. In addition to formal listing under the federal and state endangered species acts, "species of special concern" receive consideration by CDFW. Species of special concern are those whose numbers, reproductive success, or habitat may be threatened.

California Fish and Game Code (§3503.5)

The CFGC (§3503.5) states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (all owls except barn owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFGC (§3503) also states that "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

California Migratory Bird Protection Act

The CMBPA amends the CFGC (§3513) to mirror the provisions of the MBTA and allow the State of California to enforce the prohibition of take or possession of any migratory nongame bird as designated in the federal MBTA, including incidental take.

Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance have the potential to affect bird species protected by the MBTA and CFGC. Thus, vegetation removal and ground disturbance in areas with breeding birds should be conducted outside of the breeding season (approximately March 1 through August 31). If vegetation removal or ground-disturbing activities are conducted during the breeding season, then a qualified biologist must determine if there are any nests

of bird species protected under the MBTA and CFGC present in the Project area prior to commencement of vegetation removal or ground-disturbing activities. If active nests are located or presumed present, then appropriate avoidance measures (e.g., spatial or temporal buffers) must be implemented.

Lake and Streambed Alteration Agreement, CFGC (§1602)

The CDFW is a trustee agency that has jurisdiction under the CFGC (§1600 et seq.). The CFGC (§1602), requires that a state or local government agency, public utility, or private entity must notify CDFW if a proposed Project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds… except when the department has been notified pursuant to Section 1601." If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures.

Rare and Endangered Plants

The CNPS maintains a list of plant species native to California with low population numbers, limited distribution, or otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS California Rare Plant Rank (CRPR) plants receive consideration under CEQA review. The CNPS CRPR categorizes plants as follows:

- Rank 1A: Plants presumed extinct in California;
- Rank 1B: Plants rare, threatened, or endangered in California or elsewhere;
- Rank 2A: Plants presumed extirpated or extinct in California, but not elsewhere;
- Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere;
- Rank 3: Plants about which we need more information; and
- Rank 4: Plants of limited distribution.

The California Native Plant Protection Act (CFGC §1900-1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered as defined by CDFW. An exception to this prohibition allows landowners, under specific circumstances, to take listed plant species, provided that the owners first notify CDFW and give the agency at least 10 days to retrieve (and presumably replant) the plants before they are destroyed. Fish and game code §1913 exempts from the 'take' prohibition "the removal of endangered or rare native plants from a canal, lateral channel, building site, or road, or other right of way."

California Environmental Quality Act Guidelines §15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines §15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled based on the definition in the ESA and the section of the CFGC dealing

with rare, threatened, and endangered plants and animals. The CEQA Guidelines (§15380) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (e.g., candidate species, species of concern) would occur. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

CONCLUSIONS AND RECOMMENDATIONS

Endangered, Threatened, and Rare Plants

Based on the results of the botanical habitat assessment and protocol-level survey, there is no potential special-status botanical species to occur within the BSA, Therefore, there will be no effects to special-status botanical species, or their habitats, and no avoidance and minimization measures are proposed.

Endangered, Threatened, and Special-status Wildlife

The following are the recommended minimization and mitigation measures to further reduce or eliminate Project-associated impacts to special-status wildlife species. These proposed measures may be amended or superseded by the Project-specific permits issued by the regulatory agencies.

Sierra Nevada yellow-legged frog and foothill yellow-legged frog

- A qualified biologist shall conduct protocol-level surveys for both SNYLF and FYLF to determine the presence or absence of the species within the BSA.
- Under the federal ESA, SNYLF is listed as endangered and the North Feather DPS of FYLF is a proposed threatened species. A Biological Assessment for Section 7 consultation with the USFWS will be required to assess impacts to SNYLF and FYLF, including impacts to aquatic and upland habitat. Conservation measures to protect both species will be issued by USFWS in the Biological Opinion.
- If SNYLF and/or FYLF individuals are determined to be present within the BSA, then an Incidental Take Permit (ITP) from CDFW will be required prior to the initiation of any Project activities as both species are listed as threatened under CESA.

Bald eagle, northern goshawk, and migratory birds and raptors

- Project activities, including site grubbing and vegetation removal, shall be initiated outside of the bird nesting season (February 1 – August 31).
- If Project activities cannot be initiated outside of the bird-nesting season, then the following will occur:
    - A qualified biologist shall conduct a pre-construction survey within 250 feet of the BSA, where accessible, within 7 days prior to the start of Project activities.
    - If an active avian nest (i.e., containing egg[s] or young) is observed within the BSA or in an area adjacent to the BSA where impacts could occur, then a species protection buffer will be established. The species protection buffer will be defined by the qualified biologist based on the species, nest type, and tolerance to disturbance. Construction activity shall be prohibited

within the buffer zones until the young have fledged or the nest fails. Nests shall be monitored by a qualified biologist once per week and a report submitted to the CEQA lead agency weekly.

- If an active nest of a bald eagle or northern goshawk is observed, CDFW shall be consulted prior to the initiation of Project activity.

Willow flycatcher

- If Project activities are to be initiated during the willow flycatcher breeding season (June 1 through September 30), then at least two (2) protocol-level surveys shall be conducted during the specified time frames in accordance with *A Willow Flycatcher Survey Protocol for California* (Bombay et al. 2003).
- If an active willow flycatcher nest is identified during protocol-level surveys, then CDFW must be consulted prior to the initiation of any Project activities.

Pallid bat

- Mature trees shall be removed and/or felled between September 1 and March 15, outside of the bat maternity season. Trees should be removed at dusk to minimize impacts to roosting bats.

Other Natural Resources

Waters of the United States

If activities occur within the ordinary high water mark and/or result in fill or discharge to any WOTUS which include, but are not limited to, intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, vernal pools or natural ponds, then the following will need to be obtained:

- Prior to any discharge or fill material into WOTUS, authorization under a Nationwide Permit or Individual Permit shall be obtained from the Corps (Clean Water Act §404). For fill requiring a Corps permit, a water quality certification from the Regional Water Quality Board (Clean Water Act §401) shall also be obtained prior to discharge of dredged or fill material.
- Prior to any activities that would obstruct the flow of or alter the bed, channel, or bank of any perennial, intermittent, or ephemeral creeks, notification of streambed alteration shall be submitted to the CDFW, and, if required, a Lake and Streambed Alteration Agreement (CFGC §1602) shall be obtained.

Mitigation requirements for the fill of WOTUS will be implemented through an onsite restoration plan, and/or an In-Lieu Fund and/or a certified mitigation bank with a Service Area that covers the Project area. These agreements, certifications and permits may be contingent upon successful completion of the CEQA process.

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LIST OF PREPARERS

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Anthony McLaughlin. GIS Analyst and Environmental Planning. B.A in Human Geography with certificates in Geographical Information Systems and Environmental and Land Use Planning. Anthony has more than 5 years conducting spatial analysis, drafting technical reports, and producing high quality cartographic outputs.

Appendix A

Proposed Improvements Map

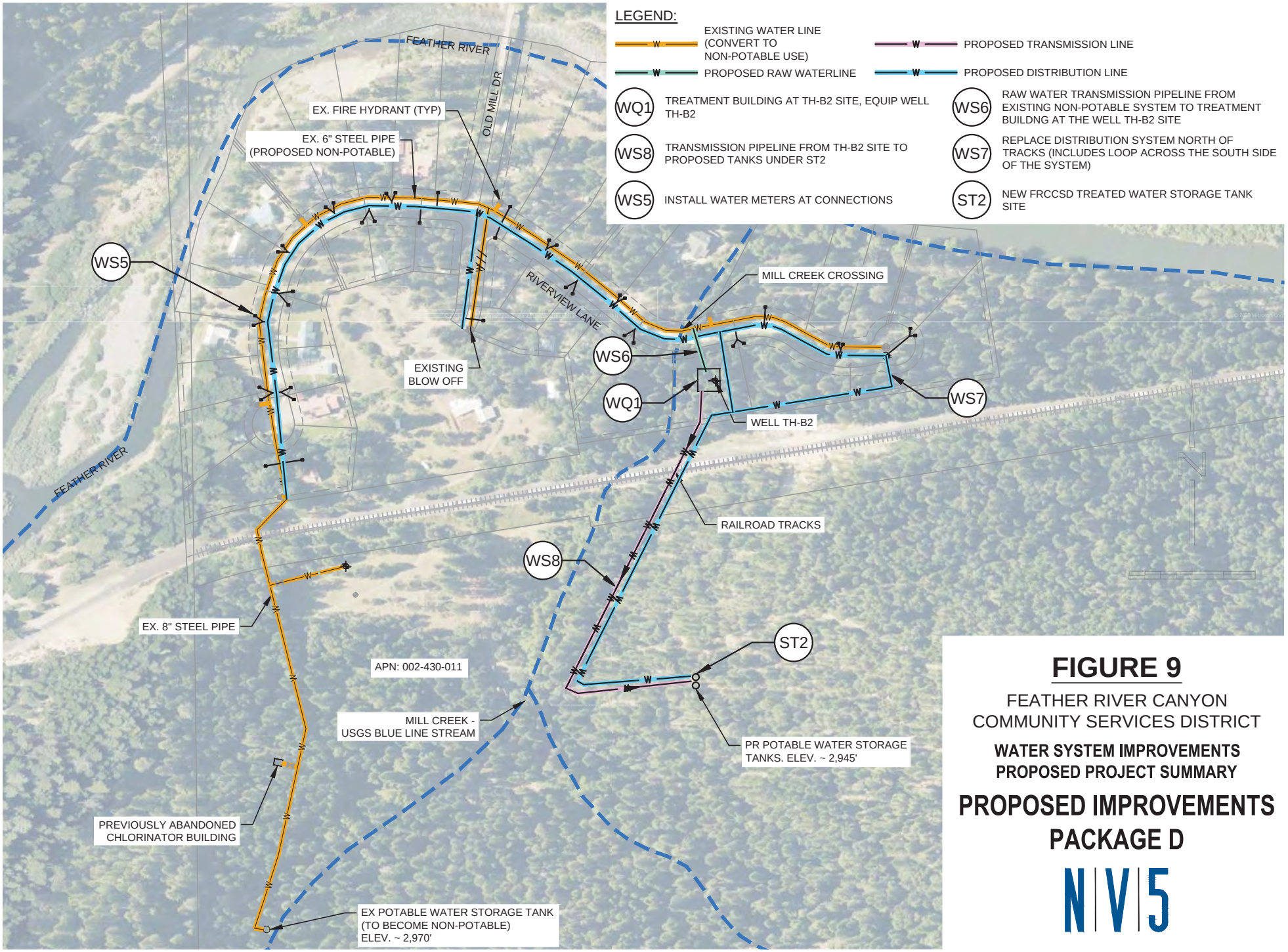

FIGURE 9

FEATHER RIVER CANYON COMMUNITY SERVICES DISTRICT

WATER SYSTEM IMPROVEMENTS
PROPOSED PROJECT SUMMARY

PROPOSED IMPROVEMENTS PACKAGE D

N|V|5

Appendix B

Official Species Lists

Search Results

37 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [**1A:1B:2A:2B**] , Quad is one of [**4012112:4012111:4012018:3912182:3912181:3912088**]

SCIENTIFIC NAME	▲ COMMON NAME	BLOOMING PERIOD	FED LIST	STATE LIST	CA RARE PLANT RANK
Eriogonum umbellatum var. *ahartii*	Ahart's buckwheat	Jun-Sep	None	None	1B.2
Rhamnus alnifolia	alder buckthorn	May-Jul	None	None	2B.2
Rhynchospora capitellata	brownish beaked-rush	Jul-Aug	None	None	2B.2
Hemieva ranunculifolia	buttercup-leaf hemieva	Jun-Aug	None	None	2B.2
Eleocharis torticulmis	California twisted spikerush	Jun-Jul	None	None	1B.3
Lewisia cantelovii	Cantelow's lewisia	May-Oct	None	None	1B.2
Sedum paradisum ssp. *paradisum*	Canyon Creek stonecrop	May-Jun	None	None	1B.3
Frangula purshiana ssp. *ultramafica*	Caribou coffeeberry	May-Jul	None	None	1B.2
Eremogone cliftonii	Clifton's eremogone	Apr-Sep	None	None	1B.3
Penstemon personatus	closed-throated beardtongue	Jun-Sep(Oct)	None	None	1B.2
Boechera constancei	Constance's rockcress	May-Jul	None	None	1B.1
Betula glandulosa	dwarf resin birch	May-Jul	None	None	2B.2
Sedum albomarginatum	Feather River stonecrop	May-Jun	None	None	1B.2
Utricularia intermedia	flat-leaved bladderwort	Jul-Aug	None	None	2B.2
Monardella follettii	Follett's monardella	Jun-Sep	None	None	1B.2
Stachys pilosa	hairy marsh hedge-nettle	Jun-Aug	None	None	2B.3
Packera eurycephala var. *lewisrosei*	Lewis Rose's ragwort	Mar-Jul(Aug-Sep)	None	None	1B.2
Carex petasata	Liddon's sedge	May-Jul	None	None	2B.3
Stellaria longifolia	long-leaved starwort	May-Aug	None	None	2B.2
Clarkia mildrediae ssp. *mildrediae*	Mildred's clarkia	May-Aug	None	None	1B.3
Carex limosa	mud sedge	Jun-Aug	None	None	2B.2
Corallorhiza trifida	northern coralroot	Jun-Jul	None	None	2B.1
Potamogeton epihydrus	Nuttall's ribbon-leaved pondweed	(Jun)Jul-Sep	None	None	2B.2
Erigeron lassenianus var. *deficiens*	Plumas rayless daisy	Jun-Sep	None	None	1B.3
Carex scoparia var. *scoparia*	pointed broom sedge	Jul-Sep	None	None	2B.2
Orthocarpus bracteosus	rosy orthocarpus	Jun-Sep	None	None	2B.2
Erythranthe percaulis	Serpentine Canyon monkeyflower	(Mar)May(Jun)	None	None	1B.1
Carex sheldonii	Sheldon's sedge	May-Aug	None	None	2B.2
Monardella stebbinsii	Stebbins' monardella	Jul-Sep	None	None	1B.2
Pyrrocoma lucida	sticky pyrrocoma	Jul-Oct	None	None	1B.2
Oreostemma elatum	tall alpine-aster	Jun-Aug	None	None	1B.2
Brasenia schreberi	watershield	Jun-Sep	None	None	2B.3
Ivesia webberi	Webber's ivesia	May-Jul	FT	None	1B.1

Astragalus webberi	Webber's milk-vetch	May-Jul	None	None	1B.2
Rhynchospora alba	white beaked-rush	Jun-Aug	None	None	2B.2
Carex lasiocarpa	woolly-fruited sedge	Jun-Jul	None	None	2B.3
Epilobium luteum	yellow willowherb	Jul-Sep	None	None	2B.3

Showing 1 to 37 of 37 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2022. Rare Plant Inventory (online edition, v9-01 1.5). Website https://www.rareplants.cnps.org [accessed 8 March 2022].

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Twain (4012111) OR Caribou (4012112) OR Bucks Lake (3912182) OR Meadow Valley (3912181) OR Quincy (3912088) OR Crescent Mills (4012018))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ahart's buckwheat *Eriogonum umbellatum var. ahartii*	PDPGN086UY	None	None	G5T3	S3	1B.2
alder buckthorn *Rhamnus alnifolia*	PDRHA0C010	None	None	G5	S3	2B.2
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
bald eagle *Haliaeetus leucocephalus*	ABNKC10010	Delisted	Endangered	G5	S3	FP
bank swallow *Riparia riparia*	ABPAU08010	None	Threatened	G5	S2	
Bolander's bruchia *Bruchia bolanderi*	NBMUS13010	None	None	G3G4	S3	4.2
brownish beaked-rush *Rhynchospora capitellata*	PMCYP0N080	None	None	G5	S1	2B.2
buttercup-leaf hemieva *Hemieva ranunculifolia*	PDSAX0W010	None	None	G5	S2	2B.2
California twisted spikerush *Eleocharis torticulmis*	PMCYP092E0	None	None	G1	S1	1B.3
Cantelow's lewisia *Lewisia cantelovii*	PDPOR04020	None	None	G3	S3	1B.2
Caribou coffeeberry *Frangula purshiana ssp. ultramafica*	PDRHA0H061	None	None	G4T2T3	S2S3	1B.2
Clifton's eremogone *Eremogone cliftonii*	PDCAR17010	None	None	G3	S3	1B.3
closed-throated beardtongue *Penstemon personatus*	PDSCR1L4Y0	None	None	G2	S2	1B.2
Constance's rockcress *Boechera constancei*	PDBRA06090	None	None	G2	S2	1B.1
Darlingtonia Seep *Darlingtonia Seep*	CTT51120CA	None	None	G4	S3.2	
dwarf resin birch *Betula glandulosa*	PDBET02030	None	None	G5	S2	2B.2
Feather River stonecrop *Sedum albomarginatum*	PDCRA0A030	None	None	G2	S2	1B.2
flat-leaved bladderwort *Utricularia intermedia*	PDLNT020A0	None	None	G5	S3	2B.2
Follett's monardella *Monardella follettii*	PDLAM180W0	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
foothill yellow-legged frog *Rana boylii*	AAABH01050	None	Endangered	G3	S3	SSC
fringed myotis *Myotis thysanodes*	AMACC01090	None	None	G4	S3	
greater sandhill crane *Antigone canadensis tabida*	ABNMK01014	None	Threatened	G5T5	S2	FP
hairy marsh hedge-nettle *Stachys pilosa*	PDLAM1X1A0	None	None	G5	S3	2B.3
Lewis Rose's ragwort *Packera eurycephala var. lewisrosei*	PDAST8H182	None	None	G4T2	S2	1B.2
Liddon's sedge *Carex petasata*	PMCYP03AE0	None	None	G5	S3	2B.3
long-leaved starwort *Stellaria longifolia*	PDCAR0X0M0	None	None	G5	S2	2B.2
long-legged myotis *Myotis volans*	AMACC01110	None	None	G4G5	S3	
Mildred's clarkia *Clarkia mildrediae ssp. mildrediae*	PDONA050Q2	None	None	G3T2T3	S2S3	1B.3
Morrison bumble bee *Bombus morrisoni*	IIHYM24460	None	None	G4G5	S1S2	
mud sedge *Carex limosa*	PMCYP037K0	None	None	G5	S3	2B.2
North American porcupine *Erethizon dorsatum*	AMAFJ01010	None	None	G5	S3	
northern coralroot *Corallorhiza trifida*	PMORC0M050	None	None	G5	S1	2B.1
northern goshawk *Accipiter gentilis*	ABNKC12060	None	None	G5	S3	SSC
Nuttall's ribbon-leaved pondweed *Potamogeton epihydrus*	PMPOT03080	None	None	G5	S2S3	2B.2
osprey *Pandion haliaetus*	ABNKC01010	None	None	G5	S4	WL
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G4	S3	SSC
Plumas rayless daisy *Erigeron lassenianus var. deficiens*	PDAST3M262	None	None	G3G4T2T3	S2S3	1B.3
pointed broom sedge *Carex scoparia var. scoparia*	PMCYP03C91	None	None	G5T5	S1	2B.2
Quincy lupine *Lupinus dalesiae*	PDFAB2B1A0	None	None	G3	S3	4.2
rosy orthocarpus *Orthocarpus bracteosus*	PDSCR1H030	None	None	G3	S1	2B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Sagehen Creek goeracean caddisfly *Goeracea oregona*	IITRI0X010	None	None	G3	S1S2	
Serpentine Canyon monkeyflower *Erythranthe percaulis*	PDPHR01140	None	None	G1	S1	1B.1
Sheldon's sedge *Carex sheldonii*	PMCYP03CE0	None	None	G4	S2	2B.2
Sierra Nevada mountain beaver *Aplodontia rufa californica*	AMAFA01013	None	None	G5T3T4	S2S3	SSC
Sierra Nevada red fox *Vulpes vulpes necator*	AMAJA03012	None	Threatened	G5T1T2	S1	
Sierra Nevada yellow-legged frog *Rana sierrae*	AAABH01340	Endangered	Threatened	G1	S1	WL
southern long-toed salamander *Ambystoma macrodactylum sigillatum*	AAAAA01085	None	None	G5T4	S3	SSC
Stebbins' monardella *Monardella stebbinsii*	PDLAM180L0	None	None	G2	S2	1B.2
sticky pyrrocoma *Pyrrocoma lucida*	PDASTDT0E0	None	None	G3	S3	1B.2
tall alpine-aster *Oreostemma elatum*	PDASTEA020	None	None	G2	S2	1B.2
three-ranked hump moss *Meesia triquetra*	NBMUS4L020	None	None	G5	S4	4.2
Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010	None	None	G4	S2	SSC
watershield *Brasenia schreberi*	PDCAB01010	None	None	G5	S3	2B.3
Wawona riffle beetle *Atractelmis wawona*	IICOL58010	None	None	G3	S1S2	
Webber's ivesia *Ivesia webberi*	PDROS0X0Q0	Threatened	None	G2	S1	1B.1
Webber's milk-vetch *Astragalus webberi*	PDFAB0F9J0	None	None	G1	S1	1B.2
western bumble bee *Bombus occidentalis*	IIHYM24250	None	None	G2G3	S1	
western pearlshell *Margaritifera falcata*	IMBIV27020	None	None	G4G5	S1S2	
white beaked-rush *Rhynchospora alba*	PMCYP0N010	None	None	G5	S2	2B.2
willow flycatcher *Empidonax traillii*	ABPAE33040	None	Endangered	G5	S1S2	
wolverine *Gulo gulo*	AMAJF03010	None	Threatened	G4	S1	FP

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
woolly-fruited sedge	PMCYP03720	None	None	G5	S2	2B.3
Carex lasiocarpa						
yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Coturnicops noveboracensis						
Yuma myotis	AMACC01020	None	None	G5	S4	
Myotis yumanensis						

Record Count: 64

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: February 11, 2022
Project Code: 2022-0006755
Project Name: FRCCSD Old Mill Ranch Water System Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Project Code: 2022-0006755
Event Code: None
Project Name: FRCCSD Old Mill Ranch Water System Improvements
Project Type: Government / Municipal (Non-Military) Construction
Project Description: Water utility improvements for community near Twain, CA.
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.01437425,-121.08356583057952,14z

Counties: Plumas County, California

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
Sierra Nevada Yellow-legged Frog *Rana sierrae* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix C

Observed Species List

Plant Species Observed within the BSA on February 9 and August 25, 2022	
Scientific Name	**Common Name**
Acer macrophyllum	Big-leaved maple
Achillea millefolium	Common yarrow
Acmispon americanus	Spanish lotus
Adenocaulon bicolor	American trailplant
Aira caryophyllea	Silver hairgrass
Alnus rhombifolia	White alder
Aralia californica	California spikenard
Arctostaphylos viscida ssp. *viscida*	White-leaved manzanita
Artemisia douglasiana	California mugwort
Asarum sp.	Wild ginger
Balsamorhiza sp.	Balsamroot
Bromus diandrus	Rip-gut brome
Bromus tectorum	Cheatgrass
Calocedrus decurrens	Incense cedar
Cardamine sp.	Bittercress
Carex sp.	Sedge
Ceanothus integerrimus	Deer brush
Centaurea cyanus	Bachelor button
Centaurea solstitialis	Yellow star thistle
Chenopodium album	Lamb's quarters
Cirsium vulgare	Bull thistle
Claytonia parviflora	Small flowered miner's lettuce
Collinsia parviflora	Few flowered blue eyed mary
Collomia grandiflora	Mountain collomia
Convolvulus arvensis	Bindweed
Cornus nuttallii	Pacific flowering dogwood
Cornus sericea ssp. *sericea*	American dogwood
Croton setiger	Turkey-mullein
Dactylis glomerata	Orchard grass
Danthonia californica	California oatgrass
Dicentra formosa ssp. *formosa*	Pacific bleedinghearts
Drymocallis glandulosa	Sticky cinquefoil
Elymus glaucus	Blue wildrye
Elymus elymoides	Bottlebrush squirreltail
Epilobium brachycarpum	Tall willowherb
Equisetum arvense	Common horsetail rush
Equisetum hyemale ssp. *affine*	Giant scouring rush
Erigeron bonariensis	South American horseweed
Erigeron inornatus var. *inornatus*	California rayless daisy
Erodium cicutarum	Cut-leaf filaree
Festuca bromoides	Six-weeks fescue
Galium bolanderi	Bolander's bedstraw
Hedera helix	English ivy

Scientific Name	Common Name
Hypericum perforatum	Klamathweed
Lactuca serriola	Prickly lettuce
Lepidium sp.	Pepperweed
Lupinus albicaulis	Sickle keeled lupine
Madia gracilis	Slender tarweed
Melica harfordii	Harford melic
Melilotus albus	White sweetclover
Phacelia heterophylla	Varileaf phacelia
Pinus ponderosa	Ponderosa pine
Plantago lanceolata	English plantain
Poa bulbosa	Bulbous bluegrass
Polygonum aviculare	Prostrate knotweed
Polystichum sp.	Western swordfern
Prunus virginiana	Chokecherry
Pseudotsuga menziesii var. *menziesii*	Douglas-fir
Pteridium aquilinum var. *pubescens*	Western bracken fern
Pyrola picta	White veined wintergreen
Quercus chrysolepis	Canlyon live oak
Quercus kelloggii	California black oak
Ribes nevadense	Mountain pink currant
Rubus armeniacus	Himalayan blackberry
Rubus ursinus	Pacific blackberry
Rumex acetosella	Common sheep sorrel
Rumex crispus	Curly dock
Salix lasiolepis	Arroyo willow
Salsola tragus	Tumbleweed
Sisymbrium officinale	Hedge mustard
Solidago velutina ssp. *californica*	California goldenrod
Stachys rigida	Rigid hedge nettle
Symphoricarpos albus	Common snowberry
Torilis arvensis	Hedge parsley
Tragopogon sp.	Salsify
Trifolium dubium	Shamrock clover
Trifolium pratense	Red clover
Verbascum blattaria	Moth mullein
Verbascum thapsus	Woolly mullein
Vicia sp.	Garden vetch
Vinca sp.	Periwinkle

Appendix D

Project Site Photos

Project Site Photos

Taken February 9 and August 25, 2022

Looking south at ephemeral drainage.

Looking south at Mill Creek in August.

Looking south at disturbed annual grassland.

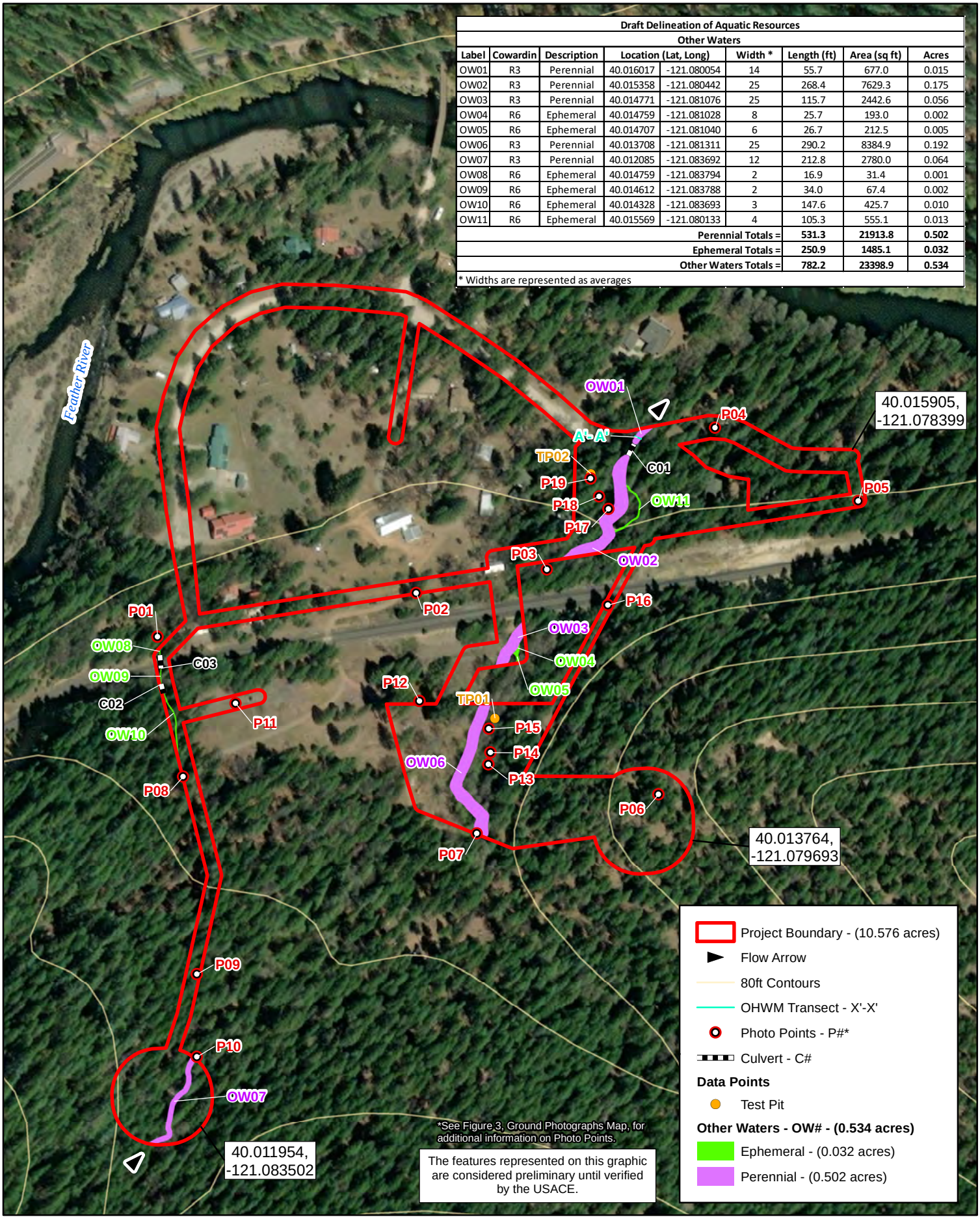
Urban habitat within the BSA.

Looking west at annual grassland habitat.

Montane hardwood conifer habitat.

Appendix E

Draft Delineation of Aquatic Resources Map



Draft Delineation of Aquatic Resources

Other Waters

Label	Cowardin	Description	Location (Lat, Long)		Width *	Length (ft)	Area (sq ft)	Acres
OW01	R3	Perennial	40.016017	-121.080054	14	55.7	677.0	0.015
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					Perennial Totals =	531.3	21913.8	0.502
					Ephemeral Totals =	250.9	1485.1	0.032
					Other Waters Totals =	782.2	23398.9	0.534

* Widths are represented as averages

NORTH

1:3,245 1 inch = 270 feet

0 100 200 Feet

Data Sources: ESRI, FRCCSD, NV5, Maxar 04/19/2021

Old Mill Ranch Water System Improvement Project
Draft Delineation of Aquatic Resources
Figure 4

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GE: #21-130 Map Date: 08/29/2022

APPENDIX C

DRAFT DELINEATION OF AQUATIC RESOURCES

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DRAFT DELINEATION OF AQUATIC RESOURCES

Feather River Canyon Community Services District

Old Mill Ranch Water System Improvement Project

Plumas County, California

September 2022

Prepared for:
Rick Reynolds
Feather River Canyon Community Services District
P.O. Box 141
Twain, CA 95984
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DRAFT DELINEATION OF AQUATIC RESOURCES,

Old Mill Ranch Water System Improvement Project, Plumas County, California

Introduction and Project Location

Gallaway Enterprises conducted a delineation of aquatic resources including waters of the United States (WOTUS) and waters of the State (WOTS) for the Feather River Canyon Community Services District (FRCCSD) Old Mill Ranch Water System Improvement Project (Project) site consisting of an approximately 11-acre survey area located within a small residential development off of Old Mill Drive on the south side of the Feather River in Twain, Plumas County, California (**Figure 1 and 2**). The Project site is located within the United States Geologic Survey (USGS) Twain Quadrangle, within Section 22, Township 25N, Range 8E.

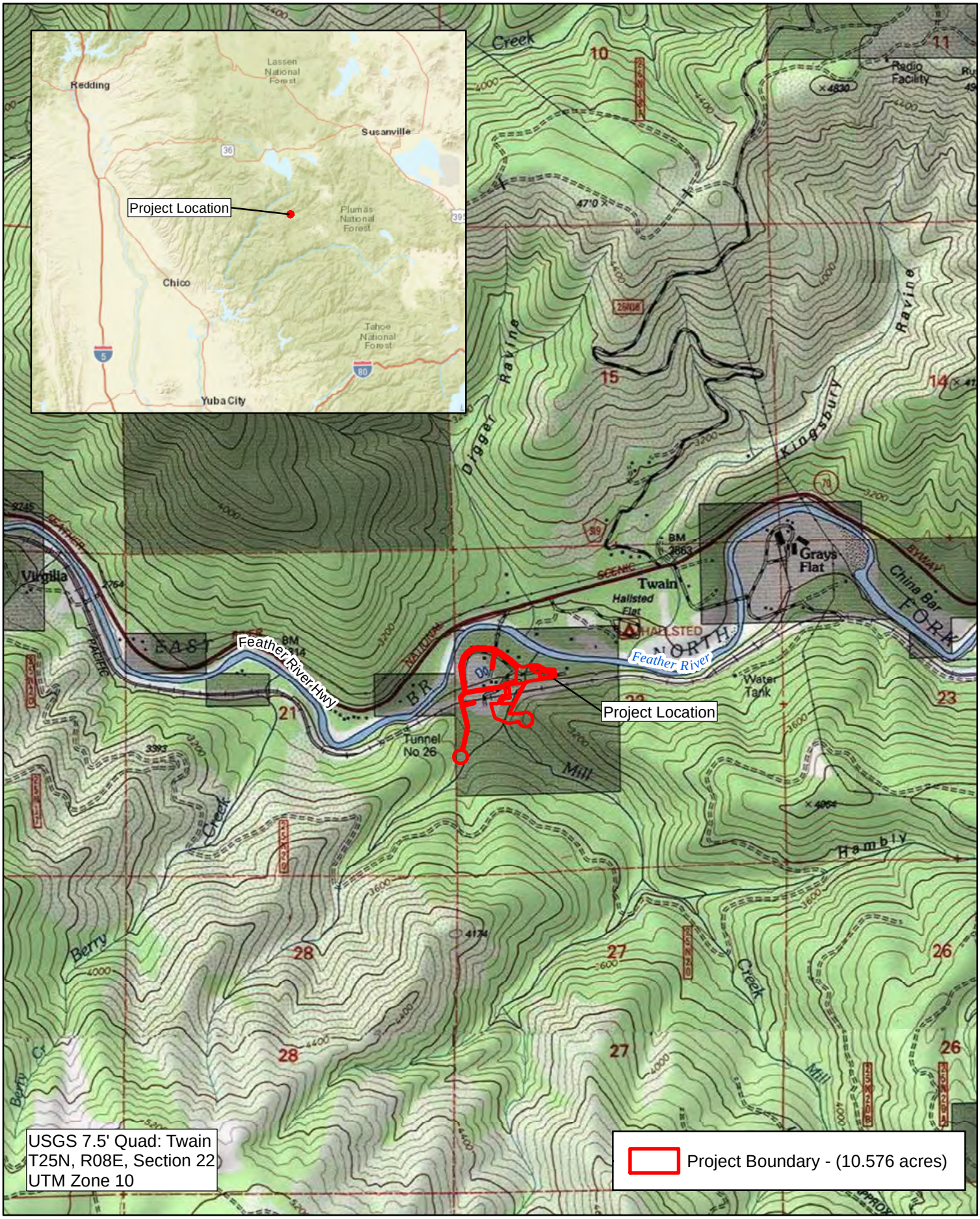
To access the site from Highway 70 heading north from the Oroville area, at the interchange north of Oroville keep right to stay on CA-70 N toward Paradise/Quincy/US-191. Continue on CA-70 N for approximately 53.5 miles then turn right onto Old Mill Drive. Cross over the bridge over the Feather River to continue on Old Mill Drive. The Project site begins at the intersection of Old Mill Drive and Riverview Lane.

A survey of WOTUS was conducted on February 9 and August 25, 2022 by Senior Botanist Elena Gregg. Data regarding the location and extent of waters of the United States and other aquatic resources were collected using a Trimble Geo Explorer 6000 Series GPS Receiver. The survey involved an examination of botanical resources, soils, hydrological features, and determination of wetland characteristics based on the *United States Army Corps of Engineers Wetlands Delineation Manual* (1987) (1987 Delineation Manual); the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (2010) (Western Mountains Manual); the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (2007); the *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (2008), and the *2020 National Wetland Plant List.* Gallaway Enterprises have prepared this report in compliance with the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (January 2016).

Environmental Setting and Site Conditions

The Project site is located at the northern edge of the Sierra Nevada Mountain Range in Twain, a census designated place in Plumas County, California, positioned along the Feather River to the southwest of Lake Almanor. In the summer of 2021 the Dixie Fire burned through portions of the Project site along the edges of the residential development. The site is primarily composed of urban development and montane hardwood-conifer forest with a few small patches of open annual grassland. Segments of a perennial drainage, Mill Creek, flow through multiple portions of the Project site and a few ephemeral drainages were also observed to occur on the site.

The average annual precipitation is 40.15 inches, the average annual snowfall is 55.1 inches and the average annual temperature is 50.1° F (WRCC 2022) in the region where the Project site is located. The Project site occurs at an average elevation of approximately 2865 feet above sea level. The site is composed of steep, 50 to 70 percent, slopes in the southern portions of the Project site to relatively flat terrain in the northern portions of the Project site. Soils within the site are primarily very gravelly and sandy loams with a natural restrictive layer typically occurring between 17 and 27 inches deep.



1:24,000

0 0.25 0.5 Miles

NORTH

Data Sources: ESRI, FRCCSD, USGS, NV5

Old Mill Ranch Water System Improvement Project
Regional Location
Figure 1

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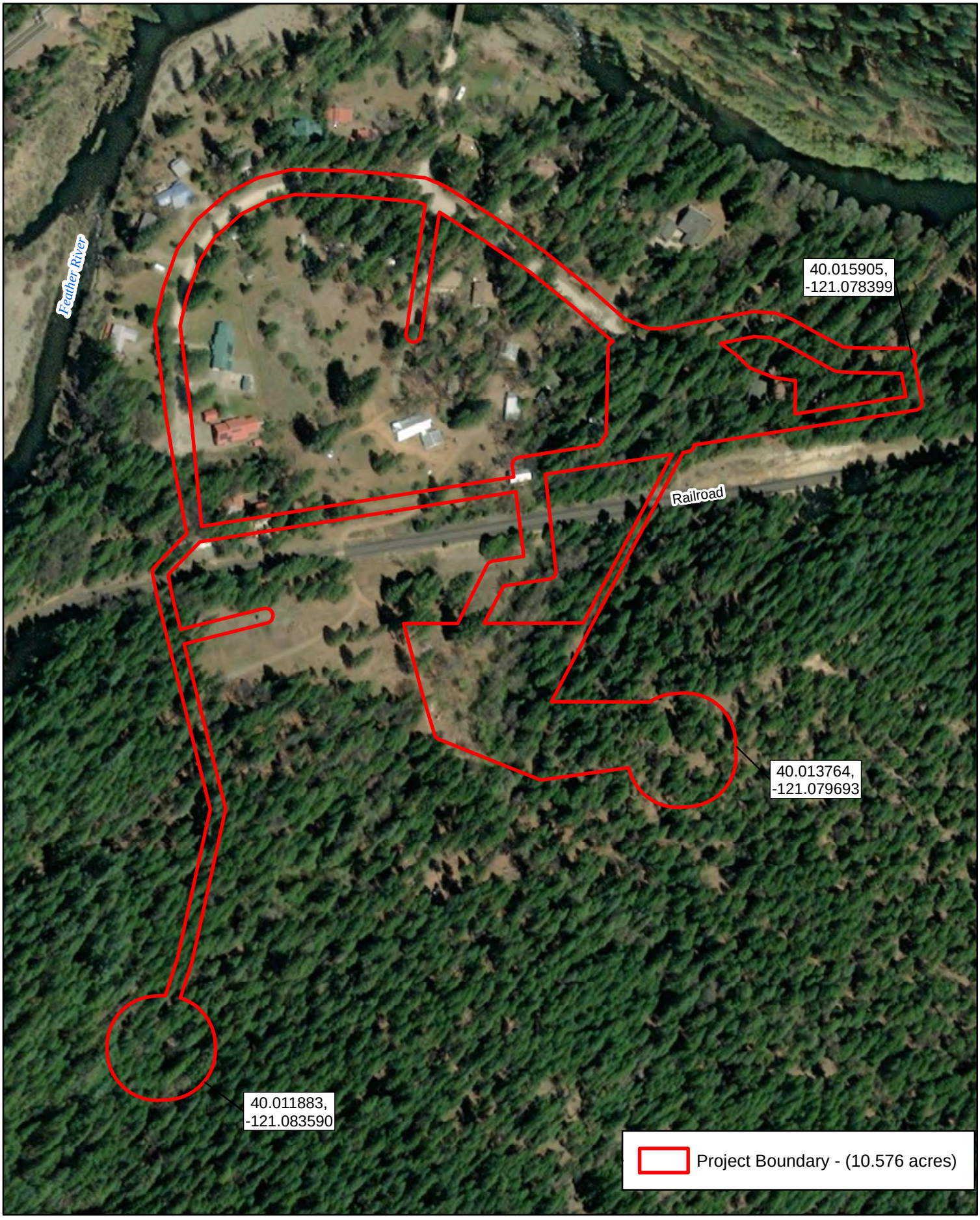
GE: #21-130 Map Date: 8/29/2022



NORTH

1:3,000

0 150 300 Feet

Data Sources: ESRI, FRCCSD, NV5, Maxar 04/19/2021 & 10/30/2020

Old Mill Ranch Water System Improvement Project
Project Location
Figure 2

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GE: #21-130 Map Date: 08/29/2022

Survey Methodology

The entire Project site was surveyed on-foot by Gallaway Enterprises staff on February 9 and August 25, 2022 to identify any potentially jurisdictional features. The survey, mapping efforts, and report production were performed according to the valid legal definitions of WOTUS in effect on the date surveyed and updated per the valid legal definitions of WOTUS in effect as of September 20, 2021. The boundaries of non-tidal, non-wetland waters, when present, were delineated at the ordinary high water mark (OHWM) as defined in 33 Code of Federal Regulations (CFR) 328.3. The OHWM represents the limit of United States Army Corps of Engineers (Corps) jurisdiction over non-tidal waters (e.g., streams and ponds) in the absence of adjacent wetlands (33 CFR 328.04) (Curtis, et. al. 2011). Historic aerial photographs available on Google Earth were analyzed prior to conducting the field visit. Areas identified as having potential wetland or unusual aerial signatures were assessed in the field to determine the current conditions.

Field data was entered onto data sheets using the most current format (**Appendix A** and **Appendix B**). When present, wetland perimeters based on the 1987 Delineation Manual and the Western Mountains Manual were recorded and defined according to their topographic and hydrologic orientation. Test pit sampling was performed and/or photographs were taken in areas displaying potential wetland signatures on aerial photographs and/or depressional topography. At each test pit the data collected involved physical sampling of soils, recording dominant vegetation, and investigation regarding wetland hydrology indicators and hydrological connectivity. Only areas exhibiting the necessary wetland parameters according to the 1987 Delineation Manual and Western Mountains Manual on the date surveyed were mapped as wetlands. Photographs were taken to show aquatic features and/or areas identified as having unusual aerial signatures. The locations of the photo points are depicted in **Figure 3** and the associated photographs are provided at the end of the report.

Many of the terms used throughout this report have specific meanings relating to the federal wetland delineation process. Term definitions are based on the Corps 1987 Delineation Manual; the Western Mountains Manual; *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, (*Lichvar and McColley 2008*)* and the Corps *Jurisdictional Determination Form Instructional Guidebook* (2007). The terms defined below have specific meaning relating to the delineation of WOTUS as prescribed by §404 of the Clean Water Act (CWA) and described in 33 CFR Part 328 and 40 CFR Parts 110, 112, and 116, and 122.

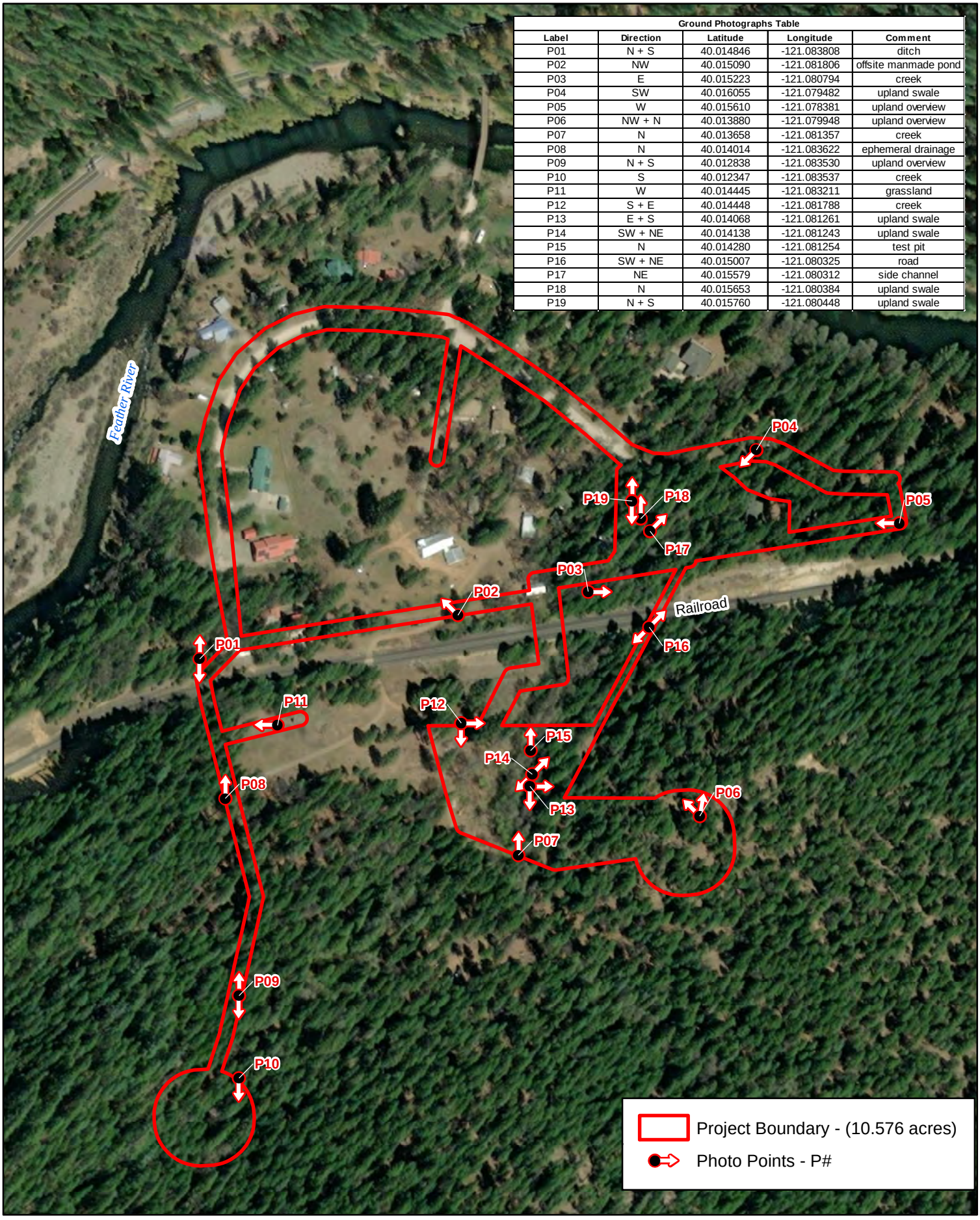
Determination of Hydrophytic Vegetation

The presence of hydrophytic vegetation was determined using the methods outlined in the 1987 Delineation Manual and the Western Mountains Manual. Areas were considered to have positive indicators of hydrophytic vegetation if they pass the dominance test, meaning more than 50 percent of the dominant species are obligate wetland, facultative wetland and facultative plants. Plant species were identified to the lowest taxonomy possible. Plant indicator status was determined by reviewing the 2020 National Wetland Plant List. In situations where dominance can be misleading due to seasonality, the prevalence index will be used to determine hydrophytic status of the community surrounding sample sites.

Plant indicator status categories:

Obligate wetland plants (OBL) – plants that occur almost always (estimated probability 99%) in wetlands under normal conditions, but which may also occur rarely (estimated probability 1%) in non-wetlands.

Facultative wetland plants (FACW) - plants that usually occur (estimated probability 67% to 99%) in wetlands under normal conditions, but also occur (estimated probability 1% to 33%) in non-wetlands.



Ground Photographs Table

Label	Direction	Latitude	Longitude	Comment
P01	N + S	40.014846	-121.083808	ditch
P02	NW	40.015090	-121.081806	offsite manmade pond
P03	E	40.015223	-121.080794	creek
P04	SW	40.016055	-121.079482	upland swale
P05	W	40.015610	-121.078381	upland overview
P06	NW + N	40.013880	-121.079948	upland overview
P07	N	40.013658	-121.081357	creek
P08	N	40.014014	-121.083622	ephemeral drainage
P09	N + S	40.012838	-121.083530	upland overview
P10	S	40.012347	-121.083537	creek
P11	W	40.014445	-121.083211	grassland
P12	S + E	40.014448	-121.081788	creek
P13	E + S	40.014068	-121.081261	upland swale
P14	SW + NE	40.014138	-121.081243	upland swale
P15	N	40.014280	-121.081254	test pit
P16	SW + NE	40.015007	-121.080325	road
P17	NE	40.015579	-121.080312	side channel
P18	N	40.015653	-121.080384	upland swale
P19	N + S	40.015760	-121.080448	upland swale

NORTH

1:3,250

0 150 300 Feet

Data Sources: ESRI, FRCCSD, NV5, Maxar 04/19/2021 & 10/30/2020

Old Mill Ranch Water System Improvement Project
Photo Points
Figure 2

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Facultative plants (FAC) – Plants with a similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and non-wetlands.

Facultative upland plants (FACU) – Plants that occur sometimes (estimated probability1% to 33%) in wetlands, but occur more often (estimated probability 67% to 99%) in non-wetlands.

Obligate upland plants (UPL) – Plants that occur rarely (estimated probability 1%) in wetlands, but occur almost always (estimated probability 99%) in non-wetlands under natural conditions.

Determination of Hydric Soils

Soil survey information was reviewed for the current site condition. Field samples were evaluated by using the Munsell soil color chart (2009 Edition), hand texturing, and assessing soil features (e.g. oxidized root channels, evidence of hardpan, Mn and Fe concretions). Information regarding local soil and series descriptions is provided in **Appendix C.** A few soil pits (**Appendix A**) were dug in portions of the site that exhibited concave or swale-like micro-topography. The current Natural Resources Conservation Service (NRCS) *Field Indicators of Hydric Soils in the United States, Version 8.2* (NRCS 2018) was used in conjunction with the Western Mountains Manual to determine the presence of hydric soil indicators.

Determination of Wetland Hydrology

Wetland hydrology was determined to be present if a site supported one or more of the following characteristics:

- Landscape position and surface topography (e.g. position of the site relative to an up-slope water source, location within a distinct wetland drainage pattern, and concave surface topography),
- Inundation or saturation for a long duration either inferred based on field indicators or observed during repeated site visits, and
- Residual evidence of ponding or flooding resulting in field indicators such as scour marks, sediment deposits, algal matting, surface soil cracks and drift lines.

The presence of water or saturated soil for approximately 12% or 14 consecutive days during the growing season typically creates anaerobic conditions in the soil, and these conditions affect the types of plants that can grow and the types of soils that develop (Wetland Training Institute 1995).

Historic aerial photographs were analyzed to look for primary and secondary wetland hydrology indicators of inundation or saturation. The historic aerial imagery reviewed was the public, readily available imagery provided on Google Earth. If aerial signatures demonstrated the presence of surface water on 1 or more of the historic aerial photographs viewed, inundation and a primary indicator of wetland hydrology was determined to be present. Saturation, a secondary indicator of wetland hydrology, was determined to be present if saturation, "darker patches within the field," were observed on 1 or more of the historic aerial photographs viewed and the presence of hydric soils was confirmed in these areas during the field survey.

Determination of Ordinary High Water Mark

Gallaway utilized methods consistent with the Western Mountains Manual and *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, (2008)* to determine the OHWM. The lateral extents of non-tidal water bodies (e.g. intermittent and ephemeral streams) were based on the OHWM, which is "the line on the shore established by the fluctuations of water" (Corps 2005). The OHWM was determined based on multiple observed physical characteristics of the area, which can include scour, multiple observed flow events (from current and historical aerial photos), shelving, and changes in the character of soil, presence of mature vegetation,

deposition, and topography. Due to the wide extent of some floodplains, adjacent riparian scrub areas characterized by hydric soils, hydrophytic vegetation, and hydrology may be included within the OHWM of a non-tidal water body (Curtis, et. al. 2011).

OHWM Transect:

Representative OHWM widths measured in the field are shown as a transect line and measured in feet as required by the Corps *Final Map and Drawing Standards for the South Pacific Division Regulatory Program (2012)*. The transect line is used to ensure that the other waters of the United States identified within the Project site are mapped and calculated at the appropriate average width for each channel segment based on the Corps definition of OHWM as defined in the OHWM Field Guide and the *Ordinary High Water Mark Identification RGL 05-05 (2005)* (RGL 05-05). When the average width of a feature changes, this change is shown on the delineation map as a feature transition and a new average channel width is determined. At the transect line Gallaway used multiple observed physical indicators in determining the OHWM. The lateral extents of the transect line identify the location of the OHWM where benches, drift, exposed root hairs, changes in substrate/particle size, and, if appropriate, changes in vegetation were observed. If any other physical indicators as described in the OHWM Field Guide or RGL 05-05 are observed, these indicators are also utilized to help determine the location of the OHWM. Field data gathered along the OHWM transect of Mill Creek within the Project site was entered onto the OHWM Datasheet (Curtis and Lichvar 2010), which is provided as **Appendix B**.

Determination of Wetland Boundaries in Difficult Wetland Situations

The difficult wetland situation procedures for determining hydrophytic vegetation were used when mapping the boundary of aquatic features within the Project site due to the extreme drought conditions experienced in California in 2022 (USACE 2022). To aid in the determination, spatial patterns, analysis of aerial photographs, topography, and landscape position were used in conjunction with vegetation data to determine the wetland boundary. Areas where wetland vegetation or wetland hydrology was lacking but where the landscape position was likely to concentrate water were closely inspected. Gallaway Enterprises mapped these areas as wetlands if hydric soil indicators were detected and at least one other hydric indicator was present (i.e. wetland hydrology or hydrophytic vegetation).

Aquatic Resource Boundary Determination and Acreage Calculation

The wetland-upland boundary was determined based on the presence or inference of positive indicators of all mandatory criteria. The site was traversed on foot to identify wetland features and boundaries. The spatial data obtained during the preparation of this wetland delineation was collected using a Trimble Geo Explorer 6000 Series GPS Receiver. No readings were taken with fewer than 5 satellites. Point data locations were recorded for at least 25 seconds at a rate of 1 position per second. Area and line data were recorded at a rate of 1 position per second while walking at a slow pace. All GPS data were differentially corrected for maximum accuracy. In some cases, when visual errors and degrees of precision are identified due to environmental factors negatively influencing the precision of the GPS instrument (i.e. dense tree cover, steep topography, and other factors affecting satellite connection) mapping procedures utilized available topographic and aerial imagery datasets in order to improve accuracy in feature alignment and location.

Non-Wetland and Non-Jurisdictional Feature Boundary Determination

Areas were determined to be non-wetlands if they did not meet the necessary wetland test parameters (hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4) and were determined to be

potentially non-jurisdictional if they were consistent with the description of non-jurisdictional features as presented in the *Corps Jurisdictional Determination Form Instructional Guidebook* (2007).

There were a few upland swales present within the Project site adjacent to the main drainage on the site. Photographs (**Figure 3**) and test pits (TP01 and TP02) were taken to assess the vegetative cover and soil characteristics at these locations. Based on the data collected (**Appendix A**), these locations did not meet the necessary parameters to be considered a wetland and did not exhibit an OHWM. Due to the lack of wetland or other water characteristics, these areas were determined to be upland swales and were not included as an aquatic resource.

Results

Table 1 Summarizes the area calculations for the pre-jurisdictional aquatic features within the Project. A complete Draft Delineation of Aquatic Resources map, utilizing a 1" to 270' scale, is included as **Figure 4**.

Table 1. Summary of the Draft Delineation of Aquatic Resources Results for the Old Mill Ranch Water System Improvement Project.

Draft Delineation of Aquatic Resources						
Other Waters						
Label	**Cowardin**	**Description**	**Width ***	**Length (ft)**	**Area (sq ft)**	**Acres**
OW01	R3	Perennial	14	55.7	677.0	0.015
OW02	R3	Perennial	25	268.4	7629.3	0.175
OW03	R3	Perennial	25	115.7	2442.6	0.056
OW04	R6	Ephemeral	8	25.7	193.0	0.002
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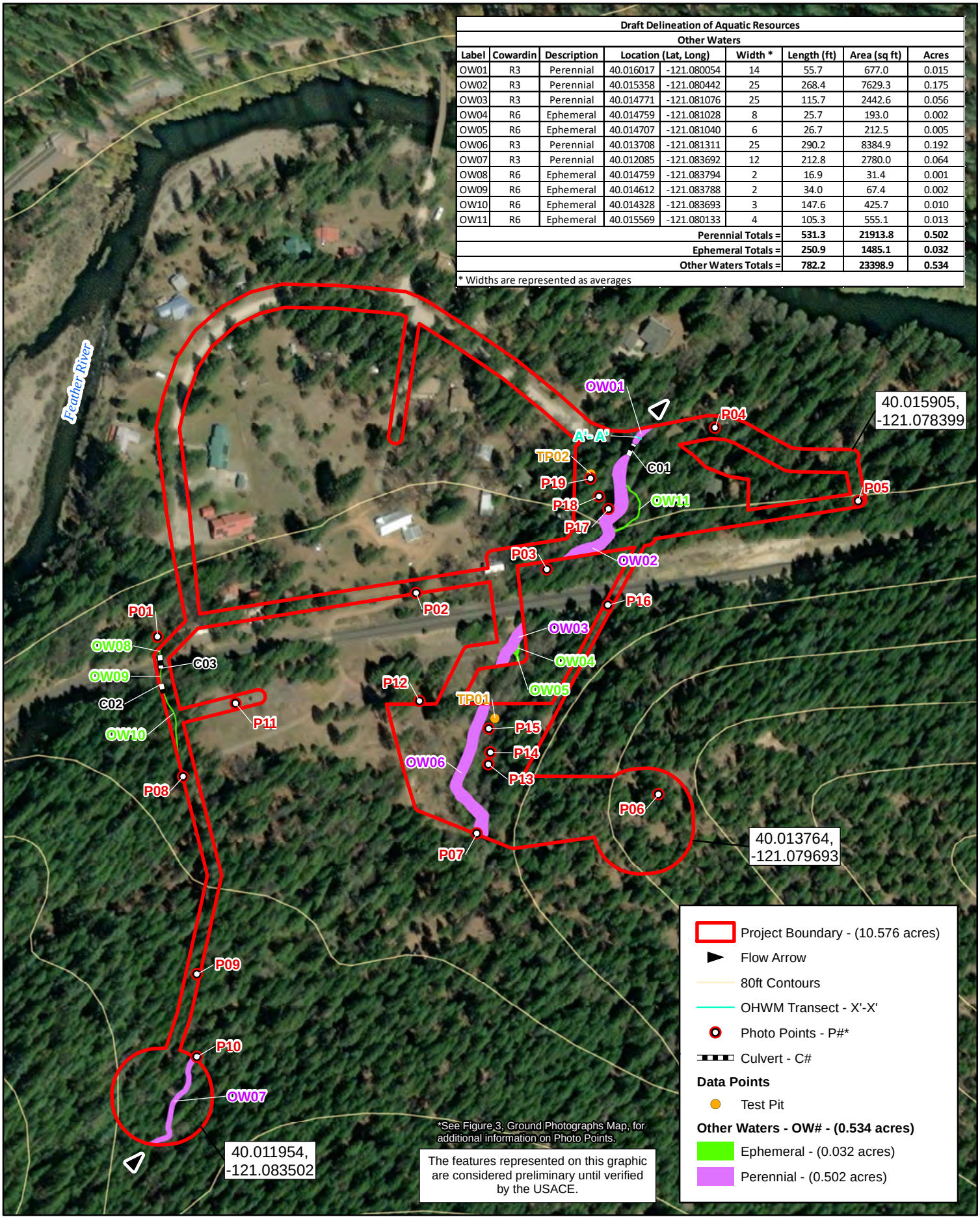
OW09	R6	Ephemeral	2	34.0	67.4	0.002
OW10	R6	Ephemeral	3	147.6	425.7	0.010
OW11	R6	Ephemeral	4	105.3	555.1	0.013
Perennial Totals				**531.3**	**21913.8**	**0.502**
Ephemeral Totals				**250.9**	**1485.1**	**0.032**
Other Waters Totals =				**782.2**	**23398.9**	**0.534**
* Widths are represented as averages						

Waters of the United States: Other Waters

There are 11 features (or segments of features) identified as "other waters of the United States" (OW) within the Project (**Figure 4**). The area and linear footage data associated with these features are provided in **Table 1**. Other waters of the United States are seasonal or perennial water bodies, including lakes, stream channels, ephemeral and intermittent drainages, ponds, and other surface water features that exhibit an ordinary high-water mark, but lack positive indicators for one or more of the three wetland parameters (hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4). The boundaries



Draft Delineation of Aquatic Resources

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* Widths are represented as averages

NORTH

1:3,245 1 inch = 270 feet

0 100 200 Feet

Data Sources: ESRI, FRCCSD, NV5, Maxar 04/19/2021

Old Mill Ranch Water System Improvement Project
Draft Delineation of Aquatic Resources
Figure 4

gallaway ENTERPRISES

GE: #21-130 Map Date: 08/29/2022

of all other waters identified within the Survey Area were delineated based on the observed OHWM, including physical characteristics such as natural lines impressed on the bank, shelving, changes in the character of the soil, the destruction of terrestrial vegetation, debris lines and other appropriate indicators.

Of the 11 OW features identified within the Project five have been identified as segments of a branched perennial drainage (OW01-OW03 and OW06-OW07) and six have been identified as ephemeral drainages (OW04-OW05 and OW08-OW11). The perennial drainage features include multiple segments of Mill Creek and an unnamed tributary of Mill Creek and are classified by the Corps as Relatively Permanent Waters (RPW). The ephemeral drainages identified on the Project site are classified as Non-Relatively Permanent Waters (NRPW). Non-Relatively Permanent Waters are defined as tributaries that typically flow for less than 3 months of the year and have a documented hydrologic connection to a Traditionally Navigable Water (TNW). Relatively Permanent Waters are defined as tributaries that typically flow for more than 3 months of the year and have a documented hydrologic connection to a TNW. Flowing water was not present within any of the ephemeral features during the February 2022 site visit. The OW features identified within the Project were observed to contain appropriate morphology of bed, bank and scour.

Waters of the United States: Wetlands

No wetland features were observed to occur within the Project site (**Figure 4**). There was some montane riparian vegetation associated with the perennial drainages present within the Project site, but all of this riparian vegetation was limited to within the OHWM of the drainages.

Photographs were taken of the various drainages and upland swales within the Project site (**Figure 3**).

Soils

Field observations of soil characteristics included soil color, texture, structure, and the visual assessment of soil features (e.g. the presence, or absence of redoximorphic features and the depth of restrictive layers such as hardpans). Gallaway's soil texture evaluations rendered very gravely loams. Field observations of soil characteristics at the test pit sites are included in the data forms presented in **Appendix A**.

The geographic region in which the Project is found is often characterized as having a naturally occurring restrictive layer that undulates throughout the region. Restrictive layers restrict root growth, limit water infiltration, and result in a perching of the water table in certain locations. Within the Project site, the restrictive layer is composed of lithic bedrock that ranges from 17 to 27 inches below the ground surface.

Gallaway queried the National Cooperative Soil Survey database to further evaluate the current soil conditions. A copy of the soil survey map and a description of mapped soil units for the Project site are included as **Appendix C**. One soil map unit occurs within the Project. The one map unit is listed below in **Table 2**. Based on Gallaway's review, this one soil map unit identified within the Project site contains no hydric components. A copy of the soil survey map and a description of mapped soil units for the Project site are included as **Appendix C**.

Table 2. Soil Map Units, NRCS hydric soil designation, and approximate totals for the Old Mill Ranch Water System Improvement Project.

Map Unit	Map Unit Name	% Hydric Component	Landform of Hydric Component	% Map Unit in Project
264	Skalan-Deadwood-Kistirn families complex, 50 to 70 percent slopes	N/A	N/A	100%

Vegetation

During the site visit, the typical dominant vegetation present within the OHWM of the perennial drainage present within the Project site included scouring rush (*Equisetum hyemale*) (FACW), California spikenard (*Aralia californica*) (FAC), scattered arroyo willow (*Salix lasiolepis*) (FACW), red osier dogwood (*Cornus sericea* ssp. *sericea*) (FACW), and white alder (*Alnus rhombifolia*) (FACW). The ephemeral drainages present within the Project site generally lacked vegetation. The top of the banks of the intermittent drainage was composed of hardwood-conifer forest habitat. The hardwood-conifer forest habitat scattered throughout the Project site was dominated by a tree canopy of ponderosa pine (*Pinus ponderosa*) (UPL) with scattered Douglas fir (*Pseudotsuga menziesii*) (UPL), incense cedar (*Calocedrus decurrens*) (UPL) and canyon live oak (*Quercus chrysolepis*) (UPL). The vegetation within the disturbed annual grassland habitat present was typically dominated by yellow star-thistle (*Centaurea solstitialis*) (UPL), bulbous bluegrass (*Poa bulbosa*) (NL), wooly mullein (*Verbascum thapsus*) (FACU), Harford melic (*Melica harfordii*) (NL), blue wildrye (*Elymus glaucus*) (FACU), California rayless daisy (*Erigeron inornatus* var. *inornatus*) (NL), California goldenrod (*Solidago velutina* ssp. *californica*) (NL), bachelor's button (*Centaurea cyanus*) (FACU), and grand collomia (*Collomia grandiflora*) (NL).

Hydrology

Precipitation, snow melt, natural spring seepage and capture of localized runoff are the main hydrological inputs for the aquatic resources within the Project site. The perennial drainages present within the site are Mill Creek (OW01-OW03 and OW06) and an unnamed tributary of Mill Creek (OW07). Mill Creek is a direct tributary of the North Fork Feather River, a TNW. Flowing water was observed within all of the perennial drainages during the February field visit.

The ephemeral drainages OW04, OW05, and OW11 are small side channels/braids of Mill Creek and the ephemeral drainages OW08-OW10 are segments of a drainage that flows only immediately after precipitation events and snowmelt. This ephemeral drainage has been man-altered as the feature flows under the railroad tracks and has been re-routed around the small residential development to outfall into the Feather River to the north/northwest of the Project site. None of the ephemeral drainages contained flowing water during the February field visit, however there was a broken water pipe that was contributing to the presence of some standing water within OW08.

There are also upland swale features present within the Project site, however, these features did not contain any wetland or OW characteristics and were, therefore, not included as aquatic resources.

Site Photos Taken on February 9 and August 25, 2022

P01 – OW08 looking north (containing standing water from leaking pipe)

P01 – Broken water pipe in OW08 looking south

P02 – Offsite pond looking northwest

P03 – OW02 looking east

P04 – Upland swale looking southwest

P05 – Overview of steep upland looking west

P06 – Overview of upland looking north

P08 – OW10 looking north

P06 – Overview of upland looking northwest

P09 – Overview of upland looking north

P07 – OW06 looking north

P09 – Overview of upland looking south

P10 – OW07 looking south

P11 – Weedy upland grassland looking west

P12 – Upland overview looking south

P12 – Upland overview looking east

P13 – Upland swale looking south

P13 – Upland swale looking east

P14 – Upland swale looking southwest

P16 – Upland overview looking northeast

P14 – Upland swale looking northeast

P16 – Upland overview looking southwest

P15 – TP01 looking north

P17 – OW02 and OW11 looking northeast

P18 – Upland swale looking north

P19 – TP02 looking north

P19 – Upland swale looking south

Glossary

Abutting: When referring to wetlands that are adjacent to a tributary, abutting defines those wetlands that are not separated from the tributary by an upland feature, such as a berm or dike.

Adjacent: Adjacent as used in "Adjacent to traditional navigable water," is defined in Corps and EPA regulations as "bordering, contiguous, or neighboring." Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes and the like are 'adjacent wetlands. A wetland "abuts" a tributary if it is not separated from the tributary by uplands, a berm, dike, or similar feature.

While all wetlands that meet the agencies' definitions are considered adjacent wetlands, only those adjacent wetlands that have a continuous surface connection because they directly abut the tributary (e.g., they are not separated by uplands, a berm, dike, or similar feature) are considered jurisdictional under the plurality standard. (CWA Jurisdiction Following Rapanos v US and Carabell v US 12-02-08).

The regulations define "adjacent" as follows: "[t]he term adjacent means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are 'adjacent wetlands.'" Under this definition, a wetland does not need to meet all criteria to be considered adjacent. The agencies consider wetlands to be bordering, contiguous, or neighboring, and therefore "adjacent" if at least one of following three criteria is satisfied:

(1) There is an unbroken surface or shallow sub-surface hydrologic connection between the wetland and jurisdictional waters; or

(2) The wetlands are physically separated from jurisdictional waters by "manmade dikes or barriers, natural river berms, beach dunes, and the like;" or,

(3) Where a wetland's physical proximity to a jurisdictional water is reasonably close, that wetland is "neighboring" and thus adjacent. For example, wetlands located within the riparian area or floodplain of a jurisdictional water will generally be considered neighboring, and thus adjacent. One test for whether a wetland is sufficiently proximate to be considered "neighboring" is whether there is a demonstrable ecological interconnection between the wetland and the jurisdictional waterbody. For example, if resident aquatic species (e.g., amphibians, reptiles, fish, mammals, or waterfowl) rely on both the wetland and the jurisdictional waterbody for all or part of their life cycles (e.g., nesting, rearing, feeding, etc.), that may demonstrate that the wetland is neighboring and thus adjacent. The agencies recognize that as the distance between the wetland and jurisdictional water increases, the potential ecological interconnection between the waters is likely to decrease.

The agencies will also continue to assert jurisdiction over wetlands "adjacent" to traditional navigable waters as defined in the agencies' regulations. Under EPA and Corps regulations and as used in this guidance, "adjacent" means "bordering, contiguous, or neighboring." Finding a continuous surface connection is not required to establish adjacency under this definition. The Rapanos decision does not affect the scope of jurisdiction over wetlands that are adjacent to traditional navigable waters. The agencies will assert jurisdiction over those adjacent wetlands that have a continuous surface connection with a relatively permanent, non-navigable tributary, without the legal obligation to make a significant nexus finding.

Atypical situation (significantly disturbed): In an atypical (significantly disturbed) situation, recent human activities or natural events have created conditions where positive indicators for hydrophytic vegetation, hydric soil, or wetland hydrology are not present or observable.

Channel. "An open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water" (Langbein and Iseri 1960:5).

Channel bank. The sloping land bordering a channel. The bank has steeper slope than the bottom of the channel and is usually steeper than the land surrounding the channel.

Cobbles. Rock fragments 7.6 cm (3 inches) to 25 .4 cm (10 inches) in diameter.

Debris flow. A moving mass of rock fragments, soil, and mud where more than 50% of the particles are larger than sand-sized.

Ditch. A constructed or excavated channel used to convey water.

Drift. Organic debris oriented to flow direction(s) (larger than small twigs).

Ephemeral stream. An ephemeral stream has flowing water only in direct response to precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Facultative wetland (FACW). Wetland indicator category; species usually occurs in wetlands (estimated probability 67–99%) but occasionally found in non-wetlands.

Flat. A level landform composed of unconsolidated sediments usually mud or sand. Flats may be irregularly shaped or elongate and continuous with the shore, whereas bars are generally elongate, parallel to the shore, and separated from the shore by water.

Gravel. A mixture composed primarily of rock fragments 2mm (0 .08 inch) to 7.6 cm (3 inches) in diameter. Usually contains much sand.

Growing season The frost-free period of the year (see U.S. Department of Interior, National Atlas 1970:110-111 for generalized regional delineation).

Herbaceous. With the characteristics of an herb; a plant with no persistent woody stem above ground.

Hydric soil. Soil is hydric that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen-depleted) conditions in its upper part (i.e., within the shallow rooting zone of herbaceous plants).

Hydrophyte, **hydrophytic.** Any plant growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.

Intermittent stream. An intermittent stream has flowing water during certain times of the year and more than in direct response from precipitation, when elevated groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water.

Jurisdictional Waters. Features that meet the definition of waters of the Unites States provided below and that fall under Corps regulations pursuant to Section 404 of the CWA are considered jurisdictional features.

Litter. Organic debris oriented to flow direction(s) (small twigs and leaves).

Man-induced wetlands. A man-induced wetland is an area that has developed at least some characteristics of naturally occurring wetlands due to either intentional or incidental human activities.

Non-Relatively Permanent Water: A non-relatively permanent water (NRPW) is defined as a tributary that is not a TNW and that typically flows for periods for less than 3 months. NRPWs are jurisdictional when they have a documented significant nexus to TNWs. All NRPWs must also contain appropriate morphology of bed, bank and scour and be clearly connected to a TNW.

Normal circumstances. This term refers to the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed.

Obligate hydrophytes. Species that are found only in wetlands e.g., cattail (*Typha latifolia*) as opposed to ubiquitous species that grow either in wetland or on upland-e .g., red maple (*Acer rubrum*).

Obligate wetland (OBL). Wetland indicator category; species occurs almost always (estimated probability 99%) under natural conditions in wetlands.

Other Waters of the United States. Other waters of the United States are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high-water mark but lack positive indicators for one or more of the three wetland parameters (hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4).

Palustrine the Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 parts per thousand. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2 m (6.6 feet) at low water; and (4) salinity due to ocean-derived salts is less than 0.5 parts per thousand.

Perennial stream. A perennial stream has flowing water year-round during atypical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Ponded. Ponding is a condition in which free water covers the soil surface (e.g., in a closed depression) and is removed only by percolation, evaporation, or transpiration.

Problem area. Problem areas are those where one or more wetland parameters may be lacking because of normal seasonal or annual variations in environmental conditions that result from causes other than human activities or catastrophic natural events**.**

Relatively Permanent Waters of the U.S. Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).

Scour. Soil and debris movement.

Sheetflow. Overland flow occurring in a continuous sheet; a relatively high-frequency, low-magnitude event.

Shrub. A woody plant which at maturity is usually less than 6 m(20 feet) tall and generally exhibits several erect, spreading, or prostrate stems and has a bushy appearance ; e.g., speckled alder (*Alnus rugosa*) or buttonbush (*Cephalanthus occidentalis*).

Succession. Changes in the composition or structure of an ecological community.

Traditional Navigable Waters (TNWs)."[a]ll waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide." These waters are referred to in this guidance as traditional navigable waters. The traditional navigable waters include all of the "navigable waters of the United States," as defined in

33 C.F.R. Part 329 and by numerous decisions of the federal courts, plus all other waters that are navigable-in-fact (for example, the Great Salt Lake, UT, and Lake Minnetonka, MN). Thus, the traditional navigable waters include, but are not limited to, the "navigable waters of the United States" within the meaning of Section 10 of the Rivers and Harbors Act of 1899 (also known as "Section 10 waters").

Tree. A woody plant which at maturity is usually 6 m (20 feet) or more in height and generally has a single trunk, unbranched for 1 m or more above the ground, and a more or less definite crown; e.g., red maple (*Acer rubrum*), northern white cedar (*Thuja occidentalis*).

Typical Year. Defined by the EPA and Corps as meaning when precipitation and other climactic variables are within the normal periodic range for the geographic area based on a rolling thirty-year period.

Water table. The upper surface of a zone of saturation. No water table exists where that surface is formed by an impermeable body.

Waters of the United States (WOTUS). This is the encompassing term for areas under federal jurisdiction pursuant to Section 404 of the CWA. Waters of the United States are divided into "wetlands" and "other waters of the United States."

Watershed (drainage basin). An area of land that drains to a single outlet and is separated from other watersheds by a divide.

Wetland. Wetlands are defined as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 [b], 40 CFR 230.3). To be considered under potential federal jurisdiction, a wetland must support positive indicators for hydrophytic vegetation, hydric soil, and wetland hydrology.

Woody plant. A seed plant (gymnosperm or angiosperm) that develops persistent, hard, fibrous tissues, basically xylem; e.g., trees and shrubs.

Xeric. Relating or adapted to an extremely dry habitat.

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Appendix A: Wetland Determination Data Form

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Old Mill Ranch Water System Improvement Project City/County: Twain, Plumas County Sampling Date: 8/25/2022

Applicant/Owner: Feather River Canyon Community Services District State: CA Sampling Point: TP01

Investigator(s): E. Gregg Section, Township, Range: Section 22, Township 25N, Range 8E

Landform (hillslope, terrace, etc.): toe slope Local relief (concave, convex, none): slightly concave Slope (%): 2

Subregion (LRR): Sierra Nevada Mountains (MLRA 22A) Lat: 40.014342 Long: -121.081207 Datum: NAD 83

Soil Map Unit Name: Skalan-Deadwood-Kistirn families complex, 50 to 70 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Drought Conditions. NO OHWM indicators present. Area is located between the creek and a hillslope and is gently sloped toward the hillslope.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 4 sq. meters)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer macrophyllum	20	Yes	FACU
2.			
3.			
4.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: 4 sq. meters)			
1. Cornus nuttallii	20	Yes	FACU
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 4 sq. meters)			
1. Equisetum hyemale	5	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 75

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 5	x 2 = 10
FAC species _____	x 3 = _____
FACU species 40	x 4 = 160
UPL species _____	x 5 = _____
Column Totals: 45 (A)	170 (B)

Prevalence Index = B/A = 3.77

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	7.5YR 3/1	88	7.5YR 5/8	2	C	M	gravely clay loam	
	10YR 5/3	10						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: n/a

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Drainage patterns were the only indicator observed - likely due to snow melt.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Old Mill Ranch Water System Improvement Project City/County: Twain, Plumas County Sampling Date: 8/25/2022

Applicant/Owner: Feather River Canyon Community Services District State: CA Sampling Point: TP02

Investigator(s): E. Gregg Section, Township, Range: Section 22, Township 25N, Range 8E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): Sierra Nevada Mountains (MLRA 22A) Lat: 40.015789 Long: -121.080446 Datum: NAD 83

Soil Map Unit Name: Skalan-Deadwood-Kistirn families complex, 50 to 70 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

Drought Conditions. NO OHWM indicators present. Area is an upland swale that dead-ends at a road.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 sq meter)			
1. Galium bolanderi	30	Yes	NL
2. Equisetum hyemale	10	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 10	x 2 = 20
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species 30	x 5 = 150
Column Totals: 40 (A)	170 (B)

Prevalence Index = B/A = 4.25

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	organic							loose leaf and other organic debris
4-8	7.5YR 2.5/1	100					gravely clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: n/a

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

No redox features present. Landscape position/geology is not typical for areas where a depleted matrix occur under the dark surface, however, the soil pit was not dug deep enough to rule out indicators A11 or A12. Therefore, hydric soil is assumed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed - there was a thick layer of undisturbed loose organic debris on the soil surface.

Appendix B: Arid West Intermittent Streams OHWM Datasheets

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: FRCCSD Old Mill Ranch Water Improvement Project **Date:** 2/9/22 **Time:** 11:20am
Project Number: 21-130 **Town:** Twain **State:** CA
Stream: Mill Creek **Photo begin file#:** — **Photo end file#:** —
Investigator(s): S. Gregg

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: Mill Creek north of culvert under Riverview Lane

Projection: Google Earth **Datum:** WGS 84
Coordinates: 40.015998°, -121.080093°

Potential anthropogenic influences on the channel system: The up and below-gradient portions of this Creek flows through a small residential community and under train tracks before flowing into the Feather River just north of this transect area.

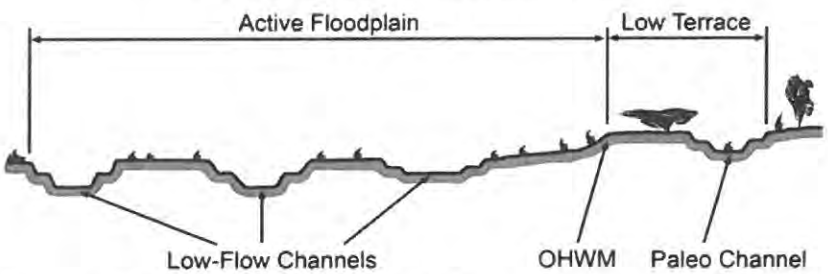
Brief site description: Creek is fairly channelized with little to no transition into the adjacent montane hardwood-conifer upland habitat.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☒ Topographic maps
- ☐ Geologic maps
- ☒ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

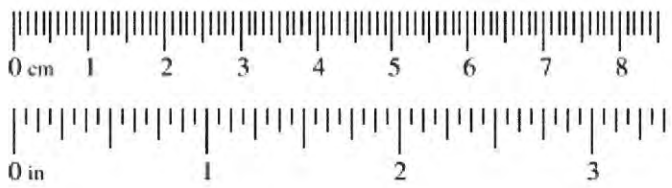


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☒ GPS
   - ☒ Digitized on computer
   - ☐ Other:

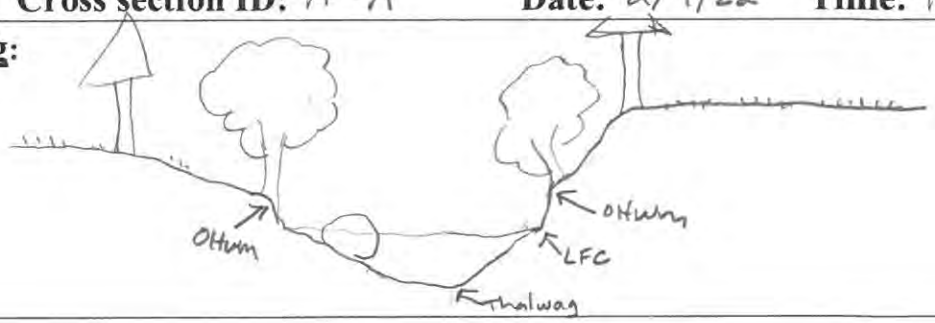
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 21-130 **Cross section ID:** A'-A' **Date:** 2/9/22 **Time:** 11:20am

Cross section drawing:



Looking downstream

OHWM

GPS point: See transect A-A on delineation map

Indicators:

- ☒ Change in average sediment texture
- ☒ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☒ Other: Exposed roots
- ☒ Other: Drift debris

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: See transect A-A

Characteristics of the floodplain unit:

Average sediment texture: cobble + boulders

Total veg cover: 5 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: scour holes
- ☒ Other: change in % vegetation cover
- ☐ Other:

Comments:

flowing water present in low-flow channel

Project ID: 21-130 **Cross section ID:** A'-A' **Date:** 2/9/22 **Time:** 11:20am

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: See transect A'-A'

Characteristics of the floodplain unit:

Average sediment texture: cobble

Total veg cover: 100 % Tree: 50 % Shrub: 30 % Herb: 20 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☐ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: exposed roots
- ☒ Other: change in species composition/vegetation
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: See transect A-A

Characteristics of the floodplain unit:

Average sediment texture: gravelly loam

Total veg cover: 140 % Tree: 70 % Shrub: 20 % Herb: 50 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☒ Benches
- ☒ Soil development
- ☒ Surface relief
- ☒ Other: change in vegetation composition
- ☐ Other: _____
- ☐ Other: _____

Comments:

Appendix C: NRCS Soils Map and Soil Series Description

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Plumas National Forest Area, California

September 7, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

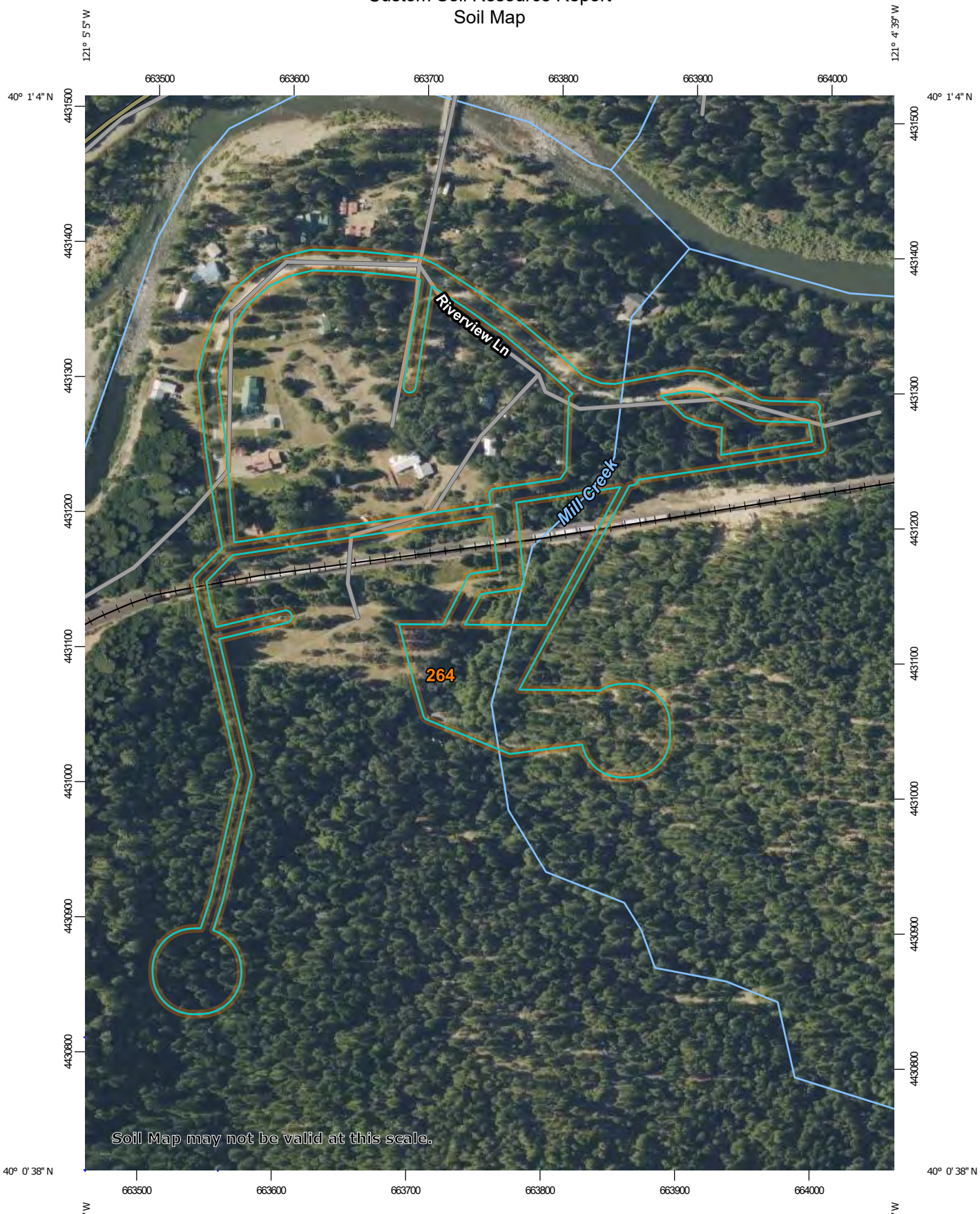
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:3,880 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Plumas National Forest Area, California
Survey Area Data: Version 15, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 8, 2019—Jun 21, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
264	Skalan-Deadwood-Kistirn families complex, 50 to 70 percent slopes.	10.6	100.0%
Totals for Area of Interest		**10.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Plumas National Forest Area, California

264—Skalan-Deadwood-Kistirn families complex, 50 to 70 percent slopes.

Map Unit Setting

National map unit symbol: htdc
Elevation: 2,600 to 5,500 feet
Mean annual precipitation: 40 to 80 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 135 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Skalan family and similar soils: 40 percent
Deadwood family and similar soils: 30 percent
Kistirn family and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Skalan Family

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Residuum weathered from greenstone

Typical profile

H1 - 0 to 9 inches: extremely gravelly sandy loam
H2 - 9 to 27 inches: extremely cobbly loam
H3 - 27 to 37 inches: unweathered bedrock

Properties and qualities

Slope: 50 to 70 percent
Depth to restrictive feature: 27 to 31 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Deadwood Family

Setting

Landform: Mountains

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from mica schist

Typical profile

H1 - 0 to 4 inches: very gravelly silt loam
H2 - 4 to 17 inches: very gravelly loam
H3 - 17 to 27 inches: unweathered bedrock

Properties and qualities

Slope: 50 to 70 percent
Depth to restrictive feature: 17 to 21 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R022AW005CA - Shallow Mesic Mountains >40"ppt
Hydric soil rating: No

Description of Kistirn Family

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Residuum weathered from schist

Typical profile

H1 - 0 to 5 inches: very gravelly silt loam
H2 - 5 to 22 inches: very gravelly silty clay loam
H3 - 22 to 44 inches: extremely gravelly silty clay loam
H4 - 44 to 65 inches: very gravelly silt loam
H5 - 65 to 79 inches: weathered bedrock

Properties and qualities

Slope: 50 to 70 percent
Depth to restrictive feature: 65 to 69 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Josephine family

Percent of map unit: 10 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Soil List - All Components

This table lists the map unit components and their hydric status in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the

upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or

B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

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Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Vasilas, L.M., G.W. Hurt, and C.V. Noble, editors. Version 7.0, 2010. Field indicators of hydric soils in the United States.

Report—Hydric Soil List - All Components

Hydric Soil List - All Components–CA713-Plumas National Forest Area, California					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
264: Skalan-Deadwood-Kistirn families complex, 50 to 70 percent slopes.	Skalan family	40	Mountains	No	—
	Deadwood family	30	Mountains	No	—
	Kistirn family	15	Mountains	No	—
	Josephine family	10	—	No	—
	Rock outcrop	5	—	No	—

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APPENDIX D

CULTURAL RESOURCES REPORT

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