

Notice of Intent to Adopt a Mitigated Negative Declaration

Project Title: Fall River Lake Trail Improvement and Ecocultural Enhancement

Lead agency name and address: Fall River Valley Community Services District (FRVCSD)
24850 3rd Street, P.O. Box 427
Fall River Mills, CA 96028

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Project Location: Fall River Mills, CA

Project sponsor's name and address: Fall River Valley Community Services District
24850 3rd Street, P.O. Box 427
Fall River Mills, CA 96028

Introduction:

This Notice of Intent serves as public notice that the Fall River Valley Community Services District (FRVCSD) has prepared an Initial Study and proposes to adopt a Mitigated Negative Declaration for the Fall River Lake Trail Improvement and Ecocultural Enhancement Project (proposed project). A Mitigated Negative Declaration has been prepared because no substantial evidence exists that the proposed project may have a significant environmental effect that cannot be fully mitigated to a less-than-significant level. The proposed Mitigated Negative Declaration does not signify approval or disapproval of this project by the Board of Directors of the FRVCSD. The FRVCSD will consider the proposed Mitigated Negative Declaration together with any comments received during the public review process to determine whether the proposed project would have a heretofore unidentified significant impact on the environment.

Project Location:

The proposed project is in Fall River Mills, Shasta County, California. The proposed project area includes the lands along the west bank of Fall River Lake/Pit 1 Forebay and 20 acres of oak woodland on the east side of Fall River Lake/Pit 1 Forebay. The Fall River Lake and the lands surrounding it are zoned unclassified (UC) and Exclusive Agriculture (EA) and support public recreation opportunities, including boating, fishing, and hiking. The proposed project is shown on the *Fall River Mills, California* 7.5-minute U.S. Geological Survey (USGS) quadrangle at 41° 0'50"N and 121°26'47"W.

Project Description:

The proposed project will transform existing off-highway vehicle roads adjacent to the east bank of Fall River Lake in Shasta County, California into no more than 2 miles of pedestrian and other non-motorized use trail, while decommissioning side roads/trails. In addition, the project will thin and restore up to 20

acres of mixed pine/oak woodlands on the west side of the lake and will install educational native plant guilds within restored areas that highlight the cultural importance of grassland and woodland ecosystems. A detailed Project Description is included in the appended Initial Study.

Review Period:

As mandated by Public Resources Code § 21091, the minimum public review period for this Initial Study and proposed Mitigated Negative Declaration is 30 days. The document has been sent to the State Clearinghouse. This document is open to public review and comment from Monday, March 4, 2019, through Wednesday, April 3, 2019. **Comments must be received by 5 p.m. on the last day of the comment period, Wednesday, April 3, 2019.** Any comments on the document may be presented in writing to:

Fall River Valley Community Services District
Attn.: Bill Johnson, FRVCSD Parks Manager
24850 3rd Street, P.O. Box 427
Fall River Mills, CA 96028
Phone: 530.336.5263
email: bjohnson@frvcsd.org

Document Availability

Copies of the Public Draft Initial Study and Proposed Mitigated Negative Declaration and supporting technical studies are available for review at the following location:

Fall River Valley Community Services District
24850 3rd Street
Fall River Mills, CA 96028

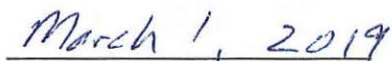
Fall River Valley Library
43250 Hwy, 299 East
Fall River Mills, CA 96028

Determination:

Based on the Initial Study, this project has the potential to affect special-status bird and aquatic species and cultural resources. Incorporation of project design features and mitigation measures stipulated in the Initial Study and Best Management Practices would reduce the risk of environmental impacts to less than significant. A **MITIGATED NEGATIVE DECLARATION** will be prepared.



Bill Johnson, Parks Manager
Fall River Valley Community Services District



Date

INITIAL STUDY—DRAFT

Fall River Valley Community Services District

Fall River Lake Trail Improvement and

Ecocultural Enhancement Project

Prepared for:



Prepared by:



SPRING RIVERS

ECOLOGICAL SCIENCES LLC

March 1, 2019

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1.0 INTRODUCTION

The proposed Fall River Lake Trail Improvement and Ecocultural Enhancement Project must comply with the California Environmental Quality Act (CEQA), which requires state and local agencies to identify significant environmental impacts of their actions and to make good-faith efforts to avoid or mitigate impacts to properties eligible to the California Register of Historical Resources (California Register).

This Initial Study compiles information from a biological resource assessment and a summary of the findings of the cultural resources records search. It includes a description of the biological resources known to occur in the vicinity of Fall River Mills, California that could potentially utilize habitat within the proposed Fall River Lake Trail Improvement and Ecocultural Enhancement Project Area (Figure 1). A description of the proposed project and potential impacts to habitats and species that could result from project work activities are also identified. Impact avoidance, minimization, and mitigation measures are detailed.

The purpose of the proposed project is to transform existing off-highway vehicle roads along the east bank of Fall River Lake in Shasta County, California into 2 miles of pedestrian and other non-motorized use trail, while decommissioning side roads/trails (Figure 1). This multipurpose trail begins near the Fall River Elementary School and extends to Mackey's Cove. The project will also thin and restore up to 20 acres of mixed pine/oak woodlands on the west side of the lake. In addition to reducing hazardous fuels, the oak woodland restoration will enhance native biological diversity and highlight the ecocultural importance of oaks and acorns to the Ajumawi Band of the Ajumawi-Atsugewi Nation (Pit River Tribe). In addition, the project will install educational native plant guilds within restored areas that will highlight the cultural importance of grassland and woodland ecosystems.

Core collaborating partners tasked with implementing the project include the Fall River Valley Community Services District (FRVCSD), Lomakatsi Restoration Project (Lomakatsi), the Inter-Tribal Ecosystem Restoration Network/Elected Cultural Representatives of the Ajumawi Band of the Ajumawi-Atsuge Nation (Pit River Tribe), Spring Rivers Foundation, and Spring Rivers Ecological Sciences LLC (Spring Rivers). All project work will occur on PG&E-watershed lands that will be retained by PG&E under a conservation easement with the Shasta Land Trust. Project funding comes from the Pacific Forest and Watershed Lands Stewardship Council (Stewardship Council) with matching from the FRVCSD and Lomakatsi.

The FRVCSD and partners developed this project to promote public recreation and education and encourage Tribal ecocultural use of an area that has been highly impacted by land-use history. The trail will be created on land that is currently degraded due to lack of maintenance and excessive, unauthorized off-highway vehicle (OHV) use. Historically these areas were composed of biologically diverse grassland and woodland ecosystems and they contain culturally

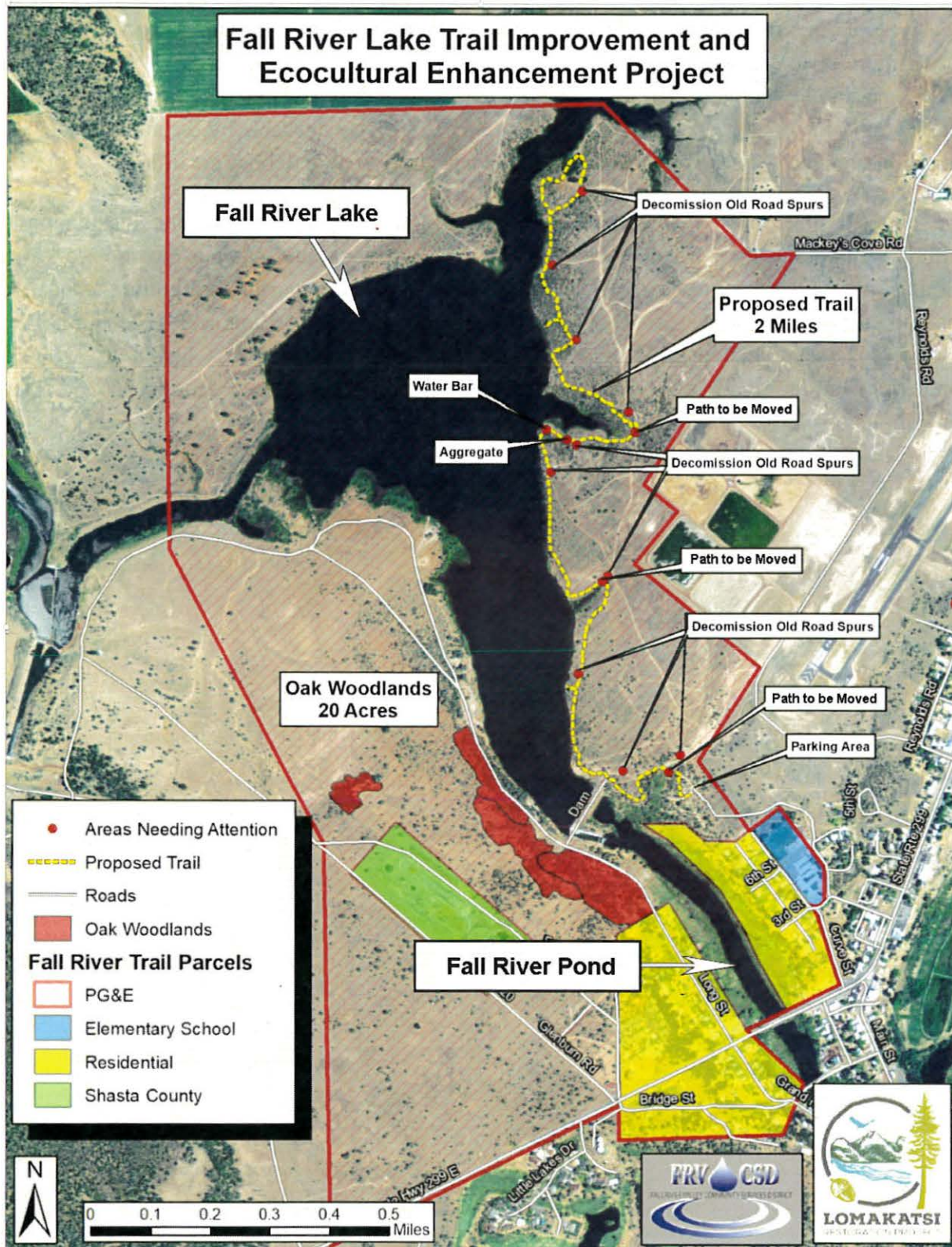


Figure 1. Map of proposed Project Area.

important sites. The current state of the Project Area excludes cultural use, provides a vector for invasive species, promotes accelerated soil erosion, and is unsightly for recreating visitors. The flatter, more open east side of the lake has been dissected by a network of OHV tracks. These OHV roads hold and channel water during wet conditions, causing erosion, gullyng, and degradation of natural conditions. They are muddy and nearly unusable by the public under wet conditions, and very dusty and suboptimal for public enjoyment under dry conditions.

The planned trail work, including decommissioning of side roads/trails and installation of culturally important native plant guilds, will help restore grassland habitat, provide workforce training, and increase environmentally appropriate recreational opportunities, cultural education, outdoor education, and access to culturally significant botanical resources. The thinning of pine/oak woodland habitat will reduce hazardous fuels, improve forest health by reducing competitive stress, and protect oaks and other culturally important plant species for future generations.

2.0 DESCRIPTION OF PROJECT WORK ACTIVITIES

The proposed project is located adjacent to Fall River Lake/Pit 1 Forebay (Figure 1), which is the forebay for the Pit 1 Hydroelectric Project (Pit 1 Project). The Pit 1 Project is owned and operated by Pacific Gas and Electric Company (PG&E) and licensed by the Federal Energy Regulatory Commission (FERC Project No. 2687). All project work will occur on PG&E-watershed lands that will be retained by PG&E under a conservation easement with the Shasta Land Trust. The trail work will occur on the east side of Fall River Lake within the Stewardship Council's Land Conservation Conveyance Plan Fall River Mills Planning Unit Parcels 136 and 149; and forest thinning will occur on the west side of the lake within Parcels 115, 145, 147, and 160 (Figure 2).

The FRVCSD's proposal for funding for Enhancements on Watershed Lands from the Stewardship Council outlined the project tasks (FRVCSD 2018). Project Tasks 1 and 2 involve project design, permitting, management, and coordination. Construction-related tasks are described below.

Task 3. Trail Installation

Goal: Install/rehabilitate approximately 2 miles of 4-foot wide public access trail (totaling 0.97 acres) and protect biological and cultural resources.

Methods:

Task 3.1 – Trail installation (initial grade). The main trail grade will be installed using a trail cutting machine called a SWECO trail dozer, which is a small, light-weight (< 10,000 lbs) dozer designed for trail installation. Following the trail design and layout, new trail sections will be installed with proper grade slope and drainage. Sections of old OHV roads/trails will be blocked and rehabilitated to proper specifications.

Grading will be limited to less than 250 cubic yards of soil disturbance/movement. Some sections of the trail alignment that have been eroded below the surrounding grade will be filled up to grade using crushed gravel and the final trail surface will be gravel. Straw wattles will be employed to reduce potential for future erosion. One section of trail alignment will involve abandoning a short section of deeply eroded OHV road and creating a new alignment nearby, but away from the old alignment. Surface material from the new alignment will be placed into the eroded section. Then that old section will be seeded/re-vegetated and allowed to grow over. Final trail surface materials will depend on section conditions. Where drainage and surface runoff may be a concern, the trail surface will be covered with gravel aggregate. Where drainage is not a concern, the surface may be covered with wood chips. Trail materials will be purchased from a local vendor and transported to the site in small trucks and ATVs with trailers.

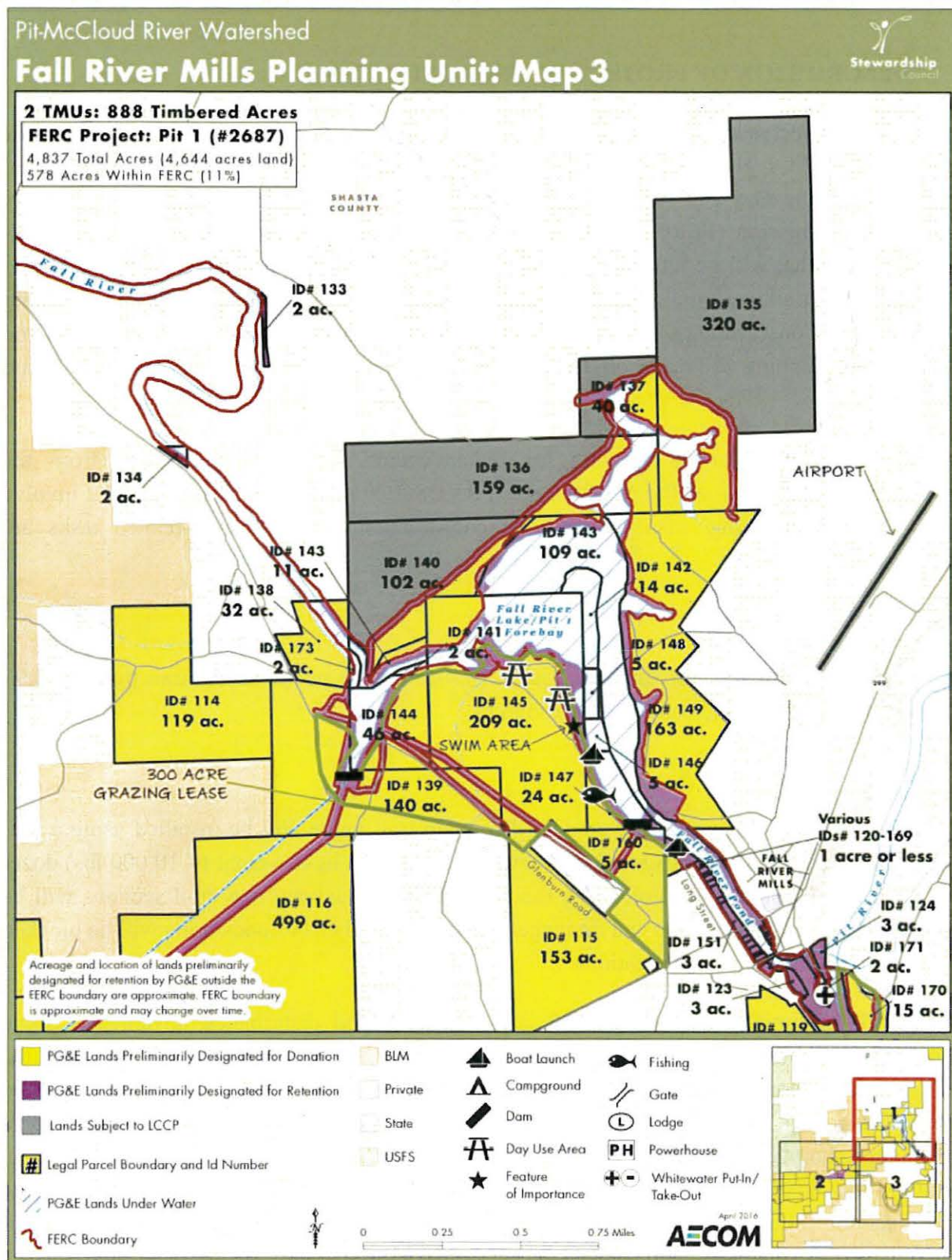


Figure 2. Stewardship Council's Map of the Fall River Mills Planning Unit showing PG&E watershed land parcels.

The trail will be routed far enough away from the three eastern coves shown in Figure 1 to avoid all wetland habitat. Most of the trail work will occur on existing roads and OHV trails with no vegetation; however, short sections will require cutting of trail through upland vegetation that has grown over old sections of road. Some shrubs will need to be removed in those sections to facilitate the new pathway.

Trail installation labor will be done with hand crews provided by Lomakatsi as well as local Tribal youth participating in the youth education and employment program. Crews will complete hand grading and installation, cut in step footings as needed, and install weed protection cloth and either an aggregate or wood chip base. The final trail width will be 4 feet wide and have a minimum of 3 inches of surface material depth.

Task 3.2 – Trail maintenance will be conducted following year two inspections. Corrections will be made for any slumping, erosion, or other damage.

Timeline: Trail installation will take place during June through September 2019, depending on weather and equipment availability. Completion of all subtasks will be before fall/winter rains.

Task 4. Install Trail Barriers and off-road vehicle mitigation

Goal: Decommission numerous road/trail spurs alongside the new trail system.

Methods:

Task 4.1 – OHV road/trail decommission. This task will be completed with small, low ground pressure equipment while Tribal Cultural Monitors are on site. Work will concentrate on 10-25 foot sections where OHV roads/trails connect with the newly constructed trail. Work will focus on two components: (1) rehabilitate highly incised and eroded areas, and (2) regrade and contour enough of a distance to keep trail users from continuing down undesignated trails. In addition, existing juniper near where OHV roads/trails connect with the newly constructed trail will be moved and placed by hand to help block the undesignated roads/trails.

Task 4.2 – Installation of split-rail fence in areas highly susceptible to trespass by OHVs. The split rail fence will be installed manually with Lomakatsi crews using hand tools and an auger to set posts. Project partners will work with community members and local OHV groups to develop a plan to limit future interference between trail use and OHV activities.

Task 4.3 – Load, haul, and deliver oak thinning byproducts. This activity will focus on using thinning byproducts from the oak habitat restoration to block access to road/trail spurs. In addition to creating an access barrier, the wooden barriers will be positioned to help reestablish proper drainage, reduce erosion, and provide microsites suitable for planting of native demonstration gardens.

Task 4.4 – Crew Implementation. This task is related to all the above subtasks. Following the equipment work, other work will be completed by hand crews and Tribal youth participating in the youth education and employment program. That work will consist of hand grading, log cribbing and manual placement of logs and thinning materials for drainage and slope stabilization structures, and the final raking and stabilization of the area.

Timeline – Barriers and off-trail mitigation is scheduled for June through September 2019, depending on weather and equipment availability. Completion of all subtasks will be before fall/winter rains.

Task 5. Native planting and seeding

Goal: To plant native species along the trail route and in decommissioned areas to aid in the rehabilitation of the Project Area, as well as to provide cover to deter trail users from going off trail. To develop native ecocultural guilds (demonstration gardens) along the trail that will educate the public on the ecological and cultural importance of grassland species and serve to train Tribal youth on grassland restoration.

Methods:

Task 5.1 – Purchase and/or grow (depending on availability) 4,000 native plants. Task will require a site survey by a botanist, plant species selection, tribal coordination, and seed collection by student volunteers and workforce training program.

Task 5.2 – Implement planting and seeding for road/trail spur decommissioning. Install native shrub species and sow grass to decommission road/trail spurs. Culturally important species from local seed stock will be used to the greatest extent possible.

Task 5.3 – Implement planting and seeding for ecocultural guilds. Utilize workforce training program and/or volunteers to plant native species in trailside guilds, with an emphasis on culturally significant species grown from locally collected seed. Where appropriate, install educational signs that explain the ecocultural significance of native plants and the importance of grassland restoration.

Task 5.4 – Track success of plantings through photo points and documentation of plant survival.

Timeline: 24 months; begin seed collection and preparation in summer/fall 2019 and complete planting in spring 2021.

Task 6. Oak Woodland Restoration

Initial data collection and project planning for this task was completed in February 2018. The 20 acres of oak woodland habitat originally designated for thinning has since been modified by a

wildfire, known as the Hat Fire, that burned 1,900 acres of land west of Fall River Lake in August 2018, including roughly two thirds of the designated 20 acres. Consequently, the scope of the thinning project has been reduced, and the tasks described below may be modified accordingly.

Goal: Restore structural conditions in up to 20 acres of oak woodland habitat in order to enhance its ecological and cultural value.

Methods:

Task 6.1 – Oak habitat thinning data collection and prescription development. Sample stand inventory plots. Develop quantitative thinning prescription.

Task 6.2 – Oak habitat thinning and pile. Utilize workforce training program to implement thinning of small-diameter conifers and other encroaching vegetation. Remove all encroaching conifers under the dripline of oaks. Radial thin most encroaching conifers up to 2x the length of the dripline to reduce shade on oak crowns as much as possible. Large overstory conifers may be retained sparingly within the radial thin zone where they minimally impact oaks (such as on the North or East aspects).

- Diameter limits within 2x dripline of oaks (i.e., oak radial thin zone):
 - Gray pine less than 14" diameter breast height (dbh) will be cut; larger trees will be girdled.
 - Juniper up to 20" dbh will be cut.
- Diameter limits outside of oak radial thin zone:
 - Remove all conifers smaller than 10" dbh.

Generally, thin-from-below to remove small tree and shrub density and reduce horizontal and vertical continuity of fuels. Promote vigorous trees that have dominant or co-dominant canopy position. Use variable density thinning principals to create diverse forest conditions. Promote the development of young forests toward more complex, heterogeneous forest structure by clumping retention trees, radial releasing large and old trees, and promoting regeneration.

Designate retention areas, 1/10th to 1/4 acre in size to be left untreated to protect important ecological features such as around rock outcrops, rare or uncommon species, snags, seeps, regeneration thickets, shaded areas that create cool microclimates, coarse wood and decadence, and visual breaks to reduce sight lines. These designated retention areas should cover approximately 10% of the treatment area and be separated by at least 30 feet.

Enhance existing canopy openings. Thin between clumps and individual leave trees (i.e., trees to be left on-site) to increase the growing space for leave trees. Vegetation is variable, maintain species diversity for trees and shrubs while also promoting the appropriate species and density for the microsite. Reduce understory brush to reduce fuels, and leave shrub species (i.e., shrub species to be left on-site) in skips or small discontinuous patches.

Snags greater than 10" dbh will be retained on site where they do not pose an excessive fire risk or create a falling hazard. Thin vegetation underneath and around snags to reduce fire risk, especially where multiple snags are clumped.

Task 6.3 – Oak habitat burning. Piling and burning of surface fuels will generally aim to achieve the following: (1) reduce the available fuel within the stand, (2) protect desired species from fire-related mortality during burning, and (3) prepare the stand for the possibility of a low-intensity prescribed burning regime.

Pile locations will be selected away from:

- legacy trees—piles will be located greater than 20 feet from legacy trees.
- desired leave trees—piles will typically be 10 feet away, increasing in distance as species priority increases.
- legacy snags & nurse logs.
- retention patches, roads, trails and ditches.

Some hand piles will be retained as 'wildlife piles' for habitat cover.

Timeline: Initial oak habitat thinning will take place in 2019. Debris piles will be burned in fall 2019 or spring 2020, depending on the curing of the material and weather conditions.

3.0 ASSESSMENT METHODS

The Initial Study includes a biological resource assessment and cultural resources records search.

The purpose of the biological resource assessment, conducted by Spring Rivers, is to evaluate the potential effects of the various work activities on state-listed and federally-listed species, as well as species that meet the criteria for listing under the California Environmental Quality Act (CEQA) guidelines (Section 15380).

This document summarizes the species occurrence and habitat information available for the Fall River Mills area and highlights information that is specific to the proposed Project Area (Figure 1). A preliminary list of species that could potentially occur within the Project Area was developed from online publications and databases, including the California Natural Diversity Database (CNDDDB) rare species list for the Fall River Mills and Hogback USGS 7.5' quadrangles (CDFW 2019); California Department of Fish and Wildlife (CDFW) Special Status Animals List (CDFW 2018a); CNDDDB State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2018b); CNDDDB Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2018c); and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2019). The preliminary species list was updated/refined using biological information gathered in support of relicensing, license-compliance monitoring, and construction projects for the Pit 1 Project (Dittes and Guardino 2014; FERC 1999; GANDA 2004; and PG&E 2001, 2009a, 2009b, 2009c, 2011, 2017, 2018, and 2019); and site-specific biological information gathered by Spring Rivers for other research and/or monitoring projects.

In compliance with CEQA Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5, Far Western Anthropological Research Group, Inc., conducted a records search of cultural resources files at the Northeast Information Center, in Chico, and Pacific Gas and Electric Company (PG&E) archives (Far Western 2019). The records search buffer was one-eighth mile around the Area of Potential Effects (APE). Sources consulted included:

- National Register of Historic Places – Listed Properties and Determined Eligible Properties
- California Inventory of Historical Resources (Department of Parks and Recreation)
- California Register of Historical Resources

4.0 ASSESSMENT RESULTS

This section describes the historical and existing environmental setting for the proposed project, discusses the special-status species and protected habitats that are known to occur in the vicinity of Fall River Mills, and evaluates the potential for those species and habitats to occur within the Project Area.

4.1 ENVIRONMENTAL SETTING

The 2 miles of trail (0.97 acres) and 20 acres of oak woodland habitat designated for thinning are located adjacent to Fall River Lake near the town of Fall River Mills, in Shasta County, California (Figure 1). The entire Project Area lies within the Fall River Mills USGS 7.5' Topographic Quadrangle. Portions of the project are adjacent to residential areas, and the entire project is adjacent to waters and facilities used by PG&E for operation of its Pit 1 Hydroelectric Project (FERC Project No. 2687). The historical and existing environmental conditions within the Project Area are described below.

4.1.1 Geology

The Project Area is situated at the southern end of the Fall River Valley, near the southern end of the Cascade Range Geomorphic Province at its juncture with the western part of the Modoc Plateau Geomorphic Province. Fall River Valley is a Modoc Plateau fault block basin overlain by Pleistocene lake sediments (Alt and Hyndman 1975). The majority of the Project Area is mapped as Pleistocene-Age alluvium (Qoa).

4.1.2 Hydrology and Aquatic Resources

Fall River Lake receives inflow from the Fall River, which is a sinuous, low-gradient river that originates from a series of springs and spring-fed lakes in the upper Fall River Valley and then flows south through mostly privately-owned agricultural lands to its confluence with the Pit River. The Fall River, which is within the "Lower Pit River" USGS Hydrologic Unit (Map Unit Number 18020003), is one of the largest spring systems in the United States (Meinzer 1927). During summer (mid-June to mid-October), Fall River discharge to the Pit River is generally between 800 cfs and 900 cfs with a standard deviation of less than 100 cfs (PG&E 2011). During high winter and spring run-off events when Bear Creek, the only surface tributary to Fall River is running, flows in the thousands have been recorded. During an extreme runoff event on December 31, 1996, Bear Creek discharge was measured 6,520 cfs around 8:30 am at Spaulding Bridge just upstream of the confluence with Fall River (Rick Poore, unpublished data).

Since operation of the 69.3-megawatt Pit 1 Project began in 1922, most of the Fall River is diverted by the Pit 1 Diversion Dam at the upstream end of Fall River Lake through the Pit 1 Powerhouse, which is situated on the Pit River 6.5 river miles downstream of the Fall River's

natural confluence with the Pit River. The diversion dam can discharge from 200 to 2,028 cfs of water into the Pit 1 Forebay/Fall River Lake, however, PG&E is required to release a continuous flow of Fall River water from the Pit 1 Diversion Dam through Fall River Pond to supply the Knoch Ranch diversion (a water right senior to PG&E) at Fall River Pond Weir (see Figure 2). In addition, PG&E's current operating license requires instream flow releases of 50–150 cfs above and beyond what is being diverted by the Knoch Ranch. These releases flow over the Fall River Pond Weir into the natural Fall River channel for 0.2 mile (0.3 km) to its historic confluence with the Pit River. For the control of aquatic vegetation growth and mosquito production in Fall River Pond, the 2007 FERC License for the Pit 1 Project requires PG&E to release flushing flows of 1,250 cfs (or the natural flow if less than 1,250 cfs) through Fall River Pond for two consecutive days (Saturday and Sunday) three times during the summer. This license condition was implemented from 2003 through 2009, and surface aquatic vegetation cover on Fall River Pond was monitored from 2005 through 2009, after which a summary report was filed along with a recommendation to discontinue the summer flushing flows. The State Water Board has temporarily suspended summer flushing flows in 2010–2018 while undergoing a California Environmental Quality Act (CEQA) process to analyze the effects of permanently suspending the flushing flow requirement.

The Fall River upstream of the Pit 1 Diversion Dam is a designated Wild Trout Stream that is characterized by constant annual flow, water temperature (9–12° C), water clarity (>25 m in the headwater regions), and water chemistry, because it is nearly completely springfed (PG&E 2011). The only exception to this is seasonal rain and snowmelt runoff from Bear Creek, which enters the Fall River near the Thousand Springs headwaters. This unique environment supports a number of aquatic organisms, including rare and endemic species of crayfish, sculpin, and molluscs found only within the Fall River system and a few nearby springs in the Hat Creek and Pit River drainages. Aquatic species endemic to the Fall River and mid-reaches of the Pit River include Shasta crayfish (*Pacifastacus fortis*), rough sculpin (*Cottus asperimus*), bigeye marbled sculpin (*Cottus klamathensis macrops*), and Ahjumawi pebblesnail (*Fluminicola ahjumawi*).

In addition to rough and bigeye marbled sculpins, the native fish assemblage in the Fall River upstream of the Pit 1 Diversion dam includes Rainbow trout (*Oncorhynchus mykiss*), Sacramento pikeminnow (*Ptychocheilus grandis*), Sacramento sucker (*Catostomus occidentalis*), tule perch (*Hysterocarpus traskii*), Pit River tui chub (*Siphatales thalassinus*), and Pit-Klamath brook lamprey (*Lampetra lethophaga*). Non-native species that have been documented in the Fall River include brown trout (*Salmo trutta*), blue gill (*Lepomis macrochirus*), green sunfish (*Lepomis cyanellus*), largemouth bass (*Micropterus salmoides*), and mosquitofish (*Gambusia affinis*). Spring Rivers has observed or collected all of the above species in Fall River Lake, with the exception of tui chub, Pit-Klamath brook lamprey, and brown trout.

In addition to the Ahjumawi pebblesnail, the Fall River upstream of the Pit 1 Diversion Dam supports a diverse molluscan assemblage, including but not limited to the Great Basin rams-horn (*Helisoma newberryi*), topaz juga (*Juga acutiflosa*), canary duskysnail (*Colligyrus convexus*), Archimedes pyrg (*Pyrgulopsis archimedis*), montane peaclam (*Pisidium ultramontanum*), California floater mussel (*Anodonta californiensis*), and western ridged-shell mussel (*Gonidea angulata*). Spring Rivers has observed Great Basin rams-horn, California floater mussel, and western ridged-shell mussel in Fall River Lake.

4.1.3 Vegetation Communities and Terrestrial Resources

The following description of the vegetation communities in the vicinity of Fall River Lake is from botanical surveys conducted by PG&E between June 1990 and May 1992 during the relicensing for the Pit 1 Hydroelectric Project (Stebbins 1992). Fall River Lake is surrounded by the following three major vegetation habitat types: juniper, low sagebrush, and fresh emergent wetland. Juniper is common around the southern and western upland areas away from the shoreline of the lake. The juniper community includes moderately spaced western juniper (*Juniperus occidentalis*), ponderosa pine (*Pinus ponderosa*), and gray pine (*Pinus sabiniana*) with an understory of bitterbrush (*Purshia tridentata*), wooly sunflower (*Eriophyllum lanatum*), lupine (*Lupinus argenteus*), and penstemon (*Penstemon laetus*). The low sagebrush community is dominated by low sagebrush (*Artemisia arbuscula*), rabbit brush (*Ericameria* [*Chrysothamnus*] *nauseosa*), and mule's ears (*Wyethia mollis*) with silvery false lupine (*Thermopsis californica* var. *argentata*) and a few scattered junipers. The fresh emergent wetlands along the immediate shoreline of Fall River Lake consists mostly of dense stands of bulrush (*Schoenoplectus* [*Scirpus*] *acutus*), cattail (*Typha latifolia*), rush (*Juncus balticus*), spikerush (*Eleocharis acicularis*), and water smartweed (*Persicaria* [*Polygonum*] *hydropiperoides*).

Historically, the openings in low sagebrush habitat were dominated by native annual and perennial grasslands. After years of cattle grazing and off-road vehicle use, the open areas are currently dominated by non-native annual grassland and graded/disturbed areas. Based on botanical surveys conducted adjacent to Fall River Pond (Dittes and Guardino 2014), dominant grasses in drier upland areas around Fall River Lake may include cheatgrass (*Bromus tectorum*), Japanese Brome (*B. japonicus*), softchess (*B. hordeaceus*), Medusa-head grass (*Taeniatherum caput-medusae*), shining nitgrass (*Gastridium ventricosum*), Apera (*Apera interrupta*), Italian Ryegrass (*Festuca perennis*), rat-tail fescue (*Vulpia myuros*), bulbous bluegrass (*Poa bulbosa*), wall barley (*Hordeum murinum*), scattered Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and common barley (*Hordeum vulgare*). A preliminary tour of the site by a botanist collaborator revealed that large areas of the project area are occupied by common wheatgrass (*Triticum aestivum*). Lower, slightly moister areas may support common velvetgrass (*Holcus lanatus*), native creeping wildrye (*Elymus triticoides*), and Kentucky bluegrass (*Poa pratensis*).

Before the Hat Fire burned much of the woodland habitat on the west side of Fall River Lake in August 2018 (see Section 2, Task 6), the 20 acres of woodland habitat designated for thinning was divided into two units as shown in Figure 1. The larger unit consisted of a canopy dominated by gray pine (*Pinus sabiniana*) with a variable density of mature and legacy Oregon white oak (*Quercus garryana*) and California black oak (*Q. kelloggii*) that were beginning to be overtopped by gray pine. Western juniper (*Juniperus occidentalis*), gray pine, and a small number of incense-cedar (*Calocedrus decurrens*) were beginning to infill under the canopy causing excessive density. The understory vegetation was dominated by Oregon grape (*Berberis aquifolium*), mountain mahogany (*Cercocarpus betuloides*, *C. ledifolius*), evergreen buckthorn (*Rhamnus ilicifolia*), Klamath plum (*Prunus subcordata*), and non-native rose (*Rosa spp.*). The smaller thinning unit consisted of a mature Oregon white oak plantation with a low density of western juniper encroachment.

The existing vegetation communities in the Fall River Valley support a diversity of terrestrial wildlife species. The sagebrush plant communities, which are characteristic of the region, provide important habitat for sagebrush-dependent wildlife such as brewers sparrow (*Spizella breweri*). The region also serves as one of the best staging areas for waterfowl migration in northern California, and is used by raptors and passerines as a migratory stopover. Intact grassland habitat provides important avian foraging and roosting habitat in the winter, important stopover habitat during spring and fall for birds migrating along the Pacific flyway, and excellent breeding habitat for waterfowl during the spring and summer. The abundance of riverine, lacustrine, and wetlands habitat in the Fall River Valley, particularly in the Tule River sub-drainage, contributes to the diversity and abundance of wildlife in the project vicinity.

4.2 SPECIAL-STATUS ANIMALS

Table 1 provides a list of special-status aquatic and terrestrial wildlife species reported to occur in the vicinity of Fall River Lake. Special-status species include species with federal or state listing status, and species designated as California species of special concern (SSC) or California fully protected (CFP). The Federal Endangered Species Act (ESA) listing codes are as follows: federally endangered (FE), federally threatened (FT), federal candidates for listing (FC), federally proposed for listing as endangered (FPE), federally proposed for listing as threatened (FPT), and federally proposed for delisting (FPD). The California Endangered Species Act (CESA) listing codes are as follows: state endangered (SE), state threatened (ST), state candidate for listing as endangered (SCE), state candidate for listing as threatened (SCT), and state candidate for delisting (SCD). The potential effects of the various work activities on special-status animals that could potentially occur within the Project Area are evaluated in the following subsections: Invertebrates, Fish, Amphibians and Reptiles, Birds, and Mammals.

Table 1. List of special-status animals reported to occur in the vicinity of the proposed project.

Common Name (Scientific Name)	Status ¹	Habitat and Distribution	Reported Occurrences	Potential for Species Occurrence in Project Vicinity
Invertebrates				
Shasta crayfish (<i>Pacifastacus fortis</i>)	FE, SE	Cool, spring-dominated rivers and streams characterized by clean, volcanic cobbles and boulders overlying gravel substrates (USFWS 1998). Historically restricted distribution, limited to mid-reaches of the Pit River drainage, primarily the Fall River and Hat Creek drainages in Shasta County.	Species was first reported from Fall River at Fall River Mills in 1898 (Rutter 1908). One live specimen was found in Fall River Pond in 1974 (Moyle and Daniels, unpublished survey notes) and one dead specimen was found in 1978 (Daniels 1980, R. Daniels personal communication 4/27/93, and 1978 unpublished field notes). Its distribution within Fall River is now restricted to the headwater springs (PG&E 2018).	Does not occur. There are no documented occurrences of Shasta crayfish in Fall River Lake, and no suitable habitat for Shasta crayfish exists in Fall River Lake.
Fish				
Rough sculpin (<i>Cottus asperimus</i>)	ST, CFP	Clear water with soft, sandy substrates and abundant vegetation. Species with historically restricted distribution, limited to mid-reaches of the Pit River drainage (Moyle 2002).	Species was collected in Fall River downstream of Fall River Lake in 2004 (PG&E 2009a), and it is known to occur in the upper reaches of Fall River (Spring Rivers, unpublished data).	Species likely occurs in Fall River Lake, which contains suitable habitat for rough sculpin.

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Common Name (<i>Scientific Name</i>)	Status ¹	Habitat and Distribution	Reported Occurrences	Potential for Species Occurrence in Project Vicinity
Other special- status fish species: Bigeye marbled sculpin (<i>Cottus klamathensis macrops</i>) Hardhead (<i>Mylopharodon conocephalus</i>)	SSC	Various. Bigeye marbled sculpin has a historically restricted distribution, limited to mid-reaches of the Pit River drainage (Moyle 2002). Hardhead are distributed throughout Sacramento and San Joaquin drainage basins.	Bigeye marbled sculpin was collected in Fall River downstream of Fall River Pond Weir during 2004–2008 (PG&E 2009a). Hardhead was collected in Fall River Lake in 2005 (Spring Rivers 2007).	Bigeye marbled sculpin likely occur in Fall River Lake; and hardhead do occur in Fall River Lake.
Amphibians and Reptiles				
Cascades frog (<i>Rana cascadae</i>)	SCE, SSC	Habitat varies by life stage and includes large lakes, ponds, wet meadows, and flowing streams. Historically distributed from the Shasta-Trinity region to the Modoc Plateau, and south from Lassen region to upper Feather River (Jennings and Hayes 1994).	Species was reported in upper Bear Creek (Pondosa USGS 7.5' Quadrangle), tributary to upper reaches of Fall River in 1939 and 1946 (Pope et al. 2014). Nearest existing population is 15 miles west of proposed project (K. Pope, personal communication, April 2016).	Does not occur. Was not found during amphibian surveys done throughout Pit 1 Project area in 2004–2008 (PG&E 2009b).

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Common Name (<i>Scientific Name</i>)	Status ¹	Habitat and Distribution	Reported Occurrences	Potential for Species Occurrence in Project Vicinity
Oregon spotted frog (<i>Rana pretiosa</i>)	FT, SSC	Marshes, ponds, lake edges, and slow meadow streams, usually where there is low emergent vegetation (Jennings and Hayes 1994). Historically occurred in mid-reaches of the Pit River drainage.	Species is known from only seven records in California, one of which was collected by Rutter and Chamberlain at the type locality of the Shasta crayfish, Fall River near Fall River Mills, Shasta County on August 29, 1898 (USNM 38806).	Does not occur. Was not found during amphibian surveys done throughout Pit 1 Project area in 2004–2008 (PG&E 2009b). Species is believed to be extinct in California.
Northwestern pond turtle (<i>Actinemys marmorata</i>)	SSC	Rivers, streams, lakes, ponds, shallow wetlands, abandoned gravel pits, stock ponds, and sewage treatment lagoons. Pools are the preferred habitat in streams and rivers (Bury and Germano 2008). Historically distributed throughout California.	Species is known to occur in Fall River Pond (PG&E 2009c) and in Fall River Lake (Spring Rivers, unpublished data).	Species does occur in Fall River Lake. Suitable upland breeding habitat is present in project vicinity.
Birds				
Northern goshawk (<i>Accipiter gentilis</i>)	SSC	Breeds in middle and high elevation dense coniferous forest. May winter in low elevation riparian habitat in the North Coast, Sierra Nevada, Klamath, and Cascade ranges, and Warner Mountains (Shuford and Gardali 2008; Zeiner et al. 1990a).	The nearest documented goshawk occurrence is located more than 7 miles northeast of the construction area near Day (CDFW 2019).	Does not occur. No suitable habitat exists within 1 mile of the proposed project.

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Common Name (<i>Scientific Name</i>)	Status ¹	Habitat and Distribution	Reported Occurrences	Potential for Species Occurrence in Project Vicinity
Tri-colored blackbird (<i>Agelaius tricolor</i>)	SCE, SSC	Freshwater marshes dominated by cattails and bulrushes, with willows and nettles (Neff 1937). Nests in non-native Himalayan blackberry, cattail/bulrush, and in irrigated pastures (Meese et al. 2015).	Species has been documented within the Fall River Mills USGS Quad (CDFW 2019), and has been observed in the vicinity of Fall River Lake (Spring Rivers, unpublished data).	Species could potentially occur in project vicinity. Suitable nesting habitat exists along the shores of Fall River Lake.
Golden eagle (<i>Aquila chrysaetos</i>)	CFP	Habitats include forests, canyons, shrub lands, grasslands, and oak woodlands. Eagles in northeastern California typically nest on cliffs (Katzner et al. 2012).	Golden eagle nesting territory was documented in the Pit River canyon upstream of Pit 1 Powerhouse in 1992 (PG&E 2001).	May occur as transient only. Species may forage in project vicinity, but no suitable nesting habitat exists within 1 mile of the proposed project.
American peregrine falcon (<i>Falco peregrinus anatum</i>)	CFP	Forages in open areas, usually in mesic habitats; winters in the Central Valley. Known nests occur along the coast and in the Sierra Nevada and northern mountains in woodland, forest, and coastal habitats near water or on high cliffs (Small 1994; Zeiner et al. 1990a).	Species was observed near Fall River Lake in 1992 (PG&E 2001). The nearest known peregrine falcon nesting area is located more than 2 miles from Fall River Lake, on the cliffs above Pit Falls in the Pit 1 Bypass Reach (PG&E 2017).	May occur as transient only. Species may forage in project vicinity, but no suitable nesting habitat exists within 1 mile of the proposed project.
Greater sandhill crane (<i>Grus canadensis tabida</i>)	ST, CFP	Nests in open areas of wet meadows that are often interspersed with emergent marsh. Usually build nests over shallow water (CDFG 1994).	Species was observed around Fall River Lake in 1992 (PG&E 2001), and has been observed in swamp and pasture lands upstream of the Pit 1 Diversion Dam (Spring Rivers, unpublished data).	May occur as transient only. Minimal nesting habitat exists around Fall River Lake.

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Common Name (<i>Scientific Name</i>)	Status ¹	Habitat and Distribution	Reported Occurrences	Potential for Species Occurrence in Project Vicinity
Bald eagle (<i>Haliaeetus leucocephalus</i>)	SE, CFP	Breeds in coniferous forest near lakes, rivers, or ocean shorelines in northern California. Winters near large water bodies or rivers at scattered locations throughout California (Small 1994; Zeiner et al. 1990a).	There is an active bald eagle nesting territory with a nest on the north shore of Fall River Lake; the nest was occupied and successful in 2013, 2014, 2015, and 2016 (PG&E 2017). The nest was occupied, but not successful in 2017 and 2018 (PG&E 2019). There is a second active bald eagle nesting territory whose foraging area includes lower Fall River Lake.	Species does occur in project vicinity; the nesting territory is at north end of Fall River Lake.
Bank swallow (<i>Riparia riparia</i>)	ST	Nesting habitat includes tall, vertical banks of soft soil, firm sand or sandy loam near a water source (Small 1994; Zeiner et al. 1990a).	Active bank swallow colonies were documented along the east bank of Fall River Lake in 1992 (PG&E 2001). Spring Rivers observed nesting bank swallows along the east bank of Fall River Lake in 2016.	Active bank swallow colonies occur along the east bank of Fall River Lake.
Mammals				
California wolverine (<i>Gulo gulo luscus</i>)	FPT, ST, CFP	Utilizes habitat including red fir, mixed conifer, lodgepole, subalpine conifer, alpine dwarfshrub, barren, and probably wet meadows, montane chaparral, and Jeffrey pine (Zeiner et al. 1990b). Historically distributed in North Coast, Cascade, and Sierra Nevada ranges above 6,000 ft.	A wolverine was reported in the vicinity of Fall River Mills in the 1970s (FERC 1999).	Does not occur. Species has not been documented in the vicinity of the proposed project since the 1970s.

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Common Name (<i>Scientific Name</i>)	Status ¹	Habitat and Distribution	Reported Occurrences	Potential for Species Occurrence in Project Vicinity
Pacific fisher, West Coast DPS (<i>Pekania pennanti</i>)	FPT, ST, CFP	Occurs in intermediate to large-tree stages of coniferous forests and deciduous riparian habitats with a high percent canopy closure (Zeiner et al. 1990b). Uncommon permanent resident of the Sierra Nevada, Cascade, Klamath Mountains, and North Coast ranges.	The eastern-most Pacific Fisher detection within Shasta County was a road-kill specimen found near Dead Horse Summit on Highway 89 (CDFW 2019; Steve Breth, personal communication).	Unlikely to occur due to urban setting and lack of suitable denning habitat in project vicinity.
American badger (<i>Taxidea taxus</i>)	SSC	Open, arid habitats; prefers grasslands, savannas, mountain meadows, and open areas of desert scrub from below sea level to over 12,000 ft (Zeiner et al. 1990b).	Species has been documented within the Fall River Mills USGS Quad (CDFW 2019).	Unlikely to occur due to urban setting and lack of suitable denning habitat in project vicinity.
Sierra Nevada red fox (<i>Vulpes vulpes necator</i>)	ST	Conifer forests and montane chaparral habitats in Sierra Nevada and Cascade ranges at 4,000 to 12,000 ft (Zeiner et al. 1990b).	Species has been documented within the Fall River Mills USGS Quad (CDFW 2019).	Unlikely to occur due to urban setting and lack of suitable denning habitat in project vicinity.

¹ Status abbreviations are as follows: FE = federally endangered; FT = federally threatened; FPT = federally proposed for listing as threatened; SE = state of California endangered; ST = state of California threatened; SCE = state candidate for listing as endangered; SSC = state species of special concern; and CFP = California fully protected.

4.2.1 Invertebrates

No special-status invertebrates could potentially occur in the project vicinity. While the type locality (Fall City Mills, Fall River, California) of the Shasta crayfish (Rutter 1908, Faxon 1914) is in the vicinity of Fall River Lake and the species was historically present throughout the Fall River drainage, Shasta crayfish (*Pacifastacus fortis*; FE and SE) are now found only in the headwaters of Fall River drainage, generally associated with springs (PG&E 2018). Shasta crayfish may still exist more than five river miles downstream of the Project Area, in springs in the margins of the Pit River. There is no likelihood that the project could affect the Pit River Shasta crayfish, as the primary potential impact to aquatic organisms would be from erosion and sedimentation. Standard erosion control measures will be implemented as described in Section 5.0 to minimize any potential for erosion during project construction and to prevent any potential for impacts to aquatic habitats and species. In addition, the resurfacing of the trail and decommissioning of old road and trail surfaces will reduce the amount of erosion and sedimentation to the lake that currently exists. Furthermore, any erosion and sedimentation would be confined to Fall River Lake and would not pass from Fall River Lake into Fall River Pond, the Fall River bypass reach downstream of Fall River Pond, or the Pit River.

4.2.2 Fish

Rough sculpin (*Cottus asperimus*; ST, CFP) and bigeye marbled sculpin (*Cottus klamathensis macrops*; SCC) likely occur in Fall River Lake, and Hardhead (*Mylopharodon conocephalus*) is known to occur in Fall River Lake. Impacts to these species could occur if the project work activities result in sedimentation into Fall River Lake. The potential for sedimentation into Fall River Lake is low, because the planned trail installation/rehabilitation will occur during the dry summer season on existing roads/trails with compacted or thin soils that are back from the banks of Fall River Lake and do not drain directly toward the lake. Standard erosion control measures will be implemented as described in Section 5.0 to minimize any potential for erosion during project construction and to prevent any potential for impacts to aquatic habitats and species. In addition, the resurfacing of the trail and decommissioning of old road and trail surfaces will reduce the amount of erosion and sedimentation to the lake that currently exists.

4.2.3 Amphibians and Reptiles

Based on results of amphibian surveys conducted throughout the Pit 1 Project area during 2004–2008 (PG&E 2009b), no special-status amphibians occur in the vicinity of Fall River Lake. Western pond turtles (*Actinemys marmorata*; SSC), however, are known to occur in Fall River Lake and suitable nesting habitat (e.g., open areas with good sun exposure that are dominated by grasses and herbaceous vegetation) is present in undisturbed locations around Fall River Lake (PG&E 2009c). Since the planned trail work will take place almost exclusively on existing roads/trails with compacted/shallow soils, the potential for occurrence of pond turtle nests within

the planned disturbance area is low. However, impacts to western pond turtle could occur if any ground-disturbing activities occur during the turtle nesting season in less disturbed areas with potentially suitable nesting habitat. The duration of the western pond turtle nesting season is not known, but it is suspected that egg laying occurs during summer and that hatchlings emerge from the nests the following spring (Bury and Germano 2008). To minimize potential impacts to western pond turtles during the project construction phase, pre-construction surveys and avoidance/minimization measures will be implemented as described in Section 5.0.

4.2.4 Birds

Based on recent occurrence information and existing habitat conditions, the following special-status bird species could utilize nesting habitat in the project vicinity: tri-colored blackbird (*Agelaius tricolor*; SCE, SSC), yellow warbler (*Dendroica petechia brewsteri*; SSC), bald eagle (*Haliaeetus leucocephalus*; SE, CFP), and bank swallow (*Riparia riparia*, ST).

Some suitable nesting habitat (i.e., willows and other riparian vegetation) for tri-colored blackbird, yellow warbler, and other neo-tropical birds is present along the east bank of Fall River Lake adjacent to the planned trail route. Project work could impact nesting neo-tropical birds if work activities result in removal of nesting habitat or if noise-generating activities cause birds to vacate nests or nesting areas or otherwise disturb adults during breeding/nesting season, which extends from April 1 to August 31. The upland shrubs that will be removed in two sections of the planned trail (see Section 2.0, Task 3.1) are not suitable nesting habitat for tri-colored blackbird or yellow warbler; however, other migratory bird species protected under the Migratory Bird Treaty Act (MBTA) could potentially utilize upland shrubs as nesting habitat. The woodland habitat designated for thinning could also provide suitable nesting habitat for common species such as red tailed hawk (*Buteo jamaicensis*) that are protected under the MBTA and are known to nest in suitable locations around Fall River Lake (Spring Rivers 2016). To minimize potential impacts to nesting birds, pre-construction surveys and any recommended avoidance/minimization measures will be implemented as described in Section 5.0.

PG&E conducts annual monitoring of bald eagle productivity in the Pit 1 Project area, which includes Fall River Lake, according to the Bald Eagle Compliance Monitoring Plan (PG&E 2003) as required by Article 415 of Pit 1 Project FERC license. There is an active bald eagle nest site on the north shore of Fall River Lake, as well as several others in the vicinity of the project (Figure 3). The upper half of Fall River Lake is within an active bald eagle (*Haliaeetus leucocephalus*; SE, CFP) nesting territory. Project work could impact nesting bald eagles if noise-generating activities cause birds to vacate nests or nesting areas or otherwise disturb adults during breeding/nesting season, which extends from January 1 to July 31.

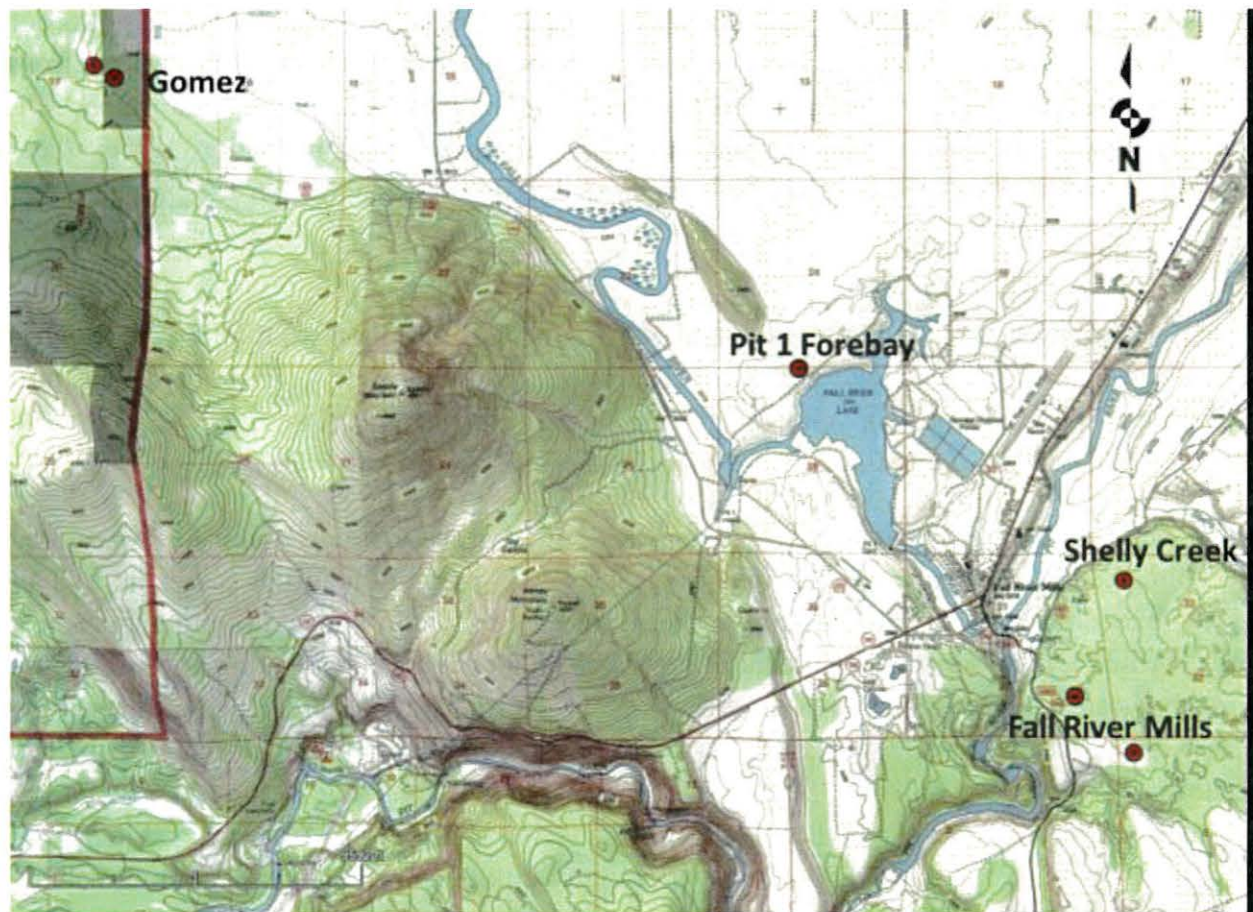


Figure 3. Locations of bald eagle nest sites used during PG&E's 2012-2018 Bald Eagle Compliance Monitoring that are in the vicinity of the proposed project (from PG&E 2017).

The 2012-2016 Five-Year Summary Report (PG&E 2017) recommended changes to bald eagle management in the Pit 1 Bald Eagle Compliance Monitoring Plan subsequently approved by FERC in the November 2017 order. For nests in the Project Area, the U.S. Fish and Wildlife Service National Bald Eagle Management Guidelines (2007) will be used to define the protective buffer distances in nest management zones. Specifically, a buffer of 660 feet (200 meters) is recommended for construction activities, timber management, and motorized and non-motorized activities around active nests from January 1 to July 31. To minimize potential impacts to nesting bald eagles, PG&E's wildlife biological consultant responsible for monitoring bald eagles within the Pit 1 Project will be consulted to determine the location of active bald eagle nests and evaluate the potential for the project work to disturb nesting eagles. If any of the project work activities have potential to disturb nesting bald eagles, then avoidance/minimization measures will be implemented as described in Section 5.0.

The 2012-2016 Five-Year Summary Report (PG&E 2017) recommended changes to bald eagle management in the Pit 1 Bald Eagle Compliance Monitoring Plan subsequently approved by FERC in the November 2017 order. For nests in the Project Area, the U.S. Fish and Wildlife Service National Bald Eagle Management Guidelines (2007) will be used to define the protective buffer distances in nest management zones. Specifically, a buffer of 660 feet (200 meters) is recommended for construction activities, timber management, and motorized and non-motorized activities around active nests from January 1 to July 31. To minimize potential impacts to nesting bald eagles, PG&E's wildlife biological consultant responsible for monitoring bald eagles within the Pit 1 Project will be consulted to determine the location of active bald eagle nests and evaluate the potential for the project work to disturb nesting eagles. If any of the project work activities have potential to disturb nesting bald eagles, then avoidance/minimization measures will be implemented as described in Section 5.0.

Active bank swallow (*Riparia riparia*, ST) nesting colonies occur along the east bank of Fall River Lake. Project work could impact nesting bank swallows if noise-generating activities cause birds to vacate nesting areas or otherwise disturb adults during breeding/nesting season, which extends from April 1 to August 31. Since the bank swallow colonies are located adjacent to roads formerly frequented by OHVs and across the lake from an active day use area and boat launch, the Fall River Lake bank swallows are likely acclimatized to human-made noise. However, if any of the project work activities are expected to generate excessive noise capable of disturbing nesting bank swallows, avoidance/minimization measures will be implemented as described in Section 5.0.

Special-status bird species that have not been documented as occurring within 1 mile from the Project Area, and birds for which no suitable nesting habitat exists within the Project Area include northern goshawk (*Accipiter gentilis*; SSC), golden eagle (*Aquila chrysaetos*, CFP), American peregrine falcon (*Falco peregrinus anatum*), and greater sandhill crane (*Grus*

canadensis tabida; ST, CFP). These species will not be affected by the Fall River Lake Trail Improvement and Ecocultural Enhancement Project.

4.2.5 Special-Status Mammals

Several special-status carnivore species, including California wolverine (*Gulo gulo luscus*; FPT, ST, CFP), Pacific fisher (*Martes pennant*; FPT, ST, CFP), American badger (*Taxidea taxus*; SSC), and Sierra Nevada red fox (*Vulpes vulpes necator*; ST) have been reported as occurring within the Fall River Mills USGS 7.5' Topographic Quadrangle (CDFW 2019). These species are unlikely to occur in the Project Area, however, due to lack of suitable denning habitat and the proximity of the Project Area to Fall River Mills and the Fall River Lake Day Use Area (Figure 2). Therefore, any use of the Project Area by these species would likely be transitory and project construction activities should not harm or harass these species. No special-status bats or other mammals with current special status designation have been documented as occurring in the project vicinity (CDFW 2019, GANDA 2004).

4.3 SPECIAL-STATUS PLANTS

A list of special-status plant species that could potentially occur within the Project Area is provided in Table 2. Special-status species include species with federal or state listing status and species with designated California Rare Plant (CRP) status ranks. The CRP status ranks included in Table 2 are defined in the Table 2 footnotes.

During botanical surveys conducted in support of PG&E's Fall River Pond Weir and Gage Replacement Project (Dittes and Guardino 2014), tufted loosestrife (*Lysimachia thyrsiflora*; CRP 2B.3) was identified on the right (southwest) bank of the Fall River near the Fall River Pond Weir (Figure 4). In California, tufted loosestrife occurs in meadows, seeps, marshes and swamps from 800 to 1300 meters elevation. Its CRP rank of 2B.3 means that it is considered somewhat threatened in California (less than 20% of occurrences threatened and immediacy of threat or no current threats known), but it is more common elsewhere (e.g., CO, OR, WA, UT, WY, & Eurasia). Its CNDDDB state status rank is S1, which is critically endangered. Tufted loosestrife is known from five occurrences in California, all within Plumas and Shasta counties. The Consortium of California Herbaria has records of 11 collections; 2 of which were taken near Fall River Mills in 1949 (S. Galen Smith, Malcom A. Nobs, and Herbert L. Mason #753).

Tufted loosestrife was not identified within the Pit 1 Project area during relicensing botanical surveys (PG&E 2001); and there are no known occurrences of this species around Fall River Lake. The proposed route for the Fall River Lake trail will avoid all wetland habitats where tufted loosestrife and other wetland plant species could potentially occur.

Table 2. Special-status plants that could potentially occur in the vicinity of the proposed project.

Common Name (Scientific Name)	Status¹ and CRP Rank²	General Habitat	Found in Project Vicinity During Recent Surveys³ (Yes/No)
Lemmon's milk-vetch (<i>Astragalus lemmonii</i>)	1B.2	Perennial herb in the pea family; inhabits moist places within Great Basin sagebrush scrub communities.	No
Watershield (<i>Brasenia schreberi</i>)	2B.3	Perennial aquatic plant that grows in shallow water of lakes, ponds, and rivers.	No
Bristly sedge (<i>Carex comosa</i>)	2B.1	Perennial herb in sedge family that grows in wet places, including meadows and other wetlands.	No
Castlegar hawthorne (<i>Crataegus castlegarensis</i>)	3	Newly described tree in rose family; inhabits moist rocky loam in riparian woodland in Great Basin habitats.	No
Tracy's eriastrum (<i>Eriastrum tracyi</i>)	1B.2	Annual herb in the phlox family; inhabits chaparral and cismontane woodland, where the plants are found in areas with sandy or volcanic soils.	No
Baker cypress (<i>Hesperocyparis bakeri</i>)	4.2	Evergreen tree in cypress family; grows in small, scattered populations within Siskiyou, Modoc, Shasta, Plumas, and Tehama counties.	No
Water star-grass (<i>Heteranthera dubia</i>)	2B.2	Aquatic plant in the water hyacinth family; occurs in rivers and lakes.	No
Tufted loosestrife (<i>Lysimachia thyrsiflora</i>)	2B.3	Perennial herb in myrsine family that grows in marshes, shorelines of lakes and ponds and occasionally along streams.	Yes, on west bank of Fall River Pond near Fall River Pond Weir
Tehama pincushion (<i>Navarretia heterandra</i>)	4.3	Annual herb in the phlox family that grows in moist areas on grasslands, such as vernal pools.	Yes, on west and north banks of Fall River Lake
Profuse-flowered pogogyne (<i>Pogogyne floribunda</i>)	4.2	Annual herb in mint family. Found in vernal pools, ephemeral creeks, and other summer-dry water bodies in Modoc Plateau.	No
Bidwell's knotweed (<i>Polygonum bidwelliae</i>)	4.3	Small, annual herb; inhabits areas with thin, volcanic soils in chaparral, cismontane woodland, or grassland.	No
Marsh skullcap (<i>Scutellaria galericulata</i>)	2B.2	Perennial herb in the mint family; inhabits mesic areas such as meadows, or marshes and swamps, in lower montane coniferous forest (CNPS 2010).	No

Common Name (Scientific Name)	Status ¹ and CRP Rank ²	General Habitat	Found in Project Vicinity During Recent Surveys ³ (Yes/No)
Hairy marsh hedge- nettle (<i>Stachys pilosa</i>)	2B.3	Perennial herb in mint family. Usually occurs in wetlands.	No
Long-leaved starwort (<i>Stellaria longifolia</i>)	2B.2	Perennial herb in pink family. It grows in many types of moist habitat, including meadows, marshes, and roadsides.	No
Slender-leaved pond weed (<i>Stuckenia filiformis</i> <i>ssp. alpina</i>)	2B.2	Perennial rhizomatous herb in the pondweed family. Occurs in rivers and lakes.	No
Silvery false-lupine (<i>Thermopsis californica</i> <i>var. argentata</i>)	4.3	Perennial plant in the pea family; inhabits lower montane coniferous forest, and pinyon and juniper woodland.	Yes, in parking area near Fall River Pond

1 Status abbreviations are as follows: FT = federally threatened; CE = state of California endangered

2 CRP (California Rare Plant) Rank abbreviations are as follows: 1A = presumed extirpated in California and either rare or extinct elsewhere; 1B = rare, threatened, or endangered in California and elsewhere; 2A = presumed extirpated in California but common elsewhere; 2B = rare, threatened, or endangered in California but more common elsewhere; 3 = plants about which more information is needed; and 4 = plants with limited distribution. Threat ranks are defined as: 0.1 = seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat); 0.2 = moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat); and 0.3 = not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

3 Botanical surveys: conducted in project vicinity for PG&E's Fall River Pond Weir and Gage Replacement Project (Dittes and Guardino 2014) and for PG&E's Former Trap Club Remediation Project (Spring Rivers 2016).



Figure 4. Locations of special-status plant species in the vicinity of the proposed project.

During botanical surveys conducted in support of PG&E's remediation work at the Former Trap Club (Spring Rivers 2016), Tehama pincushion (*Navarretia heterandra*; CRP 4.3) was identified in several moist depressions along the right (southwest) bank of the Fall River downstream from the Pit 1 Diversion Dam (Figure 4). In California, Tehama pincushion occurs in vernal pools and wet or drying flats in the central valley and mountains below 1,100 meters elevation. Its CRP rank of 4.3 means that it has a limited distribution but is not very threatened in California. It has a CNDDDB rank of S4, which means that it is apparently secure in California.

Like Tehama pincushion, silvery false lupine (*Thermopsis californica* var. *argentata*; 4.3) is an apparently secure species with a limited distribution that occurs in the project vicinity. Spring Rivers identified this species in an open parking area adjacent to Fall River Pond in 2012, and it is likely to occur in similar habitat around Fall River Lake (PG&E 2001).

Tufted loosestrife, Tehama pincushion, and silvery false lupine are the only special-status plant species listed in Table 2 that have been recently identified in the vicinity of the proposed project. Tufted loosestrife is unlikely to occur within 100 feet from the planned trail, which will be routed to avoid wetland habitat areas. Tehama pincushion and silvery false lupine are likely to occur in less disturbed areas adjacent to the planned trail route; however, these species are not likely to occur on the roads/trails that the project will rehabilitate. Completion of the trail improvements and road decommissioning is expected to improve habitat for native plants, including Tehama pincushion and silvery false lupine, on the east side of Fall River Lake.

To ensure that no rare or special-status plant species are impacted during the trail construction phase, a pre-construction botanical survey will be conducted by a qualified botanist within all planned disturbance areas and staging areas as described in Section 5.0. If special status plants are found they will be protected by establishing a no-disturbance buffer around the plant/plant colony, and the trail alignment will be adjusted as needed to avoid any special status plants.

4.4 INVASIVE PLANT SPECIES

Table 3 lists the non-native and invasive plant species that could potentially occur within the Project Area. The invasive status ranks included in Table 3 were obtained from the California Invasive Plant Council (Cal-IPC) Invasive Plant Inventory (Cal-IPC 2019). The status ranks are defined in the Table 3 footnotes.

Three species of invasive plants, yellow star-thistle (*Centaurea solstitialis*), common mullein (*Verbascum thapsus*), and Himalayan blackberry (*Rubus armeniacus* = *R. discolor*) were found in the vicinity of Fall River Pond (see Figure 1) during botanical surveys conducted in 2014 (Dittes and Guardino 2014). In addition, Eurasian watermilfoil (*Myriophyllum spicatum*) is known to occur in lower Fall River (Johnson et al. 2006). To prevent the introduction or spread

Table 3. Non-native and invasive plants with potential to occur in the vicinity of the proposed project.

Common Name (Scientific Name)	Cal-IPC Status ¹	General Habitat	Found in Project Vicinity During Recent Surveys ² (Yes/No)
Jointed goatgrass (<i>Aegilops cylindrical</i>)	High	Winter-annual grass closely related to barbed goatgrass; can displace native vegetation once it becomes established.	No
Barbed goatgrass (<i>Aegilops triuncialis</i>)	Moderate	Winter-annual grass closely related to jointed goatgrass; can displace native vegetation once it becomes established.	No
Tree of heaven (<i>Ailanthus altissima</i>)	Moderate	Deciduous tree known to produce prolific seeds and root sprouts.	No
Spotted knapweed (<i>Centaurea maculosa</i>)	High	Biennial to short-lived perennial that reproduces by prolific seed production and lateral vegetative roots, and displaces native vegetation.	No
Yellow star-thistle (<i>Centaurea solstitialis</i>)	High	Deep tap-rooted winter annual herb or a short-lived perennial that is considered one of the most serious rangeland weeds because of its ability to displace native vegetation.	Yes, on left bank of Fall River Pond
Poison hemlock (<i>Conium maculatum</i>)	Moderate	Biennial tap-rooted herb that is able to over-shade some native vegetation, and therefore outcompete it; established by seed into disturbed areas.	No
Scotch broom (<i>Cytisus scoparius</i>)	High	Perennial shrub that has been known to completely take over natural areas, out-competing the native vegetation.	No
Quackgrass (<i>Elytrigia repens</i>)	No Cal-IPC rating	Perennial grass that can form extensive rhizomes; grows into thick stands that out-compete native vegetation	No
Leafy spurge (<i>Euphorbia esula</i>)	High	Rhizomatous perennial herb that can spread through a vigorous lateral root system.	No
Sweet fennel (<i>Foeniculum vulgare</i>)	High	Perennial herb that is an aggressive invader. It reproduces both by root crown and prolific seed production.	No

Common Name (Scientific Name)	Cal-IPC Status ¹	General Habitat	Found in Project Vicinity During Recent Surveys ² (Yes/No)
Yellow flag iris (<i>Iris pseudacorus</i>)	Limited	Aquatic perennial monocot that can form dense mats (monocultures) from lateral rhizome growth and also reproduce from seed.	No
Perennial sweet pea (<i>Lathyrus latifolius</i>)	No Cal-IPC rating	Rhizomatous, deep tap-rooted perennial vine that can spread vegetatively and also utilizes prolific seed production; can create dense stands that compete with native vegetation.	No
Eurasian watermilfoil (<i>Myriophyllum spicatum</i>)	High	Perennial submerged aquatic species that can form dense mats that both interfere with native ecosystems and recreational facilities.	No
Black locust (<i>Robinia pseudoacacia</i>)	Limited	Deciduous tree which can produce dense monotypic stands through root sprouts and seed production.	Yes, on left bank of Fall River Pond.
Himalayan blackberry (<i>Rubus armeniacus</i> = <i>R. discolor</i>)	High	Robust evergreen shrub that forms impenetrable stands in disturbed and wet areas.	Yes, on both banks of Fall River Pond
Cutleaf blackberry (<i>Rubus laciniatus</i>)	No Cal-IPC rating	Evergreen shrub that may occur in disturbed areas where it can form dense stands.	Yes
Medusahead (<i>Taeniatherum caput-medusae</i>)	High	Winter annual grass that occurs along roadsides, in disturbed areas, and in grasslands.	Yes
Puncturevine (<i>Tribulus terrestris</i>)	Limited	Annual herb that often occurs in disturbed areas.	No
Common mullein (<i>Verbascum thapsus</i>)	Limited	Biennial or annual herb that often occurs in moist and disturbed areas.	Yes, on left bank of Fall River Pond.

¹ **Cal-IPC** = California Invasive Plant Council ranks: **High** = Severe ecological impacts on physical processes, plant and animal communities, and vegetation structure; reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment; most are widely distributed ecologically; **Moderate** = Substantial and apparent, but not generally severe, ecological impacts on physical processes, plant and animal communities, and vegetation structure; reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance; ecological amplitude and distribution may range from limited to widespread; and **Limited** = Invasive but ecological impacts are minor on a statewide level or there was not enough information to justify a higher score; reproductive biology and other attributes result in low to moderate rates of invasiveness; ecological amplitude and distribution are generally limited, but may be locally persistent and problematic.

² **Botanical surveys:** conducted in project vicinity for PG&E's Fall River Pond Weir and Gage Replacement Project (Dittes and Guardino 2014) and for PG&E's Former Trap Club Remediation Project (Spring Rivers 2016).

of new or currently found noxious weeds species, the FRVCSD and Lomakatsi will implement its Best Management Practices as described in Section 5.0. By implementing the BMPs, impacts to native botanical resources as a result of invasive weed proliferation will be minimized.

4.5 CULTURAL RESOURCES

Seven archaeological resources recorded within the APE include six prehistoric archaeological sites and one with both prehistoric and historic-era artifacts. Two additional archaeological sites (one prehistoric and one prehistoric and historic-era) are plotted just outside the APE but might extend into it. Built resources recorded in the APE include the Forebay Dam and Forebay (aka Fall River Lake) of Pit No. 1 Power Plant; while the Power Plant system is a historic district eligible to the California Register, associated elements in the APE are non-contributing and need no further management.

The sensitivity of cultural resources restricts public release of detailed resource descriptions or site locations. The detailed report has been provided to Project planners and the FRVCSD and Project implementation will follow the cultural resource protection measures described in Section 5.

5.0 AVOIDANCE AND MINIMIZATION MEASURES

The following avoidance and minimization measures are recommended to minimize the potential for project activities to directly or indirectly affect special-status species and habitats.

Measure 1 – Wetlands

The trail will generally be aligned to provide 100-foot buffer from any wetlands, with the possible exception of short sections of trail on existing OHV roads nearest the two small coves on the east side of Fall River Lake. No new sections of trail will be constructed within 100 feet of any wetlands. Implement erosion control measures during the construction phase to prevent sedimentation into Fall River Lake, as described in Measure 7: Best Management Practices for water quality; design and install the trail to proper specifications to minimize erosion and improper drainage; and perform inspections and maintenance to ensure that the trail remains stable in the long term.

Measure 2 – Fish and Aquatic Habitat

Implement erosion control measures during the construction phase to prevent sedimentation into Fall River Lake, as described in Measure 7: Best Management Practices for water quality; design and install the trail to proper specifications to minimize erosion and improper drainage; and perform inspections and maintenance to ensure that the trail remains stable in the long term.

Measure 3 – Western Pond Turtle (*Actinemys marmorata*)

Most of the trail installation work will be on existing OHV roads/trails with compacted soils, which are not likely to be used for nesting by pond turtles. The two short sections where new trail segments are to be cut through natural areas off of existing roads are not likely to be preferred nesting habitat for turtles, due to their location (i.e., along the top of a high bank that would not be climbable by turtles) and slope. Spring Rivers will conduct a pre-construction survey in those areas to search for possible turtle nests. If nests are found within the planned trail route, the trail will be moved to avoid impacts to western pond turtle. If adult turtles are found in or near project work areas, they will be moved away from the work area into appropriate near-channel habitat. If necessary, temporary fencing will be installed between the work area and any adjacent turtle habitat in order to prevent migration back into the work area. All fencing will be inspected weekly and removed within a week after project work is completed.

Measure 4 – Nesting Birds

In the Intermountain Area, nesting season for neo-tropical songbirds typically occurs between April 1 and August 31. If vegetation removal or noise disturbing activities will take place during

the nesting season, Spring Rivers will conduct a pre-construction survey for nesting birds along the trail route and within the oak woodland habitat (Figure 1) within 7 days of the start of work. If nests are found during the surveys, a no-disturbance buffer of 250 feet will be established around the nest area and all reasonable measures will be taken by the work crew to minimize disturbance until the young have fledged.

Project work could impact nesting bald eagles if noise-generating activities take place within 200 meters (660 feet) of active nests during the breeding/nesting season, which extends from January 1 to July 31. A pair of bald eagles have been nesting on the north shore of Fall River Lake since 2013 (Pit 1 Forebay territory, PG&E 2017). The Pit 1 Forebay nest that has been used for the last six years is more than 700 meters from the closest portion of the trail (Figure 3). The Pit 1 Forebay pair is consistently found in the upper portion of Fall River Lake since they appropriated that part of the Fall River Mills territory in 2012. The Fall River Mills territory bald eagle pair forages in the lower half of Fall River Lake and in Fall River Pond (PG&E 2017). To prevent impacts to nesting bald eagles, PG&E's wildlife biologist responsible for monitoring bald eagles within the Pit 1 Project will be consulted to determine the location of active bald eagle nests and to evaluate the potential for the project work to disturb nesting eagles. If any of the project work activities have potential to disturb nesting bald eagles, then those activities will not be conducted for the duration of the nesting period or until PG&E's wildlife biologist has determined that the nestlings have fledged.

Project work could impact nesting bank swallows if noise-generating activities take place within 100 feet of active nests during the nesting season, which extends from April 1 to August 30. To prevent disturbance to nesting bank swallows, Spring Rivers will conduct a pre-construction survey for nesting bank swallows to determine exact locations of active nesting colonies. If active nesting colonies are located within 100 feet from any portion of the planned trail route, noise-generating activities in those locations will be prevented for the duration of the nesting season.

Measure 5 – Special-Status Plant Species and Noxious Weeds

A botanical survey will be conducted within all planned disturbance areas and staging/laydown areas before the start of work to determine presence/absence of special-status plant species and noxious weeds, and to identify native plant species that will be suitable for the planting and seeding phase of the project. If any special-status plant species are discovered during the botanical survey, those species will be protected by establishing a no-disturbance buffer around the plant/plant colony, and the trail alignment will be adjusted as needed to avoid any special status plants.

To prevent the introduction or spread of noxious weeds species, only weed-free erosion control and fill materials will be used for the trail construction. In addition, machinery brought in from

other locations will be pressure washed off-site before arrival/delivery. The revegetation plan will adhere to standard Best Management Practices (BMPs) for seed, mulch, and fertilizer use.

Measure 6 – Cultural Resource Protection

All known historic and prehistoric sites will be avoided by the proposed trail work. The only exception would be if an existing OHV road already traverses a site, the addition of trail surface material (at least three inches depth of either wood chips or gravel aggregate) can be used to convert, better define, and protect the trail. If the work would require any removal of or disturbance of existing ground within the archaeological site, the section of trail would be re-routed away from the site, instead.

The ecocultural enhancement work will involve selective thinning of some trees and shrubs that have become overgrown in the past decades. There may be some yarding and skidding of larger trees from where they are cut, but the majority of the work will be hand labor with a minimum of ground disturbance.

The Ajumawi Band of the Pit River Tribe is a collaborator on this project and Tribal Cultural Monitors will be on site during all soil-disturbing work to ensure the preservation and integrity of cultural sites. In addition, Project proponents are consulting with PG&E cultural resources personnel to mitigate any affects to cultural resources by either adjusting the trail alignment and/or covering the surface of existing Off-Highway Vehicle (OHV) roads that already cross through archaeological sites with a minimum of 3 inches of surface material depth. No grading or excavation will take place near any recorded resources. Either wood chips or gravel aggregate will be used for the surface material depending on drainage and surface runoff conditions. PG&E will also provide an archaeologist monitor when work is in the vicinity of archaeological sites. As recommended in the Cultural Resources Records Search, all eligible and unevaluated sites will be avoided and trails routed around them to insure they are not disturbed. The completed project will eliminate or substantially restrict unauthorized OHV use and will, therefore, help protect these cultural resources.

Measure 7 – Implement Best Management Practices (BMPs)

All applicable BMPs (e.g., BMPs for water quality, soil protection, hazardous fuels, and vegetation management, etc.) will be utilized during this construction work. The BMPs that are applicable for this construction work include:

- Erosion Control and Dust Abatement
 - Install erosion control structures before any vegetation clearing or ground-disturbing activities commence to protect the waterways from runoff and bank sloughing.

- Water all roads and barren areas before grading to minimize dust.
- Water Quality/Discharge
 - This project is non-industrial and will disturb less than one acre so it is exempt from the need for a Stormwater Pollution Prevention Plan (SWPPP). BMPs will be followed to prevent contamination of soils and waterways from construction and hazardous materials.
 - Clean spills immediately and notify the Regional Water Quality Control Board (RWQCB) and California Department of Fish and Wildlife (CDFW) of any spills and cleanup procedures.
 - Neither petroleum products nor hazardous materials will be stored onsite.
 - Staging and storage areas will be outside the riparian zone for Fall River Lake.
 - Perform refueling and vehicle maintenance at least 100 feet from the shore.
 - Any other motorized equipment stored on-site, e.g., the SWECO trail dozer, will be placed within a spill containment area.
 - Inspect equipment daily to ensure that seals prevent any fuel, engine oil, and other fluids from leaking.
- Hazardous Materials
 - In the event of a release of a hazardous substance, the FRVCSD will make all required notifications to stakeholders and regulatory agencies.
 - Materials such as fuel (gasoline/diesel) and hydraulic oil will be used on the job site. Material Safety Data Sheets for all substances used on the job site will be on file at the job headquarters as required by the Hazard Communication Law, General Industry Safety Orders, Sec. 5194, and will be available as necessary. Hazardous waste products such as grease cartridges and oil absorbents will be placed in proper containers and transported from the job site to an authorized Hazardous Waste Collection Site. Trucks will be refueled off site. Small motorized equipment, such as chainsaws, and the SWECO trail dozer will be refueled as required within a spill containment area. No fuel storage tanks will be placed at the work site.
- Fire Prevention/Protection Plan
 - All required permits, including fire permits, will be obtained before construction activities commence. In addition, all construction personnel will make all reasonable efforts to prevent and suppress wildfires. Smoking may only be done

in vehicles, on roads, or areas cleared to mineral soil for a diameter of at least three feet.

- Fire suppression equipment will be kept onsite and will include one shovel with each tractor, backhoe, or other heavy equipment. One shovel and one chemical pressurized fire extinguisher (fully charged) located at a point not greater than a distance of 25 feet from the work site, for each gasoline powered tool, including but not restricted to chain saws, rock drills etc. Fire extinguishers shall be of the type and size set forth in the California Public Resources Code Sec. 4431 and the California Administrative Code, Title 14, Sec. 1234. Shovels shall be a type “O”, and overall length of not less than 46 inches. Axes or pulaskis (pulaskis are recommended) shall have a 2 ½ pound or larger head, and shall be at least 28 inches in overall length.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Biological

The proposed project is unlikely to directly or indirectly affect any special-status species or habitat, because much of the trail work will be implemented by hand crews on already highly disturbed ground. In addition, the forest thinning portion of the project has been scaled down substantially since the Hat Fire burned two thirds of the 20 acres designated for thinning in August 2018. To ensure that no aspect of the planned project will impact special-status species or habitat, the FRVCSD and collaborating partners will implement all avoidance and minimization measures and adhere to the BMPs described in Section 5.0. Without implementation of avoidance and minimization measures, potential direct effects of the construction work include removal of upland shrubs that could be used by some species of nesting birds and disturbance of breeding/nesting birds by noise and increased human activity. Given the proposed project design, which avoids and provides 100-foot buffer from all wetlands, the project is unlikely to result in any degradation of aquatic habitat. Potential indirect effects include introduction of invasive/noxious weed species through dirty construction equipment, and degradation of terrestrial habitat during staging and mobilization. These direct and indirect effects will be minimized or eliminated with implementation of avoidance and minimization measures and BMPs.

Cultural

It is possible to avoid impacts to sites by ensuring the trail is routed around cultural sites, installing temporary fencing, or using fill over limited impact corridors to ensure archaeological site avoidance. PG&E cultural resources personnel will be consulted to ensure that the trail alignment avoids sites and/or that the surface of existing Off-Highway Vehicle (OHV) roads that already cross through archaeological sites are covered with a minimum of 3 inches of surface material depth. PG&E will provide an archaeologist monitor when work is in the vicinity of archaeological sites. Tribal Cultural Monitors will be on site during all soil-disturbing work to ensure the preservation and integrity of cultural sites.

Overall, the proposed project will help protect archaeological sites by restricting or closing unauthorized OHV access and is clearly preferable to a no-project alternative.

The Ajumawi Cultural Monitors will be included and consulted in all project phases. The Native American Heritage Commission would also need to be contacted to request a Sacred Lands search of the APE.

Since project impacts are projected to be quite shallow, no deep subsurface probing or excavations for buried archaeological sites outside known archaeological site boundaries are necessary for CEQA compliance.

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APPENDIX A

CEQA ENVIRONMENTAL CHECKLIST

Fall River Lake Trail Improvement and
Ecocultural Enhancement Project

CEQA Environmental Checklist

Project Title: Fall River Lake Trail Improvement and Ecocultural Enhancement

Lead Agency Name and Address: Fall River Valley Community Services District
24850 3rd Street, PO Box 427
Fall River Mills, CA 96028

Contact Person and Phone Number: Bill Johnson, FRV CSD Parks Manager
530.336.5263
frmcscd@citlink.net

Project Location: Fall River Mills, CA

Project Sponsor's Name and Address: Fall River Valley Community Services District
24850 3rd Street, PO Box 427
Fall River Mills, CA 96028

Description of Project:

The proposed project will transform existing off-highway vehicle roads/trails along the east bank of Fall River Lake in Shasta County, California into 2 miles of pedestrian and other non-motorized use trail, while decommissioning side roads/trails (Figure 1). In addition, the project will thin and restore up to 20 acres of mixed pine/oak woodlands on the west side of the lake; and will install educational native plant guilds within restored areas that highlight the cultural importance of grassland and woodland ecosystems.

The lands on which the Project will be implemented are Pacific Gas and Electric Company (PG&E) owned surrounding a forebay for PG&E's Pit 1 Hydroelectric Project (FERC Project No. 2687), which is known as Pit 1 Forebay or Fall River Lake. PG&E supports the project and a Third-Party-Use agreement is underway. Fall River Lake and the lands surrounding it are zoned unclassified (UC) and Exclusive Agriculture (EA) (Figure 2) and support public recreation opportunities, including boating, fishing, and hiking. The area along the east side of Fall River Lake, where the trails project is planned has received extensive unauthorized use by off-highway vehicles (OHV), which has led to significant degradation of habitat and trail conditions and a reduction in authorized recreational use quality.

Surrounding Land Uses and Setting; Briefly Describe the Project's Surroundings:

Surrounding lands include open space, residential homes, businesses, and the Fall River Elementary School in the nearby community of Fall River Mills, as well as Pacific Gas and Electric Company lands and facilities.

Other public agencies whose approval is required (e.g. permits, financial approval, or participation agreements):

PG&E Third Party Use Agreement

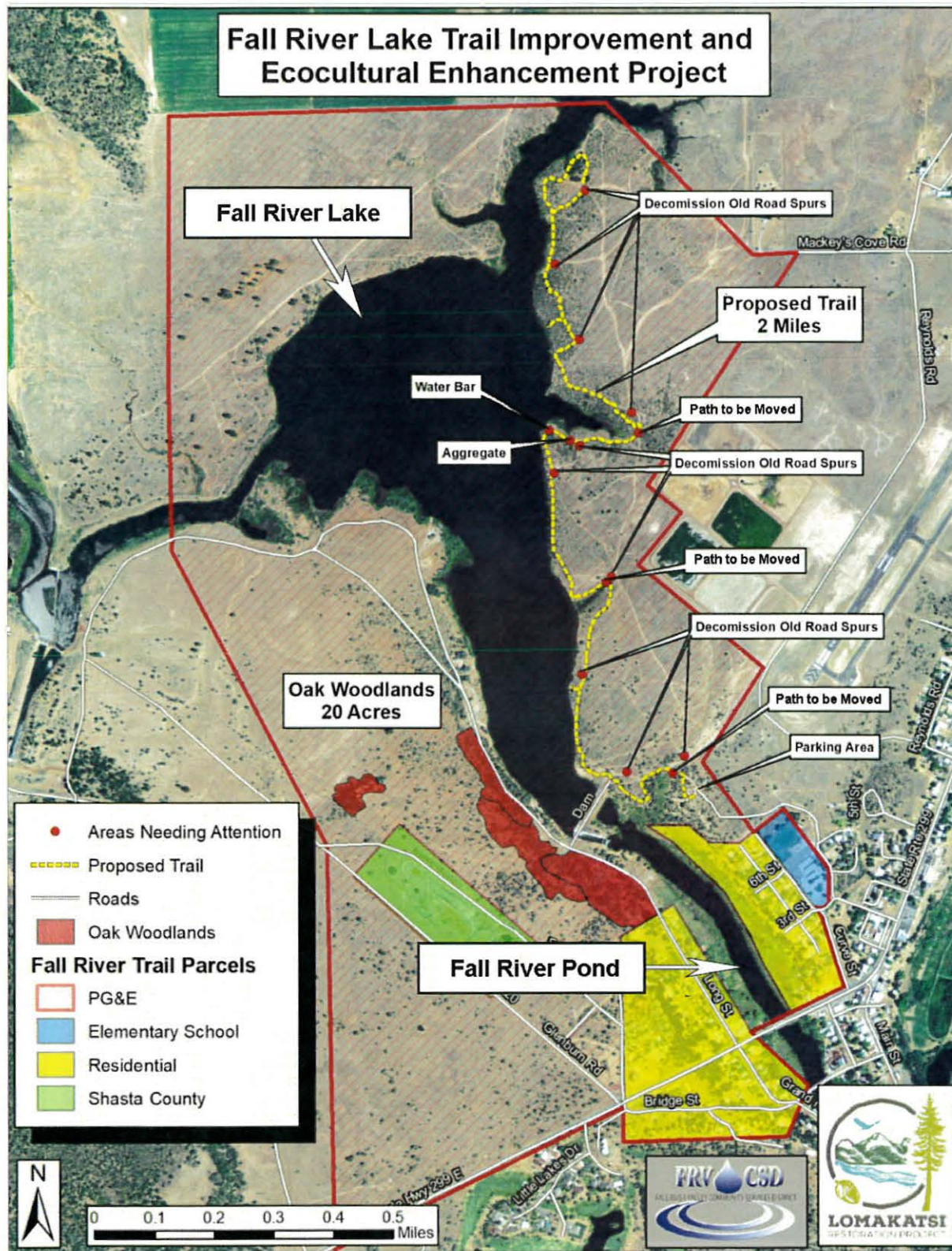


Figure 1. Map of proposed Project Area.



ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

ENVIRONMENTAL CHECKLIST:

Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
II. AGRICULTURE 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. Would the project:				

Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IV. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><i>Trail work could potentially impact native western pond turtles (Actinemys marmorata; SSC) if any ground-disturbing activities occur during the turtle nesting season in less disturbed areas with potentially suitable nesting habitat. The duration of the western pond turtle nesting season is not known, but it is suspected that egg laying occurs during summer and that hatchlings emerge from the nests the following spring (Bury and Germano 2008). To minimize potential impacts to western pond turtles during the project construction phase, pre-construction surveys and avoidance/minimization measures will be implemented, including:</i></p> <ul style="list-style-type: none"> <i>Spring Rivers will conduct a pre-construction survey in those areas to search for possible turtle nests/nesting areas.</i> <i>If nests are found within the planned trail route, the trail will be moved to avoid impacts to western pond turtle.</i> <i>If adult turtles are found in or near project work areas, they will be moved away from the work area into appropriate near-channel habitat.</i> <i>If necessary, temporary fencing will be installed between the work area and any adjacent turtle habitat in order to prevent migration back into the work area. All fencing should be inspected weekly and removed within a week after project work is completed.</i> 				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><i>A Cultural Resources Records Search for this project found seven archaeological resources recorded within the Area of Potential Effects (APE), including six prehistoric archaeological sites and one with both prehistoric and historic-era artifacts. Two additional archaeological sites (one prehistoric and one prehistoric and historic-era) are plotted just outside the APE but might extend into it. Built resources recorded in the APE include the Forebay Dam and Forebay (aka Fall River Lake) of Pit No. 1 Power Plant; while the Power Plant system is a historic district eligible to the California Register, associated elements in the APE are non-contributing and need no further management. Of the 10 sites, six have been evaluated to the National Register; the State Office of Historic Preservation concurred with all evaluations (PG&E 2007).</i></p> <p><i>The Ajumawi Band of the Pit River Tribe is a collaborator on this project and Tribal Cultural Monitors will be on site during all construction phases. In addition, Project proponents are consulting with PG&E cultural resources personnel to mitigate any affects to cultural resources by either adjusting the trail alignment and/or covering the surface of existing Off-Highway Vehicle (OHV) roads that already cross through archaeological sites with a minimum of 3 inches of surface material depth. No grading or excavation will take place near any recorded resources. Either wood chips or gravel aggregate will be used for the surface material depending on drainage and surface runoff conditions. PG&E will also provide an archaeologist monitor when work is in the vicinity of archaeological sites. As recommended in the Cultural Resources Records Search, all eligible and unevaluated sites will be avoided and trails routed around them to insure they are not disturbed. The completed project will eliminate or substantially restrict unauthorized OHV use and will, therefore, help protect these cultural resources.</i></p>				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VI. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VII. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VIII. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XV. TRANSPORTATION/TRAFFIC – Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

