

BIOLOGICAL RESOURCES ASSESSMENT

626 OUT BACK WAY [APN 140-100-41]
CALAVERAS COUNTY, CALIFORNIA

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Planning Department

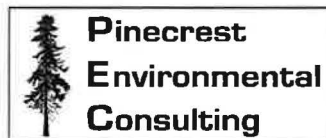
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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this Biological Resources Assessment (BRA) prepared by Pinecrest Research Corporation, Inc. (PRC) is to analyze the potential impacts of the proposed project on special-status species and their habitats, and design avoidance and mitigation measures to protect special-status species and their habitats, pursuant to applicable regulations from County of Calaveras (County), the State of California (State), and the United States (U.S.) Federal Government. As part of this analysis, this BRA evaluates the likelihood of special-status species and/or habitats listed in Appendix A to occur on or near the site of the proposed project, assesses the potential for jurisdictional wetlands and other waters of the State and waters of the U.S. to exist onsite, and classifies landforms that may potentially convey sediment to waters of the State or waters of the U.S. including dry creeks, washes, swales, gullies, and other erosional features. Also included is a set of Best Management Practices (BMPs) that are adapted from a variety of sources including State Water Resources Control Board (SWRCB) *Cannabis* General Order No. WQ 2019-0001-DWQ and other state and local ordinances.

The Proposed Project involves a zoning amendment at the project parcel in order to expand the current Cannabis cultivation areas. The zoning amendment is required to expand cultivation in order to accommodate an additional cultivation license. The cultivation expansion areas are shown in Figure 3. The proposed project involves additional cultivation located to the east and northeast of the existing cultivation facilities, and these areas are referred to hereafter as the Project Area. The new cultivation areas will require grading and removal of trees, and this BRA focuses on the impacts caused by construction of additional cultivation areas in the Project Area.

1.2 LOCATION

1.2.1 Site Overview

The project site is located at 626 Out Back Way in Calaveras County, 1.7 miles west of the community of Railroad Flat (Figure 1). The property is comprised of Assessor's Parcel Number (APN) 140-100-41, that is deeded 40 acres, and is zoned RA-20. The property is located in Section 27, Township 6 North, Range 13 East, on the USGS Railroad Flat 7.5-minute quadrangle (Figure 2). The approximate latitude and longitude of the centroid of the property is 38.2024 (N), -120.3147 (W). The property is under the jurisdiction of the North Coast Regional Water Quality Control Board (RWQCB), and the Northern Region (District 1) of the California Department of Fish & Wildlife (CDFW), and is located in a "very low" priority groundwater basin as designated by the California Department of Water Resources (DWR).

1.2.2 Federal Critical Habitat

Federal Critical Habitat (FCH) is designated by the U.S. Fish & Wildlife Service (USFWS) and provides special protections for habitats considered important for long-term population persistence of endangered or threatened species. There is no FCH onsite for any animal or plant species. There is no FCH within 10 miles of the project parcel. The nearest FCH is for California red-legged frog (*Rana draytonii*), located 15

miles southwest of the project parcel near the community of Toyon (Appendix D). The next nearest FCH is for Sierra Nevada yellow-legged frog (*Rana sierrae*) located 20 miles northeast of the project parcel near Bear Creek. There is also FCH for Chinook salmon (*Oncorhynchus tshawytscha*) located 20 miles southwest of the project parcel in the Calaveras River. There is no other FCH located within 20 miles of the project parcel.

1.2.3 Special-Status Species Occurrences

Special-status species (SSS) are those species that receive special protections under either local, State, or Federal law and include both State and Federally Endangered and Threatened species of animals and plants, as well as candidate listing species and other species or populations of special concern for which additional information is required. The California Natural Diversity Database (CNDDB) provides information on most known SSS occurrences in the State of California. A description of the habitat requirements and likelihood of occurrence of potential SSS on the project site based the CNDDB database, published scientific literature, and the expertise of PEC staff, is provided in Appendix A, with a description of the nearest locality of all SSS known from within a 5 mile radius around the project site. Additionally, map-based representation of all of the SSS within an approximately 5 mile radius around the project site is provided in Appendices B & C.

1.2.3.1 SSS Animals

There are a total of 6 special-status animal species within 5 miles of the project parcel (Appendices A-C). There is one special-status animal species whose CNDDB polygon overlaps with the project parcel, obscure bumble bee (*Bombus caliginosus*). The centroid of this polygon is located offsite, 0.8 miles north near Railroad Flat Road. The next nearest known occurrence of special-status animal species is Northern spotted owl (*Strix occidentalis*; NSO) located approximately 1.6 miles north of the project parcel near Wet Gulch. The next nearest known occurrence of special-status animal species is silver-haired bat (*Lasionycteris noctivagans*) located approximately 3.5 miles north of the project parcel near West Point. The next nearest known occurrence of special-status animal species is foothill yellow-legged frog (*Rana boylei*) located approximately 3.8 miles east of the project parcel near Little Mokelumne River. The next nearest known occurrence of special-status animal species is northern goshawk (*Accipiter gentilis*) located approximately 3.9 miles northeast of the project parcel near Licking Fork. The next nearest known occurrence of special-status animal species is North American porcupine (*Erethizon dorsatum*) located approximately 4.9 miles west of the project parcel near Rich Gulch. There are no other known occurrences of special-status animal species within 5 miles of the project parcel.

1.2.3.2 SSS Plants

There are a total of 3 special-status plant species within 5 miles of the project parcel (Appendices A & B). The nearest known occurrence of special-status plant species is yellow-lip pansy monkeyflower (*Diplacus pulchellus*) located approximately 0.4 miles east of the project parcel near Rail Road Flat. The next nearest known occurrence of special-status plant species is three-bracted onion (*Allium tribracteatum*) located approximately 4.1 miles northeast of the project parcel near Middle Fork Mokelumne River. The next nearest known occurrence of special-status plant species is Stanislaus monkeyflower (*Erythranthe marmorata*) located approximately 4.8 miles southeast of the project parcel near Mokelumne River. There are no other known occurrences of special-status plant species within 5 miles of the project parcel.

1.2.4 Landforms & Topography

The maximum elevation of the site is 2,957 feet above sea level at the southeast corner of the site, and the minimum elevation is 2,801 feet above sea level at the northwestern portion of the site near Outback Way (Figure 3). The topography of the site is flat in the west and slightly steep in the east of the parcel, with grades between 5° and 10°, as measured by Suunto PM5 handheld clinometer (Figure 2). Water passing offsite eventually enters North Fork Calaveras River, that flows west for 1.5 miles before the confluence with South Fork Calaveras River in New Hogan Lake near San Andres. From the confluence, Calaveras River flows west for approximately 32 miles before the confluence with San Joaquin River near Sacramento, which then flows west for approximately 26 miles before the confluence with Sacramento River forming Suisun Bay (Figure 1). More information about wetlands and watercourses onsite is provided in §2.4, below.

1.3 METHODS

1.3.1 Records Search & Literature Review

Based on a review of the literature and relevant databases, we compiled a list of special-status plant and animal species that are known to occur within Calaveras County, or that occupy habitats that are known to be present on or near the project site (Appendices A-C). Sources of information referenced include the California Department of Fish & Wildlife (CDFW) *California Natural Diversity Database* (CNDDB 2024), U.S. Fish and Wildlife Service Environmental Conservation Online System (USFWS 2024), the California Native Plants Society (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2024), the CDFW *Habitat Relationships System* (HRS), and the knowledge of PEC staff familiar with the species and habitats of Calaveras County. Additional information on sensitive habitats including wetlands was obtained from the USFWS National Wetlands Inventory (NWI 2024), and the County of Calaveras *Geographic Information System Portal* (Calaveras Co. 2024). Plant species included here are State or Federally Endangered or Threatened species, and/or considered rare by CDFW, and/or are recognized as special-status species (SSS) by CNPS and/or CDFW. Animal species included here are designated as State or Federally Endangered or Threatened, and/or CDFW species of special concern (SSC), and/or CDFW fully protected species (FPS). In addition, nests of most native bird species, regardless of their regulatory status, are protected from take or harassment under the U.S. Migratory Bird Treaty Act (MBTA) and relevant sections of the California Fish & Game Code.

1.3.2 Field Surveys

Wildlife and botanical surveys were conducted at the site on January 17, 2022, and March 13, 2024. The weather at the time of the first site visit that began at 12:00 PM was cool and cloudy. The temperature at the start of the first survey was 60 degF, relative humidity was 42%, and wind speed was negligible, as measured with Kestrel 3000 handheld weather station. Approximately 2-3" of rain fell the preceding month and most perennial species had leafed out and most annual plant species had germinated but had not yet begun flowering. The weather at the time of the second survey that began at 10:30 AM was partly cloudy. The temperature at the start of the second survey was approximately 70 degF, relative humidity was approximately 40%, and wind speed was negligible. Approximately 2" of rain fell the preceding month and most annual plant species had begun flowering.

At both survey dates, starting with the southern portion of the parcel near the graded pad and proposed cultivation areas, the entire project site was surveyed on foot by PEC biologist Dr. Christopher T.

DiVittorio, recording the location and identity of all plant and animal species encountered. Plant voucher specimens were taken of any species that were not identifiable in the field, and that were not likely to be special-status.

2.0 RESULTS

2.1 REGIONAL ECOLOGICAL SETTING

Using field surveys, a review of published literature, and the knowledge of PRC staff, all of the natural communities present on and around the project site were assessed. Regionally, the dominant vegetation type is second-growth Douglas fir forest on steeper slopes, and mixed oak woodland and savannah on lower elevation slopes with higher proportions of chaparral on south-facing slopes, and higher proportions of hardwoods along watercourses. Irrigated and non-irrigated pastures, ungrazed grasslands, and rural residences occur in flat valley bottoms (Figure 2).

2.2 NATURAL COMMUNITIES WITHIN THE PROJECT SITE

The natural communities onsite consists entirely of second-growth mixed Douglas fir-Jeffrey pine-Black oak forest (Figure 3). The specific community descriptions below are organized based on these zones. We used as guidance the *Manual of California Vegetation* (Sawyer et al. 2009) to guide community classification, and *The Jepson Manual* (Baldwin et al. 2012) to guide plant nomenclature.

2.2.1 Second-Growth Douglas fir-Black oak Forest

Native tree species observed onsite include Douglas fir (*Pseudotsuga menziesii*) to 20" DBH, Ponderosa pine (*Pinus ponderosa*) to 20" DBH, Sugar pine (*Pinus lambertiana*) to 15" DBH, Incense cedar (*Calocedrus decurrens*) to 12" DBH, Madroño (*Arbutus menziesii*) to 12" DBH, Black oak (*Quercus kelloggii*) to 20" DBH, Canyon live oak (*Quercus chrysolepis*) to 14" DBH, tanoak (*Notholithocarpus densiflorus*) to 10" DBH, Mountain dogwood (*Cornus nuttallii*) to 8" DBH, and epiphytes of American mistletoe (*Phoradendron leucarpum*). Native shrub and herbaceous plant species observed onsite include mountain misery (*Chamaebatia foliolosa*), toyon (*Heteromeles arbutifolia*), coffeeberry (*Frangula californica*), deerbrush (*Ceanothus integerrimus*), arching ceanothus (*Ceanothus arcuatus*), golden fleece (*Ericameria arborescens*), common manzanita (*Arctostaphylos manzanita*), and whiteleaf manzanita (*Arctostaphylos viscida*), blue wildrye (*Elymus glaucus*), hairy wood rush (*Luzula comosa*), gumweed (*Grindelia camporum*), giant mountain dandelion (*Agoseris grandiflora*), Pacific sanicle (*Sanicula crassicaulis*), common yarrow (*Achillea millefolium*), stinging nettle (*Urtica dioica*), narrow-leaf miner's lettuce (*Claytonia parviflora*), cudweed (*Pseudognaphalium beneolens*), dwarf checkerbloom (*Sidalcea malviflora*), mountain piperia (*Piperia transversa*), common bedstraw (*Galium aparine*), and wall bedstraw (*Galium parisiense*). Additional species were not able to be identified at the time of the surveys due to lack of flowers, and these included *Madia* spp., *Clarkia* spp., *Vicia* spp., *Acmispon* spp., *Trifolium* spp., *Iris* spp., *Allium* spp., Cyperaceae, and Poaceae.

Non-native species observed onsite include silver hairgrass (*Aira caryophyllea*), dogstail grass (*Cynosurus echinatus*), wild oatgrass (*Avena barbata*), soft chess (*Bromus hordeaceus*), Zorro fescue (*Festuca myuros*), foxtail barley (*Hordeum murinum*), nit grass (*Gastridium phleoides*), medusahead (*Elymus caput-medusae*), ripgut brome (*Bromus diandrus*), cheatgrass (*Bromus tectorum*), field parsley (*Torilis arvensis*), crane's bill filaree (*Erodium botrys*), ribwort (*Plantago lanceolata*), Klamathweed

(*Hypericum perforatum*), common geranium (*Geranium molle*), bur clover (*Medicago polymorpha*), shepherd's purse (*Capsella bursa-pastoris*), smooth cat's ear (*Hypochaeris glabra*), yellow star thistle (*Centaurea solstitialis*), bull thistle (*Cirsium vulgare*), spiny sowthistle (*Sonchus asper*), woolly mullein (*Verbascum thapsus*), vinca (*Vinca major*), hairy bitter cress (*Cardamine hirsuta*), Klamathweed (*Hypericum perforatum*), and Himalayan blackberry (*Rubus armeniacus*). Horticultural specimens of apple (*Malus pumila*), Giant Sequoia (*Sequoia gigantea*), and Coast redwood (*Sequoia sempervirens*) are also present near the residence.

2.3 WILDLIFE

Animal species observed directly and indirectly onsite include turkey vulture (*Cathartes aura*), acorn woodpecker (*Melanerpes formicivorus*), raven (*Corvus corax*), black-eyed junco (*Junco hyemalis*), Stellar's jay (*Cyanocitta stelleri*), American robin (*Turdus migratorius*), California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), golden-crowned kinglet (*Regulus satrapa*), ruby-crowned kinglet (*Regulus calendula*), white-crowned sparrow (*Zonotrichia leucophrys*), purple finch (*Haemorhous purpureus*), Anna's hummingbird (*Calypte anna*), red-breasted nuthatch (*Sitta canadensis*), red-tailed hawk (*Buteo jamaicensis*), tracks of black tail deer (*Odocoileus hemionus*), Western grey squirrel (*Sciurus griseus*), excavation mounds of Botta's pocket gopher (*Thomomys bottae*), scat of California black bear (*Ursus americanus californiensis*), scat of black-tailed jackrabbit (*Lepus californicus*), and digs of striped skunk (*Mephitis mephitis*).

2.4 WATERCOURSES & POTENTIAL WETLANDS

Jurisdictional watercourses onsite were classified according to the three-tier method used by the California Department of Forestry & Fire Protection (CALFIRE 2017) and included as a reference in Appendix E. Based on these criteria there is one jurisdictional watercourse onsite, an unnamed ephemeral Class III channel that initiates onsite near the center of the parcel and flows northwest before flowing offsite (Figure 3). There are no jurisdictional culverts onsite required to reach the cultivation area. Potential wetlands onsite were assessed based on the likelihood to satisfy the three-tier wetland delineation criteria used by the Army Corps of Engineers *Wetland Delineation Manual* (ACOE 1987), however a protocol-level wetland delineation was not performed. For this BA, we identified potential wetlands in Figure 3 based on the presence of one of the three ACOE criteria, usually hydrophytic vegetation cover but sometimes soil indicators or hydrology or a combination of these. Based on these criteria there are no potentially jurisdictional wetlands onsite (Figure 3).

2.5 SOILS & LOCAL GEOMORPHOLOGY

The parent materials on the project parcel are typical of western Calaveras County (USGS 1985). The southern portion of the project parcel is mapped as Nedsgulch-Sites Complex, 3% to 15% slopes, (#8160). This soil type has lesser proportions of Wallyhill (10%) and is designated not prime farmland. The northern portion of the project parcel is mapped as Nedsgulch-Sites Complex, 15% to 30% slopes, (#8161). This soil type has lesser proportions of Lickinfork (10%) and is designated not prime farmland. There are no serpentine outcrops or serpentine-derived soils mapped onsite.

3.0 CONCLUSIONS & RECOMMENDATIONS

3.1 PLANTS

No special-status plant species were observed during the two surveys performed at the site. There are no species whose CNDDB polygons overlap with the project site. The nearest special-status plant species to the project site is Yellow-lip pansy monkeyflower, however this species has low likelihood of existing onsite because it lives primarily in wetland and riparian habitats and there is no suitable habitat in the project area for this species. There are also occurrences of Three-bracted onion located near the project parcel, and there is some habitat for this species onsite although it was not observed in the project area. The March 2024 survey was performed during the flowering time of many species onsite, however a second late-season plant survey is typically recommended for new ground disturbing activities, consistent with CDFW (2018) *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities*. In addition, tree removal due to project implementation may have adverse effects on the Due to the potential for special-status plant species to exist in the project area we recommend the following measures be taken:

Recommendation 1: A late-season special-status plant survey should be conducted to coincide with the timing of late flowering plant species, typically May through early June.

If special-status plants are found in the project area, the applicant should consult with a qualified biologist and/or CDFW to determine appropriate steps for mitigation. If the species found is special-status but not listed as Threatened or Endangered by the State or Federal governments, a qualified biologist should prepare a mitigation plan that details steps to move the affected population, if feasible, to a suitable location elsewhere on the property. The plan should include additional propagation as well as success criteria to ensure there is no net loss of individuals of the species. If the species found is listed by the State or Federal government as Threatened or Endangered, the applicant should stop work in the affected area, and consult with CDFW and/or USFWS to create an approved mitigation plan that will mitigate and compensate for any project-related impacts to this species.

Recommendation 2: If native trees greater than 5" DBH are to be removed, they should be replaced onsite at the following ratios, in accordance with Calaveras County General Plan Measure COS-4D: 5-12" DBH 1:1 ratio; 12-24" DBH 1:2 ratio; >24" DBH 1:3 ratio. Trees should be replaced with the same species or other appropriate native species from local Calaveras County genotypes and planted onsite in areas lacking tree cover, if possible.

3.2 WILDLIFE

No special-status animal species were observed during the two surveys performed at the site. There is one species whose CNDDB polygon overlaps with the project site, Obscure bumble bee, although this species requires grassland habitat for breeding and foraging, and there is no suitable grassland habitat onsite. There is also one known occurrence of Northern spotted owl (*Strix occidentalis*; NSO) from 1978 located 1.6 miles of the project site. There is some marginal nesting and foraging habitat for this species onsite, and individuals may occasionally migrate through the site in search of suitable habitat. Nesting birds

and/or raptors that receive protections may also occur in the project area. Due to the potential for disruption of bird habitat due to the proposed cultivation expansion, we recommend the following measure be taken to ensure no impacts to nesting birds occur:

Recommendation 3: If vegetation clearing is required including removal of small trees or shrubs, we recommend a preconstruction survey for nesting migratory birds and raptors to be conducted within 7 days of ground disturbance if disturbance is to occur during the typical nesting period, from February 1 to October 31.

If nesting birds are observed in the project area and the species is not listed by the State or Federal government as Threatened or Endangered, appropriate buffers should be established by a qualified biologist around each nest, and no disturbance should occur inside the buffer area until the nest is no longer active, e.g. eggs have hatched and young have fledged. A buffer of 100 feet should be used for passerine birds and 250 feet for raptors. Buffers should be demarcated with construction fencing and no disturbance should be allowed inside the buffer until all young have fledged and the nest is no longer active. If the species observed is listed by the State or Federal government as Threatened or Endangered (e.g. NSO) then work should stop in the project area and applicant should consult with CDFW and/or USFWS to prepare a mitigation plan that will ensure no project-related impacts occur to this species.

Other species known from the area with some potential habitat onsite include Foothill yellow-legged frog (FYLF) located 3.8 miles from the project parcel. However, FYLF requires wetlands and streams and associated upland habitats for estivation, and there is no suitable stream habitat for breeding, and the cultivation area does not have cracks or other features appropriate for estivation for this species. If these wildlife avoidance measures are observed we do not anticipate any impacts to special-status species or their habitats due to continued cultivation on the project parcel.

3.3 EROSION, WATERCOURSES & WETLANDS

There is one jurisdictional watercourse identified onsite, and no potentially jurisdictional wetlands identified onsite. No direct routes for sediment to enter any waters of the State from the project site due to the presence of intact vegetation between activity areas and the jurisdictional watercourse, thus as we do not anticipate any impacts to wetlands or watercourses as a result of cultivation on the project parcel. There are no culvert crossings required to reach the cultivation area that appear to be in need of remediation or repair. During and after project implementation, as long as the erosion control BMPs provided in Appendix F are implemented to the greatest extent practicable, and appropriate setbacks observed as required by the State Water Resources Control Board *Cannabis* General Order, no sediment discharge to waters of the State is anticipated. Anywhere revegetation after disturbance is required, only native vegetation from local genotypes should be used. A list of suitable species and nurseries/vendors can be provided by PEC on request. Sterile wheat is acceptable only if no native species can be obtained.

4.0 REGULATORY FRAMEWORK

4.1 FEDERAL

4.1.1 Endangered Species Act (ESA)

The U.S. Fish & Wildlife Service (USFWS) has jurisdiction over federally-listed threatened and endangered species under the ESA. USFWS also maintains a list of proposed and candidate species that are not legally protected under the ESA, but are often included in their review of a project as they may become listed in the near future. The ESA protects listed animal species from harm or take which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that results in death or injury to a listed species. An activity can be defined as a take even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under ESA if they occur on federal lands. Pursuant to the requirements of the ESA, a federal agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed threatened or endangered species (plants and animals) may be present in the project area and determine whether the proposed project may affect such species. Any activities that could result in the take of a federally-listed species will require formal consultation with USFWS.

4.1.2 Migratory Bird Treaty Act (MBTA)

The MTBA implements international treaties between the U.S. and other nations that were enacted to protect migratory birds, their parts, eggs, and nests from activities including hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. All migratory birds and their nests are protected from take and other impacts under MTBA (16 USC §703, *et. seq.*).

4.1.3 Eagle Protection Acts

Both bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) are additionally protected under the Eagle Protection Act (16 USC §669, *et. seq.*) and the Bald & Golden Eagle Protection Act (16 USC §668-668d).

4.1.4 Clean Water Act (CWA)

Section 404 The United States Army Corps of Engineers (USACE) administers Section 404 of the federal Clean Water Act (CWA), which regulates the discharge of dredge and fill material into waters of the United States. As of the date of preparation of this report, the U.S. Environmental Protection Agency (EPA) and USACE published a final rule in the Federal Register on September 8, 2023 that took effect on the same date, amending the “Revised Definition of Waters of the United States” that was published in the Federal Register on January 18, 2023, and took effect on March 20, 2023. This final rule conforms the definition of “waters of the United States” to the U.S. Supreme Court’s May 25, 2023 decision in the case of *Sackett vs. EPA*.

According to the September 8, 2023 final rule and as codified in Title 40 Code of Federal Regulations §120.2 and Title 33 Code of Federal Regulations §328.3, “waters of the United States” have been amended to read as follows:

1. Waters which are:

- a. Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
 - b. The territorial seas; or
 - c. Interstate waters;
2. Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (5) of this section;
3. Tributaries of waters identified in paragraph (1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:
 - a. Waters identified in paragraph (1) of this section; or
 - b. Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (2) or (3) of this section and with a continuous surface connection to those waters;
5. Intrastate lakes and ponds not identified in paragraphs (1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (1) or (3) of this section.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA and/or USACE.

"Wetland" refers to areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and seasonal wetlands. Wetlands are considered jurisdictional if they fall under one of the categories of waters of the United States defined above. The USACE jurisdiction typically extends up to the ordinary high water mark (OHWM).

In general, a USACE permit must be obtained before placing fill in wetlands or other waters of the United States. The type of permit depends on the impacted acreage, the purpose of the proposed fill, and other factors.

Section 401 Under Section 401 of the CWA, "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states the discharge will comply with the applicable provisions under the federal Clean Water Act." In this case, applicants must obtain a Section 401 Water Quality Certification from the RWQCB from the region in which the project takes place.

4.2 STATE

4.2.1 California Environmental Quality Act (CEQA)

The following CEQA guidelines are intended to determine significance thresholds when analyzing the potential impacts of a proposed project on biological resources. The following is a list of criteria for determining if impacts are considered significant:

Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plan, policies, or regulations, or by the California Department of Fish & Wildlife (CDFW) or U.S. Fish & Wildlife Service (USFWS).

1. Have a substantial adverse effect on any riparian habitat or other sensitive natural community

- identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.
2. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
 3. 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.
 4. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
 5. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan.

4.2.2 California Endangered Species Act (CESA)

The State of California enacted CESA in 1984 and is similar to the federal ESA but pertains to State-listed threatened and endangered species. CESA requires State agencies to consult with CDFW when preparing a CDQA documents to ensure that the State lead agency actions do not jeopardize the continued existence of a listed species or results in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternative available (Fish & Game Code [FGC] §2080.) CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify reasonable and prudent alternatives to the proposed project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State's prohibition against take of a listed species if the take is incidental to carrying out an otherwise lawful project that has been approved under CEQA (FGC §2081).

4.2.3 California Fish & Game Code

Under CESA, CDFW has the responsibility for maintaining a list of threatened and endangered species (FGC §2070). Fish & Game Code §2050-2098 outline the protection provided to California's rare, endangered, and threatened species. Fish & Game Code §2080 prohibits the taking of plants and animals listed under CESA. Fish & Game Code §2081 establishes an incidental take permit program for State-listed species. CDFW also maintains a list of candidate species that it formally notices as being under review for addition to the list of endangered or threatened species.

In addition, the Native Plant Protection Act of 1977 (NPPA) (FGC §1900, *et seq.*) prohibits the taking, possessing, or sale within the State of any plants with a State designation of rare, threatened, or endangered (as defined by CDFW). An exception to this prohibition in NPPA allows landowners, to take listed plant species under specified circumstances, provided that the owners first notify CDFW and give the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed. Fish & Game Code §1913 exempts from the take prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right-of-way." Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

In addition to formal listing under federal ESA and CESA, some species receive additional consideration by CDFW and local lead agencies during the CEQA process. Species that may be considered for review are those listed as a "Species of Special Concern." CDFW maintains lists of Species of Special Concern that serve as species "watch lists." Species with this status may have limited distributions or limited populations, and/or the extent of their habitats has been reduced substantially, such that their populations

may be threatened. Thus, their populations are monitored, and they may receive special attention during environmental review. While they do not have statutory protection, they may be considered rare under CEQA, and specific protection measures may be warranted. In addition to Species of Special Concern, CDFW Special Animals List identifies animals that are tracked by the California Natural Diversity Database (CNDDB) and may be potentially vulnerable but warrant no federal interest and no legal protection.

Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. CEQA Guidelines §15065 (Mandatory Findings of Significance) requires that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines §15380 (Rare or Endangered Species) provides for the assessment of unlisted species as Rare or Endangered under CEQA if the species can be shown to meet the criteria for listing. Unlisted plant species on the California Native Plant Society (CNPS) List ranked 1A, 1B, and 2 would typically require evaluation under CEQA.

Fish & Game Code §3500-5500 outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. The CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Under Fish & Game Code §3503.5, it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. To comply with the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project study area and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may impact a candidate species. Project-related impacts to species on CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of CESA. Take of protected species incidental to otherwise lawful management activities may be authorized under Fish & Game Code §206.591. Authorization from CDFW would be in the form of an Incidental Take Permit.

Fish & Game Code §1602 requires any entity to notify CDFW before beginning any activity that “may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake” or “deposit debris, waste, or other materials that could pass into any river, stream, or lake.” This definition includes waters that are episodic and perennial and ephemeral streams, desert washes, and watercourses with a subsurface flow. A Lake or Streambed Alteration Agreement (LSAA) will be required if CDFW determines that project activities may substantially adversely affect fish or wildlife resources through alterations to a covered body of water.

4.2.4 Porter-Cologne Water Quality Control Act

California's Regional Water Quality Control Boards (RWQCB) regulate actions that would involve “discharging waste, or proposing to discharge waste, within any region that could affect the water of the State” (Water Code §13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. “Waters of the State” are defined as “any surface water or groundwater, including saline waters, within the boundaries of the State” (Water Code §13050(e)).

4.2.5 California Native Plant Society (CNPS)

The CNPS maintains a rank of plant species that are native to California and that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Following are the definitions of the CNPS ranks:

- Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- Rank 2A: Plants presumed extirpated in California but common elsewhere
- Rank 2B: Plants rare, threatened, or endangered in California but more common elsewhere
- Rank 3: Plants about which more information is needed
- Rank 4: Watch List: Plants of limited distribution

Potential impacts to populations of CNPS ranked plants receive consideration under CEQA review. All plants appearing on CNPS Lists 1 or 2 are considered to meet the CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, potential impacts to these species or their habitats should be analyzed during the preparation of environmental documents pursuant to CEQA, as they may meet the definition of Rare or Endangered under the CEQA Guidelines Section 15380 criteria.

4.2.6 State Water Resources Control Board *Cannabis* Cultivation General Order

In addition to the above regulations, *Cannabis* cultivation is subject to State Water Resources Control Board (SWRCB) *Cannabis* Cultivation General Order No. WQ-2019-0001-DWQ (Order). This statewide Order specifies measures that must be taken to ensure water quality based on the size of the cultivation area (Tier 1 vs Tier 2), the risk determination based on potential to affect water quality (low, medium, high), and watercourse classifications and minimum setbacks that must be followed. Currently, Class I watercourses (perennial streams, lakes, ponds) must observe 150 foot setbacks, Class II watercourses (intermittent streams or wetlands) must observe 100 foot setbacks, and Class III watercourses (ephemeral streams) must observe 50 foot setbacks. Class IV watercourses (e.g. man-made canals) that support native aquatic species must observe a setback equal to the established riparian vegetation zone, or if the watercourse does not support aquatic species does not need to observe setbacks. Other measures that must be taken to protect water resources are also provided in the text of the statewide Order.

4.3 REGIONAL & LOCAL

Natural resource use and *Cannabis* commercial development in Calaveras County is guided by the Calaveras County General Plan and regulated by Calaveras County Code. Below is a sample of relevant codes and ordinances that pertain to vegetation management and commercial *Cannabis* cultivation on lands within the County's jurisdiction.

4.3.1 County of Calaveras Municipal Code

Cannabis Cultivation & Commerce (Chapter 17.95)

The County's Commercial Cannabis Cultivation Ordinance provides comprehensive guidelines on the size, location, and permitted activities for all commercial Cannabis facilities within the County's jurisdiction including restrictions on water sources, types of fencing, pest control measures, vegetation

clearing, noise and visual impacts, storage and disposal of waste products, and grading. The Ordinance also specifies that the applicant must abide by all applicable Federal and State laws including the SWRCB *Cannabis* General Order, as discussed above.

Voluntary Oak Woodland Management Plan & Oak Woodlands Ordinance (Chapter 17.101)

The Voluntary Oak Woodland Management Plan was published in January 2007, and the Oak Woodlands Ordinance was published on January 19, 2023 but has not been officially approved or adopted by resolution. These documents recommend measures that should be followed in order to ensure that there is no net loss of oak woodlands however their recommendations are not binding and are currently implemented on a voluntary basis.

4.3.2 County of Calaveras General Plan

The Calaveras County General Plan was adopted on November 12, 2019 and designates a number of goals, objectives, and policies that are designed to guide orderly growth and development, promote equity, strengthen the economy, protect the environment, and promote public health and safety. All discretionary development in Calaveras County must be consistent with the General Plan. COS-4I requires discretionary projects to enlist the services of a qualified professional biologist to identify and map any sensitive habitats or special-status species onsite, and to prepare mitigation measures if impacts to any of these biological resource are anticipated. This BRA satisfies the requirements of COS-4I.

As described in Measure COS-4D, oak woodlands receive protections pursuant to Public Resources Code Section 21083.4(b). In addition, COS-4D requires oak woodlands that may be subject to disturbance from discretionary development projects to be mapped and quantification of the extent of canopy proposed to be removed. Mitigation for trees removed shall be at a ratio of 1:1 or 2:1 and performed in Calaveras County in an area with similar habitat values and functions.

Measures COS-4L and COS-4N also require setbacks from wetland, watercourse, and riparian features to the greatest extent practicable, as determined in consultation with a qualified professional biologist. For projects that may result in fill or sediment deposition into wetlands, watercourses, or riparian zones, the applicant must contract with a qualified professional biologist to determine the extent of wetland, watercourse, or riparian features onsite, and recommend setbacks or other mitigation measures in order to ensure that no unauthorized fill or hydrologic disruptions occur.

4.3.3 Habitat Conservation Plan / Natural Communities Conservation Plan

The project site is not located in an area that is covered by any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no additional mitigation related to local or regional conservation plans is necessary.

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FIGURE 1: REGIONAL LOCATION

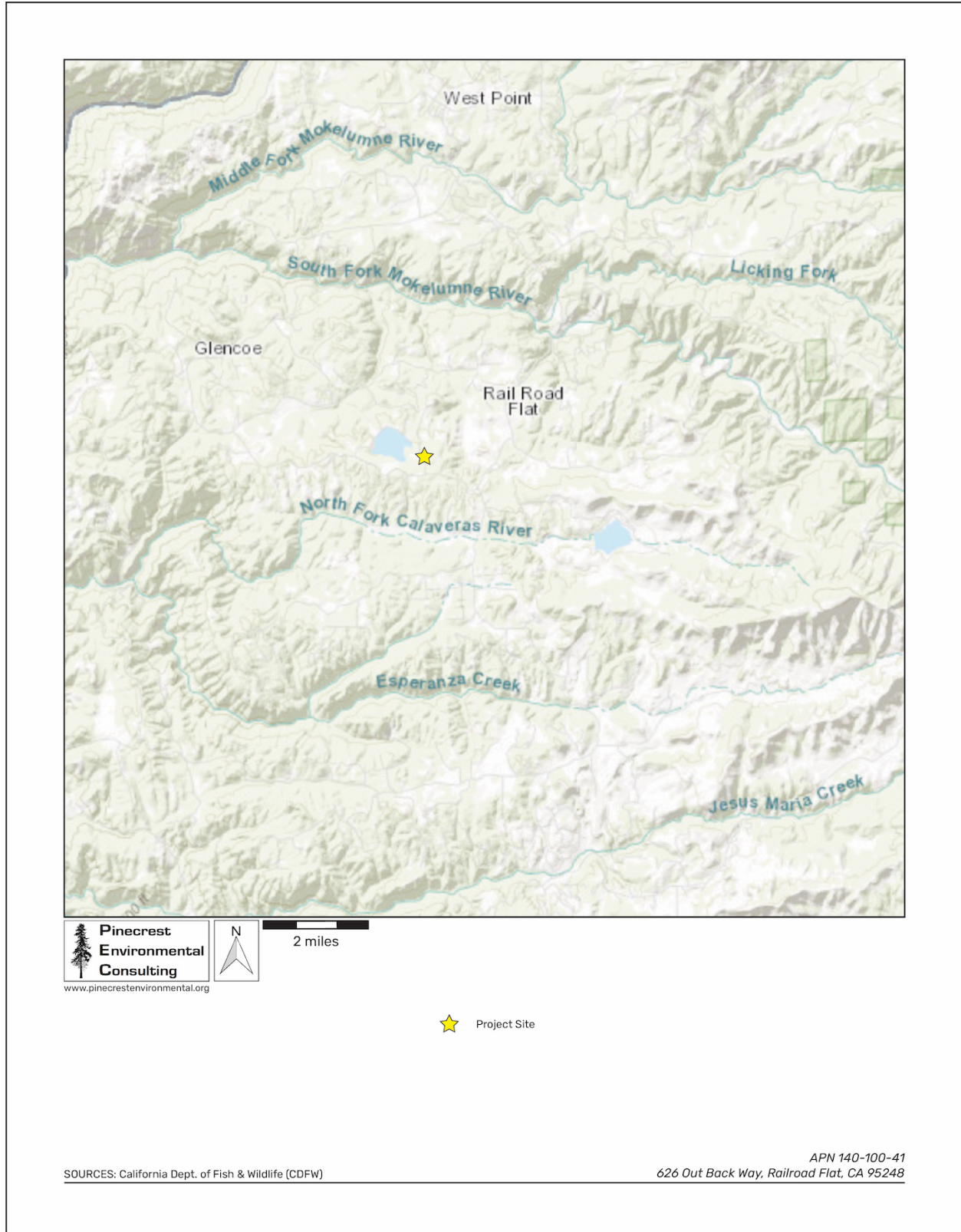


FIGURE 2: 40-FOOT CONTOURS

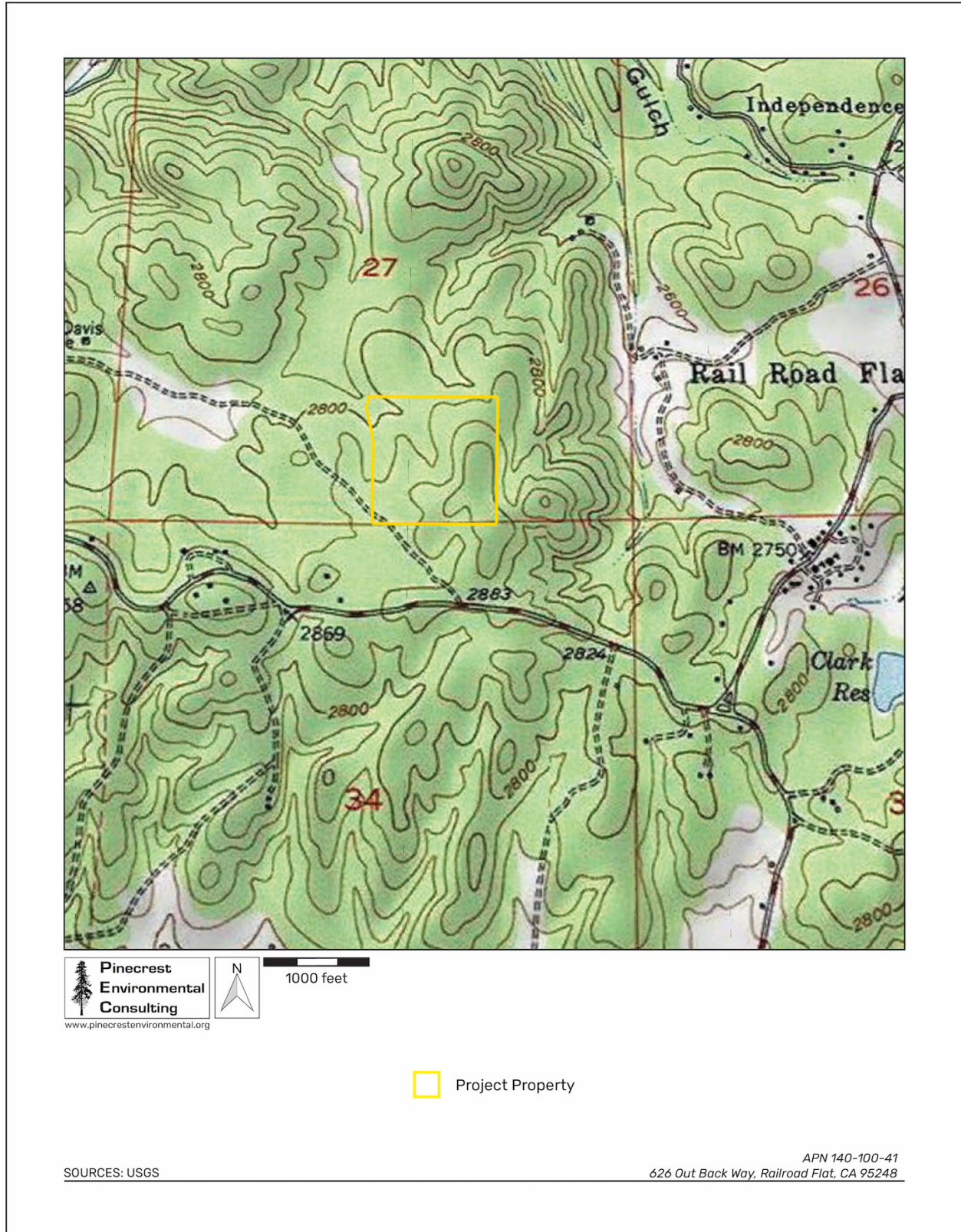
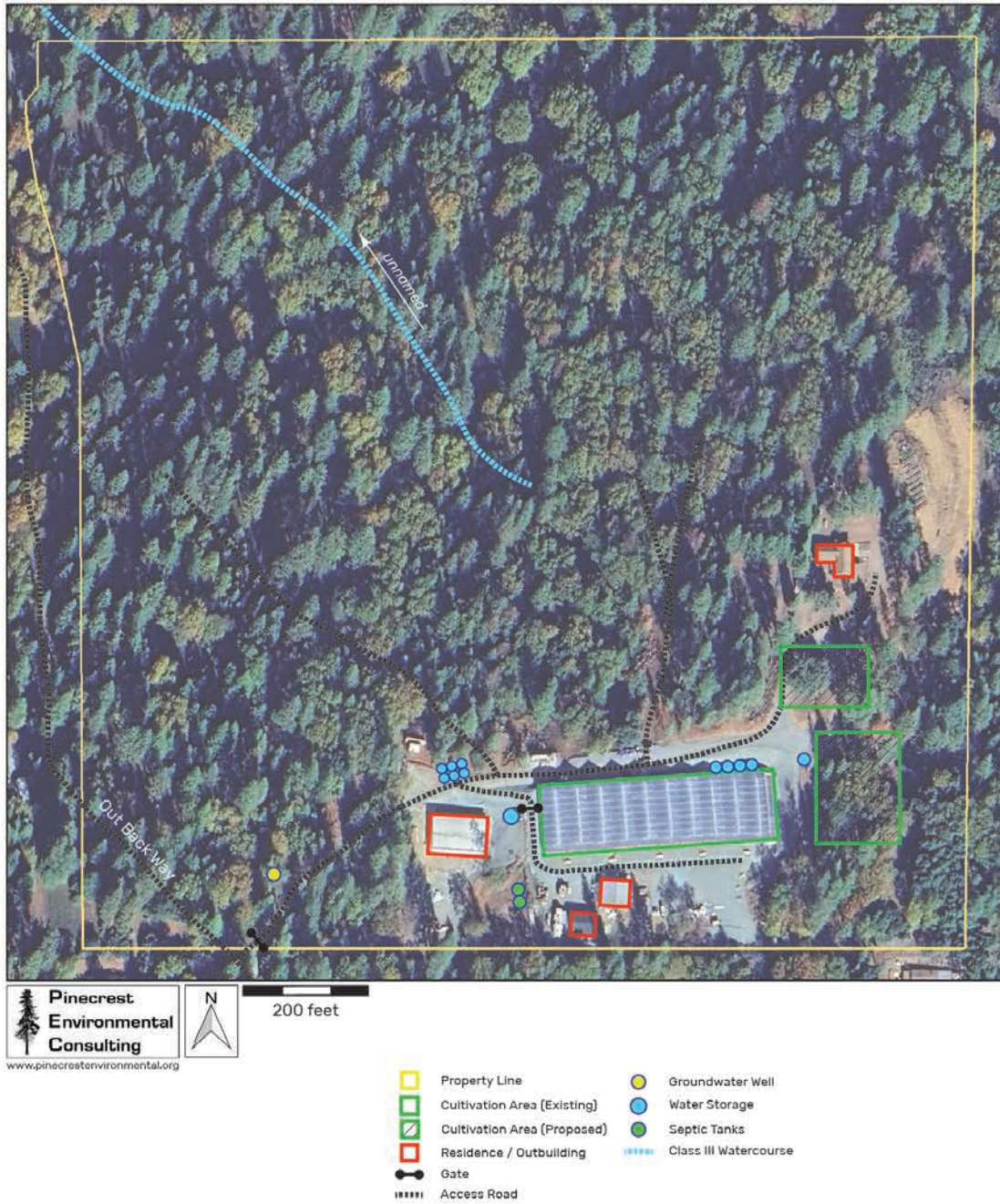


FIGURE 3: SITE PLAN



SOURCES: Google Earth; PEC Inc. Image Date: November 2023

APN 140-100-41
626 Out Back Way, Railroad Flat, CA 95248

FIGURE 4: PHOTOGRAPH OF MAIN GATE



SOURCES: PEC Inc.

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FIGURE 5: PHOTOGRAPH OF ACCESS ROAD



SOURCES: PEC Inc.

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FIGURE 6: PHOTOGRAPH OF EXISTING CULTIVATION AREA



SOURCES: PEC Inc.

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FIGURE 7: PHOTOGRAPH OF GROUNDWATER WELL



SOURCES: PEC Inc.

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FIGURE 8: PHOTOGRAPH OF WATER STORAGE



SOURCES: PEC Inc.

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FIGURE 9: PHOTOGRAPH OF RESIDENCE



SOURCES: PEC Inc.

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FIGURE 10: PHOTOGRAPH OF EROSION CONTROL



FIGURE 11: PHOTOGRAPH OF PROPOSED CULTIVATION AREA A



SOURCES: PEC Inc.

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FIGURE 12: PHOTOGRAPH OF PROPOSED CULTIVATION AREA B



SOURCES: PEC Inc.

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FIGURE 13: PHOTOGRAPH OF DRYING BUILDING



SOURCES: PEC Inc.

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FIGURE 14: PHOTOGRAPH OF MAINTENANCE BARN



SOURCES: PEC Inc.

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FIGURE 15: PHOTOGRAPH OF CLASS III WATERCOURSE



SOURCES: PEC Inc.

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FIGURE 16: PHOTOGRAPH OF MIXED CONIFER-OAK WOODLAND



SOURCES: PEC Inc.

APN 140-100-41
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APPENDIX A: SPECIAL-STATUS SPECIES CONSIDERED

The following is a list of special-status plant and animal species generated based on knowledge of the species and habitats of Calaveras County by PEC staff, from various State and Federal databases, and from the California Natural Diversity Database (CNDDB). Known occurrences within 5 miles of the project site are shown in bold.

Taxon	Status ¹ Fed/State/CNPS	Primary, Secondary Habitat	Potential to Occur Within the Project Area
PLANTS			
Ahart's dwarf rush (<i>Juncus leiospermus</i> var. <i>ahartii</i>)	—/—/1B.2	Vernal pools, wetlands	<u>None</u> : No suitable vernal pool habitat exists onsite.
Baker's navarretia (<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>)	—/—/1B.1	Vernal pools, riparian woodland	<u>None</u> : No suitable vernal pool habitat exists onsite.
Bent flowered fiddleneck (<i>Amsinckia lunaris</i>)	—/—/1B.2	Valley grassland, foothill woodland	<u>Low</u> : Some woodland habitat exists onsite.
Big scale balsamroot (<i>Balsamorhiza macrolepis</i>)	—/—/1B.2	Valley grassland, foothill woodland	<u>Low</u> : Some woodland habitat exists onsite.
Brandegee's clarkia (<i>Clarkia brandegeae</i>)	—/—/4.2	Chaparral, grassland, foothill Woodland	<u>Medium</u> : Some suitable woodland habitat exists onsite.
Brazilian watermeal (<i>Wolffia brasiliensis</i>)	—/—/2B.3	Freshwater marsh, ponds	<u>None</u> : No suitable wetland habitat exists on the parcel.
Bristly sedge (<i>Carex comosa</i>)	—/—/2B.1	Wetland, riparian	<u>Very Low</u> : No wetland habitat exists onsite.
Brownish beaked-rush (<i>Rhynchospora capitellata</i>)	—/—/2B.2	Wetland, riparian	<u>Very Low</u> : No wetland habitat exists onsite.
Butte county fritillary (<i>Fritillaria eastwoodiae</i>)	—/—/3.2	Woodland, chaparral	<u>Very Low</u> : Some woodland habitat exists onsite.
California alkalai grass (<i>Puccinellia simplex</i>)	—/—/1B.2	Alkalai wetland	<u>None</u> : No alkalai wetland habitat exists onsite.
California beaked-rush (<i>Rhynchospora californica</i>)	—/—/1B.1	Wetland	<u>None</u> : No wetland habitat exists onsite.

Taxon	Status ¹ Fed/State/CNPS	Primary, Secondary Habitat	Potential to Occur Within the Project Area
California satintail (<i>Imperata brevifolia</i>)	—/—/2B.1	Chaparral	<u>Very Low</u> : Some chaparral habitat exists onsite.
Cantelow's lewisia (<i>Lewisia cantelovii</i>)	—/—/1B.2	Wetland, rock outcrop	<u>Very Low</u> : Some potential habitat exists onsite, although not near the project area.
Caper-fruited tropidocarpum (<i>Tropidocarpum capparideum</i>)	—/—/1B.1	Valley grassland	<u>Very Low</u> : No suitable grassland habitat exists onsite.
Chaparral sedge (<i>Carex xerophila</i>)	—/—/1B.2	Chaparral	<u>Low</u> : Some chaparral habitat exists onsite.
Colusa layia (<i>Layia septentrionalis</i>)	—/—/1B.2	Valley grassland	<u>Very Low</u> : No suitable grassland habitat exists onsite.
Congdon's tarplant (<i>Centromadia parryi</i> ssp. <i>congonii</i>)	—/—/1B.1	Valley grassland, wetlands	<u>Very Low</u> : No suitable grassland habitat exists onsite.
Congested hayfield tarplant (<i>Hemizonia congesta</i> ssp. <i>congesta</i>)	—/—/1B.2	Grassland, coastal scrub	<u>Very Low</u> : No suitable grassland habitat exists onsite.
Dimorphic snapdragon (<i>Antirrhinum subcordatum</i>)	—/—/4.3	Serpentine, chaparral	<u>None</u> : No serpentine habitat exists onsite.
Dubious pea (<i>Lathyrus sulphureus</i> var. <i>argillaceus</i>)	—/—/3	Foothill woodland	<u>Medium</u> : Some woodland habitat exists onsite.
Dwarf downingia (<i>Downingia pusilla</i>)	—/—/2B.2	Vernal pool, freshwater wetland	<u>None</u> : No suitable vernal pool habitat exists onsite.
Eel-grass pondweed (<i>Potamogeton zosteriformis</i>)	—/—/2B.2	Freshwater wetland, pond	<u>None</u> : No suitable pond habitat exists onsite.
Finger rush (<i>Juncus digitatus</i>)	—/—/1B.1	Wetland	<u>None</u> : No suitable wetland habitat exists onsite.
Glandular western flax (<i>Hesperolinon adenophyllum</i>)	—/—/1B.2	Chaparral	<u>Very Low</u> : Some chaparral habitat exists onsite.
Grassleaf water plantain (<i>Alisma gramineum</i>)	—/—/2B.2	Wetland, riparian	<u>None</u> : No potential wetland habitat exists onsite.
Hispid bird's beak (<i>Chloropyron molle</i> ssp. <i>hispidum</i>)	—/—/1B.1	Wetland, alkalai sink	<u>None</u> : No potential wetland habitat exists onsite.

Taxon	Status ¹ Fed/State/CNPS	Primary, Secondary Habitat	Potential to Occur Within the Project Area
Jepson's coyote thistle (<i>Eryngium jepsonii</i>)	—/—/4.2	Freshwater wetland, vernal pool	<u>None</u> : No suitable wetland habitat exists onsite.
Jepson's milk-vetch (<i>Astragalus rattanii</i> var. <i>jepsonianus</i>)	—/—/1B.2	Chaparral, serpentine grassland	<u>Very Low</u> : No suitable serpentine habitat exists onsite.
Layne's ragwort (<i>Packera layneae</i>)	—/—/1B.2	Serpentine grassland	<u>Low</u> : No suitable serpentine habitat exists in the project area.
Legenere (<i>Legenere limosa</i>)	—/—/1B.1	Vernal pool	<u>None</u> : No suitable vernal pool habitat exists in the project area.
Marsh checkerbloom (<i>Sidalcea oregana</i> ssp. <i>hydrophila</i>)	—/—/1B.2	Freshwater wetland, riparian	<u>None</u> : No potential wetland habitat exists onsite.
Nuttall's ribbon-leaved pondweed (<i>Potamogeton epihydrus</i>)	—/—/2B.2	Freshwater wetlands	<u>None</u> : No potential wetland habitat exists onsite.
Oregon polemonium (<i>Polemonium carneum</i>)	—/—/2B.2	Coastal scrub, yellow pine forest	<u>Very Low</u> : Some suitable forest habitat exists onsite.
Oval-leaved viburnum (<i>Viburnum ellipticum</i>)	—/—/2B.3	Chaparral	<u>Low</u> : Some suitable chaparral habitat exists onsite.
Pappose tarplant (<i>Centromadia parryi</i> ssp. <i>parryi</i>)	—/—/1B.2	Grassland, wetlands	<u>Very Low</u> : No suitable grassland habitat exists onsite.
Peruvian dodder (<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>)	—/—/1B.2	Grassland, chaparral	<u>Very Low</u> : Some chaparral habitat exists onsite.
Pine Hill flannelbush (<i>Fremontodendron decumbens</i>)	FE/SR/1B.2	Chaparral, foothill woodland	<u>Low</u> : Some woodland habitat exists onsite.
Quincy lupine (<i>Lupinus dalesiae</i>)	—/—/4.2	Coniferous forest	<u>Medium</u> : Some forest habitat exists onsite.
Round-leaved filaree (<i>California macrophylla</i>)	—/—/1B.2	Foothill grassland	<u>Very Low</u> : No suitable grassland habitat exists onsite.
Scadden Flat Checkerbloom (<i>Sidalcea stipularis</i>)	—/SE/1B.1	Freshwater wetland	<u>None</u> : No potential wetland habitat exists onsite.
Serpentine bird's beak (<i>Cordylanthus tenuis</i> ssp. <i>brunneus</i>)	—/—/4.3	Serpentine	<u>None</u> : No serpentine habitat exists onsite.
Serpentine daisy (<i>Erigeron serpentinus</i>)	—/—/1B.3	Serpentine chaparral	<u>Very Low</u> : No serpentine chaparral habitat exists onsite.

Taxon	Status ¹ Fed/State/CNPS	Primary, Secondary Habitat	Potential to Occur Within the Project Area
Sierra arching sedge (<i>Carex cyrtostachya</i>)	—/—/1B.2	Coniferous forest	<u>Low</u> : Some suitable forest habitat exists onsite.
Slender Orcutt grass (<i>Orcuttia tenuis</i>)	—/—/1B.1	Vernal pool, wetland	<u>None</u> : No potential wetland habitat exists onsite.
Stanislaus monkeyflower (<i>Erythranthe marmorata</i>)	—/—/1B.1	Coniferous forest, rock outcrop	<u>Medium</u> : Some suitable forest habitat exists in the project area. Nearest occurrences is 4.8 miles to the NW near Mokelumne River.
Stebbins' morning-glory (<i>Calystegia stebbinsii</i>)	FE/SE/1B.1	Chaparral	<u>Low</u> : Some suitable chaparral habitat exists onsite.
Stinkbells (<i>Fritillaria agrestis</i>)	—/—/4.2	Freshwater wetland, grassland	<u>None</u> : No potential wetland habitat exists onsite.
Three-bracted onion (<i>Allium tribracteatum</i>)	—/—/1B.2	Chaparral, yellow pine forest	<u>High</u> : Some suitable coniferous forest habitat onsite. Nearest occurrences is 4.1 miles to the NE near Middle Fork Mokelumne River.
Watershield (<i>Brasenia schreberi</i>)	—/—/2B.3	Pond, wetland	<u>None</u> : No suitable pond habitat exists onsite.
White beaked-rush (<i>Rhynchospora alba</i>)	—/—/2B.2	Wetland, riparian	<u>None</u> : No potential wetland habitat exists onsite.
Yellow-lip pansy monkeyflower (<i>Diplacus pulchellus</i>)	—/—/1B.2	Vernal pool, wetland	<u>Low</u> : No suitable wetland habitat exists onsite. Nearest occurrences is 0.4 miles to the E near Rail Road Flat.
MOSESSES, LICHENS & LIVERWORTS			
Bolander's bruchia (<i>Bruchia bolanderi</i>)	—/—/4.2	Forest, woodland	<u>Low</u> : Some suitable forest habitat exists in the project area.
Elongate copper moss (<i>Mielichhoferia elongata</i>)	—/—/4.3	Forest, woodland	<u>Low</u> : Some suitable forest habitat exists in the project area.
Inundated bog clubmoss (<i>Lycopodiella inundata</i>)	—/—/2B.2	Wetland, bogs, fens	<u>None</u> : No potential wetland habitat exists in the project area.
Long seta hump moss (<i>Meesia longiseta</i>)	—/—/2B.3	Rocky substrates in forests	<u>Very Low</u> : Some suitable forest habitat exists in the project area.
Minute pocket moss (<i>Fissidens pauperculus</i>)	—/—/1B.2	Forests, rocky substrates	<u>Low</u> : Some suitable forest habitat exists onsite.

Taxon	Status ¹ Fed/State/CNPS	Primary, Secondary Habitat	Potential to Occur Within the Project Area
Meesia moss (<i>Meesia triquetra</i>)	—/—/4.2	Rocky substrates in forests	<u>Low</u> : Some suitable forest habitat exists in the project area.
Slender silver moss (<i>Anomobryum julaceum</i>)	—/—/4.2	Rocky substrates in forests	<u>Very Low</u> : Some suitable forest habitat exists in the project area.
FISH			
Chinook Salmon Central Valley spring run ESU (<i>Oncorhynchus tshawytscha</i> Pop. 6)	FT/ST/—	Freshwater streams, open ocean and estuaries	<u>None</u> : No suitable stream habitat exists onsite.
Longfin smelt (<i>Spirinchus thaleichthys</i>)	FT/ST/—	Estuaries and coastal lakes	<u>None</u> : No suitable estuary habitat exists onsite.
Sacramento perch (<i>Archoplites interruptus</i>)	—/SSC/—	Low gradient sloughs and lakes	<u>None</u> : No suitable aquatic habitat exists in the project area.
Sacramento splittail (<i>Pogonichthys macrolepidotus</i>)	—/SSC/—	Low gradient freshwater streams	<u>None</u> : No suitable stream habitat exists in the project area.
Steelhead Central Valley DPS (<i>Oncorhynchus mykiss irideus</i> Pop. 11)	FT/SSC/—	Freshwater streams, open ocean and estuaries	<u>None</u> : No suitable stream habitat exists onsite.
AMPHIBIANS & REPTILES			
California red-legged frog (<i>Rana draytonii</i>)	FT/SSC/—	Vernal pools, seasonal pools, stock ponds, and associated grasslands	<u>None</u> : There is no suitable pond habitat onsite, and no suitable estivation habitat.
Coast horned lizard (<i>Phrynosoma blainvillii</i>)	—/SSC/—	Chaparral, grassland	<u>Low</u> : Some chaparral habitat exists onsite.
Foothill yellow-legged frog (<i>Rana boylei</i>)	—/SSC/—	Wetlands, riparian, streams and ponds	<u>Low</u> : There is no suitable breeding or estivation habitat onsite. Nearest occurrences is 3.8 miles to the E near Little Mokelumne River.
Giant garter snake (<i>Thamnophis gigas</i>)	FT/ST/—	Valley grassland	<u>Very Low</u> : No suitable grassland habitat exists onsite.
San Joaquin coachwhip (<i>Masticophis flagellum ruddocki</i>)	—/SSC/—	Grasslands	<u>Very Low</u> : No suitable grassland habitat exists onsite.
Western pond turtle (<i>Actinemys marmorata</i>)	—/SSC/—	Slow-moving creeks, streams, ponds	<u>None</u> : No suitable pond habitat exists onsite.

Taxon	Status ¹ Fed/State/CNPS	Primary, Secondary Habitat	Potential to Occur Within the Project Area
INVERTEBRATES			
Behren's silverspot butterfly (<i>Speyeria zerene behrensii</i>)	FE/SSC/—	Coastal prairie	<u>None</u> : Requires blue violet to reproduce. No suitable host plants exist onsite.
Brownish dubiraphian riffle beetle (<i>Dubiraphia brunnescens</i>)	—/SSC/—	Freshwater streams	<u>None</u> : No potential wetland habitat exists onsite.
California floater (<i>Anodonta californiensis</i>)	—/SSC/—	Freshwater ponds, streams	<u>None</u> : No potential wetland habitat exists onsite.
California linderiella (<i>Linderiella occidentalis</i>)	—/SSC/—	Vernal pools	<u>None</u> : No suitable vernal pool habitat exists onsite.
Crotch bumble bee (<i>Bombus crotchii</i>)	—/SSC/—	Grassland, chaparral	<u>Low</u> : Some chaparral habitat exists onsite.
Monarch butterfly California overwintering Population #1 (<i>Danaus plexippus</i>)	—/SSC/—	Large trees required for roosting	<u>Very Low</u> : Some suitable trees for roosting onsite.
Obscure bumble bee (<i>Bombus caliginosus</i>)	—/SSC/—	Grassland, foothill woodland, chaparral	<u>Medium</u>: Some chaparral habitat exists onsite. Nearest occurrence is a CNDDDB polygon that overlaps with the project parcel, that has a centroid located 1.0 miles E of the parcel near Two Dollar Gulch.
Opler's longhorn moth (<i>Adela oplerella</i>)	—/SSC/—	Usually associated with <i>Platystemon</i> (creamcups)	<u>None</u> : No suitable host plants onsite.
Oregon floater (<i>Anodonta oregonensis</i>)	—/SSC/—	High order freshwater streams	<u>None</u> : No stream habitat exists onsite.
Ricksecker's water scavenger beetle (<i>Hydrochara rickseckeri</i>)	—/SSC/—	Freshwater ponds	<u>None</u> : No suitable pond habitat exists onsite.
Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	FT/SSC/—	Obligately feeds on elderberry (<i>Sambucus</i> spp.)	<u>None</u> : Host plant not known from the project parcel.
Vernal pool andrenid bee (<i>Andrena blennospermatis</i>)	—/SSC/—	Upland areas near vernal pools	<u>None</u> : No suitable vernal pool habitat exists onsite.
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT/SSC/—	Vernal pools	<u>None</u> : No suitable vernal pool habitat exists onsite.
Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	FE/—/—	Vernal pools	<u>None</u> : No suitable vernal pool habitat exists onsite.

Taxon	Status ¹ Fed/State/CNPS	Primary, Secondary Habitat	Potential to Occur Within the Project Area
Western bumblebee (<i>Bombus occidentalis</i>)	—/SSC/—	Grassland	<u>Very Low</u> : No suitable grassland habitat exists onsite.
Western pearlshell (<i>Margaritifera falcata</i>)	—/SSC/—	Perennial freshwater streams	<u>None</u> : No suitable stream habitat exists onsite.
BIRDS			
American peregrine falcon (<i>Falco peregrinus anatum</i>)	—/SSC/—	Forages in open grasslands, nests in rock outcrops	<u>None</u> : No suitable nesting habitat exists onsite.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	—/SE/—	Typically found near lakes and streams	<u>Very Low</u> : Some marginally suitable nesting and foraging habitat exists onsite.
Bank swallow (<i>Riparia riparia</i>)	—/ST/—	Nests along incised banks of large streams	<u>None</u> : No suitable stream habitat exists in the project area.
Black swift (<i>Cypseloides niger</i>)	—/SSC/—	Cliff faces near water	<u>None</u> : No suitable stream bank habitat exists onsite.
Burrowing owl (<i>Athene cunicularia</i>)	—/SSC/—	Grasslands	<u>None</u> : No suitable grassland habitat exists onsite.
California black rail (<i>Laterallus jamaicensis coturniculus</i>)	—/ST/—	Coastal salt marshes and mudflats	<u>None</u> : No potential wetland habitat exists onsite.
California horned lark (<i>Eremophila alpestris actia</i>)	—/SSC/—	Herbaceous vegetation, chaparral	<u>Very Low</u> : Some suitable habitat exists onsite.
Cooper's hawk (<i>Accipiter cooperii</i>)	—/SSC/—	Forages over open grassland	<u>Low</u> : Some suitable nesting and foraging habitat exists onsite.
Ferruginous hawk (<i>Buteo regalis</i>)	—/SSC/—	Forages over open grassland, nests in old-growth trees	<u>Low</u> : Some suitable nesting and foraging habitat exists onsite.
Golden eagle (<i>Aquila chrysaetos</i>)	—/SSC/—	Forages over open grassland, nests in old-growth trees	<u>Low</u> : Some suitable nesting and foraging habitat exists onsite.
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	—/SSC/—	Forages over open grassland	<u>Low</u> : Some suitable foraging habitat exists onsite.
Great egret (<i>Ardea alba</i>)	—/SSC/—	Nests in trees, forages in wetlands and grasslands	<u>Very Low</u> : Some suitable foraging habitat exists onsite.

Taxon	Status ¹ Fed/State/CNPS	Primary, Secondary Habitat	Potential to Occur Within the Project Area
Long-eared owl (<i>Asio otus</i>)	—/SSC/—	Nests in old growth forest near grasslands	<u>Medium</u> : Some suitable forest habitat exists onsite.
Northern goshawk (<i>Accipiter gentilis</i>)	—/SSC/—	Yellow pine forest	<u>Medium</u> : Some suitable foraging and nesting habitat exists onsite. Nearest occurrences is 3.9 miles to the NE near Licking Fork.
Northern harrier (<i>Circus hudsonius</i>)	—/SSC/—	Open grassland, wetland	<u>Low</u> : Some suitable foraging and nesting habitat exists onsite.
Northern spotted owl (<i>Strix occidentalis</i>)	FT/ST/—	Nests primarily in old growth forest	<u>Medium</u> : Some marginally suitable forest habitat exists onsite. Nearest occurrences is 1.6 miles to the N near Wet Gulch.
Osprey (<i>Pandion haliaetus</i>)	—/SSC/—	Nests and forages over large bodies of water	<u>None</u> : No suitable foraging or nesting exist onsite.
Purple martin (<i>Progne subis</i>)	—/SSC/—	Insectivorous, nests in cavities	<u>Low</u> : Some suitable nesting habitat exists onsite.
Sharp-shinned hawk (<i>Accipiter striatus</i>)	—/SSC/—	Forest, woodland	<u>Low</u> : Some suitable nesting and foraging habitat exists onsite.
Swainson's hawk (<i>Buteo swainsoni</i>)	—/ST/—	Forages in grasslands, nests near rivers and marshes	<u>Low</u> : Some suitable nesting and foraging habitat exists onsite.
Tricolored blackbird (<i>Agelaius tricolor</i>)	—/SSC/—	Forages in grasslands and nests in dense freshwater marshes	<u>Very Low</u> : No suitable nesting habitat exists onsite.
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	FT/SE/—	Woodland, riparian	<u>Very Low</u> : Some marginal nesting and foraging habitat exist onsite.
White-tailed kite (<i>Elanus leucurus</i>)	—/CFP/—	Forages in grasslands, usually nests near wetlands	<u>Very Low</u> : Some marginal nesting and foraging habitat exists onsite.
Yellow breasted chat (<i>Icteria virens</i>)	—/SSC/—	Dense shrubby growth, farmland	<u>Very Low</u> : Some suitable scrub habiat exists onsite.
Yellow rail (<i>Coturnicops noveboracensis</i>)	—/SSC/—	Breeds in marshes, forages in wet meadows	<u>None</u> : No suitable marsh habiat exists onsite.
Yellow warbler (<i>Setophaga petechia</i>)	—/SSC/—	Riparian, shrubland, farmland	<u>Low</u> : Some suitable habiat onsite.

Taxon	Status ¹ Fed/State/CNPS	Primary, Secondary Habitat	Potential to Occur Within the Project Area
MAMMALS			
American badger (<i>Taxidea taxus</i>)	—/SSC/—	Open grassland habitats with plenty of prey	<u>Low</u> : This animal prefers den locations far away from residential developments.
Big free-tailed bat (<i>Nyctinomops macrotis</i>)	—/SSC/—	Migratory, forages over open areas, roosts in trees or caves	<u>Low</u> : Some suitable foraging and roosting habitat exists onsite.
Fisher (<i>Pekania pennanti</i>)	—/SSC/—	Forages and breeds primarily in forests	<u>Medium</u> : Some suitable forest habitat exists onsite.
Fringed myotis (<i>Myotis thysanodes</i>)	—/SSC/—	Roosts in caves or buildings, forages over water and open habitats in forests	<u>Low</u> : Some suitable foraging and roosting habitat exists onsite.
Hoary bat (<i>Lasiurus cinereus</i>)	—/SSC/—	Forages over open areas, roosts in trees or caves, broad distribution	<u>Low</u> : Some suitable foraging and roosting habitat exists onsite.
Long-eared myotis (<i>Myotis evotis</i>)	—/SSC/—	Roosts in trees, caves, and buildings, forages in open habitats	<u>Low</u> : Some suitable foraging and roosting habitat exists onsite.
Long-legged myotis (<i>Myotis volans</i>)	—/SSC/—	Roosts in caves or buildings and forages in open habitats	<u>Low</u> : Some suitable foraging and roosting habitat exists onsite.
North American porcupine (<i>Erethizon dorsatum</i>)	—/SSC/—	Require rocky areas or trees for dens, abundant open space for foraging	<u>High</u> : Some suitable foraging habitat, some suitable den habitat. Nearest occurrences is 4.9 miles to the W near Rich Gulch.
Pacific marten (<i>Martes caurina</i>)	—/SSC/—	Yellow pine forests	<u>Low</u> : Some foraging habitat exists onsite.
Pallid bat (<i>Antrozous pallidus</i>)	—/SSC/—	Common in open dry habitats with rocky areas for roosting	<u>Low</u> : Some suitable foraging and roosting habitat exists onsite.
Silver haired bat (<i>Lasionycteris noctivagans</i>)	—/SSC/—	Nocturnal, migratory, solitary, roosts in tree cavities, common in forested areas	<u>Medium</u> : Some suitable foraging and roosting habitat exists onsite. Nearest occurrences is 3.5 miles to the N near West Point.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	—/SSC/—	Hibernate in mines or caves, roosts in artificial structures and caves	<u>Low</u> : Some suitable foraging and roosting habitat exists onsite.

Taxon	Status ¹ Fed/State/CNPS	Primary, Secondary Habitat	Potential to Occur Within the Project Area
Western red bat (<i>Lasiurus blossevillii</i>)	—/SSC/—	Forages over open areas, roosts primarily in trees	<u>Low</u> : Some suitable foraging and roosting habitat exists onsite.
Yuma myotis (<i>Myotis yumanensis</i>)	—/SSC/—	Forages over slow moving water, roosts in trees, caves, and artificial structures	<u>Low</u> : Some suitable foraging and roosting habitat exists onsite.
HABITATS			
Coastal & Valley Freshwater Marsh (CVFM)	—	—	<u>None</u> : No marsh habitat exists onsite.
Northern Hardpan Vernal Pool (NHVP)	—	—	<u>None</u> : No hardpan vernal pool habitat exists onsite.
Northern Vernal Pool (NVP)	—	—	<u>None</u> : No vernal pool habitat exists onsite.
Sycamore Alluvial Woodland (SAW)	—	—	<u>None</u> : No woodland habitat exists onsite.
Valley Needlegrass Grassland (VNG)	—	—	<u>Low</u> : Some grassland habitat exists onsite.
Valley Oak Woodland (VOW)	—	—	<u>None</u> : No valley oaks exist onsite.
Valley Sink Scrub (VSS)	—	—	<u>None</u> : No sink habitat exists onsite.

¹ Status:

Federal

FE = Federally Endangered Species

FT = Federally Threatened Species

State

SE = State Endangered Species

ST = State Threatened Species

SSC = California Species of Special Concern

CFP = California Fully Protected Species

CNPS (applies to plants only)

List 1B = plants considered rare, threatened, or endangered in California and elsewhere

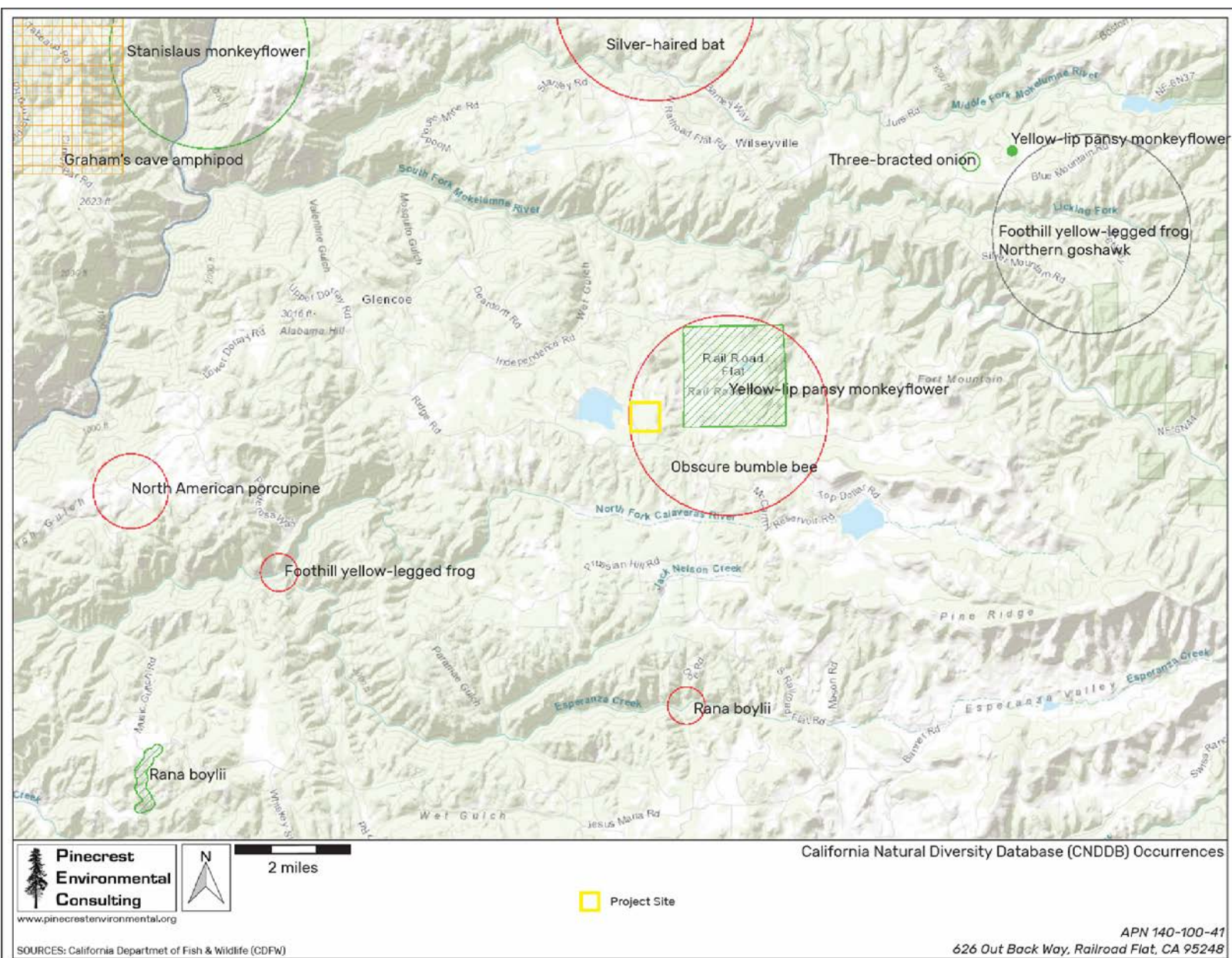
List 2B = plants rare, threatened or endangered in California, but more common elsewhere

List 3 = plant is likely rare but more information is required

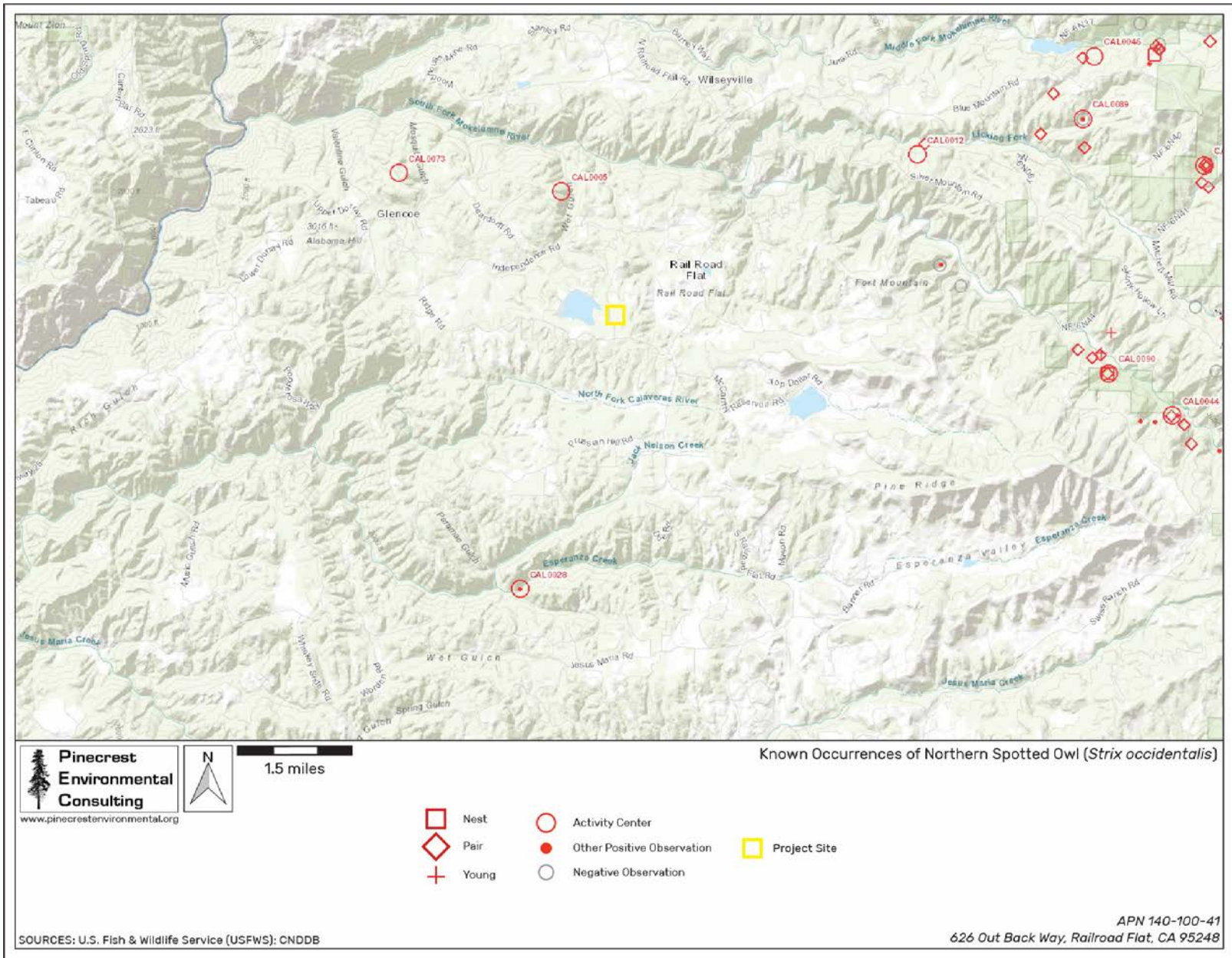
List 4 = plants of limited distribution

² USFWS

APPENDIX B: CNDDB OCCURRENCES MAP



APPENDIX C: NSO OCCURRENCES MAP



The map displays the Railroad Flat area in California, highlighting Federal Critical Habitat for four species: Sierra Nevada yellow-legged frog, California red-legged frog, California tiger salamander, and Chinook salmon. The project site is marked with a yellow star near Railroad Flat. The map includes various geographical features such as ridges (e.g., Farnham Ridge, Doaks Ridge, Bailey Ridge), valleys (e.g., Shenandoah Valley, Lone Valley), and towns (e.g., Fiddletown, Plymouth, Drytown, Volcano, Pioneer, West Point, Porter, Clinton, Jackson, Mokelumne Hill, Mountain Ranch, Calaveras, San Andreas, Calaveritas, Murphys, Forest Meadows, Big Trees, Arnold, Avery, Camp Pendola, Cotage Springs, Big Meadow, Sherrin). It also shows water bodies like Sutter Creek, South Park Dry Creek, San Antonio Creek, and New Hagon Lake. A scale bar indicates 4 miles, and a north arrow is present. The map is sourced from the United States Fish & Wildlife Service (USFWS).

Pinecrest Environmental Consulting
www.pinecrestenvironmental.org

Federal Critical Habitat

Project Site

APN 140-100-41
626 Out Back Way, Railroad Flat, CA 95248

SOURCES: United States Fish & Wildlife Service (USFWS)

APPENDIX E: STREAM CLASSIFICATION CRITERIA

The following stream classification criteria were copied from the California Department of Forestry & Fire Protection *Forest Practice Rules* (CALFIRE 2017) and is widely used by many state and local agencies. Most state and local jurisdictions require setbacks of 50, 100, and 150 feet from Class III, II, and I streams, respectively, although greater setbacks may be required in some jurisdictions.

Watercourse – a natural or artificial channel through which water flows.

- Perennial watercourse (Class I*):
 1. In the absence of diversions, water is flowing for more than nine months during a typical year,
 2. Fish always or seasonally present onsite or includes habitat to sustain fish migration and spawning, and/or
 3. Spring: an area where there is concentrated discharge of ground water that flows at the ground surface. A spring may flow any part of the year. For the purpose of this Policy, a spring does not have a defined bed and banks.
- Intermittent watercourse (Class II*):
 1. In the absence of diversions, water is flowing for three to nine months during a typical year,
 2. Provides aquatic habitat for non-fish aquatic species,
 3. Fish always or seasonally present within 1,000 feet downstream, and/or
 4. Water is flowing less than three months during a typical year and the stream supports riparian vegetation.
- Ephemeral watercourse (Class III*): In the absence of diversion, water is flowing less than three months during a typical year and the stream does not support riparian vegetation or aquatic life. Ephemeral watercourses typically have water flowing for a short duration after precipitation events or snowmelt and show evidence of being capable of sediment transport.
- Other watercourses (Class IV*): Class IV watercourses do not support native aquatic species and are man-made, provide established domestic, agricultural, hydroelectric supply, or other beneficial use.

*Except where more restrictive, stream class designations are equivalent to the Forest Practice Rules Water Course and Lake Protection Zone definitions (California Code of Regulations, title 14, Chapter 4. Forest Practice Rules, Subchapters 4, 5, and 6 Forest District Rules, Article 6 Water Course and Lake Protection).

APPENDIX F: CANNABIS CULTIVATION BEST MANAGEMENT PRACTICES

Best management practices (BMPs) are designed to prevent, minimize, and control the discharge of waste and pollutants associated with site operations and maintenance for the aforementioned project. Many of these BMPs are considered enforceable conditions under State Water Resources Control Board *Cannabis* General Order No. WQ 2019-0001-DWQ.

F.1 CANNABIS CULTIVATION

- Pesticide and fertilizer storage facilities shall be located outside of the riparian corridor setbacks for structures.
- Pesticide and fertilizer storage facilities shall not be located within 100 feet of a wellhead, or within 50 feet of identified wetlands.
- Pesticide and fertilizer storage facilities shall be adequate to protect pesticide and fertilizer containers from the weather.
- Store all bags and boxes of pesticides and fertilizers off the ground on pallets or shelves.
- If the structure does not have an impermeable floor, store all liquid pesticides and fertilizers on shelves capable of containing spills or provide appropriate secondary containment.
- Routinely check for leaks and spills.
- Have spill cleanup kit onsite to be able to respond to any leaks or spills.
- Inspect planting stock for pests and diseases prior to planting.
- Avoid planting stock with pests and disease and notify the supplier of the planting stock of the infestation.
- Comply with all pesticide laws and regulations as enforced by the California Department of Pesticide Regulation and County Agricultural Commissioner.
- For pesticides with the signal word CAUTION that have listed food uses, comply with all pesticide label directions as they pertain to personal protective equipment, application method, and rate, environmental hazards, longest reentry intervals and greenhouse and indoor use directions.
- For all other pesticides, use must comply with all label requirements including site and crop restrictions.
- Prior to the use of any registered pesticide on *Cannabis*, Operator Identification Number should be obtained from the County Agricultural Commissioner if required.
- Submit monthly pesticide use reports to the County Agricultural Commissioner if required.
- Prior to applying fertilizers, evaluate irrigation water, soils, growth media, and plant tissue to optimize plant growth and avoid over fertilization.

- Apply fertilizers at label rates and no higher.
- Do not apply fertilizers in a way that will result in runoff that may contaminate ground or surface water or escape via airborne drift or fugitive dust.
- Observe riparian corridor setbacks for agricultural cultivation as applicable. These shall be maintained as “no touch” areas and demarcated with appropriate flagging.
- The removal of vegetation is prohibited within riparian setback areas.
- No equipment, vehicles, or other materials shall be stored in the riparian setback areas.
- Composting areas shall not be located in the riparian setback areas.
- Irrigation must be conducted in a manner that does not result in runoff from the cultivated area.
- Any water tanks or storage facilities must obtain permits from the local City or County planning department where required.
- The use of membrane based water bladders is prohibited.
- If using an irrigation system, inspect for and repair leaks prior to planting each year and continuously during the season.
- Irrigation systems shall be equipped with a backflow prevention devices and shutoff valves.
- Recycle or properly dispose of all plastic bags, containers, and irrigation materials.
- Properly dispose of green waste in a manner that does not discharge pollutants to a watercourse. This may be accomplished by composting, chipping, and/or shredding.
- The method of green waste disposal must be documented.
- Used growth medium (soil and other organic medium) shall be handled to minimize or prevent discharge of soil and residual nutrients and chemicals to watercourses. Proper disposal could include incorporating into garden beds, spreading on a stable surface and re-vegetating, storage in watertight dumpsters, or covering with tarps or plastic sheeting prior to proper disposal.
- The method of disposal of growth medium must be documented.
- Compost piles are to be located outside of riparian setbacks for agricultural cultivation and in a manner that will not discharge pollutants to a watercourse.
- If necessary, construct a berm or install fiber roll around compost area to prevent runoff or use straw wattles around perimeter.
- Cover compost piles with tarp or impermeable surface prior to fall rains and continuously throughout the rainy season.
- Leave a vegetative barrier along the property boundary and interior watercourses to act as a pollutant filter.
- Avoid soil disturbance between November 1 and April 15 and during times of active precipitation.
- All exposed and disturbed soil must be covered with a minimum of 2 inches of mulch, such as straw, bark, wood chips, etc., by November 15. Alternatively, establish a thick cover crop over disturbed areas composed of native species.
- Erosion control materials shall be available on site at all times in the form of straw, mulch, wattles, silt fencing, erosion control fabrics, sand bags, or other materials adequate to cover areas of disturbed soil or incipient erosion events.

- In the event of a forecast storm event likely to produce runoff, apply mulch, wattles, or other erosion prevention measures to the disturbed areas prior to rain event.
- Any grading or drainage conducted as part of site preparation shall have permits from local County or City agencies if required.

F.2 EROSION & SEDIMENT CONTROL

- Erosion control and sediment detention devices and materials shall be incorporated into the cleanup/restoration work design and installed prior to the end of project work and before the beginning of the rainy season or any predicted rain events.
- Any continuing, approved project work conducted after October 15 shall have erosion control measures completed and up-to-date.
- All erosion control measures shall be inspected daily during severe rain events.
- Erosion control materials shall be, at minimum, stored on-site at all times during approved project work between May 1 and October 15.
- Approved project work within the 5-year flood plain shall not begin until all temporary erosion controls (straw bales or silt fences that are effectively keyed-in) are installed downslope of cleanup/restoration activities.
- Native species appropriate to the local habitat shall be used for all revegetation purposes. Non-invasive, non-persistent grass species (e.g., barley grass) may be used for their temporary erosion control benefits to stabilize disturbed slopes and prevent exposure of disturbed soils to rainfall.
- Upon work completion, all exposed soil present in and around the cleanup/restoration sites shall be stabilized within 7 days.
- The disturbed area will be minimized at all times to only that which is essential for the completion of the project.
- Provide temporary cover over disturbed areas that are not currently being worked on.
- Heavy equipment shall not be used in flowing water.
- Use of heavy equipment shall be avoided or minimized in a channel bottom with rocky or cobbled substrate.
- Heavy equipment shall not introduce chemicals or foreign sediment to the channel (e.g., remove mud from tracks or cover channel work area with plastic sheeting prior to heavy equipment entry).
- When heavy equipment is used, any woody debris and stream bank or streambed vegetation disturbed shall be replaced to a pre-project density with native species appropriate to the site.
- When possible, existing ingress or egress points shall be used or work shall be performed remotely from the top of the creek banks.
- Divert runoff away from unprotected slopes or loose soils using a combination of mats, geotextiles, silt fencing, wattling, check dams, sediment basins, vegetated buffers, or rock armor.
- Deploy appropriate erosion control measures such as silt fencing or straw wattles around all temporary exposed piles or soil or surface disturbances.

- All temporary exposed piles or soil or surface disturbances shall have tarping and sand bags or other stabilization materials deployed in order to prevent discharge of sediments in the event of a rain or wind event.
- Geotechnical fabric shall be deployed on all exposed dirt surfaces with a slope of greater than 15% and staked in place during ground disturbing activities, and silt fencing deployed on slopes of greater than 15% where appropriate.
- Sand bags, straw bales, or other devices shall be placed at appropriate locations near and alongside the roadsides and swales in anticipation of large storm events.
- Bioswales and cultivation areas including parking areas shall be maintained free of trash including empty soil and pesticide or fertilizer containers.
- Locations of sediment sources shall be identified during rain events and mitigated where appropriate.
- Protect ditch inlets and outlets from erosion using rock armor.
- Silt fencing shall be installed downstream of rock piles, stockpiles, and temporary soils storage areas.
- Desilting or retention basins shall be installed if the capacity of the natural percolation exceeds the inputs during routine storm events.
- Sediment traps shall be used on all exposed driveway surfaces where natural vegetation is not able to be established.
- Exposed unvegetated surfaces will be graveled where appropriate.
- Rock placed for slope protection shall be the minimum necessary to avoid erosion, and shall be part of a design that provides for native plant revegetation and minimizes bank armoring.
- Soil exposed as a result of project work, soil above rock riprap, and interstitial spaces between rocks shall be revegetated with native vegetation by live planting, seed casting, or hydroseeding prior to the rainy season of the year work is completed.
- Avoidance of earthwork on steep slopes and minimization of cut/fill volumes, combined with proper compaction, shall occur to ensure the area is resilient to issues associated with seismic events and mass wasting. If cracks are observed, or new construction is anticipated, consultation with a qualified professional is recommended.
- Culvert fill slopes shall be constructed at a 2:1 slope or shall be armored with rock.
- If it is necessary to conduct work in or near a live stream, the work space shall be isolated to avoid project activities in flowing water.
- Any spoils associated with site maintenance shall be placed in a stable location where it cannot enter a watercourse.
- Sidecasting shall be minimized and shall be avoided on unstable areas or where it has the potential to enter a watercourse.
- Entrance to the project site shall be maintained in a condition that will prevent tracking or flowing of sediment into the public right-of-way.
- All sediment spilled, dropped, washed, or tracked onto the public right-of-ways shall be removed immediately.
- When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-ways.

- When wheel washing is required, it shall be done in an area stabilized with crushed stone that drains into a sediment trap fitted with appropriate erosion control measures.
- To control surface water runoff in and around cultivation areas use fiber rolls or wattling and stake appropriately and perpendicular to the flow path.
- Cover crops should be utilized on all exposed slopes that are not able to be protected by other means.
- Cover crops should be native species as described in the associated biological resources report.
- Rip compacted soils prior to placing spoils to prevent the potential for ponding under the spoils that could result in spoil site failure and subsequent sedimentation.
- Compact and contour stored spoils to mimic the natural slope contours and drainage patterns to reduce the potential for fill saturation and failure.
- Ensure that spoil materials are free of woody debris, and not placed on top of brush, logs or trees.
- Inspect all roads and culverts regularly for blockages.

F.3 WATER USE & POLLUTION

- Ensure that all appropriate water rights permits are filed with the State Water Resources Control Board.
- Notify the California Department of Fish and Wildlife by submitting a Lake and Streambed Alteration (LSA) notification package if the proposed activities involve substantial diversion from or alteration of the bed or bank of a stream or other waterbody.
- Ensure that all water storage features are permitted from the Department of Water Rights if necessary.
- All refueling and pesticide and chemical storage and transfer shall occur greater than 100 feet away from any swales, creeks, or natural areas.
- All refueling and pesticide and chemical storage and transfer shall occur on top of an impermeable metal or other fabric mat that is no less than 2 inches high on all sides and capable of completely containing any spillage.
- Concrete truck and other vehicles shall not be washed out in natural areas or directly onto soil and shall be washed out into a metal or other impermeable basin and disposed of properly such that no water is discharged to the soil.
- All waste shall be kept in plastic drums with tight fitting lids so that water is not able to make contact with the contents and potentially leach to the environment.
- All pesticide sprays shall occur on windless nights for outdoor facilities.
- Chemical or fertilizer wastes shall never be disposed of into swales or creeks and shall be contained inside closed-roof facilities and designated with appropriate labeling until it is possible to dispose of properly.
- Septic leach fields and graywater mulch fields shall be maintained free of large vegetation and not used for aboveground storage that may impact their proper functioning.

- Chemical contamination (fuel, grease, oil, hydraulic fluid, solvents, etc.) of water and soils is prohibited during routine equipment operation and maintenance.
- The use or storage of petroleum-powered equipment shall be accomplished in a manner that prevents the potential release of petroleum materials into waters of the state (Fish and Game Code 5650).
- Schedule excavation and grading activities for dry weather periods.
- Designate a contained area for equipment storage, short-term maintenance, and refueling. Ensure it is located at least 50 feet from waterbodies.
- Inspect vehicles for leaks and repair immediately.
- Clean up leaks, drips and other spills immediately to avoid soil or groundwater contamination.
- Conduct major vehicle maintenance and washing offsite.
- Ensure that all spent fluids including motor oil, radiator coolant, or other fluids and used vehicle batteries are collected, stored, and recycled as hazardous waste offsite.
- Ensure that all construction debris is taken to appropriate landfills and all sediment disposed of in upland areas or offsite, beyond the 100-year floodplain.
- Use dry cleanup methods (e.g., absorbent materials, cat litter, and/or rags) whenever possible. If necessary for dust control, use only a minimal amount of water.
- Sweep up spilled dry materials immediately.
- Separate organic material (e.g., roots, stumps) from the dirt fill and store separately. Place this material in long-term, upland storage sites, as it cannot be used for fill.
- Spoils shall not be placed or stored in locations where soils are wet or unstable, or where slope stability could be adversely affected.
- Do not locate spoil piles in or immediately adjacent to wetlands and watercourses.
- Store spoil piles in a manner (e.g. cover pile with plastic tarps and surround base of pile with straw wattle) or location that would not result in any runoff from the spoil pile ending up in wetlands and watercourses.
- Keep temporary disposal sites out of wetlands, adjacent riparian corridors, and ordinary high water areas as well as high risk zones, such as 100-year floodplain and unstable slopes.
- Conduct operations on a size and scale that considers available water sources and other water use and users in the planning watershed.
- Implement water conservation measures such as rainwater catchment systems, drip irrigation, mulching, or irrigation water recycling where possible.
- Hauled water utilized for irrigation shall be documented via receipt or similar, and show the date, name, and license plate of the water hauler, and the quantity of water purchased.
- If using a water storage tank, do not locate the tank in a flood plain or next to equipment that generates heat. Locate the tank so it is easy to install, access, and maintain.
- Vertical tanks should be installed according to manufacturer's specifications and placed on firm, compacted soil that is free of rocks/sharp objects and capable of bearing the weight of the tank and its maximum contents.
- Install float valves on tanks to prevent them from overflowing.

- Place proper lining or sealing in ponds to prevent water loss.

F.4 ROAD MAINTENANCE & GENERAL CONSTRUCTION

- Always limit work to the appropriate work date windows considering wet weather, migratory bird and other biological and environmental constraints that may be placed on the project.
- Proper design and location of roads and other features is critical to ensuring that a road or other feature be adequately drained and is best accomplished through consultation with a qualified professional.
- Placement of temporary access roads, staging areas, and other facilities shall avoid or minimize disturbance to habitat.
- If inspection identifies surface rills or ruts, then surfacing and drainage likely needs maintenance. Consultation should be made with a licensed professional to design appropriate erosion control strategies.
- Design of roads should allow for sheet flow of water and use water bars and rolling dips to break up slope length.
- Vehicle speed shall be kept to a maximum of 10 mph while onsite to minimize dust generation.
- All unvegetated and unpaved roadways and vehicle turnarounds shall be graveled to a depth of not less than 1" in order to prevent dust and sediment entrainment.
- Applicant will use geotechnical fabric or similar materials on exposed slopes, and distribute weed-free straw mulch wherever possible on exposed surfaces on the perimeter of all graded roads and graveled areas.
- Roads and the berms alongside all roads shall be maintained free of headcuts, gullies, stutter bumps, and other erosion features capable of discharging sediment to adjacent grassland areas.
- Roads will be graveled with clean rock whenever required to prevent dust and sediment erosion during the wet season.
- Whenever possible, road maintenance activities shall be performed from May 1 to October 15.
- Work performed outside of this window should take extra precautions for winter weather erosion control prevention beyond that which is described in this Plan.
- A 48 hour advance forecast for rain shall trigger a temporary cessation of work, and all soils piles will need to be covered and secured with sandbags or other materials.
- Placement of temporary access roads, staging areas, and other facilities shall avoid or minimize disturbance to habitat.
- Whenever feasible, finished grades shall not exceed 1.5:1 side slopes. In circumstances where final grades cannot achieve 1.5:1 slope, additional erosion control or stabilization methods shall be applied as appropriate for the project location.
- Spoils and excavated material not used during project activities shall be removed and placed outside of 100-year floodplains.
- Upon completion of grading, slope protection of all disturbed sites shall be provided prior to the rainy season through a combination of permanent vegetative treatment, mulching, geotextiles, and/or rock, or equivalent.

- Position vehicles and other apparatus so as to not block emergency vehicle access.
- After construction is complete, all storm drain systems and culverts shall be inspected and cleared of accumulated sediment and debris.
- Sediment barriers including wattles and silt fencing should be checked for sediment accumulation following each significant rainfall and sediment removed or the feature replaced as needed.
- Road drainage shall be discharged to a stable location away from a watercourse.
- Use sediment control devices, such as check dams, sand/gravel bag barriers, and other acceptable techniques, when it is neither practical nor environmentally sound to disperse ditch water immediately before the ditch reaches a stream.
- Within areas with potential to discharge to a watercourse (i.e. within riparian areas of at least 200 feet of a stream) road surface drainage shall be filtered through vegetation, slash, or other appropriate material or settled into a depression with an outlet with adequate drainage.

F.5 SWALE & VEGETATION MANAGEMENT

- The work area shall be restored to pre-project work condition or better.
- Any stream bank area left barren of vegetation as a result of cleanup/restoration activities shall be stabilized by seeding, replanting, or other means with native trees, shrubs, and/or grasses appropriate to the site prior to the rainy season in the year work was conducted.
- Ensure that vegetated swales are properly formed, allow moderate velocity water passage without causing sediment entrainment, and are otherwise functioning properly.
- Create and expand vegetated bioswales where necessary, should additional construction or road maintenance be required, in order to maintain flow without scour.
- All bioswales and other drainage features requiring revegetation will be seeded with native vegetation and lawns and hedgerows maintained in good health and watered in dry years.
- Vegetation including grasses shall be mowed as necessary to create fire breaks and to prevent the accumulation of fuels that would be able to sustain a ground fire.
- All vegetation shall be surveyed on foot once a year by staff and new outbreaks of any invasive weeds identified by the California Invasive Plant Council as noxious or invasive to be removed by the owner or qualified landscaping professionals.
- Channels and swales that show evidence of overland flow and scour (e.g. bare of vegetation) shall be seeded with native grasses such as *Stipa pulchra*, *Hordeum brachyantherum*, *Elymus glaucus*, and *Bromus carinatus*, and kept vegetated at all times.
- If shrubs and non-woody riparian vegetation are disturbed, they shall be replaced with similar native species appropriate to the site.
- Disturbance to native shrubs, woody perennials or tree removal on the streambank or in the stream channel shall be avoided or minimized.
- If riparian trees over six inches dbh (diameter at breast height) are to be removed, they shall be replaced by native species appropriate to the site at a 3:1 ratio.
- Where physical constraints in the project area prevent replanting at a 3:1 ratio and canopy cover is sufficient for habitat needs, replanting may occur at a lesser replacement ratio.

- Vegetation planting for slope protection purposes shall be timed to require as little irrigation as possible for ensuring establishment by the commencement of the rainy season.
- The spread or introduction of exotic plant species shall be avoided to the maximum extent possible by avoiding areas with established native vegetation during cleanup/restoration activities, restoring disturbed areas with appropriate native species, and post-project monitoring and control of exotic species.
- Removal of invasive exotic species after construction activities is strongly recommended. Mechanical removal (hand tools, weed whacking, hand pulling) of exotics shall be done in preparation for establishment of native plantings.
- Where permanent soil stabilization is required a locally-appropriate mix of native grass species shall be used such as a mix containing *Nassella pulchra*, *Hordeum brachyantherum*, *Elymus glaucus*, and *Bromus carinatus* or as described in the site's Biological Resources Assessment.
- Entire cultivation site shall be seeded and maintained as a permanent non-tilled cover crop during non-usage times. Straw mulch shall be used where native seeding is not practicable.
- Use mulches (e.g. wood chips or bark) in cultivation areas that do not have ground cover to prevent erosion and minimize evaporative loss.
- Mulch shall be applied at a rate of 4000 lbs / acre and seeding shall be applied to achieve 70% cover in the first year or approximately 200 lbs / acre.
- Annual inspections for the purpose of assessing the survival and growth of revegetated areas and the presence of exposed soil shall be conducted for three years following project work.
- Dischargers and/or their consultant(s) or third party representative(s) shall note the presence of native/non-native vegetation and extent of exposed soil, and take photographs during each inspection.
- Dischargers and/or their consultant(s) or third party representative(s) shall provide the location of each work site, pre- and post-project work photos, diagram of all areas revegetated and the planting methods and plants used, and an assessment of the success of the revegetation program in the annual monitoring report as required under relevant state and local water board regulations.

F.6 IRRIGATION & CULTIVATION MANAGEMENT

- Cultivation-related waste shall be stored in a place where it will not enter a stream.
- Soil bags and other garbage shall be collected, contained, and disposed of at an appropriate facility, including for recycling where available.
- Pots shall be collected and stored where they will not enter a waterway or create a nuisance.
- Plant waste and other compostable materials be stored (or composted, as applicable) at locations where they will not enter or be blown into surface waters, and in a manner that ensures that residues and pollutants within those materials do not migrate or leach into surface water or groundwaters.
- Imported soil for cultivation purposes shall be minimized. In the event that containers (e.g. grow bags or grow pots) are used for cultivation, reuse of soil shall be maximized to the extent feasible.

- Spent growth medium (i.e. soil and other organic medium) shall be handled to minimize discharge of soil and residual nutrients and chemicals to watercourses. Proper handling of spent soil could include incorporating into garden beds, spreading on a stable surface and revegetation, storage in watertight dumpsters, covering with tarps or plastic sheeting prior to proper disposal.
- Trash containers of sufficient size and number shall be provided and properly serviced to contain the solid waste generated by the project.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Use lined bins or dumpsters to reduce leaking of liquid waste. Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash. Consider using refuse containers that are bear-proof and/or secure from wildlife.
- Refuse shall be removed from the site on a frequency that does not result in nuisance conditions, transported in a manner that they remain contained during transport, and the contents shall be disposed of properly at a proper disposal facility.
- Ensure that human waste disposal systems do not pose a threat to surface or ground water quality or create a nuisance. Onsite treatment systems should follow applicable County ordinances for human waste disposal requirements, consistent with the applicable tier under the State Water Resources Control Board Onsite Waste Treatment System Policy.
- Install buffer strips, bioswales, or vegetation downslope of cultivation areas to filter runoff of chemicals from irrigation.
- Irrigate at rates to avoid or minimize runoff.
- Regularly inspect and repair leaks in mains and laterals, in irrigation connections, or at the ends of drip tape and feeder lines.
- Design irrigation system to include redundancy (i.e., safety valves) in the event that leaks occur, so that waste of water is prevented and minimized.
- Recapture and reuse irrigation runoff (tailwater) where possible, through passive (gravity-fed) or active (pumped) means.
- Construct retention basins for tailwater infiltration; percolation medium may be used to reduce pollutant concentration in infiltrated water. Constructed treatment wetlands may also be effective at reducing nutrient loads in water.
- Ensure that drainage and/or infiltration areas are located away from unstable or potentially unstable features.
- Regularly replace worn, outdated or inefficient irrigation system components and equipment.
- Leave a vegetative barrier along the property boundary and interior watercourses to act as a pollutant filter.
- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Evaluate irrigation water, soils, growth media, and plant tissue to optimize plant growth and avoid over-fertilization.
- All chemicals shall be stored in a manner, method, and location that ensures that there is no threat of discharge to waters of the State.

- Products shall be labeled properly and applied according to the label.
- Use integrated pest management strategies that apply pesticides only to the area of need, only when there is an economic benefit to the grower, and at times when runoff losses are least likely.
- Periodically calibrate pesticide application equipment.
- Use anti-backflow devices on water supply hoses, and other mixing/loading practices designed to reduce the risk of runoff and spills.
- Petroleum products shall be stored with a secondary containment system such as a pan or a tub
- Throughout the rainy season, any temporary containment facility shall have a permanent cover and side-wind protection, or be covered during non-working days and prior to and during rain events.
- Materials shall be stored in their original containers and the original product labels shall be maintained in place in a legible condition. Damaged or otherwise illegible labels shall be replaced immediately.
- Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground. To provide protection from wind and rain throughout the rainy season, bagged and boxed materials shall be covered during non-working days and prior to rain events.
- Have proper chemical and fertilizer storage instructions posted at all times in an open and conspicuous location.
- Prepare and keep a spill prevention and cleanup plan onsite when dealing with any hazardous materials.
- Keep ample supply of appropriate spill clean-up material near storage areas.
- Plant cover crops to boost soil fertility, improve soil texture, and protect from storm caused sediment runoff.

F.7 SPECIAL-STATUS SPECIES AVOIDANCE MEASURES

- All employees and contractors including one-time contractors and day-laborers should be distributed cards with visual identifications of all of the aforementioned special-status species, including both male and female, and juvenile and adult forms, and be briefed on all of the following AMMs contained herein. Species cards may be obtained from PEC on request.
- Observation of any of the aforementioned SSS onsite shall result in immediate stoppage of all work and notification of PEC and/or CDFW.
- All animals observed onsite shall be allowed to leave the premises voluntarily without being harassed.
- Vehicle speeds should be limited to 5 mph all year, with 3 mph limit during amphibian breeding and migration season from October 1-June 1, and for breeding bird season from February 1-September 1.
- No loud noises including unmuffled or non-street legal vehicles, heavy machinery, hammering, discharge of firearms, or unmuffled generators are allowed during the breeding and nesting

window to avoid impacts to NSO from February 1-September 1.

- Avoid ground disturbance including trenching, grading, or road scraping to a depth of greater than 10" without first clearing the site from a qualified biologist to avoid disturbing estivating amphibians.
- Access within 100 feet of nesting migratory bird should not be allowed, and a sign should be placed stating there is a sensitive habitat ahead and no entry is permitted.
- All roadways and culverts should be inspected once before major rain events and once after to ensure that all erosion control materials are effective and not discharging sediment to any jurisdictional watercourses.
- All containers and other vessels left outside unattended should be checked before use to ensure that no animals are inside.
- Vessels including buckets should be turned over on their sides to allow animals to escape.
- No holes greater than 6" deep should be left exposed and uncovered to avoid making "pitfall traps" into which animals can enter but cannot escape. If holes such as post holes must be left for more than 24 hours they should be checked daily to ensure no animals are inside.
- Clear areas within 100 feet of any watercourse by a biological monitor prior to disturbing the ground more than 6".
- Only native woody species should be planted wherever revegetation is required such as along the sides of roadcuts and bridge abutments.
- Preconstruction breeding bird surveys for NSO and other migratory birds should be performed if tree removal is to take place.
- No tree or vegetation removal should be conducted during breeding bird season from February 1 to September 1.
- No aerial wires or lines should be permitted that may impede the flight path of nesting birds.
- No upward pointed lights should be permitted during anytime during the year, and ambient outdoor night time lights should be prohibited during the breeding bird period from February 1 to September 1.
- Use of rodenticides should not be used under any circumstances due to the hazard of secondary ingestion by raptors.