Attachment 6

BIOLOGICAL RESOURCES ASSESSMENT

3417 & 3547 HENDRICKS ROAD [APN 005-013-01 & 005-006-07]
LAKE COUNTY, CALIFORNIA

SUBMITTED TO:

California Cannabis Consultants
3417 Hendricks Road
Lakeport, California 95453

PREPARED BY:

Pinecrest Research Corp., Inc.
6425 Telegraph Avenue #8
Oakland, California 94609

PROJECT № LAK018

Pinecrest Research Corporation
www.pinecrestenvironmental.org

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this reconnaissance-level Biological Resources Assessment (BRA) is to evaluate the existence of special-status species (SSS) and/or habitats, assess the potential for SSS listed in Appendix A to occur on or near the site of commercial cultivation activities, and analyze project plans to determine whether impacts to SSS or their habitats may occur due to project implementation. This BRA also analyzes the potential for jurisdictional wetlands and other waters of the U.S. to exist onsite, and classifies landforms that may potentially convey sediment to waters of the U.S. including dry creeks, washes, swales, gullys, and other erosional features, although a protocol-level wetland delineation was not performed. Also included in Appendix F is a set of recommended Best Management Practices (BMPs) that are adapted from a variety of sources, some of which are enforceable conditions under State Water Resources Control Board *Cannabis* General Order No. WQ 2019-0001-DWQ.

1.2 LOCATION

1.2.1 Site Overview & Project Description

The project site is located at 3417 & 3547 Hendricks Road in unincorporated Lake County, to the west of Scotts Valley, near the town of Lakeport (Figure 1). The parcel is located in Sections 9 & 10, Township 14 North, Range 10 West, on the USGS Lakeport 7.5 minute quad (Figure 2). The approximate latitude and longitude of the centroid of the parcel is 39.0777 (N), -122.9672 (W). The parcels are designated Assessor's Parcel Numbers 005-013-01 & 005-006-07, are deeded 74.14 & 154.63 acres, are zoned “APZ”, and are under the jurisdiction of the Central Valley (Region 1) Regional Water Quality Control Board (RWQCB), and the Northern Region (District 1) of the California Department of Fish & Wildlife (CDFW). The parcels are not located in a medium- or high-priority groundwater basin as designated by the California Department of Water Resources (DWR).

1.2.2 Project Description

The project involves development of commercial *Cannabis* cultivation gardens on each of the two above-referenced parcels. The proposed development areas are the disked hayfields located in the center of the two parcels, to the south of Hendricks Creek, and on either side of the existing residences (Figure 3). The proposed commercial cultivation operation would be composed of five A-Type 3 “Medium Outdoor” Lake County License Types, with up to 205,800 square feet of combined *Cannabis* canopy. Proposed ancillary facilities include a 9,600 square foot Processing Facility (proposed metal building), three 3,000 square foot immature plant areas (proposed greenhouses), two 120 square foot Pesticides & Agricultural Chemicals Storage Areas (proposed wooden sheds), a

25,000 gallon fire water storage tank, and four 5,000 gallon water storage tanks. Additionally, an existing onsite 5,168 square foot metal barn will be used as a Harvest Storage Area.

All facilities are proposed to be built on the existing disked hayfield portions of the site (Figure 3). No trees are proposed to be removed, and all facilities as currently drawn in site plans provided by Realm Engineering and dated May 15, 2024 observe the 100 foot setbacks required from Hendricks Creek.

1.2.3 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 (Appendix D). The nearest FCH is located 9 miles to the west in the Russian River for Chinook salmon (*Oncorhynchus tshawytscha*). The next nearest FCH is located 13 miles to the northeast for Northern Spotted Owl (*Strix occidentalis*; NSO), near Elk Mountain (Appendix D). There is no FCH for any other species within 15 miles of the project parcel (Appendix D).

1.2.4 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 parcel is provided in Appendix A based the CNDDB database, published scientific literature, and the expertise of PEC staff, with all SSS known from a 5 mile radius around the project parcel highlighted. Additionally, map-based representation of all of the SSS within a 2 mile radius around the project site is provided in Appendix C.

1.2.4.1 *Animals*

There are a total of 12 special-status animal species within 5 miles of the project parcel (Appendices A & C). There are no special status species whose CNDDB polygons overlap with the project parcel. The nearest known special-status animal species to the project parcel is Tricolored blackbird (*Agelaius tricolor*) located approximately 1.9 miles east of the project parcel near Hill Road. The next nearest known occurrence of special-status animal species is American badger (*Taxidea taxus*) located approximately 2.7 miles southeast of the project parcel near Lakeport. The next nearest known occurrences of special-status animal species are Brownish dubiraphian riffle beetle (*Dubiraphia brunnescens*), Clear Lake hitch (*Lavinia exilicauda chi*), Clear Lake tule perch (*Hysterocarpus traskii lagunae*), and Sacramento perch (*Archoplites interruptus*) located approximately 3.0 miles east of the project parcel in Clear Lake. The localities of the nearest occurrences of the rest of the species are listed in Appendix A and shown in Appendix C.

1.2.4.2 *Plants*

There are a total of 8 special-status animal species within 5 miles of the project parcel (Appendices A & C). Most of the species on this list are specialists on serpentine soils or vernal pools, both soil types that do not exist onsite. The nearest known occurrence of special-status plant species is Beaked tracyina (*Tracyina rostrata*), that has a polygon that overlaps with the project parcel, and has a centroid located 0.9 miles northeast of the project parcel near Hendricks Road. The next nearest known occurrences of special-status plant species are Serpentine cryptantha (*Cryptantha dissita*) and Glandular Western flax (*Hesperolinon adenophyllum*) located approximately 1.1 miles north of the project parcel near Scotts Creek. The next nearest known occurrences of special-status plant species are Bent-flowered fiddleneck (*Amsinckia lunaris*), Colusa layia (*Layia septentrionalis*), Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*), Mayacamas popcornflower (*Plagiobothrys lithocaryus*), and Watershield (*Brasenia schreberi*) located approximately 3.8 miles southeast of the project parcel near Lakeport. There are no other known occurrences of special-status plant species within 5 miles of the project parcel.

1.2.5 Landforms & Hydrology

The parcels encompass approximately 75 and 155 acres of partially burned chaparral and pine hillside that transitions into cultivated valley grassland in the center of the valley, surrounding a Class II reach of Hendricks Creek (Figure 3). The maximum elevation of the parcel is 1,723 feet above sea level along the northwestern parcel line, and the minimum elevation is 1,428 feet above sea level near northwest corner of the parcel where Hendricks Creek exits the parcel. Most of the parcel is steeply sloped with slopes between 20% and 40%, except for the valley floor that has slopes between 1% and 5%, as measured by Suunto PM5 handheld clinometer.

The hilly portions of the site are drained by several Class III watercourses, that coalesce into a Class II reach of Hendricks Creek (Figure 9) that flows offsite to the west before turning north and flowing for 1 mile through Scotts Valley before the confluence with Scotts Creek. From the confluence, Scotts Creek flows north for 5 before joining the outflow from the Blue Lakes, and then turning east and south, passing through Tule Lake, before entering Rodman Slough after 10 miles. From the spillway of the Cache Creek Dam, Cache Creek flows east through the inner Coast Ranges for 51 miles before emerging into the Central Valley near Esparto. From there Cache Creek continues east for 28 miles before entering the Yolo Bypass west of the City of Sacramento. From there water flows south into the Sacramento River which flows south for approximately 40 miles before emptying into Suisun Bay and the Pacific Ocean.

1.2.6 Existing Structures

Access to the parcel is provided to the west off of Hendricks Road, via improved dirt driveway (Figure 7). Onsite structures include several residences, and numerous barns and outbuildings for ranch purposes (Figure 7). There are no existing *Cannabis* cultivation facilities onsite. Several gates provide access at the west and east ends of the access road, and there is also an aboveground power utility easement running east-west through the center of the property (Figure 8).

1.2.7 Regional Land Uses

Land uses in the vicinity of the project parcel are private property, much of which was on the western edge of the Mendocino Complex Fire that burned between July and October 2018. Most of the area to the west of the site burned with high intensity, while most of the area to the east including Scotts Valley did not burn. Further to the southeast is the County seat of Lakeport. To the north and south are primarily undeveloped chaparral foothills.

1.3 METHODS

1.3.1 Records Search & Literature Review

Based on a review of the literature and all relevant databases, we compiled a list of special-status plant and animal species that are known to occur within 5 miles of the project site, or that occupy habitats that are known to be present on or near the project site (Appendix A). Sources of information referenced include the California Natural Diversity Database (CNDDB 2024), U.S. Fish and Wildlife Service Environmental Conservation Online System (USFWS 2024), the California Native Plants Society Inventory of Rare and Endangered Vascular Plants of California (CNPS 2024), and the knowledge of PEC staff familiar with the species and habitats of Lake County. Additional information on sensitive habitats including wetlands was obtained from the USFWS National Wetlands Inventory (NWI 2024), and County of Lake Geographic Information System Portal (Lake Co. 2024). Plant species included here are State or Federally Endangered or Threatened, and/or considered Rare by CDFW, and/or are recognized as special-status species by the CNPS or CDFW. Animal species included here are designated as State or Federally Endangered or Threatened, and/or California Species of Special Concern, and/or Fully Protected species by the CDFW. In addition, nests of most native bird species, regardless of their regulatory status, are protected from take or harassment under the Migratory Bird Treaty Act (MBTA) and California Fish and Wildlife Code.

1.3.2 Field Surveys

A wildlife and botanical survey was conducted at the site on May 13, 2020. A second botanical survey was performed on August 12, 2024. At the time of the first survey, the weather was mild and rainy. There was a light rain falling throughout the day, and approximately 2" of rain had fallen in the previous month. Temperature was approximately 60 degF, relative humidity was approximately 75%, with wind of 0-4 mph, as measured by Kestrel handheld weather station. At the time of the second survey, the weather was sunny and warm. Temperature was approximately 86 degF, and relative humidity was approximately 34%, with wind of 2-4 mph, as measured by Kestrel handheld weather station.

Between the two site visits we are confident that the vast majority of plant species were able to be identified onsite. The first survey targeted early-flowering species, and the second survey was well-timed to target late-flowering species. Many species were still flowering during the August 12 survey, including numerous plants from genera that have rare or special-status varieties or subspecies that occur nearby including *Centromadia*, *Hemizonia*/*Calycadenia*, *Madia*, *Carex*, and *Perideridia*.

Starting with the central residential area, at each survey the entire project site was surveyed on foot by 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. Photographs and voucher specimens were taken of any plants that were unable to be identified to minimum rank taxon in the field. The field survey was conducted by dividing the outdoor portions of the parcel into zones and cataloging all of the species found in each zone. Each zone was surveyed by walking in parallel lines until the whole zone was covered. Notes were also taken in each zone documenting the general site characteristics and current land uses, as well as any surface erosional features that may require remediation. Birds and nests were identified by call and with binoculars. Vocalizations, scat, tracks, feathers, burrows, nests, and molts were used for identification of animals present onsite. Any onsite aquatic habitats were observed for a minimum of ten minutes without movement in order to observe animals that may hide when approached.

2.0 RESULTS

2.1 NATURAL COMMUNITIES IN THE EVALUATION AREA

Using field surveys, a review of published literature, and the knowledge of PEC staff, all of the natural communities present on and around the project site were assessed. Regionally, the dominant vegetation type is burned mixed oak and conifer woodland and chaparral. Outcrops of serpentine are frequent in the region towards the north and west, however the project site itself is in a separate non-serpentinite derived soil type (see §2.6, below). Towards the north, east, and west the terrain becomes increasingly mountainous while to the southeast is the town of Lakeport (Figure 1).

2.2 NATURAL COMMUNITIES WITHIN THE PROJECT SITE

All of the plant and animal species encountered during the two site visits are presented in Appendix B. A total of 77 native plant species were observed onsite, and 49 non-native plant species. A total of 20 animal species were observed onsite. Most of the parcel consists of patchily burned chaparral and mixed oak woodland. The entirety of the project development footprint is located on the flat valley floor that consists of annual and ruderal species characteristic of hayfield production and disking for many years. There is a Class II reach of Hendricks Creek that flows east across the center of the parcels (Figure 3) that is fed by a series of smaller unnamed Class III watercourses. Most of the west portion of the parcel was burned severely to moderately during the Mendocino Complex Fire in 2018, while the eastern portion did not burn at all.

The specific community descriptions below are organized based on the zones that were surveyed, and the floristic results presented in Appendix B. We used as guidance the *Manual of California Vegetation* (Sawyer et al. 2009) to guide community classification. Overall, the parcels consists of approximately 70% chaparral, 20% formerly cultivated valley floor grassland, and 10% riparian forest.

2.2.1 Partially Burned Oak & Conifer Foothill Chaparral

The hillsides surrounding the valley floor comprise most of the land area of the parcels and most of the plant species diversity onsite, however none of these areas are proposed for disturbance or development. Nonetheless a floristic inventory of the slopes and chaparral hillslopes was made. Much of this habitat was burned in the Mendocino Complex Fire. A full list of species encountered is provided in Appendix B. Representative tree and woody species in these hilly habitats include blue oak (*Quercus douglasii*) to 16" diameter-at-breast-height (DBH), black oak (*Quercus kelloggii*) to 20" DBH, gray pine (*Pinus sabiniana*) to 20" DBH, ponderosa pine (*Pinus ponderosa*) to 12" DBH, California bay (*Umbellularia californica*) to 16" DBH, madroño (*Arbutus menziesii*) to 16" DBH, leather oak (*Quercus durata*), mountain mahogany (*Cercocarpus betuloides*), coyote brush (*Baccharis*

pilularis), common manzanita (*Arctostaphylos manzanita*), hoary manzanita (*Arctostaphylos canescens*), whiteleaf manzanita (*Arctostaphylos viscida*), buck brush (*Ceanothus cuneatus*), deerbrush (*Ceanothus integerrimus*), coyote brush (*Baccharis pilularis*), silver bush lupine (*Lupinus albifrons*), and Yerba Santa (*Eriodictyon californicum*).

The burned chaparral hillslopes also contained a high diversity of native wildflowers not found on the rest of the parcel including small tarweed (*Madia exigua*), shooting stars (*Primula hendersonii*), California poppy (*Eschscholzia californica*), blue dicks (*Dichelostemma capitata*), blow wives (*Achyrachaena mollis*), large-flowered Collinsia (*Collinsia grandiflora*), purple sanicle (*Sanicula bipinnatifida*), woolly goat chicory (*Agoseris hirsuta*), Fremont's calycadenia (*Calycadenia fremontii*), Ithuriel's spear (*Triteleia laxa*), wild hyacinth (*Triteleia hyacinthina*), gumweed (*Madia gracilis*), Douglas' iris (*Iris douglasii*), and narrow-leaved mule ears (*Wyethia angustifolia*).

2.2.2 Disked Grassland

The east and west hayfields are the proposed location for the cultivation facilities, and have been disked annually for many decades. The species composition and topography is reflective of this high intensity cultivation over many years, and is dominated by forage crops, interspersed with some native herbaceous species. The east field was recently disked while the west field was not disked this year but did have evidence of a fenceline where the fence and invasive grass had been removed the year prior at the request of the County, as part of invasive species abatement measures.

There are, however, several patches of native oak woodland in the center of the parcels surrounding the existing residences, as well as small patches of oak woodland on the southern edge of the disked grassland, in the locations shown in Figure 3.

A full list of species found onsite is provided in Appendix B. Representative tree species in this area are valley oak (*Quercus lobata*) to 40" DBH, and black walnut (*Juglans hindsii*) to 30" DBH. Both of these tree species provide habitat for wildlife and stability to river banks and should not be removed, even as juveniles.

Representative herbaceous species in the grassland areas of the parcel include soft chess (*Bromus hordeaceous*), ripgut brome (*Bromus diandrus*), wild oats (*Avena barbata*), medusahead (*Elymus caput-medusae*), Zorro fescue (*Festuca myuros*), little rattlesnake grass (*Briza minor*), hairgrass (*Aira caryophyllea*), foxtail barley (*Hordeum murinum*), dogstail grass (*Cynosurus echinatus*), blue wildrye (*Elymus glaucus*), squirreltail grass (*Elymus elymoides*), slender popcorn flower (*Plagiobothrys tenellus*), common fiddleneck (*Amsinckia intermedia*), farewell-to-spring (*Clarkia amoena*), lowland cudweed (*Gnaphalium palustre*), woolly mullein (*Verbascum thapsus*), Western verbena (*Verbena lasiostachys*), common yarrow (*Achillea millefolium*), yellow star thistle (*Centaurea solstitialis*), bull thistle (*Cirsium vulgare*), woolly mullein (*Verbascum thapsus*), annual lupine (*Lupinus bicolor*), Italian thistle (*Carduus pycnocephalus*), Queen Anne's lace (*Daucus carota*), bur clover (*Medicago polymorpha*), fringepod (*Thysanocarpus curvipes*), prickly lettuce (*Lactuca serriola*), smooth cat's ear (*Hypochaeris glabra*), turkey mullein (*Croton setiger*), field bindweed (*Convolvulus arvensis*), Queen Anne's lace (*Daucus carota*), hairy bitter cress (*Cardamine hirsuta*), sweet pea (*Lathyrus latifolius*), English plantain (*Plantago lanceolata*), soap plant (*Chlorogalum pomeridianum*), milk thistle (*Silybum marianum*), Western buttercup (*Ranunculus occidentalis*), lowland cudweed (*Gnaphalium palustre*), slender dwarf flax (*Hesperolinon spergulinum*), Klamathweed (*Hypericum perforatum*),

Pacific sanicle (*Sanicula crassicaulis*), flax-leaved horseweed (*Erigeron bonariensis*), big heron bill (*Erodium botrys*), spring vetch (*Vicia sativa*), field parsley (*Torilis arvensis*), chickweed (*Stellaria media*), sheep sorrel (*Rumex acetocella*), eggleaf spurge (*Euphorbia oblongata*), hairy vetch (*Vicia villosa*), wild geranium (*Geranium molle*), rose clover (*Trifolium hirtum*), and sweet clover (*Melilotus albus*).

2.2.3 Riparian Corridor

The vegetation surrounding the Class II reach of Hendricks Creek is mostly undifferentiated from adjacent upland vegetation, however there is an increase of trees as well as some unique species associated with the riverbed. Unique species in the area surrounding the Class II watercourse includes California buckeye (*Aesculus californica*) to 30" DBH, arroyo willow (*Salix lasiolepis*), Oregon ash (*Fraxinus latifolia*), Fremont cottonwood (*Populus fremontii*), bigleaf maple (*Acer macrophyllum*), Himalayan blackberry (*Rubus armeniacus*), California rose (*Rosa californica*), pennyroyal (*Mentha pulegium*), common horsetail (*Equisetum arvense*), bog rush (*Juncus patens*), slender rush (*Juncus tenuis*), bluehead gilia (*Gilia capitata*), nut sedge (*Cyperus eragrostis*), houndstongue (*Cynoglossum occidentale*), rabbitsfoot grass (*Polypogon monspeliensis*), and wooly sunflower (*Eriophyllum lanatum*).

2.3 WILDLIFE

Wildlife activity was high due to the time of year and the weather. A full list of species observed onsite is provided in Appendix B. Representative wildlife species that were observed both directly and indirectly include Indian peacock (*Pavo cristatus*), California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), acorn woodpecker (*Melanerpes formicivorus*), turkey vulture (*Cathartes aura*), crow (*Corvus brachyrhynchos*), Brewer’s blackbird (*Euphagus cyanocephalus*), Western scrub jay (*Aphelocoma californica*), savannah sparrow (*Passerculus sandwichensis*), black-eyed junco (*Junco hyemalis*), excavation mounds of Botta's pocket gopher (*Thomomys bottae*), Western grey squirrel (*Sciurus griseus*), scat of black-tailed jackrabbit (*Lepus californicus*), scat of coyote (*Canis latrans*), tracks of Mule deer (*Odocoileus hemionus*), and Western fence lizard (*Sceloporous occidentalis*).

2.4 WATERCOURSES

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. All onsite jurisdictional streamcourses in the vicinity of the project areas are mapped in Figure 3. According to these criteria, there is one Class II reach of Hendricks Creek (Figure 9), as well as several unnamed Class III watercourses that contribute flow to Hendricks Creek. There is one culvert crossing over a Class III/IV watercourse that is conveyed by two 24 inch corrugated metal pipes (Figure 6).

2.5 POTENTIAL WETLANDS

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). According to these criteria, there are no locations that appear to qualify as jurisdictional wetland in the project areas. Additionally, there are no vernal pools or other water or drainage features in the central grassland portions of the site, likely due to the extended history of hay production and disking onsite (e.g. Figure 4).

2.6 SOILS & GEOMORPHOLOGY

Soil formations on the central flat grassland portions of the parcel are mapped as Still loams (#233) and Still-Talmage complex (#235) with slopes of 2% to 8%, with lesser proportions of Cole (2%), Kelsey (2%) and Lupoyoma (2%) deposits (USDA 1985). The #235 soil is classified as not prime farmland, while the #233 soil is classified as prime farmland if irrigated. Soils are well-drained and not prone to flooding. The hillsides that comprise most of the southern and northern portions of the site are mapped as well-drained Maymen-Millsholm-Bressa complex, 30% to 50% percent slopes (#175). The soil is classified as not prime farmland. There are no ultramafic or other serpentine outcrops onsite. There are no vernal pools or other isolated wetlands onsite.

3.0 SUMMARY & CONCLUSIONS

3.1 PLANTS

No special-status plant species were observed during the surveys performed at the site in May 2020 and August 2024. These two surveys were timed to coincide with the flowering times of early and late flowering plants onsite, and thus satisfy the requirements of the County of Lake for two appropriately timed rare plant surveys. No impacts are predicted for any of the special-status plant species discussed in Appendix A based on lack of actual sightings, and lack of suitable habitat in the proposed project areas. The entirety of the project area is disked hayfield and contains few to no native species. Additionally, there are no trees proposed to be removed as part of the proposed project. No serpentine soils are present in the project areas, and there are no vernal pools or other seasonal wetlands in the grassland portions of the site due to extended period of disking and hay cultivation that continues to the present-day.

Two small patches of oak woodland with an understory of native species are present on the margins of the cultivation areas. In addition, there are some large valley oaks present in the center of the site surrounding the existing residences. The locations of these features are shown in Figure 3. No trees or woodland habitat are proposed to be removed in the construction plans dated May 15, 2024, thus no impacts to these resources should occur.

3.2 WILDLIFE

No special-status animal species were observed during the surveys performed at the site in May 2020 or August 2024. No impacts are predicted for any of the special-status animal species discussed in Appendix A due to the lack of actual observations and lack of suitable habitat in the proposed project areas. Hendrick's Creek does not appear to be suitable estivation habitat for special-status amphibian species including foothill yellow-legged frog due to the very brief period during the year in which water is present. It is possible that foothill-yellow legged frog may migrate up Hendricks Creek in search of habitat during the wet season, however any impacts to habitat in the riparian corridor will be avoided by observing the required 100 foot setback.

3.3 WETLANDS & WATERCOURSES

No discharges of sediment or fill are predicted to any watercourses or other waters of the State or waters of the U.S. There is one culvert crossing that does not appear to be actively eroding. As long as 100 foot setbacks are observed off Hendricks Creek and the other mapped drainages there should be no impacts to downstream water quality. There are no potential wetlands or watercourses in the proposed cultivation areas. As long as appropriate setbacks are observed off of all watercourses as required by State Water Resources Control Board *Cannabis* General Order, no impacts to watercourses should occur.

If revegetation is required such as after grading or for fire erosion prevention, contractors should only use native species from local genotypes propagated from local nurseries, or sterile wheat if no suitable native species are available. A list of appropriate species and nurseries for restoration and revegetation is available from PRC on request.

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 Resister 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 Regional Water Quality Control Board 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 of the take is incidental to carrying out an other wise lawful project thar 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.

4.2.7 California Oak Woodlands Conservation Act

The California Oak Woodlands Conservation Act requires the County to determine whether a project in their jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment, as codified in California Public Resources Code Section 21083.4. If it is determined that there may be a significant effect to oak woodlands, the County shall require one or more mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands. Alternatives to mitigate the significant effect of the conversion of oak woodlands include replacement of removed trees typically at a rate of 3:1, and maintenance of trees for a period of seven years after the trees are planted, although replacement typically may only comprise 50% of the required mitigation for the project, with the remainder often consisting of conservation easements or other mitigation measures developed by the County. Trees subject to the provisions of California Public Resources Code Section 21083.4 are those in the genus *Quercus* that have a diameter at breast height (DBH) of 5 inches or more.

4.3 REGIONAL & LOCAL

Natural resource use and *Cannabis* commercial development in Lake County is guided by the Lake County General Plan and regulated by Lake 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 Lake Municipal Code

Cannabis Cultivation (Chapter 11, Article 27)

The Ordinance Code of the County of Lake 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.

4.3.2 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.

5.0 REFERENCES

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FIGURE 1: REGIONAL LOCATION

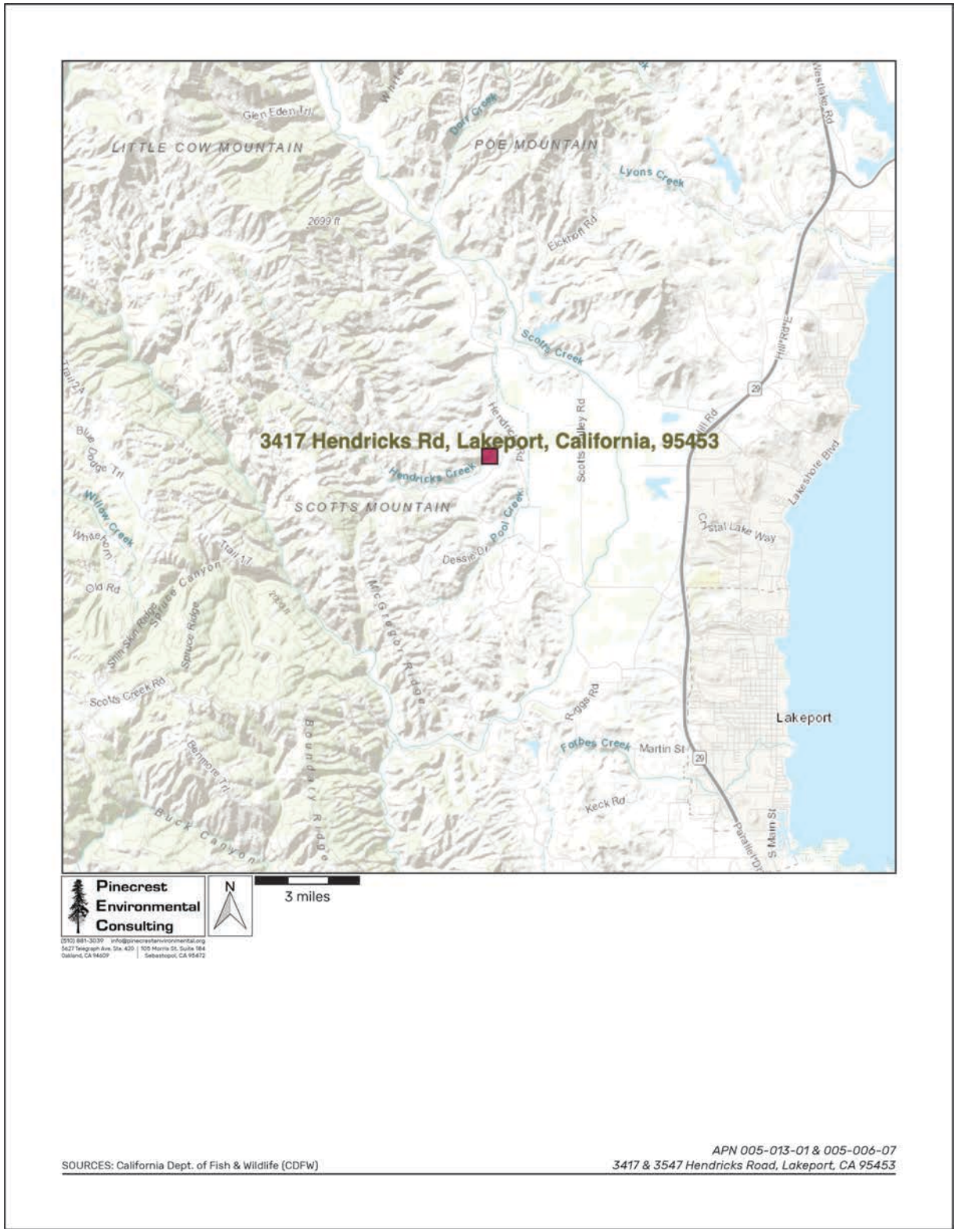


FIGURE 2: 40 FOOT CONTOURS

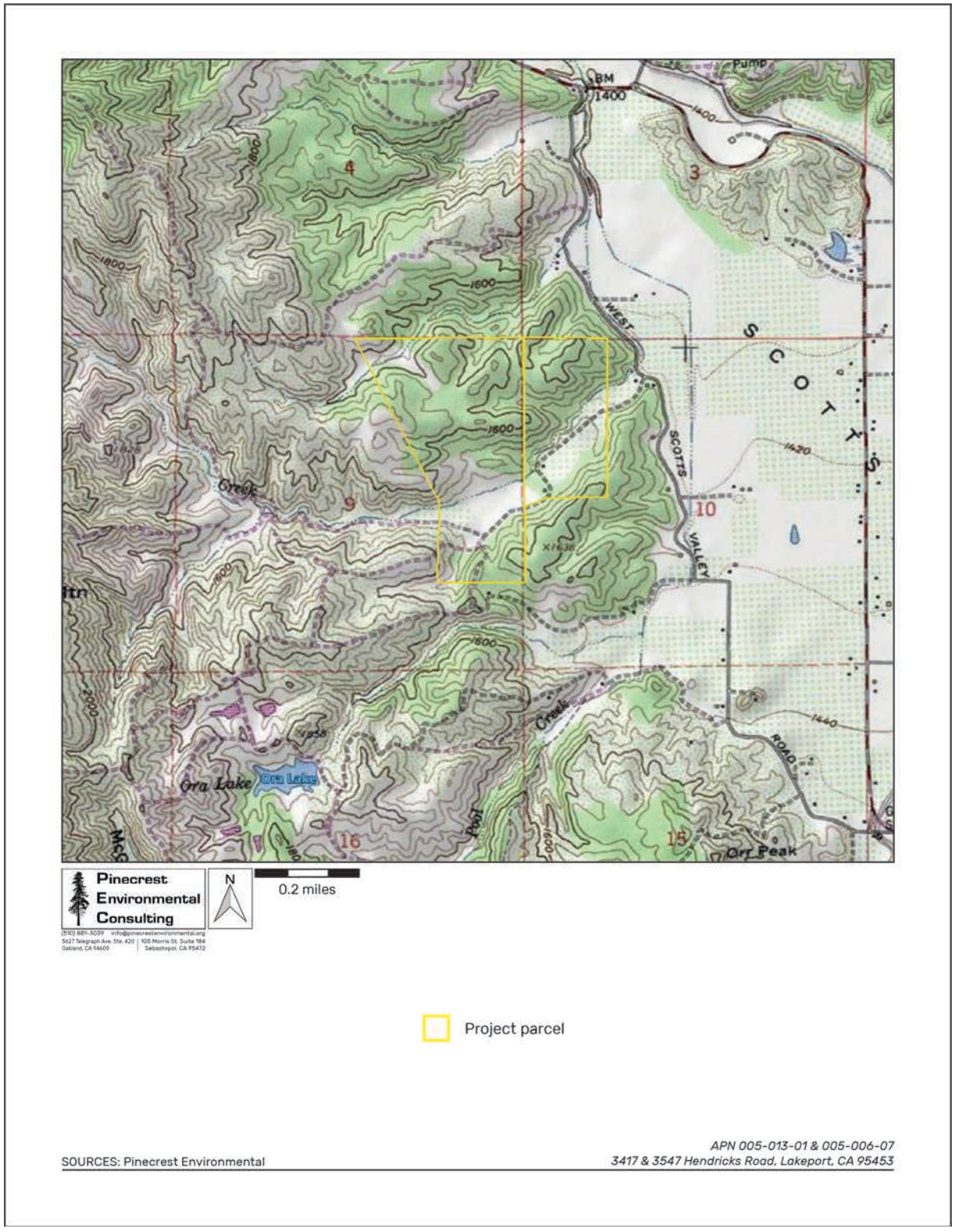


FIGURE 3: WATERCOURSES

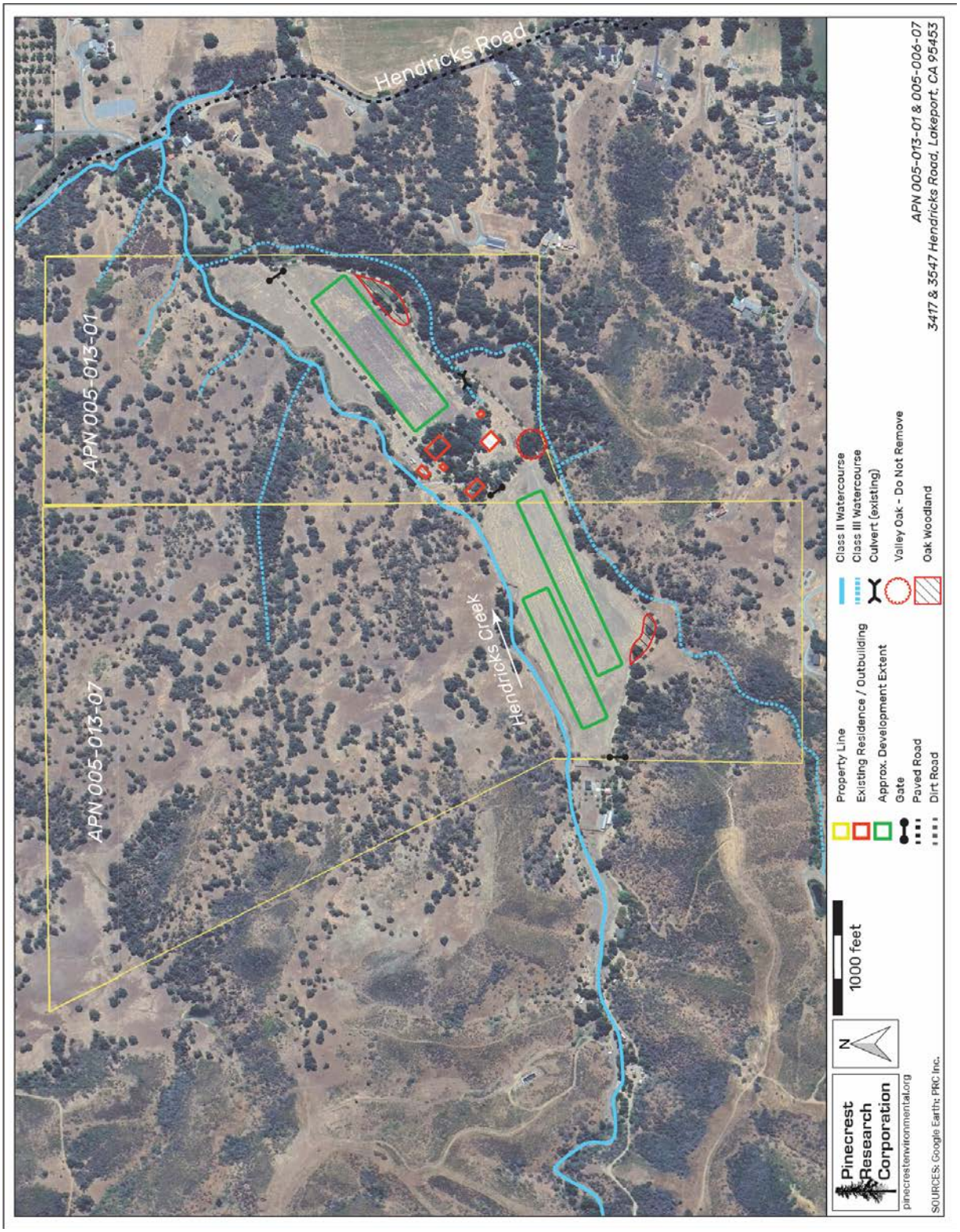


FIGURE 4: PHOTOGRAPH OF EAST CULTIVATION AREA

Pinecrest Environmental Consulting

(510) 881-3039 info@pinecrestenvironmental.org
5627 Telegraph Ave. Ste. 420 | Oakland, CA 94609
105 Morris St. Suite 184 | Sebastopol, CA 95472

SOURCES: PEC Inc.

APN 005-013-01 & 005-006-07
3417 & 3547 Hendricks Road, Lakeport, CA 95453

FIGURE 5: PHOTOGRAPH OF WEST CULTIVATION AREA

Pinecrest Environmental Consulting

(510) 881-3039 info@pinecrestenvironmental.org
5627 Telegraph Ave. Ste. 420 | Oakland, CA 94609
105 Morris St. Suite 184 | Sebastopol, CA 95472

SOURCES: PEC Inc.

APN 005-013-01 & 005-006-07
3417 & 3547 Hendricks Road, Lakeport, CA 95453

FIGURE 6: PHOTOGRAPH OF CULVERT

Pinecrest Environmental Consulting

(510) 881-3039 info@pinecrestenvironmental.org
5627 Telegraph Ave. Ste. 420 | Oakland, CA 94609
105 Morris St. Suite 184 | Sebastopol, CA 95472

SOURCES: PEC Inc.

APN 005-013-01 & 005-006-07
3417 & 3547 Hendricks Road, Lakeport, CA 95453

FIGURE 7: PHOTOGRAPH OF RESIDENCE & ACCESS ROAD

Pinecrest Environmental Consulting

(510) 881-3039 info@pinecrestenvironmental.org
5627 Telegraph Ave. Ste. 420 | Oakland, CA 94609
105 Morris St. Suite 184 | Sebastopol, CA 95472

SOURCES: PEC Inc.

APN 005-013-01 & 005-006-07
3417 & 3547 Hendricks Road, Lakeport, CA 95453

FIGURE 8: PHOTOGRAPH OF UTILITY EASEMENT

Pinecrest Environmental Consulting

(510) 881-3039 info@pinecrestenvironmental.org
5627 Telegraph Ave. Ste. 420 | Oakland, CA 94609
105 Morris St. Suite 184 | Sebastopol, CA 95472

SOURCES: PEC Inc.

APN 005-013-01 & 005-006-07
3417 & 3547 Hendricks Road, Lakeport, CA 95453

FIGURE 9: PHOTOGRAPH OF HENDRICKS CREEK (CLASS II)

Pinecrest Environmental Consulting

(510) 881-3039 info@pinecrestenvironmental.org
5627 Telegraph Ave. Ste. 420 | Oakland, CA 94609
105 Morris St. Suite 184 | Sebastopol, CA 95472

SOURCES: PEC Inc.

APN 005-013-01 & 005-006-07
3417 & 3547 Hendricks Road, Lakeport, CA 95453

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 Lake County by PEC staff, from various State and Federal databases, and from the California Natural Diversity Database (CNDDB). CNDDB occurrences within 5 miles of the project site are shown in bold.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
PLANTS			
Adobe lily (*Fritillaria pluriflora*)	—/—/1B.2	Valley grasslands, foothill woodland	Low: Some grassland habitat exists onsite.
Anthony peak lupine (*Lupinus antoninus*)	—/—/1B.2	Montane forest	None: No suitable montane habitat exists onsite.
Baker's manzanita (*Arctostaphylos bakeri* ssp. *bakeri*)	—/—/1B.1	Serpentine chaparral	None: No serpentine habitat exists onsite.
Baker's meadowfoam (*Limnanthes bakeri*)	—/ST/1B.1	Vernal pools, freshwater wetland	None: No suitable wetland habitat exists onsite.
Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*)	—/—/1B.1	Vernal pools	Very Low: No vernal pool habitat exists onsite.
Beaked tracyina (*Tracyina rostrata*)	**—/—/1B.2**	**Valley grassland, foothill woodland**	**Low: Some grassland habitat exists onsite. Nearest known occurrence has a polygon that overlaps with the project parcel, and has a centroid located 0.9 miles NE of the parcel in Scotts Valley.**
Bent flowered fiddleneck (*Amsinckia lunaris*)	**—/—/1B.2**	**Valley grassland, foothill woodland**	**Low: Some grassland habitat exists onsite. Nearest known occurrence is 3.9 miles SE of the parcel near Lakeport.**
Big scale balsamroot (*Balsamorhiza macrolepis*)	—/—/1B.2	Valley grassland, foothill woodland	Low: Some grassland habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Bogg's Lake hedge-hyssop (*Gratiola heterosepala*)	—/—/1B.2	Vernal pools, lake margins	Very Low: No suitable wetland habitat exists onsite.
Bolander's horkelia (*Horkelia bolanderi*)	—/—/1B.2	Yellow pine forest, grassland	Low: No suitable forest habitat exists onsite.
Brandegee's eriastrum (*Eriastrum brandegeeae*)	—/—/1B.1	Clearings in chaparral	Low: Some suitable chaparral habitat exists onsite.
Bristly sedge (*Carex comosa*)	—/—/2B.1	Freshwater marsh, riparian	Very Low: No suitable wetland habitat exists onsite.
Brownish beaked-rush (*Rhynchospora capitellata*)	—/—/2B.2	Freshwater marsh, riparian	Very Low: No suitable wetland habitat exists onsite.
Burke's goldfields (*Lasthenia burkei*)	FE/SE/1B.1	Vernal pools	Very Low: No suitable vernal pool habitat exists onsite.
California alkalai grass (*Puccinellia simplex*)	—/—/1B.2	Alkalai sink	None: No alkalai wetland habitat exists onsite.
California satintail (*Imperata brevifolia*)	—/—/2B.1	Chaparral	Very Low: Some suitable chaparral habitat exists onsite.
Calistoga ceanothus (*Ceanothus divergens*)	—/—/1B.2	Chaparral	Very Low: Some chaparral habitat exists onsite.
Cascade downingia (*Downingia willamettensis*)	—/—/2B.2	Vernal pool	None: No vernal pool habitat exists onsite.
Clara Hunt's milk vetch (*Astragalus claranus*)	—/—/1B.1	Chaparral, grassland	Very Low: Some chaparral habitat exists onsite.
Cobb Mountain lupine (*Lupinus sericatus*)	—/—/1B.2	Chaparral, pine forest	Very Low: Some chaparral habitat exists onsite.
Colusa layia (*Layia septentrionalis*)	**—/—/1B.2**	**Chaparral, valley grassland**	**Medium: Some suitable grassland habitat exists onsite. Low: Some grassland habitat exists onsite; no chaparral habitat onsite. Nearest known occurrence is 3.9 miles SE of the parcel near Lakeport.**
Congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*)	—/—/1B.2	Grassland, coastal scrub	Low: Some grassland habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Deep scarred cryptantha (*Cryptantha excavata*)	—/—/1B.1	Foothill woodland	Low: Some grassland habitat exists onsite.
Dimorphic snapdragon (*Antirrhinum subcordatum*)	—/—/4.3	Serpentine chaparral	None: No serpentine habitat exists onsite.
Drymaria-like western flax (*Hesperolinon drymarioides*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.
Dwarf downingia (*Downingia pusilla*)	—/—/2B.2	Vernal pools, freshwater wetland	None: No vernal pool habitat exists onsite.
Dwarf soaproot (*Chlorogalum pomeridianum* var. *minus*)	—/—/1B.2	Serpentine chaparral	None: No serpentine chaparral habitat exists onsite.
Early jewelflower (*Streptanthus vernalis*)	—/—/1B.2	Serpentine outcrops	None: No suitable serpentine outcrop habitat exists onsite.
Eel-grass pondweed (*Potamogeton zosteriformis*)	—/—/2B.2	Freshwater lakes, ponds	Very Low: No suitable pond habitat exists onsite.
Few-flowered navarretia (*Navarretia leucocephala* ssp. *pauciflora*)	FE/ST/1B.1	Vernal pools	Very Low: No suitable vernal pool habitat exists onsite.
Franciscan onion (*Allium peninsulare* var. *franciscanum*)	—/—/1B.2	Grassland	Very Low: Some grassland habitat exists onsite.
Freed's jewelflower (*Streptanthus brachiatus* ssp. *hoffmanii*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.
Geysers panicum (*Panicum acuminatum* var. *thermale*)	—/—/1B.2	Chaparral, wetlands	Very Low: No chaparral seep habitat exists onsite.
Glandular western flax (*Hesperolinon adenophyllum*)	**—/—/1B.2**	**Chaparral**	**Low: No suitable chaparral habitat exists onsite. None: No suitable chaparral habitat exists onsite. Nearest known occurrence is 1.1 miles N of the parcel near Scotts Creek.**
Grassleaf water plantain (*Alisma gramineum*)	—/—/2B.2	Wetland, riparian	Very Low: No suitable riparian habitat exists onsite.
Green jewelflower (*Streptanthus hesperidis*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Greene's narrow-leaved daisy (*Erigeron greenei*)	—/—/1B.2	Serpentine grassland	None: No serpentine habitat exists onsite.
Hall's harmonia (*Harmonia hallii*)	—/—/1B.2	Chaparral, grassland	Medium: Some grassland habitat exists onsite.
Hoffman's bristly jewelflower (*Streptanthus glandulosus* spp. *hoffmanii*)	—/—/1B.3	Chaparral, foothill woodland	Very Low: Some suitable chaparral habitat exists onsite.
Holly-leaved ceanothus (*Ceanothus purpureus*)	—/—/1B.2	Chaparral	Very Low: Some suitable chaparral habitat exists onsite.
Hospital Canyon larkspur (*Delphinium californicum* ssp. *interius*)	—/—/1B.2	Foothill woodland	Low: Some woodland habitat exists onsite.
Indian Valley brodiaea (*Brodiaea rosea*)	—/SE/3.1	Serpentine chaparral	Very Low: No serpentine habitat exists onsite.
Jepson's coyote thistle (*Eryngium jepsonii*)	—/—/4.2	Wetlands and vernal pools	None: No vernal pool habitat exists onsite.
Jepson's dodder (*Cuscuta jepsonii*)	—/—/1B.2	Chaparral, grassland	Low: Some chaparral habitat exists onsite.
Jepson's leptosiphon (*Leptosiphon jepsonii*)	—/—/1B.2	Chaparral, serpentine grassland	None: No serpentine chaparral habitat exists onsite.
Jepson's milk-vetch (*Astragalus rattanii* var. *jepsonianus*)	—/—/1B.2	Chaparral, serpentine grassland	Low: Some suitable chaparral habitat exists onsite.
Keck's checkerbloom (*Sidalcea keckii*)	FE/—/1B.1	Valley grassland, serpentine	None: No suitable wetland habitat exists onsite.
Kenwood marsh checkerbloom (*Sidalcea oregana* ssp. *valida*)	FE/SE/1B.1	Freshwater wetlands	None: No suitable wetland habitat exists onsite.
Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*)	**—/—/1B.3**	**Chaparral, foothill woodland**	**Low: No suitable chaparral habitat exists onsite. Very Low: No suitable chaparral habitat exists onsite. Nearest known occurrence is 3.9 miles NE of the parcel near Hill Rd.**
Kruckeberg's jewelflower (*Streptanthus morrisonii* ssp. *kruckebergii*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Lake County stonecrop (*Sedella leiocarpa*)	—/—/1B.1	Rock outcrops	Very Low: No rock outcrop habitat exists onsite.
Lake County western flax (*Hesperolinon didymocarpum*)	—/SE/1B.2	Serpentine grasslands	None: No suitable serpentine habitat exists onsite.
Lake Pillsbury checkerbloom (*Sidalcea hickmanii* spp. *pillsburiensis*)	—/—/1B.2	Chaparral	None: Some suitable chaparral habitat exists onsite.
Legenere (*Legenere limosa*)	—/—/1B.1	Vernal pool, freshwater wetland	None: No suitable vernal pool habitat exists onsite.
Loch Lomond button-celery (*Eryngium constancei*)	FE/SE/1B.1	Vernal pool, freshwater wetland	None: No suitable vernal pool habitat exists onsite.
Many-flowered navarretia (*Navarretia leucocephala* spp. *plieantha*)	FE/SE/1B.2	Vernal pools	Very Low: No vernal pool habitat exists onsite.
Marsh checkerbloom (*Sidalcea oregana* ssp. *hydrophila*)	—/—/1B.2	Freshwater wetland, riparian	Low: No suitable riparian habitat exists onsite.
Mayacamas popcornflower (*Plagiobothrys lithocaryus*)	**—/—/A1**	**Foothill woodland, valley grassland**	**Very Low: Presumed extinct. Last observed in 1884 near present-day Lakeport.**
Milo Baker's lupine (*Lupinus milo-bakeri*)	—/—/1B.1	Foothill woodland	None: No suitable woodland habitat exists onsite.
Morrison's jewelflower (*Streptanthus morrisonii* ssp. *morrisonii*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.
Mt. St. Helena morning-glory (*Calystegia collina* ssp. *oxyphylla*)	—/—/4.2	Serpentine chaparral	None: No serpentine habitat exists onsite.
Napa bluecurls (*Trichostema ruygtii*)	—/—/1B.2	Chaparral, grassland	Low: Some grassland habitat exists onsite.
Napa checkerbloom (*Sidalcea hickmanii* ssp. *napensis*)	—/—/1B.1	Chaparral	Low: Some woodland habitat exists onsite.
Napa false indigo (*Amorpha californica* var. *napensis*)	—/—/1B.2	Forest, woodland	Very Low: Some woodland habitat exists onsite.
Narrow-anthered brodiaea (*Brodiaea leptandra*)	—/—/1B.2	Foothill woodland, grassland	Very Low: Some grassland habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
North Coast semaphore grass (*Pleuropogon hooverianus*)	—/—/1B.1	Freshwater wetland, vernal pools	None: No suitable vernal pool habitat exists onsite.
Northern California black walnut (*Juglans hindsii*)	—/—/1B.1	Riparian	Low: No suitable riparian habitat exists onsite.
Northern meadow sedge (*Carex praticola*)	—/—/2B.2	Freshwater wetlands	None: No suitable wetland habitat exists onsite.
Nuttall's ribbon-leaved pondweed (*Potamogeton epihydrus*)	—/—/2B.2	Ponds and lakes	None: No suitable pond habitat exists onsite.
Oregon polemonium (*Polemonium carneum*)	—/—/2B.2	Coastal scrub, yellow pine forest	None: No suitable habitat exists onsite.
Oval-leaved viburnum (*Viburnum ellipticum*)	—/—/2B.3	Chaparral	Very Low: Some suitable chaparral habitat exists onsite.
Pappose tarplant (*Centromadia parryi* ssp. *parryi*)	—/—/1B.2	Grassland, wetland	Medium: Some grassland habitat exists onsite.
Pennell's bird's beak (*Cordylanthus tenuis* ssp. *capillaris*)	FE/SR/1B.2	Chaparral	Very Low: No suitable chaparral habitat exists onsite.
Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*)	—/—/1B.2	Grassland, chaparral	Very Low: Parasitic plant, typical host plants not known from the property.
Pink creamsacs (*Castilleja rubicundula* var. *rubicundula*)	—/—/1B.2	Grasslands	Low: Some grassland habitat exists onsite.
Porter's navarretia (*Navarretia paradoxinota*)	—/—/1B.3	Grasslands, wetlands	Low: Some grassland habitat exists onsite.
Raiche's manzanita (*Arctostaphylos stanfordiana* ssp. *raichei*)	—/—/1B.1	Serpentine chaparral	None: No serpentine chaparral habitat exists onsite.
Rincon Ridge ceanothus (*Ceanothus confusus*)	—/—/1B.1	Chaparral, foothill grassland	Very Low: Some suitable chaparral habitat exists onsite.
Rincon Ridge manzanita (*Arctostaphylos stanfordiana* ssp. *decumbens*)	—/—/1B.1	Chaparral	Very Low: Some suitable chaparral habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Round-leaved filaree (*California macrophylla*)	—/—/1B.2	Foothill grassland	Low: Some grassland habitat exists onsite.
Saline clover (*Trifolium hydrophilum*)	—/—/1B.2	Wetland, riparian	None: No suitable wetland habitat exists onsite.
San Joaquin spearscale (*Extriplex joaquinana*)	—/—/1B.2	Shadscale scrub, valley grassland	None: No alkalai scrub habitat exists.
Santa Rosa horkelia (*Horkelia tenuiloba*)	—/—/1B.2	Chaparral	Low: No suitable chaparral habitat exists onsite.
Sebastopol meadowfoam (*Limnanthes vinculans*)	FE/SE/1B.1	Freshwater wetland, vernal pools	None: No suitable vernal pool habitat exists onsite.
Serpentine cryptantha (*Cryptantha dissita*)	**—/—/1B.2**	**Serpentine chaparral**	**Very Low: No serpentine habitat exists onsite. Nearest known occurrence is 1.1 miles N of the parcel near Scotts Creek.**
Serpentine daisy (*Erigeron serpentinus*)	—/—/1B.3	Serpentine chaparral	None: No serpentine chaparral habitat exists onsite.
Sharsmith's western flax (*Hesperolinon sharsmithiae*)	—/—/1B.2	Chaparral	Very Low: No suitable chaparral habitat exists onsite.
Shining navarretia (*Navarretia nigelliformis* ssp. *radians*)	—/—/1B.2	Vernal pools	Very Low: No suitable vernal pool habitat exists onsite.
Slender Orcutt grass (*Orcuttia tenuis*)	FT/SE/1B.1	Grassland, freshwater wetlands	Very Low: No suitable wet meadow habitat exists onsite.
Small-flowered calycadenia (*Calycadenia micrantha*)	—/—/1B.2	Foothill grassland	Medium: Some suitable grassland habitat onsite.
Small groundcone (*Kopsiopsis hookeri*)	—/—/2B.3	Redwood forest	None: No suitable forest habitat exists onsite.
Small pincushion navarretia (*Navarretia meyersii* ssp. *deminuta*)	—/—/1B.1	Wetlands	Very Low: No suitable wetland habitat exists onsite.
Snow Mountain buckwheat (*Eriogonum nervulosum*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.
Socrates Mine jewelflower (*Streptanthus brachiatus* ssp. *brachiatus*)	—/—/1B.2	Serpentine outcrops	None: No serpentine habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Sonoma beardtongue (*Penstemon newberryi* var. *sonomensis*)	—/—/1B.3	Chaparral	Very Low: Some suitable chaparral habitat exists onsite.
Sonoma ceanothus (*Ceanothus sonomensis*)	—/—/1B.2	Chaparral	Very Low: Some suitable chaparral habitat exists onsite.
Thin-lobed horkelia (*Horkelia tenuiloba*)	—/—/1B.2	Chaparral	Very Low: Some suitable chaparral habitat exists onsite.
Three-fingered morning glory (*Calystegia collina* ssp. *tridactylosa*)	—/—/1B.2	Serpentine grassland	Very Low: No serpentine habitat exists onsite.
Three Peaks jewelflower (*Streptanthus morrisonii* spp. *elatus*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.
Tracy's eriastrum (*Eriastrum tracyi*)	—/SR/3.2	Chaparral	Low: Some suitable chaparral habitat exists onsite.
Two-carpellate Western flax (*Hesperolinon bicarpellatum*)	—/—/1B.2	Chaparral	Low: Some suitable chaparral habitat exists onsite.
Vine Hill ceanothus (*Ceanothus foliosus* var. *vineatus*)	—/—/1B.1	Chaparral	Very Low: Some suitable chaparral habitat exists onsite.
Vine Hill manzanita (*Arctostaphylos densiflora*)	—/SE/1B.1	Chaparral	Very Low: Some chaparral habitat exists onsite.
Watershield (*Brasenia schreberi*)	**—/—/2B.3**	**Pond, wetland**	**Very Low: No suitable pond habitat exists in the project area. Nearest known occurrence is 3.9 miles SE of the parcel near Lakeport.**
White beaked-rush (*Rhynchospora alba*)	—/—/2B.2	Wetlands, freshwater marsh	None: No suitable wetland habitat exists onsite.
Wolly meadowfoam (*Limnanthes floccosa* ssp. *floccosa*)	—/—/4.2	Vernal pools	None: No vernal pool habitat exists onsite.
MOSSES, LICHENS & LIVERWORTS			
Angel's hair lichen (*Ramalina thrausta*)	—/—/2B.1	Old growth conifer and hardwood forests	None: No suitable forest habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Coastal triquetrella (*Triquetrella californica*)	—/—/1B.2	Forest, woodland	Very Low: Some woodland habitat exists onsite.
Elongate copper moss (*Mielichhoferia elongata*)	—/—/4.3	Forest, woodland	Very Low: Some woodland habitat exists onsite.
Methuselah's beard lichen (*Dolichousnea longissima*)	—/—/4.2	Old growth conifer and hardwood forests	None: No suitable forest habitat exists onsite.
Slender silver moss (*Anomobryum julaceum*)	—/—/4.2	Rocky substrates in forests, riparian	Very Low: Some marginally suitable riparian habitat exists onsite.
Torren's grimmia (*Grimmia torenii*)	—/—/1B.3	Forest, woodland	Very Low: Some woodland habitat exists onsite.
FISH			
Chinook Salmon Coastal California DPS (*Oncorhynchus kisutch*)	FT/SE/—	Freshwater streams, open ocean and estuaries	None: No suitable streams exist onsite.
Clear Lake Drainage Resident Rainbow trout (*Oncorhynchus mykiss*)	FE/SE/—	Freshwater streams, open ocean and estuaries	None: No suitable habitat exists in the project area.
Clear Lake hitch (*Lavinia exilicauda chi*)	**FE/SE/—**	**Freshwater lakes and streams**	**None: No suitable habitat exists in the project area. Nearest known occurrence is 3.0 miles E of the parcel in Clear Lake.**
Clear Lake tule perch (*Hysterocarpus traskii lagunae*)	**—/SSC/—**	**Freshwater lakes and streams**	**None: No suitable habitat exists in the project area. Nearest known occurrence is 3.0 miles E of the parcel in Clear Lake.**
Coho Salmon Central California Coast ESU (*Oncorhynchus kisutch*)	FE/SE/—	Freshwater streams, open ocean and estuaries	None: No suitable streams exist onsite.
Sacramento perch (*Archoplites interruptus*)	**—/SSC/—**	**Low gradient sloughs and lakes**	**None: No suitable habitat exists in the project area. Nearest known occurrence is 3.0 miles E of the parcel in Clear Lake.**
Sacramento splittail (*Pogonichthys macrolepidotus*)	—/SSC/—	Low gradient freshwater streams	None: No suitable streams exist onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Steelhead Central California Coast DPS (*Oncorhynchus mykiss irideus*)	FT/—/—	Freshwater streams, open ocean and estuaries	None: No suitable streams exist onsite.
Steelhead Northern California DPS (*Oncorhynchus mykiss irideus*)	FT/—/—	Freshwater streams, open ocean and estuaries	None: No suitable streams exist onsite.
AMPHIBIANS & REPTILES			
California giant salamander (*Dicamptodon ensatus*)	—/SSC/—	Wetlands and riparian areas	None: No suitable wetland habitat exists onsite.
Foothill yellow-legged frog (*Rana boylii*)	**—/SSC/—**	**Wetlands, riparian, streams and ponds**	**Very Low: No suitable breeding habitat onsite. Some poor quality estivation habitat onsite. Nearest known occurrence is 3.5 miles NW of the parcel near Willow Creek.**
Red bellied newt (*Taricha rivularis*)	—/SSC/—	Woodland streams, riparian corridors	Very Low: No suitable stream habitat exists onsite.
Western pond turtle (*Emys marmorata*)	**—/SSC/—**	**Slow-moving creeks, streams, ponds, rivers, ditches.**	**None: No suitable pond habitat exists onsite. Nearest known occurrence is 3.6 miles N of the parcel near Dorr Creek.**
INVERTEBRATES			
Behren's silverspot butterfly (*Speyeria zerene behrensii*)	FE/SSC/—	Coastal prairie	None: Requires blue violet to reproduce; none onsite.
Blennosperma vernal pool andrenid bee (*Andrena blennospermatis*)	**—/SSC/—**	**Upland areas near vernal pools**	**None: No suitable vernal pool habitat exists onsite although there is some grassland habitat. Nearest known occurrence is 3.7 miles NE of the parcel near Nice-Lucene Cutoff.**
Borax Lake cuckoo wasp (*Hedychridium milleri*)	—/SSC/—	Lakes and streams	None: No suitable lake or stream habitat exists onsite.
Brownish dubiraphian riffle beetle (*Dubiraphia brunnescens*)	**—/SSC/—**	**Freshwater lakes and streams**	**None: No suitable stream habitat exists onsite. Nearest known occurrence is 3.0 miles E of the parcel in Clear Lake.**

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
California brackishwater snail (*Tryonia imitator*)	—/SSC/—	Brackish wetlands	None: No suitable wetland habitat exists onsite.
California floater (*Anodonta californiensis*)	—/SSC/—	Freshwater ponds, streams	None: No suitable stream habitat exists onsite.
California freshwater shrimp (*Syncaris pacifica*)	FE/SE/—	Freshwater ponds	None: No suitable pond habitat exists onsite.
California linderiella (*Linderiella occidentalis*)	—/SSC/—	Vernal pools	None: No vernal pool habitat exists onsite.
Clear Lake pyrg (*Pyrgulopsis ventricosa*)	—/SSC/—	Freshwater streams	None: No suitable stream habitat exists onsite.
Crotch bumble bee (*Bombus crotchii*)	—/SSC/—	Grassland, chaparral	Medium: Some grassland habitat exists onsite.
Leech's skyline diving beetle (*Hydroporus leechi*)	—/SSC/—	Freshwater ponds	None: No suitable pond habitat exists onsite.
Myrtle silverspot butterfly (*Speyeria zerene myrtleae*)	FE/SSC/—	Coastal prairie, chaparral	None: Requires western dog violet for reproduction; none onsite.
Monarch butterfly California overwintering Population #1 (*Danaus plexippus*)	—/SSC/—	Large trees required for roosting.	Low: Some suitable trees for roosting onsite.
Obscure bumble bee (*Bombus caliginosus*)	—/SSC/—	Grassland, foothill woodland, chaparral	Medium: Some grassland habitat exists onsite.
Opler's longhorn moth (*Adela oplerella*)	—/SSC/—	Usually associated with *Platystemon* (creamcups)	None: No suitable host plants onsite.
Oregon floater (*Anodonta oregonensis*)	—/SSC/—	Large freshwater streams	None: No suitable stream habitat exists onsite.
Ricksecker's water scavenger beetle (*Hydrochara rickseckeri*)	—/SSC/—	Freshwater lakes and ponds	None: No suitable pond habitat exists onsite.
Serpentine cypress wood-boring beetle (*Trachykele hartmani*)	—/SSC/—	Requires cypress trees in serpentine outcrops	None: No suitable host plants known from the project site.
Sonoma zerene fritillary (*Speyeria zerene sonomensis*)	—/SSC/—	Grasslands and meadows with *Viola* plants	None: Requires *Viola* for reproduction; none onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Unnamed isopod (*Calasellus californicus*)	—/SSC/—	Freshwater wetlands	None: No suitable wetland habitat exists onsite.
Western bumblebee (*Bombus occidentalis*)	—/SSC/—	Grassland	Medium: Some grassland habitat exists onsite.
Wilbur Springs minute moss beetle (*Ochthebius recticulus*)	—/SSC/—	Shorelines of hot springs	None: No suitable hot spring habitat exists onsite.
Wilbur Springs shorebug (*Saldula usingeri*)	—/SSC/—	Ponds	None: No suitable pond habitat exists onsite.
Wilbur Springs shore fly (*Paracoenia calida*)	—/SSC/—	Hot sulphur springs	None: No suitable hot spring habitat exists onsite.
BIRDS			
American perigrine falcon (*Falco peregrinus anatum*)	—/SSC/—	Forages in open grasslands, nests in trees	Low: Some suitable nesting and foraging habitat exists.
Bank swallow (*Riparia riparia*)	FE/SE/—	Typically found near lakes and streams	None: No suitable stream habitat exists onsite.
Bald eagle (*Haliaeetus leucocephalus*)	—/SSC/—	Forages over open lakes and streams	Very Low: No suitable foraging or nesting habitat exists onsite.
Bell's sage sparrow (*Artemisiospiza belli belli*)	—/SSC/—	Chaparral	Low: Some suitable chaparral habitat exists onsite.
Black swift (*Cypseloides niger*)	—/SSC/—	Cliff faces near water	None: No suitable stream habitat exists onsite.
Burrowing owl (*Athene cunicularia*)	—/SSC/—	Grasslands with ground squirrel burrows	Very Low: No suitable grassland habitat exists onsite due to lack of ground squirrel or other burrows.
California black rail (*Laterallus jamaicensis coturniculus*)	FE/SE/—	Coastal salt marshes and mudflats	None: No suitable salt marsh habitat exists onsite.
California horned lark (*Eremophila alpestris actia*)	—/SSC/—	Herbaceous vegetation, chaparral	Low: Some suitable foraging and nesting habitat exists onsite.
Cooper's hawk (*Accipiter cooperii*)	—/WL/—	Forages over open grassland	Low: Some suitable foraging and nesting habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Double-crested cormorant (*Phalacrocorax auritus*)	**—/SSC/—**	**Forages in open water. Nests in trees and cliffs.**	**None: No suitable foraging or nesting habitat exists onsite. Nearest known occurrence is 3.7 miles NE of the parcel near Nice-Lucerne Cutoff.**
Ferruginous hawk (*Buteo regalis*)	—/SSC/—	Forages over open grassland. Nests in old-growth trees	Low: Some suitable foraging and nesting habitat exists onsite.
Golden eagle (*Aquila chrysaetos*)	—/SSC/—	Forages over open grassland. Nests in old-growth trees	Medium: Some suitable foraging habitat. Some suitable nesting habitat.
Grasshopper sparrow (*Ammodramus savannarum*)	—/SSC/—	Forages over open grassland	Low: Some suitable foraging and nesting habitat exists onsite.
Great blue heron (*Ardea herodias*)	**—/SSC/—**	**Nests in trees, forages in wetlands and grasslands**	**None: No suitable foraging or nesting habitat exists onsite. Nearest known occurrence is 3.7 miles NE of the parcel near Nice-Lucene Cutoff.**
Great egret (*Ardea alba*)	—/SSC/—	Nests in trees, forages in wetlands and grasslands	None: No suitable foraging or nesting habitat exists onsite.
Marbled murrelet (*Brachyramphus marmoratus*)	FT/SE/—	Old growth coniferous forest	None: No suitable old-growth forest habitat exists onsite.
Northern goshawk (*Accipiter gentilis*)	—/SSC/—	Coniferous forest	None: No suitable forest habitat exists onsite.
Northern spotted owl (*Strix occidentalis*)	**FT/ST/—**	**Nests primarily in old growth forests**	**Very Low: No suitable nesting or foraging habitat onsite. Nearest occurrence is 10.0 miles to the NE near Bartlett Mountain.**
Osprey (*Pandion haliaetus*)	**—/WL/—**	**Areas with fish**	**Very Low: No suitable foraging habitat onsite. Some poor quality nesting habitat onsite. Nearest known occurrence is 3.7 miles NE of the parcel near Nice-Lucerne Cutoff.**
Prairie falcon (*Falco mexicanus*)	—/SSC/—	Forages over grasslands	Medium: Some suitable nesting and foraging habitat exists onsite.
Purple martin (*Progne subis*)	FE/SE/—	Insectivorous, nests in cavities	Low: Some suitable nesting habitat onsite. Some suitable foraging habitat onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Sharp-shinned hawk (*Accipiter striatus*)	—/SSC/—	Forest and woodland	Very Low: Some suitable nesting and foraging habitat exists onsite.
Tricolored blackbird (*Agelaius tricolor*)	**—/SSC/—**	**Forages in grasslands and nests in freshwater marshes**	**Low: Some marginal nesting habitat exists onsite. Some marginal foraging habitat. Nearest known occurrence is 1.9 miles E of the parcel near Hill Rd.**
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	—/SE/—	Woodland, riparian	Low: Some suitable nesting and foraging habitat exists onsite.
White-tailed kite (*Elanus leucurus*)	—/CFP/—	Prefers to nest in marshes next to deciduous forests.	Low: Some suitable nesting and foraging habitat exists onsite.
Yellow breasted chat (*Icteria virens*)	—/SSC/—	Dense shrubby growth, grasslands	Low: Some suitable grassland habitat exists onsite.
Yellow rail (*Coturnicops noveboracensis*)	—/SSC/—	Breeds in marshes, forages in wet meadows	None: No suitable marsh habitat exists onsite.
Yellow warbler (*Coturnicops noveboracensis*)	—/SSC/—	Riparian, shrubland, farmland	Low: Some suitable scrub habitat exists onsite.
MAMMALS			
American badger (*Taxidea taxus*)	**—/SSC/—**	**Open grassland habitats with plenty of prey**	**Low: Some suitable den habitat exists onsite. Nearest known occurrence is 2.7 miles SE of the parcel near Lakeport.**
Big free-tailed bat (*Nyctinomops macrotis*)	—/SSC/—	Forages over open areas, roots in trees or caves	Low: Some suitable foraging habitat. Few suitable roosts in project area.
Fisher (*Pekania pennanti*)	—/SSC/—	Forages and breeds primarily in forests	Very Low: No suitable forest habitat exists onsite.
Fringed myotis (*Myotis thysanodes*)	—/SSC/—	Roosts in caves or buildings and forages in open habitats	Very Low: Some suitable foraging habitat. Few suitable roosts in project area.
Hoary bat (*Lasiurus cinereus*)	—/SSC/—	Forages over open areas, roots in trees or caves at high altitude	Very Low: Few suitable roosts in the project area. Primarily forages at high altitude.
Humboldt marten (*Martes caurina humboldtensis*)	—/SSC/—	Forages and breeds in forests near streams	Very Low: Some suitable den and foraging habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Long-eared myotis (*Myotis evotis*)	—/SSC/—	Roosts in caves or buildings and forages in open habitats	Low: Some suitable foraging habitat. Few suitable roosts in project area.
Long-legged myotis (*Myotis volans*)	—/SSC/—	Roosts in caves or buildings and forages in open habitats	Very Low: Some foraging habitat. Few suitable roosts in project area.
North American porcupine (*Erethizon dorsatum*)	—/SSC/—	Require rocky areas or trees for dens, abundant open space for foraging	Very Low: Some suitable foraging and den habitat exists onsite.
Pallid bat (*Antrozous pallidus*)	—/SSC/—	Common in open dry habitats with rocky areas for roosting	Low: Some foraging habitat exists. Few suitable roosts in the project area.
Silver haired bat (*Lasionycteris noctivagans*)	—/SSC/—	Nocturnal, migratory, solitary, roosts in tree cavities	Low: Some suitable trees exist for roosting. Some foraging habitat exists.
Sonoma tree vole (*Arborimus pomo*)	—/SSC/—	Old growth Douglas fir canopies	None: No suitable forest habitat exists onsite.
Townsend's big-eared bat (*Corynorhinus townsendii*)	—/SSC/—	Hibernate in mines or caves, roost in man made structures and caves	Medium: Few man-made structures exist suitable for roosting. Some habitat for foraging.
Western red bat (*Lasiurus blossevillii*)	—/SSC/—	Forages over open areas, roots in trees or caves	Very Low: Little suitable roosting habitat. Some suitable foraging habitat.
Yuma myotis (*Myotis yumanensis*)	—/SSC/—	Forages over open areas, roots in trees or caves	Very Low: No suitable nesting habitat exists onsite. Some suitable foraging habitat exists onsite.
HABITATS			
Coastal & Valley Freshwater Marsh (CVFM)	—	—	None: No marsh habitat exists onsite.
Northern Basalt Flow Vernal Pool (NBFVP)	—	—	None: No basalt flow vernal pool habitat exists onsite.
Northern Hardpan Vernal Pool (NHVP)	—	—	None: No hardpan vernal pool habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Northern Vernal Pool (NVP)	—	—	None: No vernal pool habitat exists onsite.
Sycamore Alluvial Woodland (SAW)	—	—	None: No woodland habitat exists onsite.
Valley Needlegrass Grassland (VNG)	—	—	Low: Some grassland habitat exists onsite.
Valley Oak Woodland (VOW)	—	—	None: No valley oaks exist onsite.
Valley Sink Scrub (VSS)	—	—	None: 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
SR = State Rare (applies to plants only)
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 4 = plants of limited distribution

[2] USFWS

APPENDIX B: SPECIES ENCOUNTERED

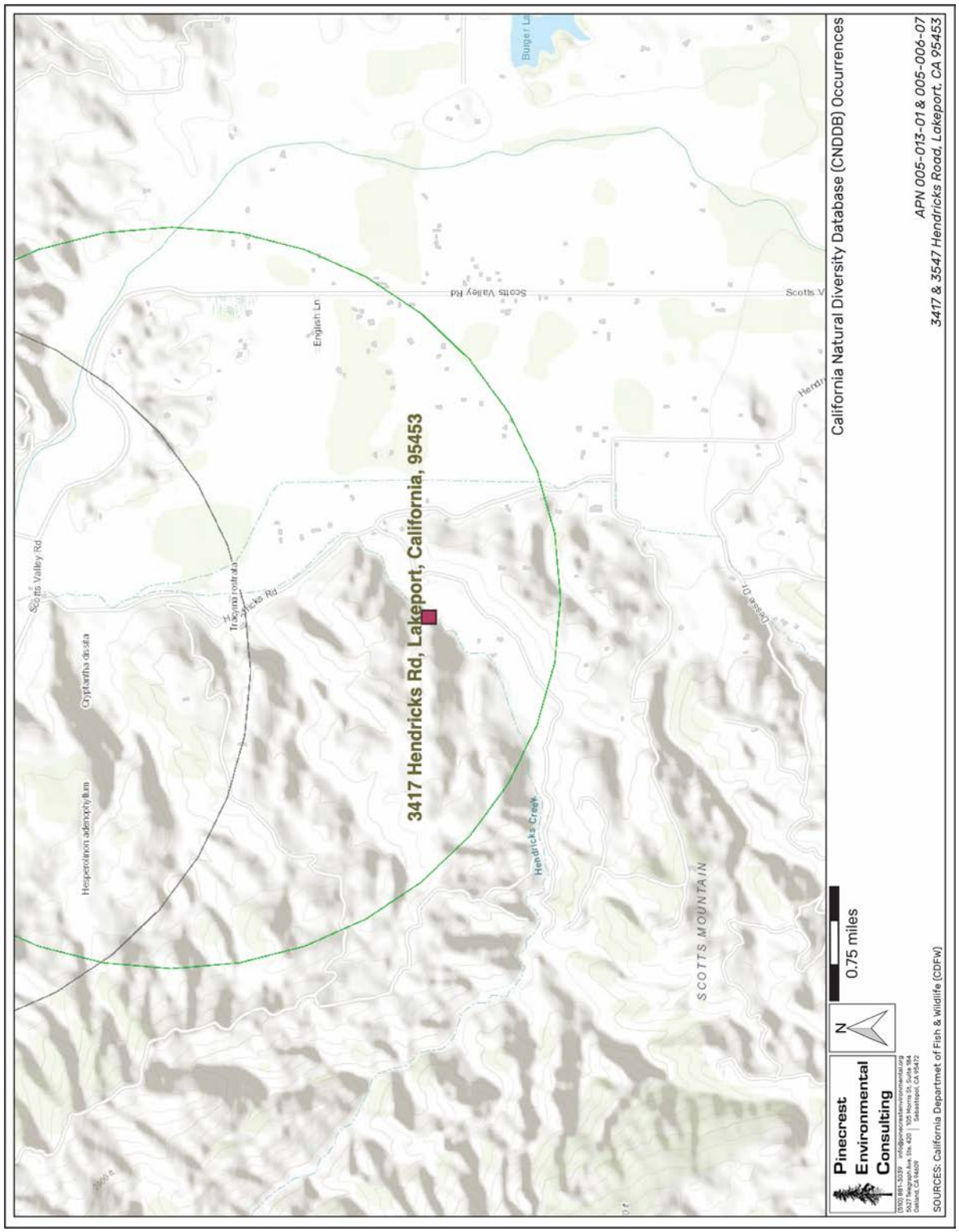
PLANTS	
SPECIES NAME	NATIVE STATUS
Acer macrophyllum	native
Achillea millefolium	native
Achyrachaena mollis	native
Acmispon americanus	native
Adelinia grandis	native
Aesculus californica	native
Agoseris hirsuta	native
Aira caryophyllea	non-native
Amaranthus powellii	native
Amsinckia intermedia	native
Arbutus menziesii	native
Arctostaphylos canescens	native
Arctostaphylos manzanita	native
Arctostaphylos viscida	native
Asclepias eriocarpa	native
Avena barbata	non-native
Baccharis pilularis	native
Briza minor	non-native
Bromus diandrus	non-native
Bromus hordeaceous	non-native
Bromus madritensis	non-native
Calycadenia fremontii	native
Cardamine hirsuta	non-native
Carduus pycnocephalus	non-native
Carex gracilior	native
Carex lenticularis var. *impressa*	native
Ceanothus cuneatus	native
Ceanothus integerrimus	native
Centaurea solstitialis	non-native
Centromadia fitchii	native
Cercis occidentalis	native
Cercocarpus betuloides	native
Chlorogalum pomeridianum	native
Cirsium vulgare	non-native
Clarkia amoena	native
Collinsia grandiflora	native
Convolvulus arvensis	non-native

Croton setiger	native
Cynosurus echinatus	non-native
Cyperus eragrostis	native
Dactylis glomerata	non-native
Daucus carota	non-native
Dichelostemma capitata	native
Dipsacus fullonum	non-native
Drymocallis glandulosa	native
Elymus caput-medusae	non-native
Elymus elymoides	native
Elymus glaucus	native
Equisetum arvense	native
Erigeron bonariensis	non-native
Eriodictyon californicum	native
Eriophyllum lanatum	native
Erodium botrys	non-native
Eschscholzia californica	native
Euphorbia oblongata	non-native
Festuca myuros	non-native
Fraxinus latifolia	native
Gastridium phleoides	non-native
Geranium molle	non-native
Gilia capitata	native
Gnaphalium palustre	native
Heliotropium curassavicum	native
Hesperolinon spergulinum	native
Hordeum murinum	non-native
Hypericum perforatum	non-native
Hypochaeris glabra	non-native
Iris douglasii	native
Juglans hindsii	native
Juncus patens	native
Juncus tenuis	native
Kickxia elatine	non-native
Lactuca serriola	non-native
Lathyrus latifolius	non-native
Lotus corniculatus	non-native
Lupinus albifrons	native
Lupinus bicolor	native
Madia exigua	native
Madia gracilis	native
Malva parviflora	non-native
Marrubium vulgare	non-native
Medicago polymorpha	non-native
Melilotus albus	non-native
Mentha pulegium	non-native
Navarretia atractyloides	native

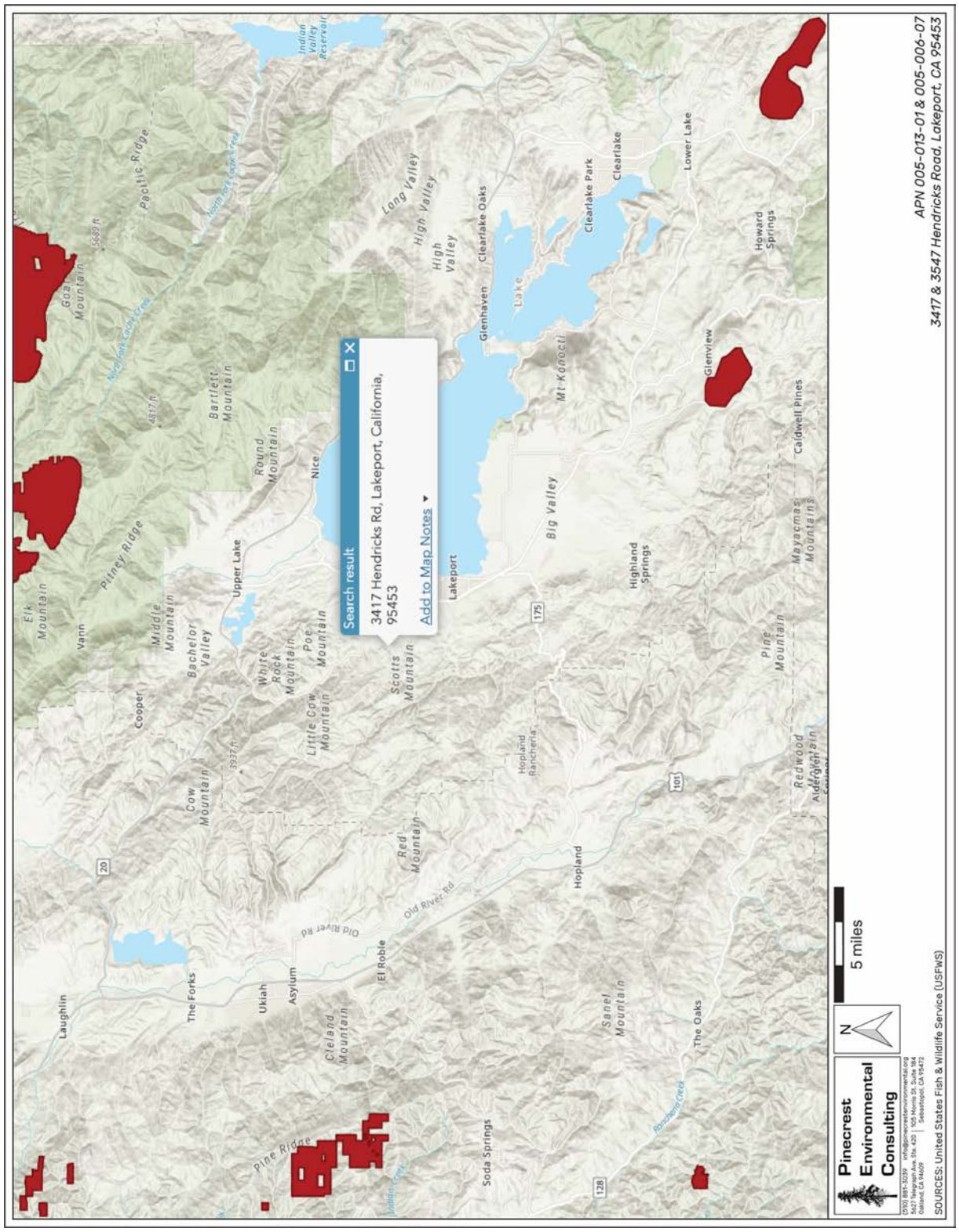
Perideridia kelloggii	native
Phalaris aquatica	non-native
Pinus ponderosa	native
Pinus sabiniana	native
Plagiobothrys tenellus	native
Plantago lanceolata	non-native
Polypogon monspeliensis	non-native
Populus fremontii	native
Portulaca oleracea	non-native
Primula hendersonii	native
Quercus agrifolia	native
Quercus douglasii	native
Quercus durata	native
Quercus kelloggii	native
Quercus lobata	native
Ranunculus occidentalis	native
Rosa californica	native
Rubus armeniacus	non-native
Rumex acetocella	non-native
Rumex crispus	non-native
Salix lasiolepis	native
Sambucus mexicana	native
Sanicula bipinnatifida	native
Sanicula crassicaulis	native
Silybum marianum	non-native
Spergula arvensis	non-native
Stellaria media	non-native
Symphoricarpos albus	native
Taraxacum officinale	non-native
Thysanocarpus curvipes	native
Torilis arvensis	native
Toxicodendron diversilobum	native
Trifolium hirtum	non-native
Triteleia hyacinthina	native
Triteleia laxa	native
Umbellularia californica	native
Verbascum thapsus	non-native
Verbena lasiostachys	native
Vicia sativa	non-native
Vicia villosa	non-native
Wyethia angustifolia	native
Xanthium strumarium	native

ANIMALS
Anaxyrus boreas (Western toad)
Aphelocoma californica (California scrub jay)
Buteo jamaicensis (red-tailed hawk)
Callipepla californica (California quail)
Canis latrans (coyote)
Cathartes aura (turkey vulture)
Corvus corax (common raven)
Euphagus cyanocephalus (Brewer's blackbird)
Junco hyemalis (dark-eyed junco)
Lepus californicus (black-tailed jackrabbit)
Melanerpes formicivorus (acorn woodpecker)
Odocoileus hemionus (black-tailed deer)
Otospermophilus beecheyi (California ground squirrel)
Passerculus sandwichensis (savannah sparrow)
Pavo cristatus (Indian peacock)
Sceloporous occidentalis (Western fence lizard)
Sciurus griseus (Western gray squirrel)
Spinus psaltria (lesser goldfinch)
Thomomys bottae (Botta's pocket gopher)
Zenaida macroura (mourning dove)

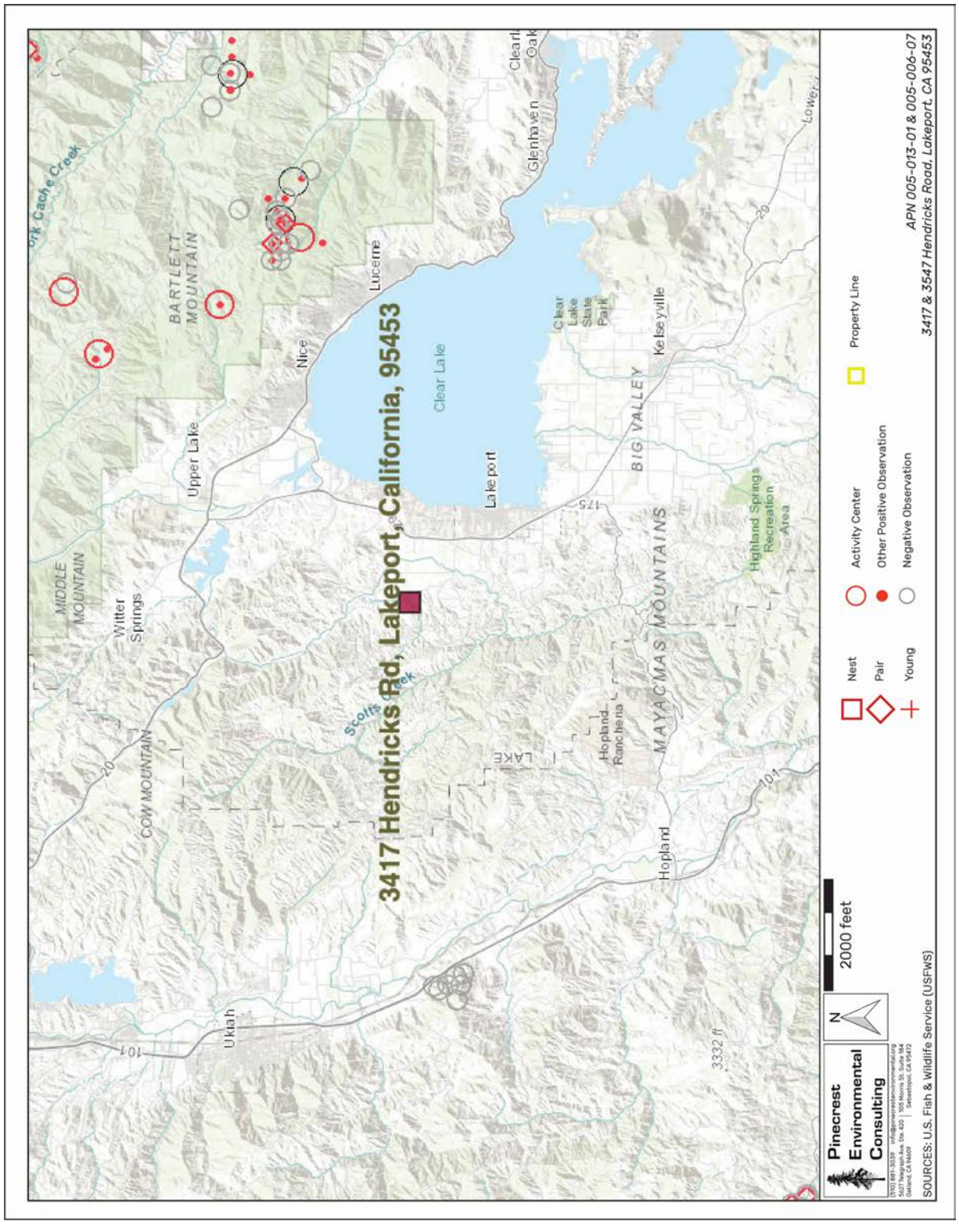
APPENDIX C: CNDDB OCCURRENCES MAP



APPENDIX D: FEDERAL CRITICAL HABITAT MAP



APPENDIX E: REGIONAL NSO OCCURRENCES MAP



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 Sonoma 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. The removal of vegetation is prohibited within these 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 all necessary permits from the Sonoma County Permit and Resource Management Department (PRMD).
- 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 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 or appropriate mulch adequate to cover area of disturbed soil.
- In the event of a forecast storm event likely to produce runoff, apply mulch to disturbed areas prior to rain event.
- Any grading or drainage conducted as part of site preparation shall have the appropriate permits from the Sonoma County PRMD.

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 constrains 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 shall 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 to June 1, and for breeding bird season from February 1 to 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 and which is generally February 1 to 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.

APPENDIX G: STREAM CLASSIFICATION CRITERIA

The following stream classification criteria were copied form 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 (as shown in Figure 4) 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).