

BIOLOGICAL STUDY REPORT

Airport Road Distribution Center Project

City of Redding, Shasta County, California



Prepared for:

Kimley-Horn and Associates

Prepared by:

Allison Loveless, Qualified Biologist

November 2021

613-02

ENPLAN

3179 Bechelli Lane, Suite 100, Redding, CA 96002
(530) 221-0440
www.enplan.com

TABLE OF CONTENTS

	<u>Page</u>
1. INTRODUCTION	1
2. PROJECT LOCATION	2
2.1. Project Description.....	2
2.2. Area Characteristics.....	2
3. RECORDS REVIEW AND FIELD RECONNAISSANCE	5
3.1. Records Review.....	5
3.2. Field Reconnaissance.....	6
4. NATURAL COMMUNITIES	6
5. SPECIAL-STATUS SPECIES	9
5.1. Special-Status Plant Species	9
5.2. Special-Status Wildlife Species.....	9
6. NESTING MIGRATORY BIRDS.....	13
7. NOXIOUS WEEDS.....	14
8. CONCLUSIONS AND RECOMMENDATIONS	14
8.1. Conclusions	14
8.2. Recommended Mitigation Measures.....	15
9. REFERENCES.....	16

APPENDICES

Appendix A. Resumes

Appendix B. Representative Photographs

Appendix C. Species Lists and Potential to Occur

Appendix D. List of Vascular Plants Observed During the Botanical Survey

1. INTRODUCTION

The project applicant is proposing to develop a warehouse/distribution center on Airport Road in the City of Redding. The purpose of this biological study report (BSR) is to identify and characterize sensitive biological resources that may occur in the project work area or that may be adversely affected by implementation of the proposed project. This BSR will serve as a baseline study to assist in the preparation of subsequent environmental documentation.

ENPLAN is an environmental consulting firm with over 40 years of experience with projects throughout northern California. All work associated with this project was performed by Donald Burk, Environmental Services Manager with ENPLAN, and Allison Loveless, Environmental Scientist with ENPLAN. Resumes for the biologists are provided in **Appendix A**.

Mr. Burk received his Master of Science degree in Botany, and Bachelor of Arts degree in Chemistry and Biological Sciences, from California State University, Chico. Having worked in the environmental consulting field since 1981, he has an in-depth background in a broad spectrum of environmental studies. His experience includes managing the preparation of CEQA/NEPA environmental compliance documents, environmental site assessments, wildlife and botanical studies, wetland delineations, reclamation plans, and stream restoration projects. Mr. Burk was responsible for the botanical survey for this project and for final report review.

Ms. Loveless received her Master of Science degree in Zoology from Oklahoma State University, Stillwater, and Bachelor of Arts degree in Geography (Environmental Studies) from the University of California, Los Angeles. Ms. Loveless has four years of experience working in environmental services throughout northern California. Her experience includes general wildlife surveys, endangered species surveys, and nesting bird surveys; preparing technical environmental documentation for environmental impact reports; and preparing biological study reports, wetland delineations, biological assessments, and associated GIS mapping. Ms. Loveless was responsible for the wildlife evaluation and drafting this BSR.

2. PROJECT LOCATION

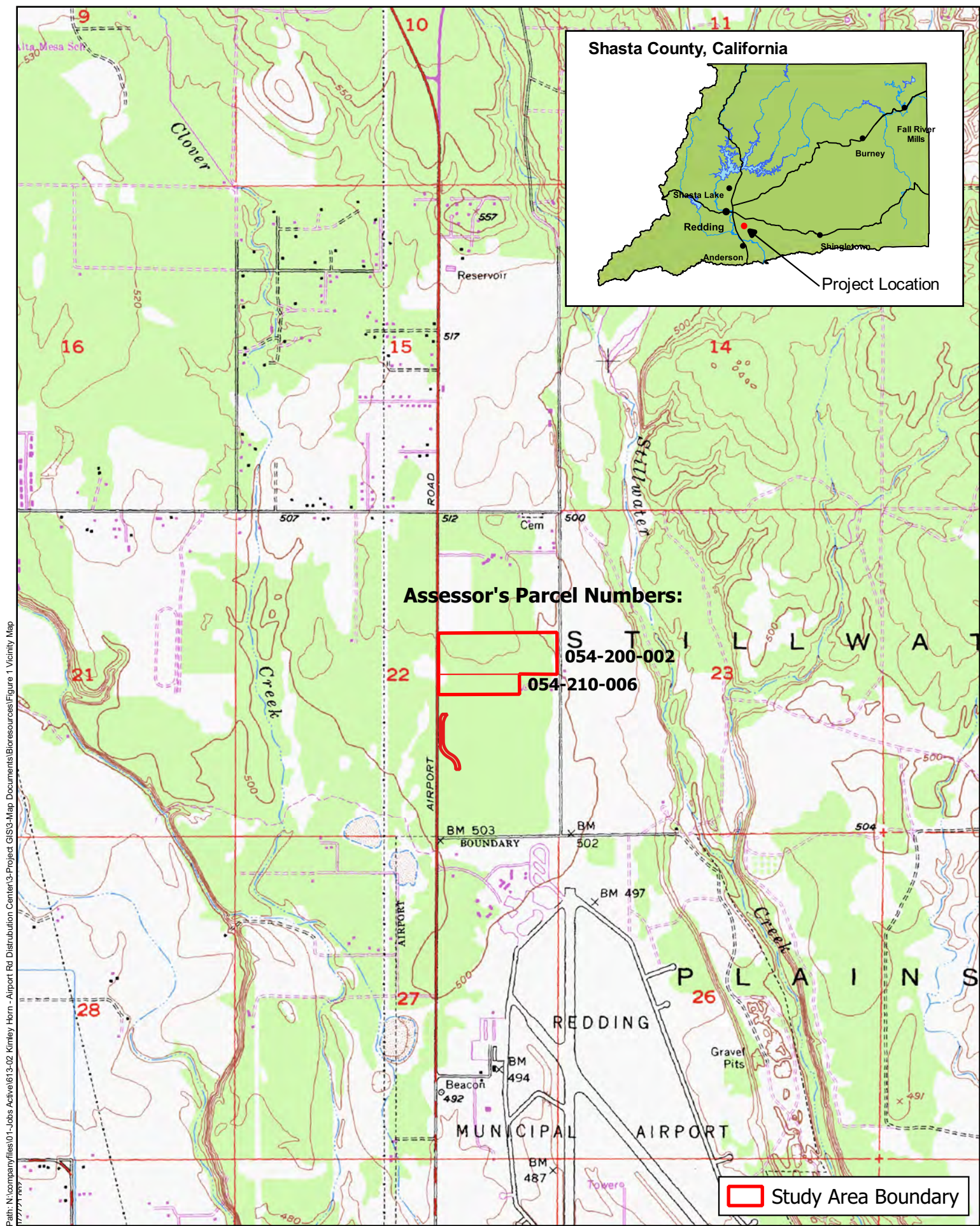
The proposed Redding Airport Distribution Center would be located on the east side of Airport Road in the City of Redding, approximately 1.5 miles north of the Redding Municipal Airport public entrance. As shown in **Figure 1**, the site is in Section 22, Township 31 North, Range 4 West, of the U.S. Geological Survey (USGS) Enterprise 7.5-minute quadrangle (USGS, 1998). The project study area includes Shasta County Assessor's Parcel Numbers 054-200-002 and 054-210-006, the abutting rights-of way of Airport Road and Old Oregon Trail, and a sewer line corridor extending south to Shasta View Drive. An aerial view of the project site is provided in **Figure 2**.

2.1. Project Description

The proposed project includes construction of a ±250,955 square-foot distribution facility with 53 loading docks. Access to the facility would be provided from an extension of Aviation Drive, which currently terminates at the northern site boundary. An emergency vehicle access road would be extended to Old Oregon Trail, which abuts the eastern boundary of the study site. The proposed improvements would include auto parking (405 stalls), van parking (64 stalls), trailer parking (61 stalls), and tractor parking (6 stalls), as well a future parking area. Other appurtenant improvements would include a one-acre stormwater detention basin, concrete walkways, an off-site sewer line extension, and other associated utilities.

2.2. Area Characteristics

The ±41.6-acre study site ranges in elevation from approximately 500 to 520 feet above sea level. Land uses adjoining the project site include commercial uses, undeveloped land, and undeveloped buffer for the Redding Municipal Airport. The Natural Resources Conservation Service (USDA NRCS, 2021) maps three soil units within the project boundary: Perkins gravelly loam, gravelly clay loam substrate, 0 to 3 percent slopes, MLRA 17; Red Bluff loam, 0 to 3 percent slopes, MLRA 17, moist; and Red Bluff loam, 3 to 8 percent slopes.



Path: N:\CompanyFiles\01-Jobs Active\613-02 Kinley Horn - Airport Rd Distribution Center\3-Project GIS\3-Map Documents\Bioresources\Figure 1 Vicinity Map

All depictions are approximate. Not a survey product.

11.05.21

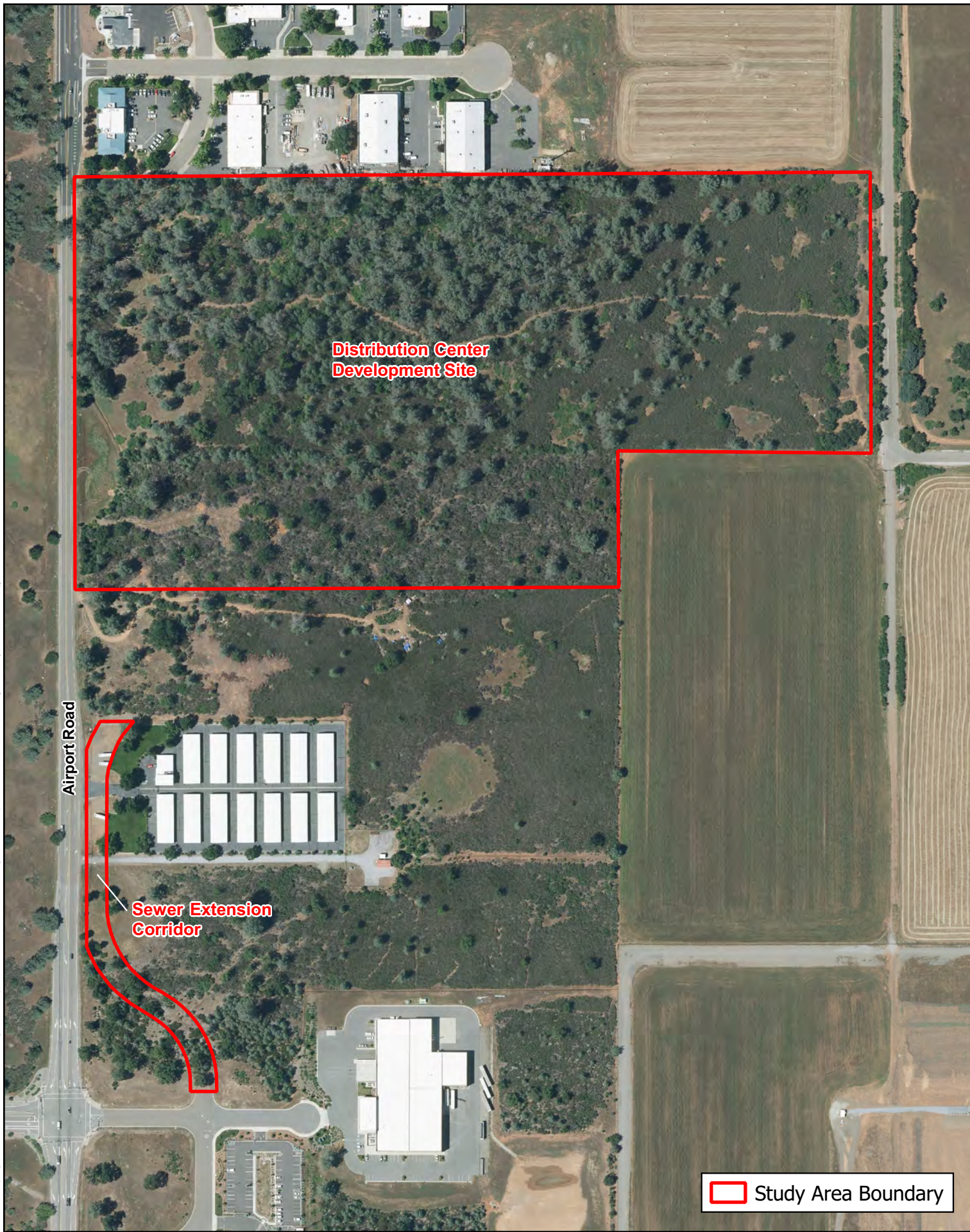


Figure 2
Project Site

All depictions are approximate. Not a survey product.

11.05.21

The distribution center site is currently undeveloped; at the time of the field survey, a large portion of the site had been cleared of all underbrush. The primary habitat type onsite is oak – pine woodland. The dominant species include valley oak (*Quercus lobata*), interior live oak (*Quercus wislizeni*), gray pine (*Pinus sabiniana*), poison oak (*Toxicodendron diversilobum*), white-leaf manzanita (*Arctostaphylos viscida*), and common manzanita (*Arctostaphylos manzanita*).

The sewer line extension is proposed in the future Aviation Drive right-of-way. The ±1.4-acre corridor passes through previously cleared, highly disturbed land in front of a mini-storage facility as well as through relatively undisturbed land supporting an oak – pine woodland as described above. Representative photographs of the project site are provided in **Appendix B**.

3. RECORDS REVIEW AND FIELD RECONNAISSANCE

3.1. Records Review

Records reviewed for this evaluation consisted of California Natural Diversity Data Base (CNDDB, 2021) records for special-status plants, animals, and natural communities (see **Table 1, Appendix C**); the California Native Plant Society (CNPS, 2021) Inventory of Rare and Endangered Plants (see **Table 2, Appendix C**); U.S. Fish and Wildlife Service (USFWS, 2021) records for federally listed, proposed, and Candidate plant and animal species under jurisdiction of the USFWS (see **Appendix C**); and National Wetlands Inventory (NWI) maps (USFWS NWI, 2021). USFWS's Environmental Conservation Online System (ECOS) Critical Habitat Mapper was used to identify the presence of critical habitat in the vicinity of the project site. The National Marine Fisheries Service (NMFS) was not consulted because the project site does not contain any streams that could potentially support fish.

The CNDDB records search covered a five-mile radius around the project site. This review of records addressed portions of the Bend, Balls Ferry, Cottonwood, Enterprise, Olinda, Palo Cedro, and Redding quadrangles. CNPS records were reviewed for the Enterprise quadrangle. The USFWS and NWI records searches were based on the study area location.

3.2. Field Reconnaissance

To determine the presence/absence of special-status plant and animal species, biological field studies were completed by ENPLAN biologists on April 15, July 22, August 20, October 18, and November 5, 2021. Some of the special-status species potentially occurring in the general project area would not have been evident at the time the fieldwork was conducted. However, determination of their potential presence could readily be made based on observed habitat characteristics.

4. NATURAL COMMUNITIES

Review of National Wetlands Inventory (NWI) records showed that one wetland has been mapped in the project site, and is identified as a fresh emergent wetland (PEM1A). The feature is located along Airport Road, on the western edge of the project site. The study area boundary includes only a portion of the wetland feature that was identified by NWI, the remainder extends to the west and is bisected by Airport Road.

Review of CNDDDB records identified three natural communities within a five-mile radius of the project site: Great Valley cottonwood riparian forest, Great Valley valley oak riparian forest, and Great Valley willow scrub. All three of these communities are considered sensitive; however, field studies confirmed that they are not present in the project area; thus, no further discussion is warranted.

Based on the field evaluation, one natural community was identified in the project study area: a mixed-oak / foothill pine woodland. The community is dominated by foothill pine (also called gray pine), interior live oak, and valley oak. The community contains both large trees (≥ 12 inches in diameter at breast height [DBH]) and dense stands of small trees. The introduced tree-of-heaven is common in the eastern portion of the distribution center parcels. The shrub understory consists of dense stands of common manzanita, white-leaf manzanita, and poison oak (except where brushing has been completed); the herbaceous layer is present in openings, and includes various grasses and forbs. This community most closely resembles the mixed oak – *Pinus sabiniana* / grass association (71.100.07) described in the CDFW California Natural Communities List, which is not identified as a sensitive natural community.

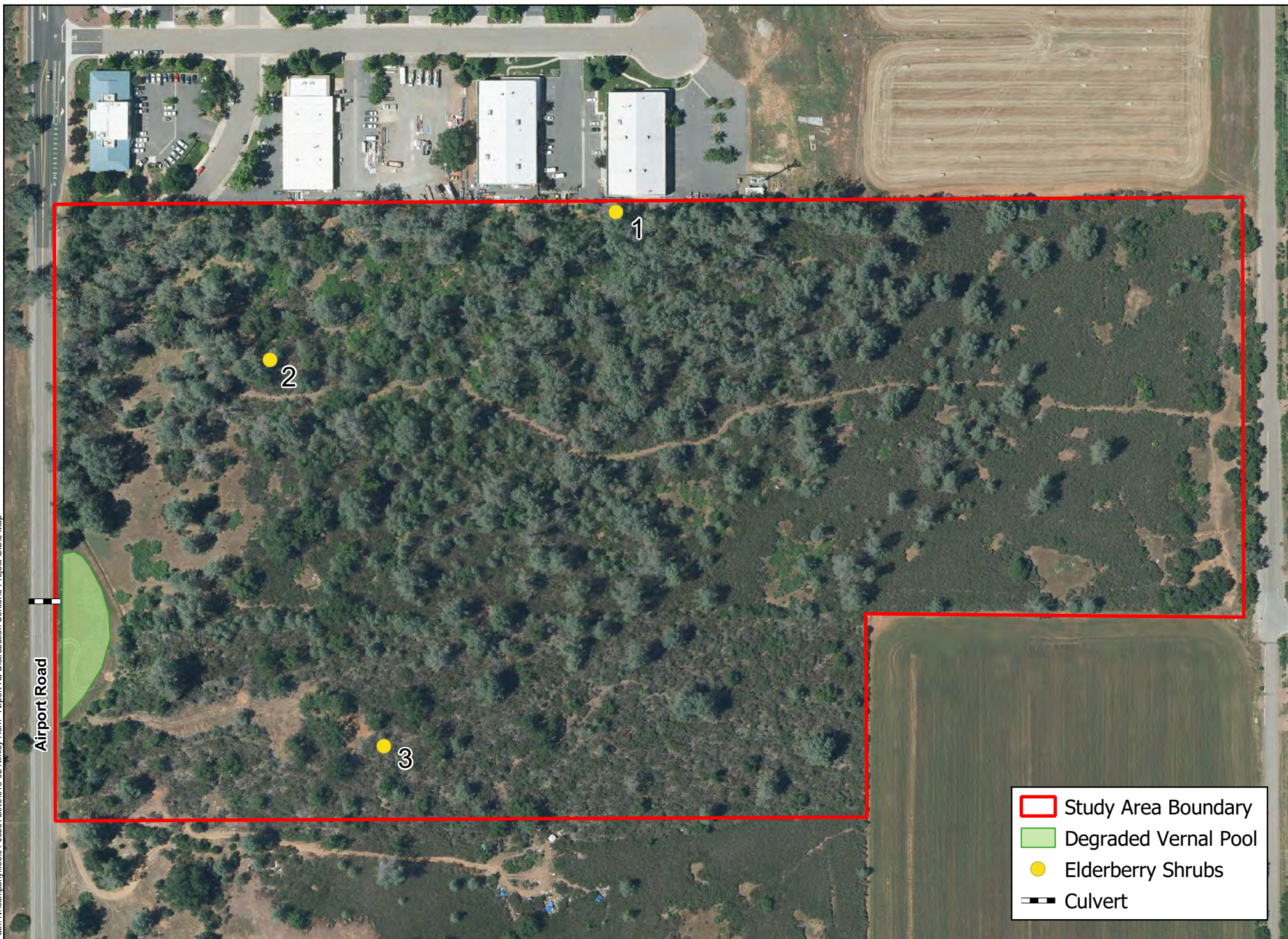
The approximate southern half of the sewer line corridor sewer corridor also supports a mixed-oak / foothill pine woodland, as described above. The northern portion of the corridor has been previously cleared and portions have been graveled; the area is used as an informal parking area. Soils are compacted and support a mix of introduced ruderal species such as puncture vine, long-beaked filaree, red-stemmed filaree, medusa-head, and European pulse.

As a result of the field evaluation, one wetland feature was identified as an inclusion in the mixed oak-foothill pine woodland (**Figure 3**); this is the same feature as shown on the NWI map. The wetland feature is a highly degraded vernal pool approximately 0.35 acres in size located on the western edge of the project site, adjacent to Airport Road. The feature is the eastern portion of a larger vernal pool that was bisected as a result of construction of Airport Road. A culvert is present beneath the roadway, but appears to be nearly blocked by sediment and debris. Additionally, a roadside ditch has been constructed on the west side of Airport Road and directs water in a north-south direction rather than between the two pool sections. Given these two hydrologic barriers, the eastern and western portions of the wetland no longer share a consistent surface water connection.

A trench was excavated on the east side of the on-site wetland years ago, probably to serve as a vehicle barrier. The trench has intercepted and redirected sheet flow that once helped sustain the wetland, but did not prevent vehicle access to the pool itself. Given its reduced watershed, severed hydrologic connection with the main portion of the historical pool, and historical and recent disturbances, the on-site wetland is drier than in past years and now supports a predominance of weedy plant species with a low diversity and abundance of native vernal pool species.

Despite its degraded character, the feature is considered as a sensitive natural community. Because preservation/restoration of the wetland and an appropriate watershed buffer is not practicable, mitigation for the loss of the feature is warranted. This would consist of purchasing wetland mitigation credits from a Corps- or CDFW-approved mitigation bank at a minimum 1:1 ratio, as further detailed in **Mitigation Measure 1**, below.

Path: N:\companyfiles\01-Jobs Active\013-02 Kimley Horn - Airport Rd Distribution Center\3-Project GIS\3-Map



- Study Area Boundary
- Degraded Vernal Pool
- Elderberry Shrubs
- Culvert



0 100 200 Feet

Figure 3
On-Site Biological Resources

All depictions are approximate. Not a survey product. 11.05.21

5. SPECIAL-STATUS SPECIES

5.1. Special-Status Plant Species

Review of the USFWS species list (see **Appendix C**) for the project area identified one federally listed plant species as potentially being present in the project area: slender Orcutt grass (federally threatened). In addition, the USFWS (2021) ECOS mapper identified critical habitat for slender Orcutt grass immediately west of the project site on the west side of Airport Road (Unit 6B) and approximately 0.6 miles due east of the project site (Unit 6C).

CNDDDB records (**Table 1, Appendix C**) show that no special-status plant species occurrences have been mapped within the project site boundary. However, six special-status plant species have been identified within a five-mile radius of the project site: Boggs Lake hedge-hyssop, legenere, Red Bluff dwarf rush, silky cryptantha, slender Orcutt grass, and watershield. An additional two non-status species have also been recorded within a five-mile radius of the project site: Henderson's bentgrass and woolly meadowfoam (CDFW, 2021). The CNPS Inventory (**Table 2, Appendix C**) identifies three additional non-status plants: dubious pea, Redding checkerbloom, and tripod buckwheat, within the Enterprise quadrangle (CNPS, 2021).

The potential for each special-status plant species to occur in the project site is evaluated in **Table 3 of Appendix C**. No special-status plant species were observed during the botanical field survey, nor are any expected to be present. A list of plant species observed during the botanical survey is provided in **Appendix E**.

5.2. Special-Status Wildlife Species

Review of the USFWS species list for the project area (see **Appendix C**) identified the following federally listed animal species as potentially being present in the project area: northern spotted owl, California red-legged frog, delta smelt, valley elderberry longhorn beetle, conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp. The USFWS ECOS mapper identified critical habitat for vernal pool tadpole shrimp and vernal pool fairy shrimp approximately 0.6 miles east of the project site (Unit 6C); no critical habitat is mapped within the boundary of the project site (USFWS, 2021).

Review of CNDDDB records showed that one special-status animal species has been documented on the project site: vernal pool tadpole shrimp. Eleven other special-status animal species have been reported within a five-mile radius of the project site: bald eagle, bank swallow, Central Valley spring-run (CVSR) Chinook salmon evolutionary significance unit (ESU), Sacramento River winter-run (SRWR) Chinook salmon ESU, osprey, spotted bat, Central Valley steelhead distinct population segment (DPS), tricolored blackbird, valley elderberry longhorn beetle, vernal pool fairy shrimp, and western spadefoot toad. Three non-status animals have also been reported in the search radius: California linderiella, great egret, and western pearlshell (CDFW, 2021).

The potential for each of the above special-status animal species to occur in the study area is further evaluated in **Table 3 of Appendix C**. As documented in **Table 3**, potentially suitable habitat is present in and adjacent to the project area for the valley elderberry longhorn beetle, and vernal pool branchiopods have been recorded on the site in the past. Therefore, detailed evaluations of the potential presence of these two taxa are provided below.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (VELB) is a federally threatened (FT) insect that may be found on elderberry shrubs throughout the Central Valley of California. The shrubs must have a minimum diameter of one inch, as measured at ground level, to support the beetle. The VELB occurs from Shasta County to Fresno County, generally below about 500 feet in elevation. The VELB is a small wood-boring beetle, approximately 0.5 to 0.8 inches in length at the adult life stage (USFWS, 2017). The adults live between four days and three weeks, in which time they mate, lay eggs on the leaves or bark of the elderberry, and die (Barr, 1991). Upon hatching, the larvae bore into the stem of the shrub and spend the majority of their lives feeding within the pith of the elderberry shrub. Prior to pupation, the larvae bore an exit hole through the elderberry shrub stem and fill it with wood dust. Once they emerge from pupation as adults, they use this hole to exit the shrub's stem (Halstead and Oldham, 1990). It is this exit hole that is used to identify the presence of the VELB on any particular

elderberry shrub. The exit hole is often the only external indication that the VELB is present.

Elderberry shrubs can be found throughout the Central Valley in both riparian and non-riparian habitats. The shrubs are most common on riparian floodplain terraces along rivers, on levees, and along canals and ditches; preferred sites provide ample subsurface water but are exposed to only short-term inundation (USFWS, 2017). Within its elevational range, the distribution of the VELB closely follows the presence of the elderberry shrub and riparian habitat, which historically occupied vast expanses along watersheds throughout California's Central Valley. Today, development has largely segmented these riparian habitats, and agricultural development has reduced the prevalence of the elderberry shrub and thus the VELB as well (USFWS, 2017).

Three elderberry shrubs were observed within the project area (**Figure 3**). The northern shrub (Elderberry 1) has one intact stem with a basal diameter of ± 4.2 inches, and a damaged stem with a basal diameter of just over 6 inches. The latter was broken off about two feet above ground level during recent brushing, but supports a ± 2.4 -inch diameter stem that branches from the main trunk about one foot above ground level. No exit holes were identified on the shrub during the field survey; however, a lack of exit holes does not preclude occupancy by the beetle. The central shrub (Elderberry 2) has one live stem with a basal diameter of ± 1.2 inches; no exit holes were observed. The southernmost shrub (Elderberry 3) was cut at ground level during site brushing about a year ago; although the shrub has resprouted, the stems are less than an inch in diameter at the base and have no potential to support the listed beetle.

According to the CNDDDB records, the nearest known VELB occurrence is approximately 2,400 meters (1.5 miles) southwest of the project site, within the riparian corridor surrounding Churn Creek. The nearest riparian habitat is about 400 meters to the east, along Stillwater Creek; Clover Creek is about 850 meters to the west, but has a very poorly developed riparian corridor. The on-site elderberries are unlikely to support the listed beetle given the site elevation (500 to 520 feet above sea level), the isolated locations of the elderberries, the absence of on-site riparian habitat, the distance to riparian habitats and known occupation sites, and the absence of exit holes.

Federal guidance for evaluating the potential presence of the listed beetle is provided in the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)* (USFWS, 2017). The *Framework* incorporates a decision tree based on site conditions, which leads to findings of “No further action required,” “Suitable habitat, likely occupied,” or “Discuss project with Service.” Given the conditions noted above (project site is within historical range of VELB, site elevation, absence of riparian habitat, no exit holes present, site is relatively isolated from known VELB occurrences and riparian vegetation), the decision tree leads to a finding of “Discuss project with Service.”

Accordingly, on September 14, 2021, ENPLAN staff (D. Burk) contacted the Sacramento Fish and Wildlife Office and spoke with Michelle Havens, Sacramento Valley Division Supervisor. Following review of the site-specific data, Ms. Havens concluded that the USFWS will not object to a “no effect” finding by the City of Redding as the CEQA Lead Agency. Written concurrence from the USFWS is not required for a “no effect” finding. However, the Corps of Engineers should be advised of the “no effect” finding when a Department of the Army permit application for fill of wetlands is submitted. No mitigation or further action is warranted with respect to the listed beetle or the on-site elderberry shrubs.

Vernal Pool Branchiopods

Vernal pool fairy shrimp (*Branchinecta lynchi*; FT) and vernal pool tadpole shrimp (*Lepidurus packardii*; FE) are freshwater crustaceans that occur in ephemeral wetland habitats such as vernal pools. These species produce eggs during the wet season; the eggs lay dormant in the soil during dry conditions and hatch once adequate environmental conditions are met (e.g., temperature and inundation). After hatching, their life cycle lasts for approximately six to nine weeks, in which time they reach maturity and reproduce (Helm, 1998). Vernal pool species may move between individual pools or wetlands within a complex due to flood events carrying eggs, or other forms of transfer such as birds, wind, etc. Therefore, these species may be defined as populations within a complex rather than being limited to specific pools (Simovich *et al.*, 1992; King *et al.*, 1996).

As discussed above, the project site contains one degraded vernal pool feature. A study conducted by ENPLAN in 2006/2007 (EcoAnalysts, 2007), identified the presence of *Lepidurus* sp. and *Linderiella* sp. (two genera of vernal pool branchiopods) eggs in soil samples taken from the vernal pool. Although egg characteristics can be used to provide identification only to the genus level, wet-season surveys and supporting data indicate that the species present were the federally listed *Lepidurus packardii* and the non-listed *Linderiella occidentalis*.

Due to the severe degradation of the wetland feature since 2007, as discussed above, the on-site wetland no longer appears to contain suitable habitat for vernal pool branchiopods. Although eggs of these species can remain dormant through extreme conditions and maintain their ability to hatch, given the limited amount of vernal pool vegetation present on the site, it appears unlikely that the wetland holds water for a period of time long enough for vernal pool branchiopods to reach reproductive maturity. Therefore, federally listed vernal pool branchiopods have a very low potential to be present on the project site with its now-normal modified condition.

However, because presence of federally listed species has been previously reported on the project site, a final determination regarding presence/absence can only be made by the Service. **Mitigation Measure 2** calls for completion of consultation prior to site development.

6. NESTING MIGRATORY BIRDS

Under the Migratory Bird Treaty Act (MBTA) of 1918, migratory bird species, their nests, and their eggs are protected from injury or death, and any project-related disturbances during the nesting period. In addition, California Fish and Game Code §3503 and §3503.5 provide regulatory protection to resident and migratory birds and all birds of prey within the State.

No special-status bird species were identified as potentially occurring in the project area; however, given the on-site habitat characteristics, many non-status bird species are expected to be present and may nest within the project site. Project construction has some potential to directly affect nesting birds due to vegetation removal, and could also indirectly affect nesting birds. Indirect effects such as nest abandonment

by adults could occur in response to loud noise levels and other human-induced disturbances during construction. **Mitigation Measure 3** outlines recommended actions to reduce or eliminate direct and indirect effects on nesting birds.

7. NOXIOUS WEEDS

The introduction and spread of noxious weeds during construction activities has the potential to impact natural habitats in surrounding areas. A number of invasive weeds (Cal-IPC, 2021) were observed in the project area during the field survey, including stinkwort, yellow star-thistle, smooth cat's-ear, rose clover, red-stemmed filaree, Klamath weed, soft chess, ripgut brome, and tree-of-heaven. These could be exported to other areas and/or other noxious weeds could be imported into the project area by unwashed construction vehicles. **Mitigation Measure 4** specifies actions to be taken to reduce or eliminate the potential to spread noxious weeds.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1. Conclusions

Based on the records search results, field observations of the study area, and the above analyses, we make the following findings:

- One sensitive natural community is present in the project study area. This feature is a highly degraded vernal pool. Project implementation would result in fill of this 0.35-acre wetland.
- No special-status plant species would be directly or indirectly affected by project implementation.
- Two elderberry shrubs in the project study area have basal stem diameters of sufficient size to potentially support the federally listed valley elderberry longhorn beetle. However, based on site-specific conditions and in accordance with guidance provided in the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle*, the US Fish and Wildlife Service concluded that it would not object to a “no effect” finding by the City of Redding with respect to the listed beetle.
- The federally listed vernal pool tadpole shrimp was documented as being present in the on-site wetland in 2006. Although the wetland feature is now significantly degraded, consultation with the US Fish and Wildlife Service is

warranted prior to initiating work that could affect the listed species or its habitat.

- The project study area has a moderate potential to support nesting birds during the nesting season (February 1 through August 31).
- Project implementation has a moderate potential to result in the introduction and/or spread of noxious weeds.

8.2. Recommended Mitigation Measures

Mitigation Measure 1. Offset the Unavoidable Loss of Wetlands. To offset the loss of on-site wetlands, the applicant shall purchase vernal pool creation credits (or other credit types as may be approved by the resource agencies) at a minimum 1:1 ratio at a Corps- or CDFW-approved mitigation bank, or pay in-lieu fees in accordance with the Corps' In-Lieu Fee Program. Proof of purchase of credits or payment of fees shall be provided to the City of Redding prior to fill or disturbance of the on-site wetland.

Mitigation Measure 2. Avoid or Offset Impacts to the Vernal Pool Tadpole Shrimp. Prior to conducting work within 100 feet of the on-site vernal pool, consultation shall be completed with the US Fish and Wildlife Service, resulting in a determination from the Service as to whether the on-site wetland provides habitat for federally listed vernal pool branchiopods. If the Service determines that the project may affect federally listed vernal pool branchiopods or their habitat, conservation or mitigation measures shall be implemented as required by the Service.

Mitigation Measure 3. Avoid Impacts to Nesting Birds. In order to avoid impacts to nesting birds and/or raptors protected under the federal Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5, including their nests and eggs, one of the following shall be implemented:

- a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31 when birds are not nesting; or
- b. If vegetation removal or ground disturbance activities occur during the nesting season, a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area.

The survey shall take into account acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds.

At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species

observed in the area, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.).

The results of the survey shall be submitted to the California Department of Fish and Wildlife upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

If active nests are found, California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service shall be notified and appropriate actions to comply with the Migratory Bird Treaty Act and California Fish and Game Code §3503 shall be implemented. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

Mitigation Measure 4. Minimize the Potential for Introduction and Spread of Noxious Weeds. The following measures shall be implemented to minimize the potential for the introduction and spread of noxious weeds:

- a. Use only certified weed-free erosion control materials, mulch, and seed.
- b. Limit any import or export of fill material to material that is known to be weed free.
- c. The construction contractor shall thoroughly wash all equipment at a commercial wash facility prior to entering and upon leaving the work site.

9. REFERENCES

Barr, C.B. 1991. The Distribution, Habitat, and Status of the Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* Fisher (Insecta: Coleoptera: Cerambycidae). U.S. Fish and Wildlife Service; Sacramento, California. 134 pp.

California Department of Fish and Wildlife. 2021. California Natural Diversity Database, July 2021 data.

_____. 2020. California Natural Communities List.
<<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline>>.
Accessed July 2021.

- California Native Plant Society (CNPS), Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v9-01 0.0). <<http://www.rareplants.cnps.org>>. Accessed July 2021.
- California Invasive Plant Council (Cal-IPC). 2021. <<https://www.cal-ipc.org/plants/inventory/>>. Accessed July 2021.
- EcoAnalysts, Inc. 2007. Results of Analyses of Soils Samples Collected from the Proposed Airport Road Parcels Project Site, California.
- Halstead, J.A. and J.A. Oldham. 1990. Special Studies Report: Revision of the Nearctic *Desmocerus Audinet-Serville* with Emphasis on the Federally Threatened Valley Elderberry Longhorn Beetle. (Coleoptera: Cerambycidae). Kings River Conservation District Research Report No. 90-002. 47 pp. + Figures.
- Helm, B. 1998. Biogeography of Eight Large Branchiopods Endemic to California. Pages 124- 139. In Ecology, Conservation, and Management of Vernal Pool Ecosystems – Proceedings from a 1996 Conference, C. W. Witham, E.T. Bauder, D. Belk, W.R. Ferren, Jr., and R. Ornduff, eds. California Native Plant Society, Sacramento, California. 285 pp.
- King, J.L., M.A. Simovich, R.C. Brusca. 1996. Species Richness, Endemism and Ecology of Crustacean Assemblages in Northern California Vernal Pools. *Hydrobiologia* 328:85-116.
- Simovich, M., R. Brusca, and J. King. 1992. Invertebrate Survey 1991-1993 PGT-PGE/Bechtel Pipeline Expansion Project. University of San Diego, Alcala Park, San Diego, California.
- United States Fish and Wildlife Service (USFWS). 2021. Official Species List. July 2021.
- _____. National Wetlands Inventory (NWI) Wetlands Mapper, accessed June 2021. <<http://www.fws.gov/wetlands/Data/Mapper.html>>.
- _____. 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). U.S. Fish and Wildlife Service; Sacramento, California. 28 pp.
- United States Department of Agriculture, Natural Resources Conservation Service. 2021. Web Soil Survey. <<https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>>. Accessed July 2021.
- United States Geological Survey (USGS). 1998. Enterprise, California, 7.5-minute topographic map.
- Zeiner, D.C., W.F.Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California.

APPENDIX A

RESUMES

Donald Burk, Environmental Services Manager

Allison Loveless, Wildlife Biologist

DONALD M. BURK
Environmental Services Manager

Education

M.S. Botany
California State University, Chico

B.A. Chemistry and Biological Sciences
California State University, Chico

Professional Affiliations and Certifications

Society of Wetland Scientists
California Botanical Society
California Native Plant Society
Association of Environmental Professionals

Donald Burk has an in-depth background in a broad spectrum of environmental studies. His academic background includes graduate studies in environmental analysis methodology, biological sciences, and community planning. He has continued his professional development through completion of specialized courses in wetland delineation; wetland impacts and mitigations; vernal pool restoration and creation; noise assessments; Surface Mining and Reclamation Act regulations; erosion control practices; and hazardous materials evaluation and remediation. As environmental services manager with ENPLAN, Mr. Burk is instrumental in the preparation of environmental documents such as site assessment reports, environmental impact reports, biological studies, and noise evaluations. His responsibilities include project team management, key decision-making, coordination with applicable agencies, and final review of environmental documents. Having worked in the environmental consulting field since 1981, Mr. Burk has the skills and experience to manage studies to achieve reliable data and concise, effective documentation in a timely and cost-efficient manner.

While attending CSU, Chico, Mr. Burk was recognized as “Outstanding Organic Chemist of the Year,” received an award of merit from the American Botanical Society, and delivered the valedictory address for the School of Natural Sciences. His Master’s thesis was granted the first annual “Outstanding Thesis Award” by CSU, Chico.

Representative Experience

- *CEQA/NEPA Compliance.* Prepared environmental impact reports, environmental impact statements, and other environmental compliance documentation for a multitude of projects, including 516- and 1,244-acre industrial parks; public facilities projects including several sewage treatment plants, a 90-foot-high earthen dam and 15-acre reservoir, a 6-mile-long, 8-lane roadway, other new road corridors, and water supply projects; shopping centers and highway commercial developments; a 10,000-seat church; a 475-acre recreation ranch; ski areas; a softball park; four new schools; a 1-million cubic yard reservoir dredging project; numerous residential developments and many other projects.

- *Environmental Site Assessments.* Managed preparation of Phase I, II and III site investigations for a number of commercial and industrial facilities. Investigations have addressed wood-products manufacturing facilities, a major clothing manufacturing operation, dry cleaners, a medical clinic, ranches, a regional transmission transformer site, automotive shops and service stations, abandoned sewage treatment ponds, office buildings, shopping centers, and other uses.
- *Biological Studies.* Managed preparation of technical field studies, including wildlife and botanical studies for a 1,016-acre site in Sacramento County; fisheries, aquatic macroinvertebrate, and riparian vegetation studies for a 38-mile reach of the North Fork Feather River; botanical surveys for 175-mile and 265-mile underground telephone cable corridors; botanical surveys for over 2,400 acres on Mount Shasta proposed for ski area development; biological surveys for a 200-acre park site; spotted owl surveys; vernal pool fairy/tadpole shrimp and valley elderberry longhorn beetle assessments; and numerous other projects.
- *Wetland Delineations.* Managed preparation of wetland delineations and/or U.S. Army Corps of Engineers permit applications for a 1,016-acre site east of Sacramento, a 200-acre site in north Redding, a 580-acre site in the City of Weed, a 100-acre site near the Redding Municipal Airport, a transmission corridor project in east Redding, a 78-acre industrial parcel in the City of Benicia, and many other parcels throughout northern California.
- *Noise Studies.* Prepared noise studies for a variety of projects, including numerous traffic corridors; large industrial facilities such as a co-generation plant, food processing plant, and a regional scrap metal recycling facility; recreation facilities such as a new ski area and a community sports complex; many new residential developments; schools; and other facilities. Testified as an expert witness in a court case involving noise generated by electric- and diesel-powered water well pumps.
- *Reclamation Plans/Stream Restoration Projects.* Prepared mine reclamation plans and/or technical studies for projects including an aggregate pit adjacent to Cow Creek in Shasta County, a pumice quarry in Napa County, and underground gold mines in Shasta and Trinity Counties. Managed preparation of a stream restoration project for a reach of the Susan River, which involved hydraulic analysis, preparation of an earth-work plan, supervision of all on-site construction activities, preparation of a revegetation/erosion control plan and supervision of its implementation, and preparation of a monitoring program. Developed a plan, and obtained all agency approvals, for creation of 10 acres of riparian forest habitat along the Sacramento River to mitigate losses on a nearby parcel.

Publications

Burk, Donald et al. (29 contributing authors). Technical Editors Gary Nakamura, UC Cooperative Extension Service and Julie Kierstead Nelson, USDA Forest Service, Shasta-Trinity National Forest. 2001. *Illustrated Field Guide to Selected Rare Plants of Northern California*. University of California, Agriculture and Natural Resources. Publication 3395.

Luper, J. and D. Burk. 2014. Noteworthy collections: *Froelichia gracilis* (Amaranthaceae). *Madrono* 61(4):413-413.

ALLISON LOVELESS

Environmental Scientist/Wildlife Biologist

Education

M.S. Zoology
Oklahoma State University, Stillwater

B.S. Geography (Environmental Studies)
University of California, Los Angeles

Prior to her career in the environmental services sector, Allison Loveless conducted field surveys for listed plants species with Sierra Pacific Industries, conducted morphological and geospatial research on mammals while at Oklahoma State University, and participated in genetic research on gray wolves during an internship with the Wyoming Fish and Game Wildlife Forensic Laboratory. Additionally, Allison has experience conducting genetic and morphological based research on isolated reptile and amphibian species, and in developing range predictions and assessments using both field and environmental modeling techniques.

Allison now has over three years of experience working in environmental services throughout northern California. Her projects have included biological studies such as endangered species surveys and nesting bird surveys, delivering on-site environmental trainings and monitoring, as well as delivering products by preparation of technical environmental documents including environmental impact reports, biological study reports, wetland delineations, biological assessments, and figure and map creation.

Representative Experience

- *Biological Studies.* Experience conducting habitat assessments, general wildlife surveys with an emphasis on species of concern, and pre-construction nesting bird surveys.
- *Wildlife Surveys.* Performed habitat assessments and general wildlife surveys, with an emphasis on species of concern. Such work has typically included pre-field review of available records including the California Natural Diversity Data Base (CNDDB), the U.S. Fish and Wildlife Service IPAC reports, and other available data sources.
- *Wetland Studies.* Performed wetland delineations and report preparation in compliance with the standards as defined by the U.S. Army Corps of Engineers.
- *GIS Mapping and Data Collection.* Skilled field data collection using GPS and Trimble units, map construction, managing, querying, and analyzing data within ArcGIS.
- *CEQA/NEPA Documentation.* Responsible for drafting environmental compliance documentation including biological study reports, natural environment studies, and biological sections of environmental impact reports and environmental impact statements.

Publications

Loveless, A.M. and K. McBee. 2017. *Nyctimene robinsoni* (Chiroptera: Pteropodidae). *Mammalian Species* 49 (949): 68-75.

Loveless, A.M., M. Papeş, D.M. Reding, and P.M. Kapfer. 2016. *Combining ecological niche modeling and morphology to assess the range-wide population genetic structure of bobcats (Lynx rufus)*. *The Biological Journal of the Linnean Society* 117: 842-857.

APPENDIX B

REPRESENTATIVE PHOTOGRAPHS



Vernal Pool. View to the south, April 15, 2021



Vernal Pool. View to the south, July 21, 2021



Large elderberry shrub (Elderberry 1) located on the northern edge of the site, July 22, 2021



Oak/Pine Woodland. View to the east, April 15, 2021



Oak/Pine Woodland. View to the north, August 20, 2021.



Elderberry 2 (in foreground). September 6, 2021.



Oak/Pine Woodland at southern end of sewer corridor. View to the north, November 5, 2021.



Ruderal vegetation in northern portion of sewer line corridor. View to north, November 5, 2021.

APPENDIX C

SPECIES LISTS AND POTENTIAL TO OCCUR

U.S. Fish and Wildlife Service List of Threatened and Endangered Species

Table 1. CNDDDB Report Summary

Table 2: California Native Plant Society Inventory of Rare and Endangered Plants

Table 3. Potential for Special-Status Species to Occur on the Project Site



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:

July 22, 2021

Consultation Code: 08ESMF00-2021-SLI-2379

Event Code: 08ESMF00-2021-E-06850

Project Name: Airport Road Distribution Center Project

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

To Whom It May Concern:

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

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

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

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

[http://](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html)

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

Attachment(s):

- Official Species List
-

Official Species List

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

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-2379

Event Code: 08ESMF00-2021-E-06850

Project Name: Airport Road Distribution Center Project

Project Type: DEVELOPMENT

Project Description: Installation of a distribution center is proposed for development on Assessor Parcel Numbers 054-200-002-000 and 054-210-006-000 on Airport Road in the City of Redding.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.5279631,-122.2992054,17z>



Counties: Shasta County, California

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Birds

NAME	STATUS
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

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

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Slender Orcutt Grass <i>Orcuttia tenuis</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

Critical habitats

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

TABLE 1
Rarefind (CNDDDB) Report Summary
 Five-Mile Radius around Project Site
 July 2021

Listed Element	Quadrangle ¹							Status ²
	BE	BF	CO	EN	OL	PC	RE	
ANIMALS								
Bald eagle			•					FD, SE
Bank swallow			•	•				ST
California linderiella*			•	•				None
Chinook salmon – Central Valley spring-run ESU					•			ST, FT
Chinook salmon – Sacramento River winter-run ESU	•							SE, FE
Great egret							•	None
Osprey			•					WL
Spotted bat						•		SSSC
Steelhead – Central Valley DPS		•			•	•		FT
Tricolored blackbird			•				•	ST, SSSC
Valley elderberry longhorn beetle			•	•				FT
Vernal pool fairy shrimp		•	•	•		•		FT
Vernal pool tadpole shrimp*		•	•	•		•		FE
Western pearlshell				•				None
Western spadefoot		•	•	•				SSSC
PLANTS								
Boggs Lake hedge-hyssop						•		SE, 1B.2
Henderson’s bent grass		•		•				3.2
Legenere		•		•				1B.1
Red Bluff dwarf rush		•	•	•				1B.1
Silky cryptantha		•	•	•		•		1B.2
Slender Orcutt grass		•	•	•		•		ST, FT, 1B.1
Watershield		•						2B.3
Woolly meadowfoam						•		4.2
NATURAL COMMUNITIES								
Great Valley Cottonwood Riparian Forest			•	•				G2, S2.1
Great Valley Valley Oak Riparian Forest			•	•				G1, S1.1
Great Valley Willow Shrub			•	•				G3, S3.2

Highlighting denotes the quadrangle in which the project site is located.

**Species reported on the project site.*

¹QUADRANGLE CODE

BE= Bend BF= Balls Ferry CO= Cottonwood
EN= Enterprise OL= Olinda PC= Palo Cedro RE= Redding

²STATUS CODES

Federal

FE Federally Listed – Endangered
FT Federally Listed – Threatened
FC Federal Candidate Species
FP Federal Proposed Species
FD Federally Delisted
FSC Federal Species of Concern

State

SFP State Fully Protected
SR State Rare
SE State Listed – Endangered
ST State Listed – Threatened
SC State Candidate Species
SD State Delisted
SSSC State Species of Special Concern
WL Watch List

Rare Plant Rank

1A Plants Presumed Extinct in California
1B Plants Rare, Threatened or Endangered in California and Elsewhere
2 Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
3 Plants About Which We Need More Information (*A Review List*)
 (generally not considered special-status, unless unusual circumstances warrant)
4 Plants of Limited Distribution (*A Watch List*)
 (generally not considered special-status, unless unusual circumstances warrant)

Rare Plant Threat Ranks

0.1 Seriously Threatened in California
0.2 Fairly Threatened in California
0.3 Not Very Threatened in California

Natural Communities

Global Rarity

G1 Critically Imperiled
G2 Imperiled
G3 Vulnerable

California Rarity

S1 Critically Imperiled
S2 Imperiled
S3 Vulnerable

Natural Community Threat Ranks

0.1 Seriously Threatened in California
0.2 Moderately Threatened in California

TABLE 2
California Native Plant Society
Inventory of Rare and Endangered Plants
U.S. Geological Survey's Enterprise 7.5-minute Quadrangle

Common Name	Scientific Name	CA Rare Plant Rank	Blooming Period	State Listing Status	Federal Listing Status
Dubious pea	<i>Lathyrus sulphureus</i> var. <i>argillaceus</i>	3	Mar-Jun	None	None
Henderson's bent grass	<i>Agrostis hendersonii</i>	3.2	Apr-May	None	None
Legenere	<i>Legenere limosa</i>	1B.1	Apr-Jun	None	None
Red Bluff dwarf rush	<i>Juncus leiostermus</i> var. <i>leiostermus</i>	1B.1	Mar-Jun	None	None
Redding checkerbloom	<i>Sidalcea celata</i>	3	Apr-Aug	None	None
Silky cryptantha	<i>Cryptantha crinita</i>	1B.2	Apr-May	None	None
Slender Orcutt grass	<i>Orcuttia tenuis</i>	1B.1	May-Sep (Oct)	CE	FT
Tripod buckwheat	<i>Eriogonum tripodum</i>	4.2	May-Jul	None	None

Rare Plant Rank	
1A	Plants Presumed Extinct in California and either Rare or Extinct Elsewhere
1B	Plants Rare, Threatened or Endangered in California and Elsewhere
2A	Plants Presumed Extinct in California but Common Elsewhere
2B	Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
3	Review List: Plants About Which More Information is Needed
4	Watch List: Plants of Limited Distribution
Rare Plant Threat Rank	
0.1	Seriously Threatened in California
0.2	Moderately Threatened in California
0.3	Not Very Threatened in California

Source: California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). <http://www.rareplants.cnps.org>. Accessed June 22, 2021.

TABLE 3
Potential for Special-Status Species Identified by the National Marine Fisheries Service, USFWS,
and CNDDDB to Occur on the Project Site
July 2021

COMMON NAME SCIENTIFIC NAME	STATUS ¹	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
PLANTS						
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	SE, 1B.2	Boggs Lake hedge-hyssop occurs in marshes, swamps, and vernal pools. The species is reported from sea level to 7,800 feet in elevation. The flowering period is April through August.	Yes	No	No	Degraded vernal pool habitat is present in the western portion of the study area. However, Boggs Lake hedge-hyssop was not observed during the botanical survey and is not expected to be present.
Legenere <i>Legenere limosa</i>	1B.1	Legenere is an annual herb that occurs in moist or wet soil associated with vernal pools, vernal marshes, lakes, ponds and sloughs up to 3,000 feet in elevation. The flowering period is April through June.	Yes	No	No	Degraded vernal pool habitat is present in the western portion of the study area. However, legenere was not observed during the botanical survey and is not expected to be present.
Red Bluff dwarf rush <i>Juncus leiospermus</i> var. <i>leiospermus</i>	1B.1	Red Bluff dwarf rush is an annual herb that typically occurs along the edges of vernal pools and vernal drainages, or on clay-rich terrace soils. The species is found between 100 and 3,400 feet in elevation. The flowering period is March through May.	Yes	No	No	Degraded vernal pool habitat is present in the western portion of the study area. However, Red Bluff dwarf rush was not observed during the botanical survey and is not expected to be present.
Silky cryptantha <i>Cryptantha crinita</i>	1B.2	Silky cryptantha is an annual herb that occurs along low-gradient seasonal streams with broad floodplains, usually on the valley floor, where it is found on gravelly or cobbly substrates. The species also occurs in vernal moist uplands. Less frequently, it occurs along perennial streams, including the Sacramento River. The species is found between 200 and 4,000 feet in elevation. The flowering period is April and May.	No	No	No	No potentially suitable habitats for silky cryptantha are present in the project site. Silky cryptantha was not observed during the botanical survey and is not expected to be present.
Slender Orcutt grass <i>Orcuttia tenuis</i>	FT, SE, 1B.1	Slender Orcutt occurs in vernal pools and similar habitats, occasionally on reservoir edges or stream floodplains, on clay soils with seasonal inundation in valley grassland to coniferous forest or sagebrush scrub. The species is found up to 5,800 feet in elevation. The flowering period is May through September.	Yes	No	No	Degraded vernal pool habitat is present in the western portion of the study area. However, Slender Orcutt grass was not observed during the botanical survey and is not expected to be present.

TABLE 3
Potential for Special-Status Species Identified by the National Marine Fisheries Service, USFWS,
and CNDDDB to Occur on the Project Site
July 2021

COMMON NAME SCIENTIFIC NAME	STATUS ¹	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Watershield <i>Brasenia schreberi</i>	2B.3	Watershield, a perennial rhizomatous herb, occurs in ponds, marshes and swamps. The species occurs between sea level and 7,300 feet in elevation and blooms between June and September.	No	No	No	No ponds, marshes or swamps are present within the study area. Watershield was not observed during the botanical surveys and is not expected to be present.
ARTHROPODS						
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	FE	Conservancy fairy shrimp inhabit large, cool-water vernal pools with moderately turbid water.	Yes	No	No	The study area is outside of the known range of conservancy fairy shrimp; therefore, this species would not be present on the project site.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	Vernal pool fairy shrimp inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump or basalt-flow depression pools.	Yes	No	No	Although vernal pool habitat is present in the western portion of the study area it is degraded and not suitable habitat for vernal pool fairy shrimp. Species presence was not documented during the 2006/2007 vernal pool branchiopod surveys.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE	Vernal pool tadpole shrimp occur in vernal pools in California's Central Valley and in the surrounding foothills.	Yes	No	No	Vernal pool tadpole shrimp were documented in the on-site vernal pool in 2006. Due to severe habitat degradation since then, the species is not expected to be present.
BIRDS						
Bald eagle <i>Haliaeetus leucocephalus</i>	FD, SE, SFP	Bald eagles nest in large, old-growth trees or snags in mixed stands near open bodies of water. Adults tend to use the same breeding areas year after year and often use the same nest, though a breeding area may include one or more alternate nests. Bald eagles do not usually begin nesting if human disturbance is evident. In California, the bald eagle nesting season is from February through July.	No	No	No	No large, old-growth trees or other suitable nesting habitat are present within the study area. Additionally, bald eagles were not observed during the field survey and are not expected to be present.

TABLE 3
Potential for Special-Status Species Identified by the National Marine Fisheries Service, USFWS,
and CNDDDB to Occur on the Project Site
July 2021

COMMON NAME SCIENTIFIC NAME	STATUS ¹	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Bank swallow <i>Riparia riparia</i>	ST	Bank swallows require vertical banks and cliffs with fine-textured or sandy soils near streams, rivers, ponds, lakes, or the ocean for nesting.	No	No	No	No vertical banks or cliffs are present in the project area. Bank swallows were not observed during the field surveys and are not expected to nest in the project area.
Northern spotted owl <i>Strix occidentalis caurina</i>	FT, SC, SSSC	Northern spotted owls inhabit dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir forests from sea level to approximately 7,600 feet in elevation. Northern spotted owls typically nest in tree cavities, the broken tops of trees, or in snags.	No	No	No	No old-growth forest or potentially suitable nesting trees/snags are present in the project area or vicinity. The spotted owl is thus not expected to nest in the project area.
Osprey <i>Pandion haliaetus</i>	WL	Ospreys nest on large decadent trees or structures such as powerline towers, buildings, and bridges near large fish-bearing water bodies. Ospreys are primarily associated with pine and mixed-conifer habitats, although urban or suburban nests are not unusual.	No	No	No	No potentially suitable nesting habitat is present in the project area for the osprey, and no ospreys or osprey nests were observed during the wildlife survey.
Tricolored blackbird <i>Agelaius tricolor</i>	ST, SSSC	Tricolored blackbirds are colonial nesters and generally nest near open water in dense stands of cattails or tules, although they can also nest in thickets of willow, blackberry, wild rose, or tall herbs. Nesting areas must be large enough to support a minimum colony of about 50 pairs. The species forages in open habitats, such as farm fields, pastures, rangelands, cattle pens, and large lawns.	No	No	No	No large expanses of cattails, tules, or thickets of willows/ blackberry/rose occur in the project area. No tricolored blackbirds or tricolored blackbird nests were observed during the wildlife survey.
INSECTS						
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	The valley elderberry longhorn beetle is found only in association with elderberry shrubs (<i>Sambucus</i> spp.). The species is generally found below 500 feet in elevation. The species is known to occur in the Central Valley and foothills.	Yes	No	No	Elderberry shrubs were observed during the botanical survey. However, given site-specific environmental characteristics, the valley elderberry longhorn beetle is not expected to be present.

TABLE 3
Potential for Special-Status Species Identified by the National Marine Fisheries Service, USFWS,
and CNDDDB to Occur on the Project Site
July 2021

COMMON NAME SCIENTIFIC NAME	STATUS ¹	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
AMPHIBIANS						
Western spadefoot <i>Spea hammondi</i>	SSSC	Western spadefoots breed from January through May in shallow, temporary pools that persist for at least three weeks. Breeding pools are generally absent of bullfrogs, fish, and crayfish, which are known to prey on tadpoles. After breeding, adults seek shelter underground either by excavating a subterranean burrow or retreating into a small mammal burrow nearby. Tadpoles transform within three weeks. Following transformation, juveniles leave breeding pools and seek shelter underground. Western spadefoots remain underground until breeding pools form the following spring.	Yes	No	No	Although vernal pool habitat is present in the western portion of the study area it is degraded and not suitable habitat for western spadefoot. The western spadefoot was not observed during the field survey and is not expected to be present.
FISH						
Chinook salmon – Central Valley spring-run ESU <i>Oncorhynchus tshawytscha</i> pop. 6	FT, ST	Central Valley spring-run Chinook salmon enter the Sacramento-San Joaquin Delta in early January, and enter natal streams between mid-March and mid-October. Upon entering fresh water, spring-run are sexually immature and must hold in cold water habitats through summer to mature. Typically, spring-run utilize mid- to high-elevation streams that provide sufficient flow, water temperature, cover, and pool depth to allow over-summering. Spawning occurs between August and mid-October.	No	No	No	No suitable habitat for Chinook salmon-Central Valley spring-run ESU is present in the project site. The species would thus not be present in the project site.

TABLE 3
Potential for Special-Status Species Identified by the National Marine Fisheries Service, USFWS,
and CNDDDB to Occur on the Project Site
July 2021

COMMON NAME SCIENTIFIC NAME	STATUS ¹	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Chinook salmon-Sacramento River winter-run ESU <i>Oncorhynchus tshawytscha</i> Pop. 7	FE, SE	Sacramento River winter-run Chinook salmon spawn almost exclusively in the Sacramento River, and not in tributary streams. Spawning generally occurs in swift, relatively shallow riffles or along the edges of fast runs where there is an abundance of loose gravel. Juveniles may rear in tributaries of the Sacramento River.	No	No	No	No suitable habitat for Chinook salmon-Sacramento River winter-run ESU is present in the project site. The species would thus not be present in the project site.
Delta smelt <i>Hypomesus transpacificus</i>	FT	Delta smelt primarily inhabit the brackish waters of Sacramento-San Joaquin River Delta. Most spawning occurs in backwater sloughs and channel edgewaters.	No	No	No	The project site is well outside the range of the Delta smelt. Delta smelt would thus not be present.
Steelhead-Central Valley DPS <i>Oncorhynchus mykiss irideus</i>	FT	Central Valley steelhead inhabit cold-water tributaries of the Sacramento and San Joaquin rivers. Adults begin their upstream spawning migration between August and March. Spawning occurs between December and April. Spawning habitat is characterized by loose, clean gravel in cold, swiftly flowing, shallow water.	No	No	No	No suitable habitat occurs in the project site for steelhead-Central Valley DPS. The steelhead-Central Valley DPS would thus not be present.
MAMMALS						
Spotted bat <i>Euderma maculatum</i>	SSSC	The spotted bat is very rare and mostly found in the foothills, mountains, and desert regions of Southern California. However, little is known about the California populations and habitats occupied range from arid deserts to grasslands and mixed conifer forests. Elevation ranges from below sea level to above 3,000 meters. The spotted bat prefers to roost in rock crevices on cliffs and in caves and buildings.	No	No	No	No suitable day-roosting habitat occurs in the project site for the spotted bat. The spotted bat would thus not roost on the site.

¹ Status Codes

Federal:

FE Federally Listed – Endangered
FT Federally Listed – Threatened
FC Federal Candidate Species
FP Federal Proposed Species
FD Federal Delisted

State:

SFP State Fully Protected
SR State Rare
SE State Listed - Endangered
ST State Listed - Threatened
SC State Candidate Species
SSSC State Species of Special Concern

WL Watch List

Rare Plant Rank

1A Plants Presumed Extinct in California
1B Plants Rare, Threatened or Endangered in California and Elsewhere
2A Presumed extirpated in California, but more common elsewhere
2B Rare or Endangered in California, but more common elsewhere

Rare Plant Threat Rank

0.1 Seriously Threatened in California
0.2 Fairly Threatened in California
0.3 Not Very Threatened in California

APPENDIX D

List of Vascular Plants Observed During the Botanical Survey

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Airport Road Distribution Center

April 15, August 20, and November 5, 2021

Adoxaceae

Sambucus nigra subsp. *caerulea*

Anacardiaceae

Toxicodendron diversilobum

Apiaceae

Eryngium castrense
Sanicula crassicaulis
Torilis arvensis

Asteraceae

Centaurea solstitialis
Centromadia fitchii
Cichorium intybus
Dittrichia graveolens
Erigeron canadensis
Grindelia camporum
Hesperis acaulis
Hypochaeris glabra
Leontodon saxatilis
Pseudognaphalium beneolens
Senecio vulgaris
Soliva sessilis

Boraginaceae

Amsinckia lycopsoides
Amsinckia sp.
Eriodictyon californicum
Heliotropium europaeum
Plagiobothrys canescens
Plagiobothrys stipitatus var. *micranthus*

Brassicaceae

Arabidopsis thaliana
Cardamine oligosperma
Hirschfeldia incana
Lepidium nitidum
Lepidium strictum
Raphanus raphanistrum

Caryophyllaceae

Cerastium glomeratum
Minuartia californica
Petrorhagia dubia
Scleranthus annuus subsp. *annuus*

Ericaceae

Arctostaphylos manzanita
Arctostaphylos viscida

Muskroot Family

Blue elderberry

Sumac Family

Poison-oak

Carrot Family

Coyote thistle
Pacific sanicle
Field hedge-parsley

Sunflower Family

Yellow star thistle
Fitch's spikeweed
Chicory
Stinkwort
Canadian horseweed
Valley gumplant
Dwarf-cudweed
Smooth cat's ear
Hawkbit
Fragrant cudweed
Old-man-in-the-Spring
Lawn burweed

Borage Family

Tarweed fiddleneck
Fiddleneck
Yerba santa
European pulsey
Valley popcorn-flower
Small popcorn-flower

Mustard Family

Thalecress
Few-seeded bittercress
Shortpod mustard
Shining peppergrass
Peppergrass
Jointed charlock

Pink Family

Mouse-eared chickweed
California sandwort
Grass pink
German knotgrass

Heath Family

Common manzanita
White-leaf manzanita

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Airport Road Distribution Center

Euphorbiaceae

Croton setigerus

Fabaceae

Acemispia parviflorus

Lathyrus angulatus

Lupinus bicolor

Trifolium dubium

Trifolium glomeratum

Trifolium hirtum

Vicia villosa

Fagaceae

Quercus douglasii

Quercus kelloggii

Quercus lobata

Quercus wislizeni

Geraniaceae

Erodium botrys

Erodium cicutarium

Erodium moschatum

Geranium molle

Hypericaceae

Hypericum perforatum

Juncaceae

Juncus bufonius

Juncus phaeocephalus var. *paniculatus*

Lamiaceae

Trichostema lanceolatum

Lythraceae

Lythrum hyssopifolia

Montiaceae

Claytonia parviflora

Moraceae

Ficus carica

Oleaceae

Olea europaea

Orobanchaceae

Castilleja attenuata

Spurge Family

Dove weed

Legume Family

Miniature lotus

Angular-seeded pea

Bicolored lupine

Little hop clover

Sessile-headed clover

Rose clover

Winter vetch

Oak Family

Blue oak

California black oak

Valley oak

Interior live oak

Geranium Family

Long-beaked filaree

Red-stemmed filaree

White-stemmed filaree

Dove's-foot geranium

St. John's-wort Family

Klamath weed

Rush Family

Toad rush

Panicled rush

Mint Family

Vinegar weed

Loosestrife Family

Hyssop loosestrife

Miner's Lettuce Family

Small-flowered miner's lettuce

Mulberry Family

Common fig

Olive Family

Olive

Broom-rape Family

Valley tassels

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Airport Road Distribution Center

Pinaceae

Pinus ponderosa
Pinus sabiniana

Pine Family

Ponderosa pine
Grey pine

Plantaginaceae

Gratiola ebracteata
Plantago erecta
Veronica peregrina subsp. *xalapensis*

Plantain Family

Hedge hyssop
Hooker's plantain
Purslane speedwell

Poaceae

Aira caryophyllea
Anthoxanthum aristatum
Avena barbata
Briza maxima
Bromus diandrus
Bromus madritensis subsp. *rubens*
Cynodon dactylon
Cynosurus echinatus
Deschampsia danthonioides
Elymus caput-medusae
Festuca myuros
Festuca perennis
Hordeum marinum subsp. *gussoneanum*
Poa annua
Poa bulbosa
Polypogon maritimus
Sorghum halepense

Grass Family

Silver hairgrass
Vernal grass
Slender wild oats
Big quaking grass
Ripgut grass
Red brome
Bermuda grass
Hedgehog dogtail
Annual hairgrass
Medusahead
Foxtail fescue
Annual ryegrass
Mediterranean barley
Annual bluegrass
Bulbous bluegrass
Mediterranean beardgrass
Johnson grass

Polemoniaceae

Navarretia leucocephala

Phlox Family

White-flowered navarretia

Polygonaceae

Rumex crispus

Buckwheat Family

Curly dock

Ranunculaceae

Ranunculus hebecarpus

Buttercup Family

Pubescent-fruited buttercup

Rosaceae

Aphanes occidentalis

Rose Family

Western ladies-mantle

Rubiaceae

Galium aparine
Galium parisiense

Madder Family

Cleavers
Wall bedstraw

Scrophulariaceae

Verbascum blattaria

Snapdragon Family

Moth mullein

Simaroubaceae

Ailanthus altissima

Quassia Family

Tree of heaven

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Airport Road Distribution Center

Themidaceae

Dichelostemma multiflorum

Vitaceae

Vitis californica

Zygophyllaceae

Tribulus terrestris

Brodiaea Family

Round-toothed ookow

Grape Family

Wild grape

Caltrop Family

Puncture vine