Appendix C

Biological Resources

C-1 Biological Resources Technical Report

C-2 Biological Resources Technical Report, Addendum No. 1

C-3 Biological Resources Technical Report, Addendum No. 2

C-4 Wetland Delineation and Jurisdictional Determination Report

C-5 Gap Area Survey Results

C-6 Special-Status Plants

C-7 Special-Status Wildlife

C-8 Avian and Bat Survey Results and Wind Turbine Siting Process Description

C-9 Pre-Construction Botanical Surveys

Appendix C-1

Biological Resources Technical Report

STRAUSS WIND ENERGY PROJECT

Biological Resources Technical Report

Prepared for:

Strauss Wind, LLC
c/o BayWa r.e. Wind LLC
5901 Priestly Drive, Suite 300
Carlsbad, CA 92008

For Submittal to:
County of Santa Barbara
Energy Division
123 E. Anapamu Street
Santa Barbara, CA 93101

Prepared by:

Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, Ca 91107

March 7, 2018

SECTION ES
EXECUTIVE SUMMARY

The Strauss Wind Energy Project (Proposed Project) has the potential to result in significant impacts to biological resources related to five of the six thresholds articulated in Appendix G of the California Environmental Quality Act (CEQA) Guidelines: federally or State-listed rare, threatened, and endangered species; State-designated sensitive plant communities, including riparian habitats; federally protected wetlands; wildlife movement and migration corridors; and potential conflicts with local policies and ordinances. This report also considers impacts to biological resources due to the transmission line corridor associated with the Proposed Project. Through the implementation of Mitigation Measures BIO-1 through BIO-14, the effects would be reduced to below the level of significance, or provide compensation for any significant impacts.

SPECIAL STATUS SPECIES

A total of 184 special status species were identified as potentially occurring on the Proposed Project site based on database searches and literature review. Of these, 26 are listed or are candidates for listing as endangered or threatened pursuant to the federal Endangered Species Act (FESA) or California ESA (CESA), including 12 plant species, 2 invertebrates, 3 fish, 2 reptiles and amphibians, and 7 birds. Three (3) listed or candidate species were observed at the Proposed Project site: Gaviota tarplant (*Deinandra increscens* ssp. *villosa*), El Segundo blue butterfly (*Euphilotes battoides allyni*), and tricolored blackbird (*Agelaius tricolor*). Potentially suitable habitat was present for an additional five listed or candidate species. The Proposed Project would also impact critical habitat for Gaviota tarplant and California red-legged frog (*Rana draytonii*).

The remaining 158 species considered are other special status species, but are not listed pursuant to the FESA or CESA. Of these, 146 are afforded special recognition by federal and/or State resource agencies or jurisdictions, or recognized resource conservation organizations, including 89 plant species, 5 invertebrates, 7 reptiles and amphibians, 32 birds, and 13 mammals. Forty (40) of these special status species were observed at the site during field surveys conducted between 2002 and 2018, including 6 plant species, 27 birds, and 7 mammals.

An additional 12 locally important species (8 plants and 4 birds) that are considered locally important within the region by Santa Barbara County, the Santa Barbara Botanical Garden, the La Purisima Audubon Society, Environmental Defense Council, or other local agencies and/or organizations, but are not afforded other special status designations, were identified with potential to be affected by Proposed Project. Ten of these species (six plants and four birds) were observed during the field surveys. Implementation of the conservation and Mitigation Measures BIO-1 through BIO-12, recommended by the applicant, would reduce the level of impacts to federally and State-listed plant and wildlife species and their habitats, State Fully Protected species, and locally important species to below the level of significance.

RIPARIAN HABITATS AND STATE-DESIGNATED SENSITIVE COMMUNITIES

One riparian habitat type and three State-designated sensitive communities were mapped within the Project area and transmission line corridor. A total of 0.36 acre of permanent impacts and 2.19 acres of temporary impacts are anticipated to the riparian habitat type, arroyo willow thickets, due to the Proposed Project. Impacts to riparian areas in the Cañada Honda Creek and its tributaries are anticipated to require a Lake or Streambed Alteration Agreement with the California Department of

Fish and Wildlife (CDFW) under Section 1600 of the State Fish and Game Code. Because of the relatively small area of modification to riparian habitat at the site, through the implementation of Mitigation Measure BIO-11 and the Lake or Streambed Alteration with CDFW, impacts to arroyo willow thickets would be reduced to below the level of significance.

Impacts to three State-designated sensitive communities are anticipated due to the Proposed Project, including tanoak forest, purple needle grass grassland, and sawtooth golden bush scrub. Impacts to tanoak forest are expected to be significant due to the removal of approximately 390 trees in 3.04 acres of temporary disturbance area and 0.53 acre of permanent disturbance area, and would thus require compensatory mitigation, as detailed in Mitigation Measures BIO-10 and BIO-13.

Temporary impacts (0.56 acre) and permanent impacts (0.02 acre) to purple needle grass grassland would occur to isolated fragments of this community, and are anticipated to be reduced to below the level of significance, with mitigation. Temporary and permanent impacts to sawtooth golden bush scrub are expected to be less than significant, with mitigation, because areas of this plant community are distributed throughout the larger mixed disturbed grassland communities at the site, the majority of which is characterized by non-native annual grass species. However, further study would be conducted of the grasslands in the Project area in the development of a Habitat Restoration and Monitoring Plan (Mitigation Measure BIO-10). Therefore, implementation of the conservation and Mitigation Measure BIO-10recommended by the applicant would reduce the level of impacts to purple needle grass grassland and sawtooth golden bush scrub to below the level of significance.

WETLANDS

Federal wetlands and waterways potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction are present within the Project site and transmission line corridor. The total area with the potential to be classified as federal wetlands and waterways within the temporary and permanent impact area is approximately 1.2 acres. Areas subject to the jurisdiction of USACE pursuant to Section 404 of the Federal Clean Water Act could be authorized pursuant to Nationwide Permit for approximately 18 stream crossings within the Project area and 10 crossings in the transmission line corridor. Under the Nationwide Permit, appropriate best management practices, avoidance measures, and mitigation measures would be implemented as detailed in Mitigation Measure BIO-11. Therefore, implementation of Mitigation Measure BIO-11 would reduce the level of impacts to below the level of significance.

MIGRATORY CORRIDORS AND NURSERY SITES

Migratory birds and bats use the area of the Proposed Project to roost and as a stopover during migration. Nesting birds, including those protected by the Migratory Bird Treaty Act (MBTA) also have the potential to be present on the Proposed Project site. Bird and bat species are susceptible to collisions with wind turbines. In addition, there are areas in the project site that are utilized for breeding dens by mammals protected by the Section 4000 of the California Fish and Game Code. The Project plans shall incorporate appropriate avoidance measures for the siting, lighting, and design of wind turbine generators to reduce potential collisions with flying wildlife species. Temporary and permanent Project impact areas are expected to be approximately 6 percent of the entire Project area, and very small relative to the available connected habitat and movement corridors in the region. Therefore, impacts to migratory corridors and breeding sites would be

reduced below a level of significance through the implementation of Mitigation Measures BIO-2, BIO-7 through BIO-9, and BIO-12.

GENERAL PLANS AND POLICIES

The Proposed Project would result in conflicts with local polices or ordinances protecting biological resources. The Proposed Project is expected to result in significant impacts in relation to conflicts with the Conservation Element of the Santa Barbara County Comprehensive Plan, and Oak Tree Protection in the Inland Rural Areas of Santa Barbara County supplement. A native tree inventory survey within the Project impact area documented 301 coast live oaks, 333 tanoaks, 1 arroyo willow, 1 red willow, 1 box elder, 5 pines, 6 toyon trees, 2 canyon live oak, and 1 Monterrey cypress. Mitigation Measure BIO-13 and BIO-14 would provide compensation for significant impacts to native trees.

In addition, the coast live oak woodland community is protected under the County Comprehensive Plan. The Project would result in a total of 5.33 acres of temporary impacts and approximately 0.01 acre of permanent impacts to this community. Because the impacts are distributed throughout this community and are focused on small, individual areas adjacent to pre-existing roads, no significant habitat fragmentation or canopy disruption is expected. As a result, impacts to this community would be less than significant, with the implementation of Mitigation Measure BIO-13.

HABITAT CONSERVATION PLANS AND NATURAL COMMUNITY CONSERVATION PLANS

Habitat Conservation Plans (HCP) and Natural Community Conservation Plans (NCCP) are absent within the Proposed Project site and would not experience impacts from the Proposed Project. Therefore, the Proposed Project would not result in impacts to biological resources in relation to a conflict with an applicable HCP or NCCP.

TABLE OF CONTENTS

SECTIONS *PAGE*

TABLES ***PAGE***

APPENDICES

SECTION 1.0
INTRODUCTION

1.1 PURPOSE OF THE BIOLOGICAL RESOURCES TECHNICAL REPORT

This Biological Resources Technical Report (BRTR) has been prepared to provide information related to the consideration of the Strauss Wind Energy Project (Proposed Project), in relation to biological resources, including a summary of the relevant federal, State, and local statutes and regulations that apply to the biological resources at the Proposed Project site; the potential for the Proposed Project to result in significant impacts related to biological resources; and mitigation measures or alternatives identified by the applicant to avoid, reduce, or provide compensation for the significant impacts of the Proposed Project. The scope of analysis in the BRTR is in accordance with Section IV, Biological Resources, of Appendix G of the California Environmental Quality Act (CEQA) Guidelines[1] and Section 6, Biological Resources, of the Santa Barbara County (County) Environmental Thresholds and Guidelines Manual.[2]

1.2 INTENDED AUDIENCE

As part of the Conditional Use Permit (CUP) application, the applicant is required to submit the technical reports that the County will need to support preparation of an environmental impact report. The BRTR has been developed in an iterative process undertaken with the applicant to use the results of literature review, field surveys, and preliminary analysis to inform the conceptual site plan in a manner that seeks to minimize impacts to the maximum extent practicable, while maintaining a site layout that is viable in relation to other environmental, social, engineering, and economic factors. This BRTR provides the information necessary for the County to review the revised CUP application for this Proposed Project. Construction, operation, and maintenance of wind energy projects has the potential to result in temporary and permanent impacts to biological resources that must be considered by the County, acting in their capacity as a lead agency, pursuant to CEQA. This BRTR may also be considered by responsible and trustee agencies including the U.S. Army Corps of Engineers (USACE), the U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW) in their review of the environmental impact report and possible related permits and agreements.

1.3 DOCUMENT HISTORY

This BRTR incorporates information from the BRTR prepared by Sapphos Environmental, Inc. for the 2009 Lompoc Wind Energy Project. The Final Environmental Impact Report for the 2009 Lompoc Wind Energy Project was certified on February 10, 2009 (2009 FEIR ; Section 7.0, *Figures*: Figure 1.3-1, *Strauss Wind Energy Project Timeline*).[3]

---

1 California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

2 County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. "Environmental Thresholds and Guidelines Manual." Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

3 County of Santa Barbara Planning and Development Department, Energy Division. August 2008. Certified 10 February 2009. Final Environmental Impact Report: Lompoc Wind Energy Project. County EIR No. 06EIR-00000-00004. State Clearinghouse No. 2006071008. Prepared by Aspen Environmental Group, Agoura Hills, CA.

This BRTR includes the findings related to biological resources that were reported in the 2009 FEIR. It also incorporates the results of field investigations completed in support of the former Lompoc Wind Energy Project between 2002 and 2008, and field investigations completed in support of the current Strauss Wind Energy Project between November 2016 and January 2018. Finally, this BRTR has been updated to address comments provided by the County on December 28, 2017,[4] and to maintain consistency with the revised CUP application. In total, 23 documents relating to biological resources that may be affected by the Proposed Project were reviewed and are included in an appendix to this BRTR (Appendix A, *Technical Reports*):

- Acciona Wind Energy USA, LLC. February 2006. Lompoc Wind Energy Project: Biological Resources Report. Prepared by: Thomas Olson Biological Consulting and Katherine Rindlaub Biological Consulting. (Appendix A-1)

- Acciona Wind Energy USA LLC. February 2007. Lompoc Wind Energy Project: Results of Winter Bird Surveys. Prepared by: Thomas Olson Biological Consulting. (Appendix A-2)

- Acciona Wind Energy USA LLC. February 2008. Memorandum for the Record No. 6: Habitat Suitability for the Federally Endangered El Segundo Blue Butterfly. Prepared by: Sapphos Environmental, Inc. (Appendix A-3)

- Acciona Wind Energy USA LLC. February 2008. Memorandum for the Record No. 7: Habitat Suitability for Sensitive Terrestrial Species. Prepared by: Sapphos Environmental, Inc. (Appendix A-4)

- Acciona Wind Energy USA LLC. February 2008. Memorandum for the Record No. 8: Habitat Suitability for Three Listed Aquatic Species. Prepared by: Sapphos Environmental, Inc. (Appendix A-5)

- Acciona Wind Energy USA LLC. January 2008. Memorandum for the Record No. 9: Plant Communities at the Lompoc Wind Energy Project Site, County of Santa Barbara, California. Prepared by: Sapphos Environmental, Inc. (Appendix A-6)

- Acciona Wind Energy USA LLC. February 2008. Memorandum for the Record No. 10: Areas Subject to the Jurisdiction of the U.S. Army Corps of Engineers and the California Department of Fish and Game at the Lompoc Wind Energy Project Site, County of Santa Barbara, California, Prepared by Sapphos Environmental, Inc. (Appendix A-7)

- Aspen Environmental Group. June 2008. Analysis of WSR-88D Data to Assess Nocturnal Bird Migration over the Lompoc Wind Energy Project in California Final Report. Prepared by: Sidney A. Gauthreaux, Jr., Geo-Marine, Inc. (Appendix A-8)

- Pacific Renewable Energy Generation, LLC. June 2008. Final Winter Season Avian Pre-Construction Survey Technical Report. Prepared by: Sapphos Environmental, Inc. (Appendix A-9)

[4] County of Santa Barbara Department of Planning and Development. 28 December 2017. Determination of Application Incompleteness for Strauss Wind Energy Project Conditional Use Permit (Case No. 16CUP-0000-00031).

- Pacific Renewable Energy Generation, LLC. July 2008. Final Avian Spring Migration Pre-Construction Survey Technical Report. Prepared by: Sapphos Environmental, Inc. (Appendix A-10)

- Acciona Wind Energy USA LLC. July 2008. Memorandum for the Record No. 16: Areas Subject to the Jurisdiction of the U.S. Army Corps of Engineers, the California Department of Fish and Game, and the County of Santa Barbara, Lompoc Wind Energy Project Site, County of Santa Barbara, California. Prepared by: Sapphos Environmental, Inc. (Appendix A-11)

- Pacific Renewable Energy Generation, LLC. August 2008. Lompoc Wind Energy Project Final Avian Breeding Season Pre-construction Survey Technical Report. Prepared by: Sapphos Environmental, Inc. (Appendix A-12)

- Acciona Wind Energy USA LLC. November 2008. Memorandum for the Record No. 1: Results of Directed Surveys for the Federally Endangered El Segundo Blue Butterfly in Support of the Lompoc Wind Energy Project (LWEP), County of Santa Barbara, California. Prepared by: Sapphos Environmental, Inc. (Appendix A-13)

- Pacific Renewable Energy Generation, LLC. December 2008. Lompoc Wind Energy Project Final Avian Autumn Migration Pre-construction Survey Technical Report. Prepared by: Sapphos Environmental, Inc. (Appendix A-14)

- Pacific Renewable Energy Generation, LLC. December 2008. Lompoc Wind Energy Project Final Spring and Autumn Bat Migration Pre-construction Survey Technical Report. Prepared by: Sapphos Environmental, Inc. (Appendix A-15)

- Strauss Wind, LLC. December 2016. Memorandum for the Record No. 1: Results for Fall 2016 Bat Surveys, Strauss Wind Energy Project. Prepared by: Sapphos Environmental, Inc. (Appendix A-16)

- Strauss Wind, LLC. December 2016. Memorandum for the Record No. 2: Strauss Wind Energy Project Autumn 2016 Avian Migration Survey. Prepared by: Sapphos Environmental, Inc. (Appendix A-17)

- Strauss Wind, LLC. August 2017. Memorandum for the Record No. 3: Strauss Wind Energy Project Autumn 2016 Aerial Raptor Survey. Prepared by: Sapphos Environmental, Inc. (Appendix A-18)

- Strauss Wind, LLC. August 2017. Memorandum for the Record No. 6: Spring 2017 Botanical Surveys. Prepared by: Sapphos Environmental, Inc. (Appendix A-19)

- Strauss Wind, LLC. August 2017. Memorandum for the Record No. 7: Strauss Wind Energy Project Spring 2017 Avian Migration Survey. Prepared by: Sapphos Environmental, Inc. (Appendix A-20)

- Strauss Wind, LLC. August 2017. Memorandum for the Record No. 8: Spring 2017 Bat Surveys. Prepared by: Sapphos Environmental, Inc. (Appendix A-21)

- Strauss Wind, LLC. November 2017. Inventory of Trees for Strauss Wind Energy Project. Prepared by: LAV/Pinnacle Engineering. (Appendix A-22)

- Strauss Wind, LLC. February 2018. Tree Inventory Data. Prepared by: Sapphos Environmental, Inc. (Appendix A-23)

1.4 WORKING DEFINITIONS

CDFW jurisdiction includes any surface water or groundwater, including saline waters, within the boundaries of the state. This is broadly construed to include all waters within the state's boundaries, whether private or public, including waters in both natural and artificial channels. Such wetlands are subject to Section 1602, subdivision (a), of the California Fish and Game Code, which states that it is unlawful for an entity to "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" without first notifying CDFW of that activity. Thereafter, if CDFW determines and informs the entity that the activity will not substantially adversely affect any existing fish or wildlife resource, the entity may commence the activity without a Lake or Streambed Alteration Agreement [Fish & Game Code, § 1602, subd. (a)(4)(A)].[5]

Common species are species that do not have a special conservation status.

Critical habitat is the protected area used by species listed as threatened or endangered under the federal Endangered Species Act (FESA). As described by FESA, critical habitat is the specific areas within the geographic area, occupied by the species at the time it was listed, that contain the physical or biological features that are essential to the conservation of endangered and threatened species and that may need special management or protection. Critical habitat may also include areas that were not occupied by the species at the time of listing but are essential to its conservation. Critical habitat may be established for species now listed as threatened or endangered where no prior habitat has heretofore been established. Except under special circumstances, critical habitat does not include the entire area which can be occupied by the threatened or endangered species.

Federally listed species are those species provided with special legal protection under the FESA. A federally listed endangered species is defined as a species that is in danger of extinction throughout all or a significant portion of its range. A federally threatened species is one likely to become endangered in the absence of special protection or management efforts provided by the listing.

Federally listed candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities.

Waters of the United States are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions and are designated protected under the federal government through jurisdictional delineation. Wetlands generally include swamps, marshes, bogs, and similar areas.

[5] State Water Resources Control Board. 2009. Section 4.6 Jurisdictional Waters and Streams. Available at: http://www.waterboards.ca.gov/academy/courses/wqstandards/materials/water_us_ca/ca_water042508.pdf

As set forth by section 404 of the Clean Water Act, authorization is required before any activity such as dredging or filling take place in wetlands.

Fully Protected Species are species that have been given the Fully Protected designation by the CDFW. The California Fish and Game Code Section 3511 states that these species "may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock." Thus, Fully Protected species have restrictive legal protections against their take.

Locally important species and communities are species and ecological communities that are monitored by private organizations or local municipal governments. For the purposes of this BRTR, such species and communities include those listed in the County of Santa Barbara Conservation Element[6] as well as those identified as having local significance in the 2008 EIR.[7] Such species and communities are of unusual ecological interest and are in need of special protection. Species listed in the Conservation Element include birds, reptiles, mammals, and plants. Communities described in the Conservation Element consist of ecological communities that are rare and/or endangered, or are the prime examples of those that are common in the County and are not endangered as yet. Many of these locally important species and communities may also be designated as special status by other resource agencies.

Migratory species are species that are normal seasonal visitors to an area. They can be broadly categorized as transients, winter visitors, or summer visitors. Transients migrate through the area to their destination either further north or further south in spring, autumn, and/or winter, but do not breed in the area. Winter visitors are regular migrants which breed to the north of the area and migrate south in the autumn to overwinter in the area. Summer visitors overwinter to the south of the area, and migrate north to the area in the spring to breed in the area during the summer, and return south in the autumn.

The **Proposed Project**, or Project, refers to the Strauss Wind Energy Project proposed in this BRTR.

The **Project area** or **wind farm area** refers to all land within the boundaries of the parcels in which the Project is located (see Section 2.0, Project Description).

Protected trees include native deciduous oak trees located in the County that are 4 inches or greater in diameter at breast height. For the purposes of this BRTR, "protected trees" consist of trees that are described in the Santa Barbara County Deciduous Oak Tree Protection and Regeneration.[8] Such trees are prohibited from being removed from the ground by any means, including, but not limited to, cutting, uprooting, poisoning, or burning (unrelated to controlled burns). Excessive

---

6 County of Santa Barbara, Department of Planning and Development. Adopted 1979; amended August 2010. Conservation Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf

7 County of Santa Barbara, Planning and Development Department. August 2008. *Final Environmental Impact Report: Lompoc Wind Energy Project*. Prepared by: Aspen Environmental Group, Agoura Hills, CA. Available at: http://www.sbcountyplanning.org/energy/projects/Wind/Lompoc_FEIR.htm

8 County of Santa Barbara. 12 August 2016. Santa Barbara County Code of Ordinances, Chapter 35, Article IX: Deciduous Oak Tree Protection And Regeneration. Available at: https://www.municode.com/library/ca/santa_barbara_county/codes/code_of_ordinances?nodeId=CH35ZO_ARTIXDEOATRPRRE

pruning or topping, or severing an oak tree's roots enough to lead to the death of the tree, would also be considered oak tree removal.

State-designated rare species are uncommon, few in number, or not abundant. A rare species is not necessarily endangered or threatened, but may be vulnerable to any exploitation, interference, or disturbance of their habitats. Species may also be common in some areas but rare in others.

Special-status plant species are considered to be of special concern based on (1) federal, State, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special status plants occurring on site. All special status plant species considered in this study have California Rare Plant Rank (CRPR) rankings (1B, 2B, 3, or 4), and are considered to be extirpated, rare, threatened, or endangered in California or are limited distribution Watch List species; and/or they are on the federal endangered species list.

Special-status wildlife species are species that have been afforded special recognition by federal, State, and/or local resource agencies or jurisdictions, or recognized resource conservation organizations. Special status wildlife species include those that are federally or State-listed as endangered, threatened, or candidate species pursuant to the FESA, the California ESA (CESA), or other regulations enforced by a federal or State agency; or those species considered by the scientific community to be rare. For this purposes of this BRTR, special status species include the following designations: federally and State-listed; CDFW California Special Animal (CSA); CDFW Fully Protected (FP); CDFW Species of Special Concern (SSC); CDFW Watch List (WL); U.S. Bureau of Land Management (BLM) Sensitive; U.S. Forest Service (USFS) Sensitive; and USFWS Birds of Conservation Concern (BCC).

State-listed species are those species provided special legal protection under the CESA. A State-listed endangered species is a species that is in danger of extinction throughout all or a significant portion of its range. A State-listed threatened species is one likely to become endangered in the absence of special protection or management efforts provided by the listing.

The CESA prohibits the take of any species of wildlife designated by the California Fish and Game Commission as a candidate species. CDFW may authorize the take of any such species if certain conditions are met. "Candidate" is not defined or addressed in statutes or regulations.

State-designated sensitive plant communities are vegetation communities considered to be of special concern according to the CDFW, and are ranked according to rarity. CDFW assigns a State rarity ranking of S1, S2, S3, S4, S5, or S6 to natural communities, with S1 being the rarest and of most concern and S6 being common and of least concern. CDFW considers natural communities ranked S1, S2, and S3 as being of special concern. Communities ranked as S4, S5, or S6 are not included as habitats of special concern.[9]

For the purposes of this BRTR, the **transmission line corridor** refers to the area surrounding and connecting the transmission poles that are proposed to extend from the northeast corner of the main Project area to the City of Lompoc, as well as the access roads leading to the poles. It does not include the poles or corridor within the main Project boundary (see Section 2.0, Project Description, and Section 4.0, Methods).

[9] California Department of Fish and Wildlife Biogeographic Data Branch. 2017. "Natural Communities - Background Information." Available at: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background

Year-round resident species are species that do not travel out of their home range, or travel only short distances, and do not regularly or seasonally enter or leave the area in a migratory pattern. They are present throughout the year.

SECTION 2.0
PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The Strauss Wind Energy Project (Project) is located near the City of Lompoc in the unincorporated territory of Santa Barbara County, California (Figure 2.1-1, *Regional Vicinity*; Figure 2.1-2, *Local Vicinity*). The Project site is located on approximately 2,988 acres of rural, agriculturally zoned land within the ridges of the Santa Ynez Mountains and along San Miguelito Canyon and the White Hills within the Tranquillon Mountain, Lompoc Hills, and Lompoc U.S. Geological Survey (USGS) 7.5-minute quadrangles (Figure 2.1-3, *Topographic Map*).

The Project site is approximately 1.8 miles southwest of the City of Lompoc, 2.3 miles northwest of the coast, 3.5 miles north of Jalama Beach County Park, 3.6 miles southwest of Highway 1 (State Route, or SR-1), 4.1 miles southeast of the Vandenberg Space Launch Complex, and 7.6 miles southeast of Ocean Beach Park. The California Coastal Zone intersects with a portion of the southern Project area. In order to provide access to wind turbine generators (WTGs) located in the southeastern portion of the Project site, existing roads will need to be graded and widened, and in some areas built, to accommodate construction equipment such as cranes required for construction of the Project. No WTGs are located within the Coastal Zone.

The Project site is bounded by Vandenberg Air Force Base (VAFB) on the south and west sides and private property on the north and east sides. The Project site is accessed via San Miguelito Road, a public road that winds through the area and terminates at the VAFB property line at the northwest edge of the Project site.

The Project would require a power transmission line connection between the Project site and the City of Lompoc, where it interconnects with PG&E's distribution grid.

2.2 PROJECT OVERVIEW

The Project is a commercial wind farm being developed by Strauss Wind, LLC (the Applicant, an affiliate of BayWa r.e. Wind, LLC), and the first such project in Santa Barbara County.

The Project would be located on approximately 2,988 acres of rural, agriculturally zoned land on coastal ridges southwest of the City of Lompoc. The Applicant has entered into long-term leases with the property owners of the 2,988 acres. The Project would have an aggregate electrical generating capacity of 102 megawatts (MW), which would supply approximately 44,700 homes with electricity per year.[1,2,3]

[1] The project proposes to use 24 each of General Electric (GE) 3.8 MW WTGs, and 6 each of GE 1.79 MW WTGs, for a total of about 102 MW.

[2] The number of homes supplied with electricity per year is based on U.S. Energy Information Administration data from 2015 showing that the average annual electricity consumption in California was 6,684 kilowatt hours (kWh) per year per home. The project would build 30 WTGs equal to 102 MW, and would generate approximately 300 GWh per year based on a 34 percent capacity factor. The Project generation per year was then divided by the average California electricity consumption value of 6,684 kWh per year per home resulting in the equivalent of 44,700 homes' consumption being generated with electricity per year.

The Project could generate an average of approximately 300 gigawatt-hours (GWh) of electricity annually.[4]

The major components of the Project are as follows:

- Up to 30 WTGs
- New access roads and road improvements
- Communications system
- Meteorological towers
- On-site electrical collection lines
- On-site substation, including an approximately 14-foot by 54-foot control building
- On-site Operations and Maintenance (O&M) facility
- A new 8.6-mile, 115-kilovolt (kV) transmission line to the Lompoc area to interconnect with the PG&E electric grid
- Upgrades to existing PG&E facilities

The Project would require a Conditional Use Permit (CUP), pursuant to the Santa Barbara County Land Use & Development Code (LUDC) Section 35.82.060, two variances for reduced setbacks from exterior property lines, and the removal of setback requirements for all internal property lines.

The Project would be constructed in one phase in order to achieve the full 102-MW generating capacity. Construction is anticipated to take approximately 9 to 15 months. The analysis presented herein assumes an approximate 10-month construction period. The Project is expected to have an operational life of approximately 30 years. Future scenarios could include lease renewals and possible repowering of the wind farm with advanced WTGs or decommissioning and restoring the land.

2.3 PROJECT COMPONENTS

Wind Turbine Generators. Up to 30 WTGs would be located in specified corridors sited along ridges entirely within the County's Inland Zone (Figure 2.3-1, *Site Plan*). The Project would include two WTG models, a 1.79-MW WTG and a 3.8-MW WTG, which would be 427 and 503 feet, respectively.

[3] U.S. Energy Information Administration. 2015. Average monthly residential electricity consumption, prices, and bills by state. Available at: https://www.eia.gov/tools/faqs/faq.php?id=97&t=3

[4] To derive GWh per year anticipated, kWh was calculated as discussed above and then converted to GWh.

TABLE 2.3-1
COMPARISON OF 2009 APPROVED LOMPOC WIND ENERGY PROJECT AND STRAUSS WIND ENERGY PROJECT

Project Characteristics	2009 Approved Lompoc Wind Energy Project	Strauss Wind Energy Project
Disturbance		
Permanent site disturbance (acres)	40.2	41.1
Temporary site disturbance (acres)	195.7	149.3
Total site disturbance (acres)	235.9	190.44
Total site disturbance as a percentage of total Project area*	8 percent	6 percent
Earthwork/Grading Volumes (cubic yards)**		
Cut	219,000	665,025††
Fill	182,000	611,775††
	401,000 combined cut and fill**	53,250 net***
Impervious Surface		
Total impervious surface (acres)	N/A	2.28
Road Improvements		
Improvements to existing roads to access turbines (miles)	N/A	2.6†
New roads to access turbines (miles)	5.5	9.9
Improvements to existing roads for transmission line construction (miles)	N/A	13.5
New roads for transmission line construction (miles)	N/A	4.4
Wind Turbine Generators (WTGs)		
Total number of proposed WTGs	65[1]	30
WTG details	1.5 MW WTG Model 1[1]	GE 1.79 MW WTG Model and GE 3.8 MW WTG Model
Number of WTGs by model	65 ea. 1.5 MW[1]	6 ea. GE 1.79 MW, 24 ea. GE 3.8 MW
Total height of WTG	389 or 397 feet (119 or 121 meters) from foundation to blade tip[2]	GE 3.8 MW WTG: 503 feet (153 meters) from foundation to blade tip. GE 1.79 MW WTG: 427 feet (130 meters) from foundation to blade tip,
Construction Truck Trips		
Total Truck Trips	12,270****	16,189*****

NOTES:

* Total Project area = 3,041 acres including transmission line.

** LWEP total cut and fill volumes were estimated for roadwork only (401,000 cubic yards [cy]). As a result, actual volumes were likely much greater when considering all Project components.

*** Earthwork for the Project is expected to be balanced on site as a result of shrinkage and settling.

**** Based on a 6-month construction schedule.

***** Based on a 10-month construction schedule.

† Includes improvement of non-County, onsite ranch roads only.

†† Includes existing and new roads for transmission line construction.

[1] Section 3.2, *Aesthetics/Visual Resources Impacts*, of the 2009 FEIR developed the visual simulations for the WTGs

using an 80 unit worst-case scenario as the basis for the analysis because the precise locations of the WTGs were not known at the time of the aesthetics evaluation.

[2] Section 3.2, *Aesthetics/Visual Resources Impacts*, of the 2009 FEIR assumed a worst-case scenario total WTG height of 397 feet for visual impact analysis purposes, except for Figure 3.2.18B, which was prepared assuming that six of the WTGs would be 436 feet in height and the other four WTGs would be 389 feet.

SOURCE: County of Santa Barbara Planning and Development Department, Energy Division. August 2008. Certified 10 February 2009. Final Environmental Impact Report: Lompoc Wind Energy Project. County EIR No. 06EIR-00000-00004. State Clearinghouse No. 2006071008. Prepared by Aspen Environmental Group, Agoura Hills, CA.

The proposed WTGs would be three-bladed, with a horizontal axis design and an upwind orientation, which is the type utilized in most modern, commercial wind farms. The blades would be constructed of laminated fiberglass. Each turbine would contain a rotor hub, to which the blades would be bolted and covered by a composite nose-cone structure to streamline the airflow and protect the equipment. The WTG foundations would have one of three designs, depending on soil conditions, geotechnical constraints and other factors, including wind patterns at the site, site access, material availability, and the WTG manufacturer selected prior to Project installation.

The WTG towers would be constructed of heavy-duty, epoxy-coated, welded steel, and would form a conical shell. The towers would taper from approximately 14 feet in diameter at the base to 10 feet at the nacelle (the enclosed part of the turbine in which the engine is housed). A fully assembled tower would weigh between 127 and 231 tons, depending on the model. For all designs, the exposed concrete pad would be approximately 15 feet in diameter and extend less than 1 foot above grade. All WTGs would be set back from private property lines at the Project area perimeter by a distance equal to the total system height, as required by LUDC Section 35.57.050, except where private property lines are within the Project parameters as per the requested variance.

The Federal Aviation Administration (FAA) will require lights on the WTGs. This analysis assumes that a synchronized, flashing, red light would be mounted on the top of the nacelle of the WTG located at the end of each WTG string. Additional WTGs within the string would be equipped with the same lights, such that lit WTGs would be separated by no more than 2,640 feet.

Safety signage would be posted where necessary around WTGs and along roads, in conformance with applicable state and federal regulations. A safety policy plan would be developed and would be included as part of the mitigation requirements. Wind farms often have multiple layers of security to prevent compromising the wind farm and the connected Bulk Electric System.[5] Physical security would be provided by installing locked gates at the entrance to all access roads. In addition, all turbines, the Project Substation, and the control house would be locked. The substation, including the control building, would be surrounded by an 8-foot, barbed wire reinforced fence.

Electronic access to any Supervisory Control and Data Acquisition (SCADA) access point would be protected by at least two layers of security using high industry standard virtual private network (VPN) technology and secure passwords and utilizing 24/7 remote monitoring. Surveillance cameras would provide round-the-clock monitoring on the wind farm and its SCADA system. Any suspected intrusions or abnormalities would be reported to field personnel. The remote monitoring

[5] North American Electric Reliability Corporation (NERC). 2014. A bulk electric system (BES) is defined as all elements and facilities necessary for the reliable operation and planning of the interconnected power system.

operations rooms and turbine manufacturer's remote operation centers would require keycard access to prevent unauthorized intrusion.

Access Roads and Road Improvements. Numerous dirt roads are present throughout the Project area and are maintained by the property owners for agricultural operations. To provide access during construction and operations, 3.5 miles of the existing roads would be improved and widened from their existing widths of 10 to 14 feet, to 22 feet. Some road sections would need to be 16 feet wide with 10-foot compacted shoulders on each side to allow crane travel between WTG locations. These shoulders would be reclaimed at the end of the Project.The width of construction access roads will vary between 22 to 40 feet to accommodate roadway cut and fill, and necessary equipment turning radii and turn-outs. The roadways would be restored to a 16-foot width upon completion of WTG installation.

In addition, approximately 9.9 miles of new roads would be constructed. Short sections of roadway would also be built in other parts of the Project area. The road work would include trenching and installing underground electrical distribution lines and communication cables.

Crossings of minor drainage channels would be accomplished with culverts or at-grade crossings. According to the preliminary grading plan, cut volumes for the entire Project are estimated to be 665,025 cubic yards (cy), and fill volumes are estimated at 611,775 cy, leaving a net differential value of 53,250 cy for all the required Project earthwork. As a result of shrinkage and settling, all earthwork is expected to be balanced on-site. All grading would be subject to a final, approved grading and erosion control plan to minimize erosion and ensure adequate slope stabilization. Areas of temporary disturbance would be revegetated following the roadwork.

Electrical Collection Lines and Communication System. Each string of WTGs would be interconnected via 34.5-kV electrically insulated cables. These cables would typically run underground. The underground collector cables would follow roads, where feasible. A small section of the collection system would be above ground due to terrain constraints. Aboveground collection lines in these areas would result in less ground disturbance and would be supported by single poles or H-frame structures. The overhead collection system would be constructed in conformance with good utility practice, the National Electric Safety Code (NESC), American National Standards Institute (ANSI), and the Avian Power Line Interaction Committee (APLIC). At the Project Substation, the voltage would be increased from 34.5 kV to 115 kV to match the voltage of the PG&E grid at the Point of Interconnection (POI).

Meteorological Towers or SODAR Units. Prior to start of construction of the Project, meteorological data would be collected using mobile sonic detection and ranging units (SODAR) and temporary meteorological towers that would record weather data necessary to determine the most efficient operational strategy for the WTGs. The data collected would include wind speed and direction, temperature, humidity, barometric pressure, and rainfall. The data collected would be used to supplement over five years of wind data collected from meteorological towers that were once present at the Project site. As a result of their small footprint and mobility, and no permanent ground disturbance, SODAR units and temporary met towers can be transported easily with a pickup truck and small utility trailer. As the SODAR unit remains on the trailer, it can be easily parked in a specified location with minimal disturbance. A temporary 60-meter met tower would be supported with three guy wires attached to ground anchors, resulting in no permanent ground disturbance.

Up to three permanent meteorological towers would be installed during construction to measure the performance of the WTGs post installation. The towers are proposed to be guy-wired lattice structures, up to 295 feet (90 meters) in height. Tensioned cables (guy-wires) in three directions would be required for these towers to provide required stability. Meteorological towers that are supported with guy wires would result in less impacts as they would not require excavation, concrete, and construction using a crane.

Project Substation. All the power generated by the WTGs would be transmitted to the on-site Project Substation via the collection system. The Project Substation would step up the voltage from 34.5 kV to 115 kV and serve as the originating point of the proposed 8.6-mile 115-kV overhead transmission line that will interconnect the Project to the POI in the City of Lompoc at the Cabrillo Substation owned by PG&E. The Project Substation, 8.6-mile transmission line, and the circuit breaker station opposite the existing POI Cabrillo Substation in Lompoc will be under the ownership of the Applicant. The Project has obtained an interconnection agreement with PG&E that was executed on July 27, 2017, to connect to their facilities located at the Cabrillo Substation.[6] The Project has complied with Federal Energy Regulatory Commission (FERC) Generator Interconnection Procedures. The Applicant will operate as a wholesale power producer with 100 percent of the output to be exported to the PG&E distribution system. The Point of Change of Ownership (PCO) will occur on the Customer side of a PG&E T-Line disconnect switch at the POI location.

The Project will install and own one span of overhead line or approximately 200 ft of overhead cable from the POI into an Applicant-owned circuit breaker station with metering equipment. The Project will supply PG&E-approved high-voltage metering equipment and a metering cabinet in the control building. PG&E will install and own only a meter in the Applicant-provided cabinet. The height and bulk of required structures will not exceed those already within the Cabrillo Substation.

The on-site Project Substation will be located entirely on the privately held land of a participating Project landowner within the Project boundary. The Project Substation footprint would disturb roughly 2.02 acres of land and be approximately 200 feet by 300 feet in dimension. The footprint would be cleared and graded, and would include structural and electrical equipment. Equipment will be installed on top of structural concrete forms, which will be roughly 18 inches above rough grade. The substation perimeter would be entirely secured by an 8-foot chain link fence topped with three-strand barbed wire, raked outward at a 45-degree angle. A locked, double-swing gate would be installed in the fencing to provide access to the Project Substation post-construction. No shrubbery, hedging, or landscaping around the perimeter of the substation is contemplated. The entire footprint of the substation would be finished with a graveled layer of clean, washed rock free of sands or organic material. This rocked layer would act as a fire barrier and as step protection. In addition, spatial separation of transformers and other design considerations would be incorporated in the design to prevent the risk of fire. The substation will be meet or exceed IEEE-979 Substation Fire Protection standards. Detection and extinguishing equipment would be installed in accordance with all applicable code requirements. Project Substation signage as required by the NESC, OSHA, and other applicable organizations would be provided. The substation will include standard low-illumination, motion-triggered lighting. The highest structure of the substation would

[6] Pacific Gas and Electric. Understand PG&E distribution qualifications, Connect your project to our wholesale distribution system. September 2017. Available at: https://www.pge.com/en_US/for-our-business-partners/interconnection-renewables/energy-transmission-and-storage/wholesale-generator-interconnection/wholesale-distribution-fast-track-interconnection-process.page

be the dead-end structure, which is a fully self-supporting structure where the conductors of the transmission line mechanically terminates to the substation. The Project Substation would be fitted with static poles that will create a shield to protect all of the equipment inside the Project Substation from lightning. Static poles may or may not have overhead shield wires attached to enhance lightning protection. The static poles would be approximately 60 feet above the substation grade. A control building would be housed entirely within the Project Substation. The control building contains switchboard panels, batteries, battery chargers, supervisory control, meters, and relays, and provides all weather protection and security for the control equipment. It is estimated that the control building would be 14 feet by 54 feet in dimension, pending release of the conceptual site plan by the Applicant. The control building would be adequately ventilated to prevent the accumulation of hydrogen gases from battery operation.

Project Substation lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized.

The entire Project Substation would be enclosed with a chain link security fence. Following construction, an inspection and commissioning test plan would be executed prior to the Project Substation being energized.

Strauss Wind Energy Project Transmission Line. The transmission line would be constructed by the Applicant and permitted as part of the Project through the Santa Barbara County CUP entitlement process as a result of its direct connection to and interdependency with the Project. Minor upgrades to PG&E's Cabrillo Substation undertaken by PG&E are included in the environmental analysis for the Project, but are expected to occur within the existing Cabrillo Substation. It is expected that PG&E will provide the California Public Utilities Commission (CPUC) with Notice of Intent to Construct.

The Applicant will be constructing the transmission line consistent with accepted industry standards, protective measures, and established industry guidelines. These include the recommended practices and procedures of the IEEE, standards for overhead line construction consistent with CPUC General Order 95 (GO95), avian protection measures consistent with the 2012 Avian Power Line Interaction Committee Guidelines, electric magnetic field design guidelines accepted for transmission design in California, and other applicable rules and standards. Where feasible and consistent with CPUC GO 95, power lines will follow existing distribution lines and/or will be consolidated with existing facilities.

All work on public streets and highways would be performed in a manner that interferes as little as possible with the operations of other utilities and the convenience of the public, and causes no unusually dangerous conditions to workmen, pedestrians, or others at any time.

O&M activities for the power line would include frequent inspections to ensure that the system is in good condition and would not create hazards. Ongoing fire management and safety would include maintaining a 10-foot radial clearance of flammable fuels (vegetation) around the base of each wood pole structure during fire season. Under Public Resources Code, Section 4292, a minimum 15-foot clearance between vegetation and conductors is required for safety and to minimize tree-related outages. Fast-growing trees may be removed or vegetation trimmed back farther than the minimum required to achieve at least 3 to 4 years of clearance before the next trim. In addition, the maintenance program would also include removing dead, rotten, or diseased trees or vegetation that hang over or lean toward the system, creating a falling hazard.

The transmission line would be constructed mostly of single wooden poles and a few double wooden poles. Single steel poles would be needed at a few engineered angle points; the number of steel poles would be determined as part of final transmission line design. The poles would be up to approximately 75 feet in height and would be placed from 64 to 1,110 feet (378 feet average) apart based on the terrain and alignment. every 250 to 350 feet; assuming as a worst-case scenario that poles were placed every 250 feet, as many as 115 poles would be required. In some locations, engineered structures with concrete foundations might be used to support the conductors. The exact number of poles and their sizes, types, and spacing would be determined as part of final design engineering. The Applicant anticipates acquiring easements ranging from 50 to 100 feet wide, depending on design, span length, and terrain.

- In order to ensure reliability, the Project transmission line would use new poles, and would run parallel to existing power lines. It is assumed that no currently existing power poles would be used.

2.4 CONSTRUCTION SCENARIO

Construction Phasing

The Project would be constructed in one phase in order to achieve the full 102-MW generating capacity. Construction would begin as soon as the required Project approvals, including the CUP and the grading, building, and other permits, are obtained from the County and other responsible agencies. Construction would be anticipated to take approximately 10 months (Table 2.4-1, *Project Construction Schedule*). Construction work to interconnect the Project would occur during the specified time frame assuming no significant environmental issues are identified.

TABLE 2.4-1
PROJECT CONSTRUCTION SCHEDULE

	Month									
Project Construction Element	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Access Roads	●									
Site Roads		●	●	●	●	●	●			
Foundations			●	●	●					
Collection System				●	●	●				
WTG Deliveries					●	●	●			
WTG Erection						●	●	●	●	
Substation						●	●	●	●	
T-Line						●	●	●	●	
Testing & Commissioning									●	●
Reclamation									●	●

NOTE: Construction during the rainy season will be conducted in accordance with SWPPP and erosion control measures. In some cases conditions may necessity a delay in activities at specific locations due to impassible terrain, potential erosion, or other environmental constraints. Estimated construction schedule includes O&M building and meteorological tower construction.

General Procedures

Normally, construction would occur during daylight hours, Monday through Saturday; however, some activities could require extended hours because of scheduling constraints or other time-sensitive matters, or to maintain structural integrity of concrete placement. Construction would typically proceed according to the following flow of work:

- Grading of field construction office, laydown area, and Project Substation
- Construction of site roads, turnaround areas, and crane pads at each WTG location
- Construction of the WTG tower foundations and transformer pads
- Installation of the electrical collection system (underground and overhead lines)
- Assembly and erection of the WTGs
- Construction and installation of the Project Substation
- Commissioning and energizing the Project

Road Construction

The Project road construction would involve the use of several pieces of heavy machinery, including bulldozers, track-hoe excavators, front-end loaders, dump trucks, motor graders, water trucks, and rollers for compaction. Access points from public roads would have locked gates, as agreed upon with the landowners.

Equipment Requirements

Heavy equipment would be needed to clear the sites, build roads and WTG foundations, haul and lift materials, and pull power lines (Table 2.4-2, *Construction Equipment Count*). After roads are opened and foundations built, cranes and trucks would move in to haul and lift the WTG parts into position for assembly. An average of approximately 222 truck trips per month would occur during Months 5 through 7 of the construction period, as shown in Table 2.4-3, *Estimated Construction Truck Trips*. The Applicant would haul WTG parts to the Project site, each with a gross weight ranging between 30,000 and 180,000 pounds. The trucks would have many axles to spread the load on streets and roads and would be in compliance with the transportation permits issued by the State of California. The trucks would enter the area from Lompoc using established truck routes and proceed to designated areas for unloading. Road material, concrete, and water would be hauled from local sources.

Site Restoration and Landscape Plan

Site restoration and cleanup would include reseeding of specifically identified areas subject to temporary disturbance during the first suitable weather conditions after the heavy construction activities have been completed, or as per the Project's restoration and revegetation plan. Temporary disturbance areas around WTG sites would be reseeded with native grasses to allow the current use of the property to continue to the maximum extent practicable while maintaining adequate access to all WTGs. Temporary disturbance on the shoulder areas of access roads (new and improved) would also be reseeded. The 2-acre fenced substation area would be covered with crushed rock; no other landscaping is planned because of this area's interior location within the Project site.

TABLE 2.4-2
CONSTRUCTION EQUIPMENT COUNT

Construction Phase	Excavator	D-9 Bulldozer	D-6 Bulldozer	Dump Truck	Compactor	Backhoe	14-H Grader	Gradall	Water Truck	Front End Loader	Scraper	Articulated Dump Truck	Rock Crusher	Concrete Trucks	CMP Roller	Telehandler	Trencher	Padding Machine	Line Truck	120-T Crane	90-T Crane	Prime Mover	Crawler Crane	Pickup Truck	Dump Truck	Generator	Total
Access Roads	1		1	3	1	1	1	1	1																		10
Site Roads	1	2	1	3	2	1	1	1	7	1	2	2	1														25
Foundations	1					1								6	1	1											10
Collection System						1	1										1	1	1								5
WTG Deliveries																1				1	2	1					5
WTG Erection																1				1	2		1				5
Substation	1		1			1								1		1			1		1				1		8
T-Line																			3								3
Testing & Commissioning																								6			6
Reclamation			1	1						1																	3
Office Area																										1	1
Total	4	2	4	7	3	5	3	2	8	2	2	2	1	7	1	4	1	1	5	2	5	1	1	6	1	1	81

NOTE: * Estimated construction equipment includes O&M building and meteorological tower construction.

TABLE 2.4-3
ESTIMATED CONSTRUCTION TRUCK TRIPS

Activity	Month										Total
	1	2	3	4	5	6	7	8	9	10	
WTG Parts Delivery[2]					140	207	207				554
WTG Foundation Installation[3]			152	51	99						302
Water Trucks[1]		1,344	1,344	1,344	1,344	1,344	1,344	384	384		8,832
Access Road Construction[4]	1,344										1,344
Site Road Construction[5]		320	240	240	240	240	240	240	320		2,080
T-Line[6]						240	240	240	240		960
Meteorological Tower Installation[7]								60			60
Collection System[8]						137	20	20			177
WTG Erection[9]						80	10	10	80		180
Services	100	100	100	100	100	100	100	100	100		900
Project Substation[10]							200	200	200		600
Reclamation										200	200
Total by Month	**1,444**	**1,764**	**1,836**	**1,735**	**1,923**	**2,348**	**2,361**	**1,254**	**1,324**	**200**	**16,189**
Total by Day (22 Construction Days per Month)*	**66**	**80**	**83**	**79**	**87**	**107**	**107**	**57**	**60**	**9**	**74**

NOTES: *Additional construction days/months may be added as mitigation pending environmental review. Estimated construction truck trips include O&M building and meteorological tower construction.

[1] Water Trucks calculation: 7 trucks times 4 fills times 2 (roundtrip) times 6 days per week times 4 weeks per month equals 1,344 trips per month for 6 months (Month 2-7). This would reduce to 2 trucks per day for two months (Month 8 and 9).

[2]WTG Parts Delivery includes transport of tower sections, blades, nacelle, hub, nose cone, and containers of ancillary parts.

[3]WTG Foundation Installation includes transport of anchor bolts, CMPs, rebar, and raw materials for the batch plant.

[4]Access Road Construction includes transport for tree trimming equipment, asphalt, and gravel trucks.

[5]Site Road Construction: It is anticipated rocks will be crushed on site. Re-fueling trucks for heavy equipment and roundtrips for heavy equipment operators are considered.

[6]T-Line includes transport for poles, conductor, and bucket trucks.

[7]Meteorological Tower Installation includes transport for lattice steel sections and meteorological equipment.

[8]Collection System includes transport for pad mount transformers, cable reels, fiber optic cable reels, copper ground reels.

[9]WTG Erection includes transport of cranes, telehandlers, and pickup trucks for crews.

[10]Project Substation includes transport for steel, breakers, transformer, control building, fencing, concrete, and gravel.

2.5 OPERATIONS PHASE

During the operational phase of the Project, approximately four to six staff would be employed on-site in the O&M facility. Monitoring of WTGs and system operation would occur in the O&M facility. Staff onsite would perform routine maintenance throughout the site, troubleshoot malfunctions, and shut down and restart WTGs when necessary. Operations would be continuously monitored through the SCADA system. Less than 250 gallons per day of potable water would be needed to serve the O&M facility. This water would be provided through an on-site well. Effluent from the office drains would be disposed of through a proposed leach line septic system.

Larger equipment, supplies, and spare parts would be stored in a secured on-site yard, while normal sized equipment, supplies and spare parts would be stored inside the O&M facility's shop area. The secured yard would be located adjacent to the O&M facility and would only be accessible to authorized personnel. Spare parts might include large components, such as a spare blade set or gearbox. Specialized equipment not needed routinely would be brought on-site as needed. Maintenance of some components of on-site infrastructure (for example, roads and electrical lines) may be subcontracted to qualified firms.

2.6 DECOMMISSIONING PHASE

The anticipated life of the Project is 30 years. At the end of its useful life, the Project could be "repowered," renovated or upgraded, or decommissioned. The decision to decommission or repower would depend on energy economics at the time, technological options, and other considerations.

If or when the Project is decommissioned, all structures and equipment at the site would be dismantled and removed, and the land surface would be restored to as close to the original condition as practical. Reclamation would be conducted on all disturbed areas to comply with County reclamation policy. The short-term goal would be to stabilize disturbed areas as rapidly as possible, thereby protecting sites and adjacent undisturbed areas from degradation.

SECTION 3.0
REGULATORY FRAMEWORK

The potential for the Proposed Project to result in significant impacts to biological resources was evaluated in light of the applicable federal, State, and local statutes and regulations.

3.1 FEDERAL

Federal Endangered Species Act

The federal Endangered Species Act (ESA) defines listed species as *endangered* or *threatened* and provides regulatory protection for listed species.[1] The FESA provides a program for conservation and recovery of threatened and endangered species; it also ensures the conservation of designated critical habitat that the U.S. Fish and Wildlife Service (USFWS) has determined is required for the survival and recovery of these listed species. Section 9 of the FESA prohibits the "take" of species listed by USFWS as threatened or endangered. "Take" is defined as follows: "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct." In recognition that take cannot always be avoided, Section 10(a) of the FESA includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10(a)(1)(B) permits (incidental take permits) may be issued if take is incidental and does not jeopardize the survival and recovery of the species. As defined in the FESA, individuals, organizations, states, local governments, and other nonfederal entities are affected by the designation of critical habitat only if their actions occur on federal lands; require a federal permit, license, or other authorization; or involve federal funding.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703–712), as amended, provides for federal protection of all migratory bird species and their active nests and eggs.[2] Similar to the FESA, the MBTA authorizes the Secretary of the Interior to issue permits for incidental take. Nesting birds and the contents of the nest within the Proposed Project property are afforded protection during the nesting season pursuant to the MBTA.

Bald and Golden Eagle Protection Act

The federal Bald and Golden Eagle Protection Act (BGEPA) (16 USC 668–668d, 54 Stat. 250), as amended, is administered by the USFWS to protect bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*), their nests, eggs, and parts. The BGEPA states that no person shall take, possess, sell, purchase, barter, offer for sale, purchase or barter, transport, export, or import any bald or golden eagle alive or dead, or any part, nest, or egg without a valid permit to do so.[3] The BGEPA also prohibits the "take" of bald and golden eagles unless pursuant to regulations.

---

1 U.S. Fish and Wildlife Service. 1973. 1973 Federal Endangered Species Act. Available at: https://www.fws.gov/endangered/laws-policies/esa.html

2 U.S. Fish and Wildlife Service. 1918. Migratory Bird Treaty Act of 1918. Available at: http://www.fws.gov/laws/lawsdigest/migtrea.html

3 U.S. Fish and Wildlife Service. 2016. The Bald and Golden Eagle Protection Act. Available at: https://www.fws.gov/midwest/midwestbird/eaglepermits/bagepa.html

Take is defined by the BGEPA as an action "to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."
"Disturb" is defined in the BGEPA as

> *to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available; (1) injury to an eagle; (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.*[4]

In addition to immediate impacts, this definition also covers impacts that result from human-caused alterations initiated around a previously used nest site during a time when eagles were not present. Permits are issued to Native Americans to possess eagle feathers for religious purposes, and salvaged eagle carcasses can be sent to the National Eagle Repository in Colorado where they are redistributed to Native Americans. This effort is coordinated by a local USFWS office. Although the bald eagle was removed from the Endangered Species List[5] in June 2007, it is still federally protected under the BGEPA. In addition, the *National Bald Eagle Management Guidelines* were published in conjunction with delisting by the USFWS in May 2007 to provide provisions to continue to protect bald eagles from harmful actions and impacts.[6]

Under the BGEPA, a final rule was published in May 2008 in the *Federal Register* that proposed authorization for take of bald eagles for those with existing authorization under the FESA where the bald eagle is covered in a Habitat Conservation Plan (HCP) or the golden eagle is covered as a non-listed species.[7] The final rule also established a new permit category to provide expedited permits to entities authorized to take bald eagles through Section 7 incidental take permits. A proposed rule will later address authorization of take of (1) disturbance-type take of bald and golden eagles due to otherwise lawful activities and (2) eagle nests in rare cases where their location poses a risk to human safety or the eagles themselves.

Section 401 of the Federal Clean Water Act

Section 401 of the federal Clean Water Act[8] is administered by the State Water Resources Control Board and the Regional Water Quality Control Boards (RWQCBs). Section 401 requires that prior to any federal permit or license, any activity, including river or stream crossings during construction, which may result in discharges into Waters of the United States, must be certified by the applicable RWQCB. Projects that may result in such discharges will be specified by the applicable permit and can normally be conducted pursuant to a water quality certification or waste discharge requirements. This ensures that the proposed activity does not violate federal water quality standards.

---

4 U.S. Fish and Wildlife Service. 2016. The Bald and Golden Eagle Protection Act. Available at: https://www.fws.gov/midwest/midwestbird/eaglepermits/bagepa.html

5 U.S Fish and Wildlife Service. 2017. Endangered Species List. Available at: https://ecos.fws.gov/ecp0/pub/SpeciesReport.do?groups=B&listingType=L&mapstatus=1

6 U.S. Fish and Wildlife Service. May 2007. National Bald Eagle Management Guidelines. Available at: https://www.fws.gov/southdakotafieldoffice/NationalBaldEagleManagementGuidelines.pdf

7 U.S. Government Printing Office. 2008. Federal Register. "Notices." 73 (98): 29075–29084.

8 US Environmental Protection Agency. Clean Water Act, as amended in 1972. §401. 1972. Available at: https://www.epa.gov/cwa-404/section-404-permit-program

Section 404 of the Federal Clean Water Act

Section 404 of the federal Clean Water Act, which is administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material into Waters of the United States, which include surface waters such as navigable waters and their tributaries, all interstate waters and their tributaries, natural lakes, all wetlands adjacent to other waters, and all impoundments of these waters.[9] USACE has established a series of nationwide permits that authorize certain activities in Waters of the United States, provided that a proposed activity can demonstrate compliance with standard conditions. Projects that result in the loss of less than the acreage specified by the applicable nationwide permit can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. If the conditions of a nationwide permit cannot be met, or the Project results in more than minimal adverse environmental impact, an individual permit may be required.

Wetlands – Executive Order Number 11990

Executive Order 11990 was issued in May 1977, as a furtherance of the National Environmental Policy Act (NEPA) providing protection of wetlands.[10] Pursuant to the order, all new construction should be designed to the greatest extent possible to avoid long- and short-term adverse impacts that would lead to the destruction or the modification of wetlands, in order to preserve and enhance the natural and beneficial values of wetlands. Federal agencies, such as the Federal Highway Administration (FHWA), cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds that: (1) there is no practicable alternative to the construction and (2) the Proposed Project includes all practicable measures to minimize harm.

3.2 STATE

California Environmental Quality Act

CEQA requires that the significant environmental impacts of proposed projects or actions undertaken, funded, or requiring an issuance of a permit by a State or local agency are identified, government decision makers and the public are informed about the effects of those actions, and that steps are taken in order to avoid or mitigate those environmental impacts, if feasible.

Section 30001 of the California Coastal Act

Section 30001 of the California Coastal Act of 1976 lists the California Coastal Zone as a distinct and valuable natural resource and includes measures to protect the state's coastal natural and scenic resources.[11] Pursuant to the act, all development should be located, designed, and constructed as to minimize any potential adverse effects on coastal zone resources. Additionally, habitats that are determined to be environmentally sensitive should be protected against any

---

[9] US Environmental Protection Agency. Clean Water Act, as amended in 1972. §404. 1972. Available at: http://www.waterboards.ca.gov/lahontan/water_issues/programs/clean_water_act_401/index.shtml

[10] Federal Register. 24 May 1977. Executive Orders 11990 Protection of Wetlands. 42 FR 26961, 3 CFR, 1977 Comp., p. 121.

[11] California Coastal Commission. 2017. Public Resources Code Division 20. California Coastal Act. Available at: https://www.coastal.ca.gov/coastact.pdf

significant disruption of habitat value. Section 30253 of the California Coastal Act requires that all new developments:

> *(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard; (2) assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs; (3) be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development; (4) minimize energy consumption and vehicle miles traveled; and (5) where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.*

State Fish and Game Code

Sections 1600–1603, Notification of Lake or Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the California Department of Fish and Wildlife (CDFW) and require preparation of a Lake or Streambed Alteration Agreement.[12] Pursuant to the Code, a "stream" is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that support or have supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial waterways valuable to fish and wildlife are subject to CDFW jurisdiction.

Sections 1900–1913, Native Plant Protection Act

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare and endangered native plants.[13] The list of native plants afforded protection pursuant to the Native Plant Protection Act includes those listed as rare and endangered under the California ESA (CESA). The Native Plant Protection Act provides limitations that no person would import into this state—or take, possess, or sell within the State of California—any rare or endangered native plant, except in compliance with provisions of the Native Plant Protection Act. Where individual landowners have been notified by the CDFW that rare or native plants are growing on their land, the landowners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

---

[12] California Department of Fish and Game. November 2001. California Code of Regulations, Section 1600, Lake or Streambed Alteration Agreement, California Code of Regulations. Available at: http://www.calwater.ca.gov/content/Library/RegGuide/Volume%202/Voume%202%20PDF%20f/vol2chp2FINAL%20S1600_1101.pdf

[13] California Department of Fish and Wildlife. 2015. California Code of Regulations, Section 1900, Native Plant Protection Act, California Code of Regulations. Available at: http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?division=2.&chapter=10.&lawCode=FGC

Sections 2080 and 2081, California Endangered Species Act

The CESA (California Fish and Game Code Sections 2050 et seq.) prohibits the take of listed species, except as otherwise provided in State law.[14] The "take" for the CESA is defined as it is in the FESA. However, unlike the FESA, the CESA also applies the take prohibitions to species petitioned for listing as State candidates rather than only those listed species. State lead agencies are required to consult with CDFW to ensure that any actions undertaken by the lead agency are not likely to jeopardize the continued existence of any State-listed species or result in destruction or degradation of required habitat. CDFW is authorized to enter into Memoranda of Understanding (MOUs) with individuals, public agencies, universities, zoological gardens, and scientific or educational institutions to import, export, take, or possess listed species for scientific, educational, or management purposes. Permits for incidental take of species protected pursuant to the CESA are available under certain circumstances as described in Sections 2080 and 2081 of the California Fish and Game Code described below.

Section 2080 of the CESA states:

> *No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.*

Pursuant to Section 2081 of the Fish and Game Code, CDFW may authorize individuals or public agencies to import, export, take, or possess, any State-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or MOUs as follows: (1) if the take is incidental to an otherwise lawful activity, (2) if impacts of the authorized take are minimized and fully mitigated, (3) if the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and (4) if the applicant ensures adequate funding to implement the measures required by CDFW. CDFW shall make this determination based on available scientific information and shall include consideration of the ability of the species to survive and reproduce.

Section 2800–2835, Natural Community Conservation Planning Act of 1991, as Amended

The Natural Community Conservation Planning Act of 1991, as amended in 2003 (California Fish and Game Code Sections 2800–2835) established the Natural Community Conservation Planning program for the protection and perpetuation of the State's biological diversity.[15] The CDFW established the program in order to conserve natural communities at the ecosystem level while accommodating compatible land use. Natural Community Conservation Planning programs (NCCPs) identify and provide for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The CDFW provides support, direction, and guidance to participants in order to ensure that NCCPs are consistent with the CESA.

---

[14] California Department of Fish and Wildlife, Code of Regulations. Amended 1997. Chapter 1.5, Sections 2050 et. Seq. California Endangered Species Act. Available at: https://www.wildlife.ca.gov/Conservation/CESA/FESA

[15] California Department of Fish and Game, Code of Regulations. 2003. Sections 2800 et. seq. Natural Community Conservation Planning Act. Available at: http://www.buttehcp.com/documents/Documents/Other%20Documents/NCCP_ACT_language.pdf

Sections 3503 and 3503.5, State Protection for Birds

Sections 3503 and 3503.5 of the State Fish and Game Code provide regulatory protection to resident and migratory birds and all birds of prey within the State of California, including the prohibition of the taking of nests and eggs, unless otherwise provided for by the Fish and Game Code.[16] Specifically, these sections of the Fish and Game Code make it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided.

Sections 3511, 4700, 5050, and 5515, State Fully Protected Species

The State of California classifies certain animals as "Fully Protected," in Section 3511 of the State Fish and Game Code.[17] This classification was the State's initial effort in the 1960s to identify and provide additional protection to certain species that were rare or faced possible extinction. Lists were made for fish, mammals, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under the FESA and/or CESA. Sections 3511, 4700,[18] 5050,[19] and 5515[20] of the Fish and Game Code state that Fully Protected species (birds, mammals, fish, reptiles, amphibians) or parts thereof may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Section 4000, Furbearing Mammals

According to the State Fish and Game Code, Division 4, Part 3, Chapter 2, Article 1, Section 4000, the list of furbearing mammals includes, but is not limited to, kit fox (*Vulpes macrotis*) and badger (*Taxidea taxus*). The regulations on take of fur-bearing mammals are established within the California Code of Regulations (CCR), Title 14, Division 1 (Subdivision 2), Chapter 5, Sections 460-464. Under these provisions, take of kit fox is prohibited, and take of badger is regulated. Title 14, Sections 460–464 of the CCR are supported by Sections 200, 203, and 4009.5 of the Fish and Game Code.

Sections 1900–1913, Native Plant Protection Act

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare and endangered native plants. The list of native plants afforded protection pursuant to the Native Plant Protection Act includes those listed as rare and endangered under CESA. The Native Plant Protection Act provides limitations that no person would import into this state—or take, possess, or sell within the State of California—any rare or endangered native plant, except in compliance with

---

[16] California Department of Fish and Wildlife, California Code of Regulations. 16 June 2015. Bird Nesting Regulations Sections 3503 and 3503.5. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=105302

[17] California Department of Fish and Wildlife, Code of Regulations. 3 April 2014. Laws and Regulations Related to Abandoned and Injured Wildlife Section 3511, Ch. 735, Sec. 1. Available at: http://www.fgc.ca.gov/meetings/2014/apr/14_3_LawsRegs_AbandonedInjured_Wildlife_140403.pdf

[18] California Department of Fish and Wildlife, Code of Regulations. 3 April 2014. Laws and Regulations Related to Abandoned and Injured Wildlife Section 4700. Available at: http://www.fgc.ca.gov/meetings/2014/apr/14_3_LawsRegs_AbandonedInjured_Wildlife_140403.pdf

[19] California Department of Fish and Wildlife, Code of Regulations. Amended 2003. California Code, Fish and Game Code – FGC 5050. Available at: http://codes.findlaw.com/ca/fish-and-game-code/fgc-sect-5050.html

[20] California Department of Fish and Wildlife, Code of Regulations. Amended 2003. California Code, Fish and Game Code – FGC 5515. Available at: http://codes.findlaw.com/ca/fish-and-game-code/fgc-sect-5515.html

provisions of the act. Where individual landowners have been notified by CDFW that rare or native plants are growing on their land, the landowners are required to notify CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

CDFW Species of Special Concern

CDFW defines a Species of Special Concern (SSC) as a species, subspecies, or distinct population of an animal (bird, mammal, fish, reptile, and amphibian) native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role;
- is listed as federally, but not State-, threatened or endangered;
- meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status;
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), which if realized, could lead to declines that would qualify it for State threatened or endangered status.

"Species of Special Concern" is an administrative designation and carries no formal legal status; however, SSCs should be considered during the environmental review process. CEQA requires State agencies, local governments, and special districts to evaluate and disclose impacts from "projects" in the state. Section 15380 of the CEQA Guidelines clearly indicates that SSCs should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein.

3.3 LOCAL

Santa Barbara County Comprehensive Plan

Projects within the County are subject to plans and policies intended to protect biological resources contained in elements of the Santa Barbara County Comprehensive Plan,[21] including the Conservation Element,[22] Land UseElement,[23] and Coastal Land Use Plan.[24] These documents identify sensitive habitats and species, and provide measures to direct Project design and policies to protect biological resources.

---

[21] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. May 2009. Environmental Resource Management Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/ermelement/erm_element.php

[22] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 1979; amended August 2010. Conservation Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf

[23] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 1980; amended December 2016. Land Use Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/LandUseElement.pdf

[24] County of Santa Barbara Department of Planning and Development. Adopted 1982, republished 2014. Coastal Land Use Plan, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/CoastalPlan.pdf

Conservation Element

Santa Barbara County's natural and cultural resources are the subject of the Conservation Element.[25] This element is required by State Planning Law as part of the Comprehensive Plan, "for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, and rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources" (Government Code, Section 65302 (d)). Furthermore, the Conservation Element identifies "species and ecological communities of particular value." For the purposes of this BRTR, species and ecological communities of particular value in the Conservation Element are considered to be locally important. Ecological communities of greatest interest listed in the Conservation Element include: high montane coniferous forest (mixed coniferous forest); mixed evergreen forest; closed cone pine forest; Douglas fir forest; southern oak woodland; coastal dune and strand; coastal salt marsh; coastal bluff; native grassland; interior cypress forest; canyon oak – big cone spruce; Coulter pine forest; rare freshwater habitats; rare freshwater habitats.

Oak Tree Protection in the Inland Rural Areas of Santa Barbara County: Supplement to the Mapped Areas and Communities Section of the Conservation Element

This section of the County Comprehensive Plan Conservation Element provides for the protection of native oak trees in the inland rural areas of Santa Barbara County, such as where the Project is located. Oak species discussed in this section include coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), blue oak (*Q. douglasii*), canyon live oak (*Q. chrysolepis*), black oak (*Q. kelloggii*), and interior live oak (*Q. wislizenii*).

Development Standard 1 for protection of all species of mature oak trees (other than valley oaks) states:

> *All development shall avoid removal of or damage to mature oak trees, to the maximum extent feasible. Mature oak trees are considered to be live oak trees six inches or greater diameter at breast height and blue oak trees four inches or greater diameter at breast height, or live and blue oaks six feet or greater in height. Native oak trees that cannot be avoided shall be replanted on site. When replanting oak trees on site is not feasible, replanting shall occur on receiver sites known to be capable of supporting the particular oak tree species, and in areas contiguous with existing woodlands or savannas where the removed species occurs. Replanting shall conform to the County's Standard Conditions and Mitigation Measures.*

[25] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 1979; amended August 2010. Conservation Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf

Land Use Element

The purpose of the Land Use Element is to interrelate all of the different factors that affect population growth, urban development and open land preservation and to represent the county's policy on land use.[26]

The Hillside and Water Protection Policies state:

> *All developments shall be designed to fit the site topography, soils, geology, hydrology, and any other existing conditions and be oriented so that grading and other site preparation is kept to an absolute minimum. Natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible. Areas of the site which are not suited to development because of known soil, geologic, flood, erosion or other hazards shall remain in open space.*
>
> *Temporary vegetation, seeding, mulching, or other suitable stabilization method shall be used to protect soils subject to erosion that have been disturbed during grading or development. All cut and fill slopes shall be stabilized as rapidly as possible with planting of native grasses and shrubs, appropriate non-native plants, or with accepted landscaping practices.*
>
> *Degradation of the water quality of groundwater basins, nearby streams, or wetlands shall not result from development of the site. Pollutants, such as chemicals, fuels, lubricants, raw sewage, and other harmful waste, shall not be discharged into or alongside coastal streams or wetlands either during or after construction.*

Streams and Creeks Policies state:

> *All permitted construction and grading within stream corridors shall be carried out in such a manner as to minimize impacts from increased runoff, sedimentation, biochemical degradation, or thermal pollution.*

Coastal Land Use Plan

The County Coastal Land Use Plan is the Santa Barbara County Local Coastal Program, a local implementation of the California Coastal Act.[27] The Coastal Land Use Plan establishes land uses within the coastal zone and includes numerous policies applicable to development projects. Pursuant to the Coastal Land Use Plan, the State Coastal Commission exercises permit jurisdiction over development projects within the California Coastal Zone. Other elements of the County's Comprehensive Plan are applicable within the Coastal Zone, however, where conflicts exist, the Coastal Land Use Plan takes precedence. A portion of the Proposed Project is located within the Coastal Zone.

---

[26] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 1980; amended December 2016. Land Use Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/LandUseElement.pdf

[27] County of Santa Barbara Department of Planning and Development. Adopted 1982, republished 2014. Coastal Land Use Plan, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/CoastalPlan.pdf

The Coastal Land Use Plan designates Environmentally Sensitive Habitat Areas (ESHAs) within the County's Coastal Zone, which are defined by Section 30107.5 of the Coastal Act as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." The Proposed Project does not fall within any mapped ESHA. However, according to Section 3.9.4 of the Coastal Land Use Plan, native plant communities are considered a county-wide ESHA that "are not designated on the land use maps because they occur in so many areas," and as such, "the policies will have to be applied on a case-by-case basis as projects are reviewed." Native plant communities include coastal sage scrub, chaparral, California native oak woodland and individual oak trees, and endangered, rare, or endemic plant species.

On oak trees in particular, Policy 9-35 of the Coastal Land Use Plan states:

> *Oak trees, because they are particularly sensitive to environmental conditions, shall be protected. All land use activities, including cultivated agriculture and grazing, should be carried out in such a manner as to avoid damage to native oak trees. Regeneration of oak trees on grazing lands should be encouraged."*

In addition, Policy 9-36 states:

> *When sites are graded or developed, areas with significant amounts of native vegetation shall be preserved. All development shall be sited, designed, and constructed to minimize impacts of grading, paving, construction of roads or structures, runoff, and erosion on native vegetation. In particular, grading and paving shall not adversely affect root zone aeration and stability of native trees.*

Santa Barbara County Deciduous Oak Tree Protection and Regeneration Ordinance

The County of Santa Barbara Deciduous Oak Tree Protection and Regeneration Ordinance[28] (Article IX of Chapter 35 of Santa Barbara County Code) regulates the removal of deciduous oak trees (valley oaks and blue oaks) in inland rural areas of the County. However, Section 35-902 states that "the regulations contained in this Article apply only where no development permit (e.g. Development Plan, Land Use Permit, Conditional Use Permit) required under Articles III or IV of Chapter 35 of the County Code or under Ordinance 661, applies." Therefore, this ordinance is not applicable to the Proposed Project.

[28] County of Santa Barbara, Santa Barbara, CA. June 2003. Santa Barbara County Code of Ordinances, Chapter 35, Article IX: Deciduous Oak Tree Protection and Regeneration. Available at: https://www.municode.com/library/ca/santa_barbara_county/codes/code_of_ordinances?nodeId=CH35ZO_ARTIXDEOATRPRRE

SECTION 4.0
METHODS

This section of the Biological Resources Technical Report (BRTR) describes the methods employed in the characterization and evaluation of biological resources within the Proposed Project area. The study methods were designed to provide the substantial evidence required to address the scope of analysis recommended in Section IV, Biological Resources, of Appendix G of the California Environmental Quality Act (CEQA) Guidelines[1] and the *Santa Barbara County Environmental Thresholds and Guidelines Manual*.[2] The biological resource areas under consideration include special status species; riparian and State-sensitive plant communities; federally protected wetlands or other Waters of the United States; the movement of native resident or migratory species or established migratory corridors or nursery sites; local policies of Santa Barbara County; and any federal, State, or regional conservation plans.

Biological resources within the Proposed Project site were evaluated in relation to the federal Endangered Species Act (FESA); the Migratory Bird Treaty Act (MBTA); the Clean Water Act Sections 400 and 401; the California Endangered Species Act (CESA); Sections 1600-1603, 3503, 3503.5, 3511, 4000, 4700, 5050, and 5515 of the California Fish and Game Code; the California Department of Fish and Wildlife (CDFW) list of Species of Special Concern; the Native Plant Protection Act; and the Conservation Element of the Santa Barbara County Comprehensive Plan.[3]

Data collection methods for the Project include database and records searches; a literature review of the 2009 Final EIR[4] and previous biological surveys conducted at the Proposed Project site; additional avian, bat, and botanical surveys conducted for the Proposed Project from 2016 to 2018 (Appendix A); and coordination with relevant agencies.

Project Study Area Overview

At the time of this BRTR, the total acreage from the summation of Assessor's Parcel Maps is 2,998 acres (see Section 2.0, *Project Description*); however, the total acreage obtained from available Geographic Information Systems (GIS) is 2,972 acres, resulting in a discrepancy of 16 acres. This discrepancy in total Project Area arises from the two sources of acreage: the summation of the acreage shown on the Assessor's Parcel maps comprising the Project, and the estimated acreage obtained from the various available GIS data, such as U.S. Geologic Survey (USGS) topographic maps and aerial imagery.

---

1 California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

2 County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Published October 2008; revised July 2015. "Environmental Thresholds and Guidelines Manual." Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

3 County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 1979; amended August 2010. Conservation Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf

4 County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. 2008. Final Environmental Impact Report, Lompoc Wind Energy Project. Prepared by: Aspen Environmental Group, Agoura Hills, CA. Available at: http://www.sbcountyplanning.org/energy/projects/Wind/Lompoc_FEIR.htm

At this stage, there has not been a survey to verify precise property lines which comprise the Project and its boundary. The majority of the properties comprising the Project were created in the 19th century as part the land division known as "Subdivision of the Rancho Lompoc and Mission Viejo." At that time, survey equipment and methods provided marginal accuracy. Furthermore, inspections of subsequent land division maps indicate that none "close" geometrically. In other words, starting at any angle point (say point "A") and traversing the parcel boundary using mapped geometrics, does not return one to said point "A." Resolution of all parcel boundaries that currently do not "close" would require an extensive survey using a common coordinate and control system; and minor but comprehensive adjustments of most parcel boundaries to provide geometric "closure." Following a comprehensive survey of numerous property boundaries, a Licensed Land Survey would make relatively minor but comprehensive adjustments of all parcel lines to achieve an entirely accurate parcel boundary and area. Said adjustments would be made based on accepted legal principals and formulas for such. The current discrepancy is not uncommon in a project of this magnitude, especially in rural and undeveloped areas, and areas with varying topography. Typically, discrepancies in decades-old land division maps are only resolved with mapping associated with urbanization, development, or a massive agency survey.

In this BRTR, all mapping efforts for biological resources were completed using Geographic Positioning System (GPS) units, and data was then uploaded and analyzed using ArcGIS software. Therefore, the Project area acreage used in this BRTR is based on GIS data, which totals 2,972 acres. Additionally, throughout this BRTR and in previous technical reports, regions of the Project area are referenced by topographic features and property names that are enumerated on Section 7.0, *Figures*: Figure 4-1, *Project Site Reference Map*.

In addition to the Project area analyzed in this BRTR, the transmission line corridor study area was evaluated. The transmission line corridor study area encompasses the proposed transmission line corridor and access roads, and constitutes of an additional approximately 89.8 acres extending about 8.6 linear miles originating from the northeast corner of the Project site and extending to the Pacific Gas and Electric (PG&E) grid in the City of Lompoc (Section 7.0: Figure 2.1-3). The transmission line corridor includes improvements to about 3.5 linear miles of existing roads, and 4.4 miles of new road construction. Thus, the total acreage evaluated in this BRTR includes the 2,972-acre Project area and 89.8 acre transmission line corridor, which totals to 3,061.5 acres.

4.1 DATABASE SEARCHES AND LITERATURE REVIEW

4.1.1 Special Status Species

The CDFW California Natural Diversity Database (CNDDB)[5] and California Native Plant Society (CNPS) Electronic Inventory[6] were queried to determine which special status plant and wildlife species have the potential to occur within the vicinity of the Proposed Project sites (Appendix B, *Record Search Results*). The queries were conducted within two USGS 7.5-minute series topographic quadrangles in which the Project was located as well as the nine surrounding quadrangles, excluding the ocean. Therefore, because the Project is located in two quadrangles and two of the surrounding quadrangles exist in the ocean, a total of nine quadrangles were searched: Tranquillon Mountain, Lompoc Hills, Surf, Lompoc, Los Alamos, Point Arguello, Santa

[5] California Department of Fish and Wildlife, Biogeographic Data Branch. 2017. Rarefind 5: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Database. Sacramento, CA.

[6] California Native Plant Society. 2017. CNPS Electronic Inventory. Available at: www.cnps.org

Rosa Hills, Point Conception, and Sacate. The CNDDB record search was updated on August 10, 2017, and the CNPS Electronic Inventory was updated on June 16, 2017. In addition, an official USFWS Species List for the Project vicinity was requested and received on June 16, 2017 (Appendix B).

To evaluate potential impacts to critical habitat, geographic information systems (GIS) were used to overlay the Project area with designated critical habitat for all federally threatened and endangered species. Critical habitat information was obtained from the USFWS Environmental Conservation Online System.[7]

All technical reports and surveys conducted within the Proposed Project area were reviewed to generate a list of all special status species that have been previously observed at the site. This included data collected in the field surveys completed before 2016, in support of the Project approved in 2009. Eleven (11) surveys conducted from 2006 to 2008 were reviewed along with Section 3.5: Biological Resources of the 2009 Final Environmental Impact Report (FEIR)[8] (Table 4.1.1-1, *Special Status Species Literature Review*; Appendix A).

Previous technical reports included data utilizing the first edition of *The Jepson Manual of Vascular Plants of California* (1993); all plant species listed in this report have been updated to follow the second edition (2012).[9,10]

[7] U.S. Fish and Wildlife Service. 2017. Environmental Conservation Online System: Information for Planning and Conservation. Available at: https://ecos.fws.gov/ipac/

[8] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. 2008. Final Environmental Impact Report, Lompoc Wind Energy Project. Prepared by: Aspen Environmental Group, Agoura Hills, CA. Available at: http://www.sbcountyplanning.org/energy/projects/Wind/Lompoc_FEIR.htm

[9] Baldwin, B.G., D.H. Goldman, D.K. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. The Jepson Manual of Vascular Plants of California. 2nd Edition. Berkeley, CA: University of California Press.

[10] Jepson Flora Project (eds.) 2017. Jepson eFlora. Available at: http://ucjeps.berkeley.edu/eflora/

TABLE 4.1.1-1
SPECIAL STATUS SPECIES LITERATURE REVIEW

Date	Survey Report	Surveyors	Resources Surveyed
December 2008	Pacific Renewable Energy Generation, LLC Lompoc Wind Energy Project Final Spring and Autumn Bat Migration Pre-construction Survey Technical Report (Appendix A-15)	SEI*	Bat species
December 2008	Pacific Renewable Energy Generation, LLC Lompoc Wind Energy Project Final Avian Autumn Migration Pre-construction Survey Technical Report (Appendix A-14)	SEI	Avian species
November 2008	Memorandum for the Record No. 1: Results of Directed Surveys for the Federally Endangered El Segundo Blue Butterfly in Support of the Lompoc Wind Energy Project (LWEP), County of Santa Barbara, California	SEI, Entomological Consulting Services	El Segundo blue butterfly
August 2008	Pacific Renewable Energy Generation, LLC Lompoc Wind Energy Project Final Avian Breeding Season Pre-construction Survey Technical Report (Appendix A-12)	SEI	Avian species
July 2008	Pacific Renewable Energy Generation, LLC Final Avian Spring Migration Pre-Construction Survey Technical Report (Appendix A-10)	SEI	Avian species
June 2008	Pacific Renewable Energy Generation, LLC Final Winter Season Avian Pre-Construction Survey Technical Report (Appendix A-9)	SEI	Avian species
February 2008	Acciona Wind Energy USA LLC Memorandum for the Record No. 8, Habitat Suitability for Three Listed Aquatic Species (Appendix A-5)	SEI	Amphibian and fish species
February 2008	Acciona Wind Energy USA LLC Memorandum for the Record No. 7, Habitat Suitability for Sensitive Terrestrial Species (Appendix A-4)	SEI	Mammal and reptile species
February 2008	Acciona Wind Energy USA LLC Memorandum for the Record No. 6, Habitat Suitability for the Federally Endangered El Segundo Blue Butterfly (Appendix A-3)	SEI	El Segundo blue butterfly
February 2007	Acciona Wind Energy USA LLC Lompoc Wind Energy Project: Results of Winter Bird Surveys (Appendix A-2)	Olson & Rindlaub**	Avian species
February 2006	Acciona Wind Energy USA LLC Lompoc Wind Energy Project: Biological Resources (Appendix A-1)	Olson & Rindlaub	All special status wildlife and plant species prior to 2006

KEY:
*SEI: Sapphos Environmental, Inc.
**Olson & Rindlaub: Thomas E. Olson Biological Consulting and Katherine Rindlaub Biological Consulting

4.1.1.1 Previous Surveys for Special Status Plants

As part of the development of this report, prior botanical surveys of the subject property conducted between 2002 and 2008 were reviewed (Table 4.1.1.1-1, *Literature Review: Special Status Plant Surveys,* Appendix A-1).[11,12] Any species observed as a result of prior surveys of the subject property are included as being present for the purposes of the BRTR.

TABLE 4.1.1.1-1
LITERATURE REVIEW: SPECIAL STATUS PLANT SPECIES SURVEYS

Dates	Surveys	Report
October 4, 2007; February 18 and March 10, 2008	Reconnaissance surveys for special status plants at the entire Proposed Project site	Final Environmental Impact Report, Lompoc Wind Energy Project
September 2006	Botanical surveys of the Proposed Project footprint in 2009 FEIR, including Larsen Ranch, and the pre-existing PG&E transmission line corridor	Lompoc Wind Energy Project Field Surveys: Vegetation
Spring and Autumn 2005	Botanical surveys of Proposed Project footprint in 2009 FEIR (not including Larsen Ranch)	Acciona Wind Energy USA LLC Lompoc Wind Energy Project: Biological Resources (Appendix A-1)
Spring and Summer 2002	Botanical surveys of Proposed Project footprint in 2009 FEIR (not including Larsen Ranch)	Acciona Wind Energy USA LLC Lompoc Wind Energy Project: Biological Resources (Appendix A-1)

4.1.1.2 Previous Surveys for Special Status Wildlife Species

As part of the development of this report, surveys for special status wildlife species for the subject property conducted between 2002 and 2013 were reviewed (Table 4.1.1.2-1, *Literature Review: Special Status Wildlife Surveys*). [13,14] Any species observed as a result of prior surveys of the subject property are included as being present for the purposes of the BRTR.

[11] CH2M HILL. September 2006a. Lompoc Wind Energy Project Field Surveys: Vegetation. Los Angeles, CA.

[12] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. 2008. Final Environmental Impact Report, Lompoc Wind Energy Project. Prepared by: Aspen Environmental Group, Agoura Hills, CA. Available at: http://www.sbcountyplanning.org/energy/projects/Wind/Lompoc_FEIR.htm

[13] CH2M HILL. September 2006a. Lompoc Wind Energy Project Field Surveys: Vegetation. Los Angeles, CA.

[14] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. 2008. Final Environmental Impact Report, Lompoc Wind Energy Project. Prepared by: Aspen Environmental Group, Agoura Hills, CA. Available at: http://www.sbcountyplanning.org/energy/projects/Wind/Lompoc_FEIR.htm

TABLE 4.1.1.2-1
LITERATURE REVIEW: SPECIAL STATUS WILDLIFE SPECIES SURVEYS

Dates	Surveys	Report
March 18–19, 2013	Aerial raptor surveys conducted by helicopter in a 10-mile radius surrounding the Project site	Memorandum for the Record No. 3: Strauss Wind Energy Project Autumn 2016 Aerial Raptor Survey (Appendix A-18)
May–June and August–September 2008	Roosting surveys in May–June 2008; acoustical monitoring in May–June and August–September 2008; active monitoring in August–September 2008	Lompoc Wind Energy Project Final Spring and Autumn Bat Migration Pre-construction Survey Technical Report (Appendix A-15)*
August–November 2008	Early morning flight counts; line transect surveys of riparian areas; diurnal raptor surveys; single-point count raptor surveys; dusk surveys; and general reconnaissance surveys of the entire Project site	Memorandum for the Record No. 1: Results of Directed Surveys for the Federally Endangered El Segundo Blue Butterfly in Support of the Lompoc Wind Energy Project (LWEP), County of Santa Barbara, California (Appendix A-13)*
August 14, 2008	Directed surveys for El Segundo blue butterfly within areas determined to contain suitable habitat	Memorandum for the Record No. 1: Results of Directed Surveys for the Federally Endangered El Segundo Blue Butterfly in Support of the Lompoc Wind Energy Project (LWEP), County of Santa Barbara, California (Appendix A-13)*
April–June 2008	Performed in conjunction with spring migration surveys	Lompoc Wind Energy Project Final Avian Breeding Season Pre-construction Survey Technical Report (Appendix A-12)*
April and May 2008	Avian point count surveys of 54 locations; diurnal raptor and nest surveys; line transect surveys of riparian areas; single-point count raptor surveys; dusk surveys; and general avian reconnaissance surveys of the entire Project site	Final Avian Spring Migration Pre-Construction Survey Technical Report (Appendix A-10)*
February and March 2008	Avian point count surveys of 54 locations; diurnal raptor and nest surveys; line transect surveys of riparian areas; and general avian reconnaissance surveys of the entire Project site	Final Winter Season Avian Pre-Construction Survey Technical Report (Appendix A-9)*
December 2007 and January 2008	Habitat assessment for California red-legged frog, unarmored threespine stickleback, and southern steelhead trout	Memorandum for the Record No. 8: Habitat Suitability for Three Listed Aquatic Species (Appendix A-5)*
December 2007 and January 2008	Habitat assessment for Blainville's horned lizard, silvery legless lizard, San Diego desert woodrat; and American badger	Memorandum for the Record No. 7: Habitat Suitability for Sensitive Terrestrial Species (Appendix A-4)*
December 2007 and January 2008	Habitat assessment for El Segundo blue butterfly within grassland and coastal scrub habitats	Memorandum for the Record No. 6: Habitat Suitability for the Federally Endangered El Segundo Blue Butterfly (Appendix A-3)*
October 4, 2007; February 18 and March 10, 2008	General wildlife surveys of the entire Project site	Final Environmental Impact Report, Lompoc Wind Energy Project (2009 FEIR)†

TABLE 4.1.1.2-1
LITERATURE REVIEW: SPECIAL STATUS WILDLIFE SPECIES SURVEYS, *Continued*

Dates	Surveys	Report
December 2006	Avian point count surveys at 18 locations within the Project area	Lompoc Wind Energy Project: Results of Winter Bird Surveys (Appendix A-2)**
September 2006	Avian reconnaissance surveys of the Proposed Project footprint in 2009 FEIR, including a proposed Operations and Maintenance facility, the Larsen Ranch, and the pre-existing PG&E transmission line corridor; avian point count surveys at six locations within the Project site	Lompoc Wind Energy Project Field Surveys: Avian, as cited in 2009 FEIR.***
Spring and Summer 2005	General wildlife surveys of Proposed Project footprint in 2009 FEIR (not including Larsen Ranch)	Lompoc Wind Energy Project: Biological Resources Report (Appendix A-1)**
Spring, Summer, and Autumn 2002	General wildlife surveys of Proposed Project footprint in 2009 FEIR (not including Larsen Ranch)	Lompoc Wind Energy Project: Biological Resources Report (Appendix A-1)**

KEY:
*SEI: Sapphos Environmental, Inc.
**Olson & Rindlaub: Thomas E. Olson Biological Consulting and Katherine Rindlaub Biological Consulting
*** CH2M HILL. September 2006a. *Lompoc Wind Energy Project Field Surveys: Vegetation*. Los Angeles, CA.
† County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. 2009. *Final Environmental Impact Report, Lompoc Wind Energy Project*. Prepared by: Aspen Environmental Group, Agoura Hills, CA. Available at: http://www.sbcountyplanning.org/energy/projects/Wind/Lompoc_FEIR.htm

In 2002 and 2005, over 55 hours of wildlife reconnaissance surveys with an emphasis on avian fauna were conducted over 13 non-consecutive days (Appendix A-1). Surveys were conducted mostly in the afternoon for good visibility and to avoid the marine layer that is common in the area. Proposed turbine locations and an approximate 500-foot radius were surveyed at least once. Most of the Proposed Project area was surveyed in 2002 and 2005, including adjacent habitats, except for the Larsen Ranch and the most current proposed transmission corridor. Features that could support nests or serve as perch sites (i.e. transmission lines, trees, and rock outcrops) were regularly searched. Birds were identified and their behavior was described. Any nesting birds or birds showing nesting behavior such as carrying nesting materials, were also documented. Other wildlife species, specifically prey species for raptors, were identified and described by locations where observed. General abundance of each species was recorded. Binoculars and a spotting scope were used during the surveys.

In 2006, additional surveys that included the Larsen Ranch and the Pacific Gas and Electric Company (PG&E) powerline corridor were conducted following protocols used in 2002 and 2005.[15] Ten-minute point count intervals were utilized and incidental wildlife observations were also documented.

In December 2006, point count surveys were conducted over three non-consecutive three-day periods at the 18 proposed turbine locations (Appendix A-2). Points were surveyed for 20 minutes at different times of the day (morning, midday, and afternoon). Birds were identified as well as number of individuals estimated, community observed in, topography, and behavior observed.

[15] CH2M HILL. September 2006a. Lompoc Wind Energy Project Field Surveys: Vegetation. Los Angeles, CA.

In 2008, winter avian surveys were conducted between February and March; spring surveys between April and May; breeding season surveys April and June; and autumn surveys between August and November (Table 4.1.1.2-1). Surveys consisted of 1) areas search counts at 54 points with a 50-meter radius, 2) diurnal raptor nest surveys along five ridges, 3) supplemental bird counts along 10 transects at three established sites, and 4) incidental bird counts. Additional surveys were done between April and May (spring surveys) as well following similar methods.

In 2013, aerial raptor surveys were conducted by helicopter in a 10-mile radius surrounding the Project site, with a particular emphasis on bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*).[16]

In the spring and autumn of 2008, approximately 140 field hours and 672 hours of acoustical data were collected in support of bat migration surveys (Appendix A-15). Over approximately 2,950 acres, roosting surveys were conducted in May through June 2008; acoustical monitoring performed with Anabat and Pettersson detectors was conducted in May to June and August to September for 17 days each session; and active monitoring was conducted in August to September 2008.

A habitat assessment for El Segundo blue butterfly (ESBB) (*Euphilotes battoides allyni*) within grassland and coastal scrub habitats was conducted in December 2007 and January 2008 (Appendix A-3). Directed surveys for the species were conducted during peak flight season on August 14, 2008, within areas determined to contain suitable habitat. Prior to directed surveys, reconnaissance surveys were conducted throughout the Project property, consisting of over 20 survey hours (Appendix A-13).

In addition, in December 2007 and January 2008, habitat assessments were conducted for the California red-legged frog (*Rana draytonii*), unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), and southern steelhead trout (*Onchorhychus mykiss*), comprising of 140 hours of field surveys and review of published and unpublished literature (Appendix A-5). At the same time, a habitat assessment was conducted for Blainville's horned lizard (*Phrynosoma coronatum blainvillii*), the silvery legless lizard (*Anniella pulchra pulchra*), the San Diego desert woodrat (*Neotoma lepida intermedia*), and American badger (*Taxidea taxus*).

General reconnaissance wildlife surveys were conducted on October 4, 2007, and February 18 and March 10, 2008 in support of the 2009 FEIR.

[16] Sapphos Environmental, Inc. Unpublished data.

4.1.2 Riparian and State Sensitive Plant Communities

State Sensitive Native Plant Communities

The CNDDB was queried to determine the potential presence of State-sensitive native plant communities and habitats within the nine USGS 7.5-minute series topographic quadrangle search area. In addition, maps, aerial photographs, and previous survey reports were reviewed to characterize riparian and other State-designated sensitive plant communities potentially present in the Proposed Project survey area. This included data collected in the field surveys done for the 2009 FEIR project between 2002 and 2008 (Appendices A-1 and A-6). These surveys and the CNDDB used the Holland classification system to name vegetation communities.[17] Plant communities were ranked based on CNDDB state rarity ranking, where rankings S1–S3 are considered sensitive and S4–S5 are not considered sensitive.[18]

State Wetlands and Riparian Habitats

Both the CNDDB and National Wetland Inventory (NWI)[19] were used to map the potentially CDFW jurisdictional riparian habitats present within the Project area. In addition, all technical reports and surveys conducted within the Proposed Project area that pertain to CDFW jurisdictional riparian habitats were reviewed. This included data collected during the jurisdictional delineation (JD) conducted in 2008 (Appendices A-7 and A-11).

4.1.3 Federal Wetlands and Waters of the United States

The NWI and the National Hydrography Dataset (NHD)[20] were searched to determine the potential presence of wetlands and waterways of the United States within the Project site.

The reports based on delineations conducted in April 2007 and January 2008 to identify federal wetlands and/or waterways in the 2009 FEIR project that were anticipated to be subject to jurisdiction of the U.S. Army Corps of Engineers (USACE) were reviewed (Appendix A-7 and A-11). For those surveys, publicly accessible data on the blue-line features, plant community data collected in the field, and known wetlands were used to determine the presence of potentially jurisdictional wetlands and/or waterways. Wetlands were characterized consistent with the guidance provided in the *Santa Barbara County Environmental Thresholds and Guidelines Manual* Section 6.C.2.[21] It should be noted that the surveyed areas in 2007 and 2008 are not the same areas that are in the current Proposed Project impact area (Appendix A-7 and A-11; and Section 7.0: Figure 2.3-1). Furthermore, because the JDs were completed in 2007 and 2008, and an

---

[17] Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

[18] California Department of Fish and Wildlife. September 2010. List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program. Sacramento, CA.

[19] U.S. Fish and Wildlife Service. 2017. National Wetlands Inventory – Wetlands Mapper. Available at: https://www.fws.gov/wetlands/Data/Mapper.html

[20] U.S. Geological Survey. 2017. National Hydrography Dataset. Available at: https://nhd.usgs.gov/NHD_High_Resolution.html

[21] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Published October 2008; revised July 2015. "Environmental Thresholds and Guidelines Manual." Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

approved JD is effective for three years following official USACE determination, they have since expired, and were reviewed for background information concerning wetland resources at the Project site. An updated jurisdictional delineation will be completed in 2018 based on the updated grading plan.

4.1.4 Migratory Corridors and Nursery Sites

An overlay of the Proposed Project area was generated using GIS with topographic, plant community, and published data for migratory corridors and nursery sites for wildlife species to characterize the baseline conditions for these resources within the area of the Proposed Project.

In the spring and autumn of 2006 and 2007, radar data was collected and analyzed to assess nocturnal bird migration patterns over the Proposed Project site (Appendix A-8). Migratory bird species and breeding bird populations were recorded during avian surveys conducted on various dates between 2002 and 2013 in support of the project described in the 2009 FEIR (Table 4.1.4-1, *Literature Review: Migratory Corridors and Nursery Sites*).

TABLE 4.1.4-1
LITERATURE REVIEW: MIGRATORY CORRIDORS AND NURSERY SITES

Dates	Surveys	Report
March 18–19, 2013	Aerial raptor surveys conducted by helicopter in a 10-mile radius surrounding the Project site	Strauss Wind Energy Project Autumn 2016 Aerial Raptor Survey (Appendix A-18)
May to June and August to September 2008	Roosting surveys in May–June 2008; acoustical monitoring in May–June and August–September 2008; active monitoring in August–September 2008	Pacific Renewable Energy Generation, LLC Lompoc Wind Energy Project Final Spring and Autumn Bat Migration Pre-construction Survey Technical Report (Appendix A-15)
August through November 2008	Early morning flight counts; line transect surveys of riparian areas; diurnal raptor surveys; single-point count raptor surveys; dusk surveys; and general reconnaissance surveys of the entire Project site	Acciona Wind Energy USA LLC Memorandum for the Record No. 1, Results of Directed Surveys for the Federally Endangered El Segundo Blue Butterfly in Support of the Lompoc Wind Energy Project, County of Santa Barbara, California (Appendix A-13)
April through June 2008	Performed in conjunction with spring migration surveys	Pacific Renewable Energy Generation, LLC Lompoc Wind Energy Project Final Avian Breeding Season Pre-construction Survey Technical Report (Appendix A-12)
April and May 2008	Avian point count surveys of 54 locations; diurnal raptor and nest surveys; line transect surveys of riparian areas; single-point count raptor surveys; dusk surveys; and general avian reconnaissance surveys of the entire Project site	Pacific Renewable Energy Generation, LLC Final Avian Spring Migration Pre-Construction Survey Technical Report (Appendix A-10)
February and March 2008	Avian point count surveys of 54 locations; diurnal raptor and nest surveys; line transect surveys of riparian areas; and general avian reconnaissance surveys of the entire Project site	Pacific Renewable Energy Generation, LLC Final Winter Season Avian Pre-Construction Survey Technical Report (Appendix A-9)
December 2006	Avian point count surveys at 18 locations within the Project area	Acciona Wind Energy USA LLC Lompoc Wind Energy Project: Results of Winter Bird Surveys (Appendix A-2)
September 2006	Avian reconnaissance surveys of the Proposed Project footprint in 2008 FEIR, including a proposed Operations and Maintenance facility, the Larsen Ranch, and the pre-existing PG&E transmission line corridor; avian point count surveys at six locations within the Project site	Lompoc Wind Energy Project Field Surveys: Avian, as cited in 2008 FEIR.***
Spring and Autumn 2006; Spring and Autumn 2007	Analysis of radar data from VAFB over the Project site to assess nocturnal bird migration patterns	Aspen Environmental Group Analysis of WSR-88D Data to Assess Nocturnal Bird Migration over the Lompoc Wind Energy Project in California Final Report (Appendix A-8)

KEY:
*SEI = Sapphos Environmental, Inc.
*** CH2M HILL. September 2006a. *Lompoc Wind Energy Project Field Surveys: Vegetation*. Los Angeles, CA.
VAFB = Vandenberg Air Force Base

4.1.5 Local Policies and Ordinances

The Santa Barbara County Comprehensive Plan was reviewed for consistency with the Proposed Project, with a focus on the Conservation Element.[22] Plant and wildlife species as well as plant communities identified as locally important in the Comprehensive Plan were taken into consideration during the special status species evaluation.

For the purposes of this BRTR, species and plant communities identified as having "particular value" in the County Comprehensive Plan were also considered locally important. Also, plant and wildlife species that have been documented as locally important in the 2009 FEIR and previous technical reports conducted within the Project area are considered locally important in this report. These include locally important avian species recognized by the La Purisima Audubon Society at Lompoc, Santa Barbara Audubon Society, the Community Environmental Council, EDC at Santa Barbara, and several private individuals.

In addition, the Project was reviewed for consistency with the Santa Barbara Coastal Land Use Plan[23] (a certified Local Coastal Program by the California Coastal Commission) due to its location partially within the Coastal Zone.

4.1.6 HCPs and NCCPs

The boundaries of known habitat conservation plan (HCP) and Natural Community Conservation Plan (NCCP) areas were compared to the area of the Proposed Project using the CDFW NCCP California Regional Conservation Plans Map, which features all NCCPs and HCPs in the State of California.[24] No HCPs or NCCPs are applicable to the Proposed Project.

4.2 2016, 2017, AND 2018 FIELD SURVEYS

Because more than two years have lapsed since the previous surveys conducted prior to 2016 in support of a former project, further field studies were undertaken in 2016, 2017, and 2018 that were intended to evaluate the potential for special status species, sensitive natural communities, and resources protected under local policies and ordinances to be present in the Proposed Project area(Table 4.2-1, *2016 and 2017 Survey Dates*). Field investigations in support of the Proposed Project include surveys for avian and bat species in the autumn of 2016 and the spring of 2017; rare plants in the spring of 2017; tree inventory surveys in the winter of 2018; and a habitat assessment of the proposed transmission line corridor in 2018. The Project plant community map was updated based on field observations recorded during these surveys. The locations of each survey were based on the proposed impact area provided at the time the survey was conducted. In order to avoid potential impacts, the Proposed Project area has been modified since each of the surveys was conducted. It is anticipated that further surveys shall be conducted in support of this Project.

---

[22] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 1979; amended August 2010. Conservation Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf

[23] County of Santa Barbara Department of Planning and Development. Adopted 1982, republished 2014. Coastal Land Use Plan, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/CoastalPlan.pdf

[24] California Department of Fish and Wildlife. 2017. "Natural Community Conservation Planning." Available at: https://www.wildlife.ca.gov/Conservation/Planning/NCCP

TABLE 4.2-1
2016–2018 SURVEY DATES

Survey Type	Dates	Report
Tree inventory	**2018**: January 22–24, 31, February 1–2	Tree Inventory Data (Appendix A-23)
Spring botanical	**2017**: April 6, 24–26	Memorandum for the Record No. 6: Spring 2017 Botanical Surveys (Appendix A-19)
Spring bat migration	**2017**: March 15-17, April 3–5, 10–12, 17–25	Memorandum for the Record No. 8: Spring 2017 Bat Surveys (Appendix A-21)
Spring avian migration	**2017**: March 16–18; April 3–5, 10–13, and 17–19	Memorandum for the Record No. 7: Strauss Wind Energy Project Spring 2017 Avian Migration Survey (Appendix A-20)
Autumn bat migration	**2016**: November 13–15	Memorandum for the Record No. 1: Results for Fall 2016 Bat Surveys, Strauss Wind Energy Project (Appendix A-16)
Autumn avian migration	**2016**: November 10, 14–17, 21–23, and 28–30; December 5–7; December 12–14	Memorandum for the Record No. 2: Strauss Wind Energy Project Autumn 2016 Avian Migration Survey (Appendix A-17)
Aerial raptor	**2016**: November 7	Memorandum for the Record No. 3: Strauss Wind Energy Project Autumn 2016 Aerial Raptor Survey (Appendix A-18)

4.2.1 Botanical Field Surveys, Spring 2017

Botanical surveys were conducted in spring 2017 in support of the Proposed Project. Surveys covered the approximate impact area provided in spring 2017, which composed of proposed roads, alongside preexisting unpaved roads, laydown areas, turbine pads, substation, and the transmission line corridor within the Proposed Project area (Section 7.0: Figure 4.2.1-1, *Spring 2017 Botanical Survey Locations*). Over half of the currently proposed impact areas and buffer zones were included in the spring 2017 surveys. It is understood that further surveys for rare plants would be conducted prior to construction (Section 5.0, *Results*).

Qualified biologists reviewed previous surveys and documentation (Table 4.2-1). The approximate proposed impact areas were surveyed on-foot, by vehicle, or with binoculars depending on the terrain and site conditions. Every plant observed within the proposed impact area and their 100-foot buffer was identified to the taxonomic level needed to determine its status. Surveys were structured to those outlined in the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Native Communities*.[25]

A Trimble Juno unit was used as a Global Positioning System (GPS), for navigation and orienteering, to upload the Project boundary, proposed impact areas, special status plant occurrences, and plant communities' maps to reference in the field. Additionally, previously

[25] California Department of Fish and Game. 24 November 2009. "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities." Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline=1

mapped special status plant population polygons, within or near the proposed impact area, were included in the Trimble to verify presence of previously mapped populations.[26]

Plant species were identified using *The Jepson Manual: Vascular Plants of California*, 2nd ed.[27] its online version (eFlora), and Calflora web resources.[28]

4.2.2 Avian Surveys, 2016–2017

Avian surveys were conducted in autumn 2016 and spring 2017 in support of the Proposed Project, consistent with surveys conducted in support of the 2009 FEIR. Many of the same sites throughout the Project site that were surveyed in 2009 were once again surveyed to update baseline conditions for the current Proposed Project.

Autumn 2016 Aerial Raptor Surveys

Qualified biologists conducted an aerial raptor survey on November 7, 2016, between 9:00 a.m. and 3:00 p.m. (Appendix A-18).

Consistent with the March 2013 survey, the November 2016 survey covered the entire Project area and areas within 10 miles that constitute potential nesting habitat for eagles (Section 7.0: Figure 4.2.2-1, *Autumn 2016 Aerial Raptor Survey Area*). The survey area did not include the open ocean, and was also subject to air space restrictions associated with Vandenberg Air Force Base (VAFB). Raptors were observed in the survey area from a chartered Bell 407 helicopter. In particular, locations of nests that were observed in the 2013 survey were revisited.

Observations of all species of raptors and nest sites were recorded. Special attention was given to identifying eagles and eagle nests. Standardized information was recorded for each observation, including: date and time; location; and description of species, behavior, and/or nest. Location was recorded using GPS units. When a possible nest site was located, a second flyover was made to confirm nest type and condition and to obtain accurate GPS location coordinates.

Autumn 2016 Avian Surveys

Qualified biologists conducted avian surveys throughout the Project site for a total of 17 days in November and December 2016 (Appendix A-17; Table 4.2.2-1, *Survey Dates in Autumn 2016*).

The methods for each survey were consistent with the methods of the autumn 2008 avian migration surveys. Survey types included early morning flight counts, line transects, diurnal raptor transects, single-point counts, dusk surveys, and general reconnaissance. The combination of all methods, in all habitats, resulted in 100 percent visual and/or aural coverage of the Project property during avian autumn surveys.

---

[26] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. 2008. Final Environmental Impact Report, Lompoc Wind Energy Project. Prepared by: Aspen Environmental Group, Agoura Hills, CA. Available at: http://www.sbcountyplanning.org/energy/projects/Wind/Lompoc_FEIR.html

[27] Baldwin, B.G., D.H. Goldman, D.K. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. The Jepson Manual of Vascular Plants of California. 2nd Edition. Berkeley, CA: University of California Press.

[28] Calflora. 2017. The Calflora Database: CalFlora Information on California Plants for Education, Research and Conservation. Berkeley, CA. Available at: http://www.calflora.org/

In every survey, each bird or flock of birds that could be visually or aurally identified was recorded. The temperature, wind speed, and cloud cover at the beginning of each survey was noted. Bird species were classified as migratory or year-round resident based on known migration patterns for each species.[29,30,31,32,33]

TABLE 4.2.2-1
SURVEY DATES IN AUTUMN 2016

Date	Early Morning Flight Count	Line Transects	Diurnal Raptor Transects	Single-Point Count	Dusk	General Reconnaissance
11/10	●	●			●	●
11/14	●		●		●	●
11/15	●	●				●
11/16	●		●			●
11/17	●			●		●
11/21	●	●				●
11/22	●		●		●	●
11/23	●			●*		●
11/28	●	●		●	●	●
11/29	●		●			●
11/30	●					●
12/5	●	●			●	●
12/6	●		●	●		●
12/7	●					●
12/12	●		●	●	●	●
12/13	●	●				●
12/14	●					●

*__Note__: this survey was ended early due to weather conditions.

Early Morning Flight Count Surveys

Early morning flight counts were conducted on each of the 17 survey days from a single location at the end of Sudden Road overlooking the southern coast mountain range adjacent to VAFB property, where the early morning flight counts had been conducted in 2008 (Section 7.0: Figure 4.2.2-2, *Autumn 2016 Avian Migration Survey Locations*). This area is an ecotone between central coast scrub and non-native grassland where autumnal migrants are concentrated at or near the fence line, at a pass at the top of a divide where a steep canyon incises the coast mountain range, approximately 3 miles from the Pacific Ocean. This area provides temporary stopover habitat and a

[29] Sibley, D. A. 2000. The Sibley Guide to Birds. New York, NY: Alfred A. Knopf, Inc.

[30] Small, A. 1994. California Birds: Their Status and Distribution. Vista, CA: Ibis Publishing Company.

[31] The Cornell Lab of Ornithology. 2017. All About Birds: Bird Guide. Available at: https://www.allaboutbirds.org/

[32] National Audubon Society. 2017. "Guide to North American Birds." Available at: http://www.audubon.org/bird-guide

[33] Shuford, W. D. and T. Gardali, eds. 2008. California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California. Studies of Western Birds No. 1. Western Field Ornithologists, Camarillo, CA, and California Department of Fish and Wildlife, Sacramento, CA.

pathway for avian autumnal migrants. Early morning flight counts were conducted for one hour beginning at or just before official morning sunrise.

Line Transect Surveys

Line transect bird counts were conducted for 75 minutes in the morning along two established routes at two sites, along the northern side of La Honda Creek and along San Miguelito Canyon Road at the same locations they had been conducted in 2008 (Section 7.0: Figure 4.2.2-2). Each of the two line transects were conducted once a week in November and December 2016 for a total of six surveys. Each transect is approximately 0.5 mile one way.

The line transect along La Honda Creek followed a riparian corridor on the border of an agricultural field and hilly annual grassland used for livestock grazing. The survey was conducted from the VAFB boundary to the western border of the first eucalyptus grove, or just west of the driveway entrance to the residence on the north side of La Honda Creek.

The line transect along San Miguelito Canyon Road ran between oak woodlands on the east side of the road and a riparian corridor on the west side of the road.

Diurnal Raptor Transect Surveys

Diurnal raptor surveys were conducted approximately once a week along the five major ridgelines at the Project site for a total of six surveys (Section 7.0: Figure 4.2.2-2). All line transects were driven at 5 miles per hour or less with frequent stops for approximately two hours during the day, for a total length of about 10 miles.

Single-Point Count Surveys

Approximately once a week, birds were counted with a focus on diurnal raptors from a single point for about two hours for a total of five surveys. The single point is located at a former meteorological tower at the north ridge at approximately 1,300 feet elevation, in the same area where this survey was conducted in 2008 (Section 7.0: Figure 4.2.2-2).

Dusk Surveys

Once a week beginning 30 minutes before sunset for one hour, dusk surveys were conducted. The surveys began at the location of the early morning flight count. As the sun set, surveys continued throughout the Project site to target roosting raptors and nocturnal species that vocalize or are found along roadsides.

General Reconnaissance Surveys

Reconnaissance (or incidental) surveys were conducted on each the 17 survey days throughout the Project property. Key areas included upper La Honda Creek, riparian and oak woodland habitats away from line transect surveys, field edges, ridgelines, and arable fields. Reconnaissance surveys were used to observe birds during all times of the day but outside specific survey periods, such as species detected while walking or driving between other survey periods.

Spring 2017 Avian Surveys

Qualified biologists conducted avian surveys throughout the Project site for a total of 13 days in March and April 2017 (Appendix A-20; Table 4.2.2-2, *Survey Dates in Spring 2017*).

TABLE 4.2.2-2
SURVEY DATES IN SPRING 2017

Date	Area Search Count	Line Transects	Diurnal Raptor Transects	Single-Point Count	Dusk	General Reconnaissance
3/16	5	2			1	1
3/17	4	2	1			1
3/18	7			1		1
4/3	4	2	1			1
4/4	3	2			1	1
4/5	5			1		1
4/10	4	2	1			1
4/11	4			1		1
4/12	5	1*	1		1	1
4/13	4	1*				1
4/17		2				1
4/18		2				1
4/19	5	2	1		1	1
Total:	50	18	5	3	4	13

*__Note__: Additional line transect survey canceled due to poor weather conditions.

The methods for each survey were consistent with the methods of the spring 2008 avian migration surveys and the autumn 2016 avian migration surveys (Appendix A-17). Survey types were congruent to those performed in autumn 2016, as listed above.

Area Search Counts

Area search counts consisted of counting the birds observed within a 50-meter radius (7,850 square meters) around a center point. A total of 50 points were surveyed for 15 minutes each (Section 7.0: Figure 4.2.2-3, *Spring 2017 Avian Migration Survey Locations*). These points included 24 points from the 2008 area search count locations; 24 points that were based on the proposed wind turbine generator locations (as they were proposed in March, 2017); and two points that were added in order to characterize the northeastern area of the property that had not been surveyed previously. The area search locations generally aligned with proposed wind turbine corridor locations, but several were located in nearby grassland habitats. Sampling points were placed at a minimum of 100 to 150 meters apart. All birds were counted within each point circle, including birds flying over within the imaginary cylinder of each point circle. Thus, all data were fully independent.

Line Transect Surveys

Line transect bird counts were congruent to those conducted in autumn 2016, as listed above. Each of the two line transects were conducted once a week in March and April 2017 for a total of 18 surveys.

Diurnal Raptor Transect Surveys

Diurnal raptor surveys were congruent to those conducted in autumn 2016 as listed above, for a total of five surveys (Section 7.0: Figure 4.2.2-3).

Single-Point Count Surveys

Birds were counted with a focus on diurnal raptors congruent to surveys conducted in autumn 2016 as listed above, for a total of three surveys (Section 7.0: Figure 4.2.2-3).

Dusk Surveys

Dusk surveys were congruent to those conducted in autumn 2016 as listed above.

General Reconnaissance Surveys

Reconnaissance (or incidental) surveys were conducted on each the 13 survey days throughout the Project property congruent to those in autumn 2016, as listed above.

4.2.3 Bat Surveys, 2016–2017

In the autumn of 2016 and spring of 2017, qualified biologists updated the results of the 2008 bat surveys. In both the autumn 2016 and spring 2017 surveys, 2008 bat survey sites (20) were revisited and resampled to assess bat presence and activity. Anabat SD2 detectors were used to record bat calls during passive and active acoustic sampling surveys (Appendices A-16 and A-21).

Nighttime Acoustic and Visual Surveys

Broadband frequency-dividing Anabat SD2™ bat detectors were used to record ultrasonic bat calls to determine species, potential species, and relative level of activity.

Two Anabat detectors were used for passive monitoring. Each was mounted on an extension pole, set approximately 3 feet above ground, and placed where an anemometer tower stood in 2008 (Section 7.0: Figure 4.2.3-1, *Bat Migration Survey Locations*). One detector was placed at the west end of the Proposed Project site and the other on the east end of the Project site. The detectors were set to activate and sample for three hours, approximately one hour before sunset and two hours after each night. Surveyors set up the passive detectors during the day and retrieved them after the survey period to check the detectors. All detectors were set with a data division ratio of eight. Ultrasonic events were stored as files on compact flash cards located within the detector for later analysis.

Two Anabat detectors were used for active monitoring. Two biologists, each with a bat detector, actively monitored a sampling location for bat activity. Active monitoring was performed concurrently with passive monitoring for two hours, starting from approximately 30 minutes to an

hour before sunset depending on sampling location. Two active locations were sampled per night (Section 7.0: Figure 4.2.3-1). A Kestrel™ anemometer was used to log wind speed and temperature before and after the acoustic survey periods.

Acoustic Analysis

Acoustic surveys take advantage of bat echolocation, a specialized adaptation common in bats in North America. All bats in the suborder Microchiroptera use echolocation to navigate, locate prey, and socially interact. Echolocation is achieved by emitting ultrasonic sound waves through the nose and mouth, and then interpreting the reflected sound waves to locate objects in the surrounding environment. The echolocation calls emitted by bats can be recorded by acoustic detectors and subsequently analyzed to determine relative activity levels and species.

Anabat detectors record ultrasonic sounds for the entire duration in which the sound is being emitted. Anabat detectors are useful for identifying relative bat activity levels and are able to measure the characteristic frequency, bandwidth, slope, duration, and time between calls. Although many bat calls are difficult to assign reliably, the combination of the above characteristics serves to separate one species from another. When provided with a clean bat call sequence of sufficient length, and not a feeding buzz, the Anabat system can provide the necessary data to identify certain bat species due to their specific call signatures.

Bat call files were analyzed using AnalookW, Version 3.8n. The frequency display was set to a logarithmic scale from 5,000 to 100,000 Hertz (Hz). The time per tick, or magnification, was set to 25 milliseconds (F6) or ten milliseconds (F7), depending on the setting for the library species used to match the bat call. Files with bat calls were viewed in the uncompressed mode to determine the presence of multiple bats, which can complicate species identification. Bat calls were also reviewed to determine if they were simple bat calls or if they were echoes, specular reflections, or harmonics; specular reflections can be confused for a true bat call and harmonics can be used as a tool to identify bat species since some species emit loud calls in the fundamental frequency and other species emit loud calls in the second harmonic. Bat calls were then characterized based on the call type, characteristic frequency, bandwidth, slope, frequency distribution over time, regularity, duration, and time between calls. The identification of call types must be completed before identification of species since a single species' entire repertoire of calls can span across a range of characteristic frequencies and slopes, and the misidentification of call type can lead to a misidentification of species. Basic call types include search calls, attack calls, feeding buzzes, and social calls. Calls can take place in high-clutter environments such as forested areas and in low-clutter environments with flat geography and no vegetation or structures. The amount of clutter affects the characteristics of bat calls and must be taken into account when placing acoustic detectors and interpreting recordings.

The characteristic frequency, bandwidth (difference between the highest frequency and lowest frequency recorded), and slope are the primary diagnostic tools used to identify species. The shape or recorded frequency distribution over time and the regularity (or irregularity) of the call are often useful in identifying genus, such as *Myotis*. The duration or length of the bat call is a secondary characteristic, but can still be useful in eliminating species from a list of potential candidates. The time between calls was also used as a tool to identify bat species. Bat calls are typically emitted as the bat exhales during the downward wing movement. In addition, larger bats with larger wings require a longer period between wing beats. Therefore, the time between wing beats can be used to determine the size of a bat and narrow down the list of potential species for identification. Furthermore, only call sequences with clear diagnostic bat calls were included for species

identification. Identification was completed using the bat call library from: (1) the Anabat Systems Manual, (2) the bat call library distributed at the 2009 Anabat Techniques Workshop, (3) the bat call library generated at the 2009 workshop based on visual confirmation of species recorded during the workshop, and (4) the bat call library distributed at the 2011 AnalookW Advanced Analysis Course.

4.2.4 Tree Inventory, 2017–2018

In November 2017, LAV/Pinnacle Engineering measured representative trees with 8 inches or greater diameter within 300 feet of WTGs 15, 27, and 28 (Appendix A-22). Prior to field surveys, Sapphos Environmental, Inc. reviewed the results of the estimation. On January 22–24, 31, and February 1–2, 2018, Sapphos Environmental, Inc. qualified biologists conducted a tree inventory to record the presence of all mature native trees within the Proposed Project and transmission line corridor impact area as of January 2018. This included three WTG locations (Numbers 15, 27, and 28), the proposed transmission line corridor outside of the Project area, and the right-of-way on either side of San Miguelito Road. The proposed transmission line corridor exits the Project area at the northeast boundary line of the Larsen property, and continues to the PG&E grid in Lompoc (Section 7.0: Figure 2.3-1). For this BRTR, the right-of-way area surveyed on San Miguelito Road constituted a 35-foot buffer on either side of the road to cover the maximum extent of road widening that is anticipated to occur. A 100-foot buffer was surveyed around the proposed transmission pole sites were surveyed. When the GPS unit located a tree at a distance outside of the survey area that was within the accuracy interval of the GPS unit, the tree was counted in the survey.

A six-inch diameter-at-breast height (DBH) was the minimum threshold for consideration as a mature tree, consistent with Santa Barbara County policy. Trees below 6 inches DBH were not included in the inventory. If a multi-trunk tree was observed as having at least one trunk above 6 inches DBH, all trunks were measured and considered as part of the individual tree. Data collected included species, height, number of trunks, trunk DBH, and location. Tree locations were recorded on GPS units.

Surveys were conducted on foot, by vehicle, or with binoculars depending on the topography, site conditions, presence of dense understory and/or poison oak, and accessibility of private properties. For trees that could not be safely accessed, the DBH and height was visually estimated through comparison to similar trees nearby. In the transmission line corridor, a total of 25 poles were inaccessible due to their locations behind private property fences (Section 4.4, *Study Limitations*). These locations were characterized with binoculars, extrapolations from the conditions from the nearest accessible comparable pole location, and aerial imagery.

4.2.5 Habitat Characterization and Assessment of Transmission Line Corridor Outside of Project Boundary, 2018

Sapphos Environmental, Inc. qualified biologists conducted a habitat characterization and assessment on January 31, February 1, and 2, 2018 of the proposed pole locations for the approximately 8-mile proposed transmission corridor that connects the WTGs to the proposed interconnect location in the City of Lompoc. In addition, approximately 7 miles of access roads that are proposed in the transmission corridor were evaluated. The first proposed pole (P28) included in the habitat assessment lies at the northeast boundary line of the Project area and continues northeast towards the City of Lompoc, ending at the PG&E grid site on N 12th St. and E Laurel Ave. (P107). A total of 79 poles were included in the habitat characterization and assessment.

Vegetation types were characterized using aerial imagery, and verified during the field visit. The habitat assessment consisted of evaluating the potential presence or absence of special status plant and wildlife species, and identifying the suitability of the habitat for any of these species. The proposed pole locations were surveyed on foot, by vehicle, or with binoculars depending on the terrain, accessibility, and site conditions. Incidental observations of plant and wildlife species were recorded.

Plant communities were classified based on *A Manual of California Vegetation*, 2nd Edition (MCV II).[34] Habitats that could not be assessed on foot or by vehicle due their locations on private property were assessed using aerial maps to classify the plant communities.

Other land use types without vegetation communities at the proposed pole locations and access roads were classified as (1) Developed for areas around residential and business structures, parking lots, pre-existing roads, staging areas, and other concrete or gravel; and (2) Agriculture for crop fields.

4.2.6 Plant Community Mapping, 2018

The plant communities map created in 2008 was updated in 2018 based on observations made during the spring 2017 avian, bat, and botanical surveys , and winter 2018 tree inventory surveys. In addition, plant communities mapped as a result of the transmission line corridor habitat assessment were incorporated into the overall Project plant community map. In previous reports and in the CNDDB, the Holland classification system[35] was used to name vegetation communities; however, this system is no longer supported by CDFW and CNPS.[36] Therefore, in this BRTR, these communities were updated to the most current, quantitative, and precise classification system used in the MCV II that meets the U.S. National Vegetation Classification Standards.[37]

In addition, potential restoration sites for coast live oak forest and tanoak woodland within the Project area, to be evaluated and incorporated in a Habitat Restoration and Monitoring Plan. Proposed sites were chosen based on the currently disturbed character of the vegetation, their proximity to current woodland communities, and the availability of water.

4.3 AGENCY COORDINATION

Over the course of the Project history, efforts to coordinate with responsible agencies for biological resources have been undertaken. Most recently, in March 2018, Sapphos Environmental, Inc. contacted the USFWS Field Office in Ventura, California to gather any new available information regarding ESBB and California red-legged frog in the Project vicinity.

---

[34] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation*, 2nd Edition. California Native Plant Society, Sacramento, CA.

[35] Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

[36] California Department of Fish and Wildlife Biogeographic Data Branch. 2018. *Natural Communities - Background Information*. Available at: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background.

[37] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation*, 2nd Edition. California Native Plant Society, Sacramento, CA.

In October 2016, Sapphos Environmental, Inc. coordinated with the USFWS Ventura Field Office and the U.S. Bureau of Land Management (BLM) Palm Springs/South Coast Field Office regarding the Autumn Aerial Raptor Survey (Appendix A-18). Records of golden and bald eagle sightings are not currently maintained by the BLM. In addition, the CDFW was contacted. The results of the surveys were not requested by these agencies.

Between November 2007 and February 2008, meetings were held to address comments and concerns regarding the 2009 project. Meetings included the Environmental Defense Center (EDC) and three local chapters of the Audubon Society to discuss the scope of their concerns related to the field work that was undertaken during preparation of the EIR (Appendices A-14 and A-15) Informal consultation was also performed with the USFWS and the CDFW.[38,39]

In August 2008, as a result of the determination of the presence of the ESBB within the Project property, a field meeting was held between the previous project applicant, Sapphos Environmental, Inc., the USACE, and the USFWS (Appendix A-13). The objective was to verify the substantial evidence that exists to support a "not likely to adversely affect" determination and review the proposed conservation measures to offset the effects of that project.

In support of the 2009 EIR, agency botanists from the USFWS, CDFW, VAFB, and the County, as well as the Santa Barbara Botanic Garden were contacted to obtain information regarding Gaviota tarplant (*Deinandra increscens* ssp. *villosa*) status and distribution (Appendix A-1). Information on the endangered ESBB was obtained from contact with environmental staff at VAFB, the USFWS, and lepidopterist Dr. Gordon Pratt. Information regarding raptor observations in San Miguelito Canyon dating from 1971 was obtained from the University of California at Santa Cruz, Santa Cruz Predatory Bird Research Group.[40]

4.4 STUDY LIMITATIONS

The results in these studies are contingent upon the understanding that biological resources are variable and unpredictable in nature and that biological field data collection is subject to the limitations that environmental factors may impose. Inclement weather is known to occur on the Project site. High winds, fog, marine layer, drizzle, and rain have influenced previous and most current studies' scheduling and results. The detectability of living organisms can differ spatially and temporally based on a range of variables (e.g., blooming period, sensitivity to human disturbance, climatic conditions, migrations, etc.). The accuracy of GPS units may have been affected by the topography of the survey areas, dense forest or brush in some areas, satellite positions, and/or proximity to VAFB.

In addition, the Project impact areas have changed over the course of the Project history since 2002, therefore protocol surveys have been conducted over varying survey areas. It is understood that further pre-construction surveys shall be conducted in the exact Project footprint areas as part of the mitigation measures prior to construction.

---

[38] Potter, Martin. 9 May 2008. Personal communication with Doug McNair, Sapphos Environmental, Inc., Pasadena, CA.

[39] Martin, Kevin. 9 May 2008. Personal communication with Pacific Renewable Energy Generation, LLC, Solana Beach, CA.

[40] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. February 2009. Final Environmental Impact Report, Lompoc Wind Energy Project. Prepared by: Aspen Environmental Group, Agoura Hills, CA.

Access was not available to 25 of the 79 proposed transmission pole locations. The characterization of these locations was based on viewing the locations with binoculars and comparing the conditions from the nearest similar pole location, augmented with data available from the literature searches and aerial photography.

SECTION 5.0
RESULTS

The results described in this section address the scope of analysis recommended in Appendix G of the California Environmental Quality Act (CEQA) Guidelines for biological resources. The analysis includes the consideration of rare, threatened, and endangered species and other special status and locally important species; riparian and other State-designated sensitive habitats, including those requiring a Lake or Streambed Alteration Agreement pursuant to Section 1600 of the State Fish and Game Code; areas potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act; the movement of native resident or migratory species of fish and wildlife or established wildlife corridors; goals and policies related to the conservation of biological resources articulated in the Santa Barbara County Comprehensive Plan; and federal, State, and regional conservation plans.

The Project site is located near the west end of the Santa Ynez Mountains, about 8 miles north-northwest (NNW) of Point Conception, or where the California coastline turns eastward. It is a semi-arid region where warm and cold ocean currents mix and distributional ranges of a number of northern and southern species overlap. A high rate of endemism also characterizes this region of varied topography and geology.

Soils mapped on the Project site include Gaviota sandy loams, Santa Lucia shaley loam, loamy and claypan San Andreas/Tierra complex soils, Los Osos clay loam, and Diablo clay.[1] Sandy loams presumably formed from erosion of Gaviota-Sacate, Matilija, and Vaqueros sandstones, and clay soils formed from the Monterey and Cozy Dell shales. Rock outcrops along the central section of the Proposed Project area are composed mostly of marine Gaviota-Sacate bedded sandstone bordered on the east and south by outcrops of Monterey shale.[2]

The local climate of the Project area is unusual. Prevailing northwesterly winds frequently whip across the ridge systems. On calmer days, particularly in summer, a thick marine layer often covers the entire vicinity around Pt. Arguello and Tranquillon Mountain. Data suggests the average annual rainfall is 20 inches on the high elevations of south Vandenberg Air Force Base (VAFB), which includes the Project area.[3] Dense fog, frequent in summer months, condenses on vegetation and precipitates onto the ground beneath. This fog drip ameliorates effects of the summer drought and increases effective precipitation at some VAFB locations by 5 inches. Average annual maximum and minimum temperatures (Fahrenheit) on VAFB are in the high 60s and low 40s, respectively, with only a few days or nights each year that reach into the 100s or drop to freezing.[4]

The Project site itself has been primarily used for ranching and some farming. It has been subject to extensive, long-term grazing and suppression of woody vegetation over most of its area. As a result, large areas of the Proposed Project are dominated by non-native plant species, such as grasses and

---

1 Shipman, Gordon E. 1981. Soil Survey of Santa Barbara County, California, South Coastal Part. United States Department of Agriculture Soil Conservation and Forest Service in Cooperation with University of California Agricultural Experiment Station.

2 County of Santa Barbara, Department of Planning and Development. Certified February 2009. *Final Environmental Impact Report, Lompoc Wind Energy Project*. Prepared by: Aspen Environmental Group, Agoura Hills, CA.

3 Holland, V.L. and David J. Keil. 1995. California Vegetation. Kendall/Hunt Publishing Company, Iowa. 516 pp.

4 Holland, V.L. and David J. Keil. 1995. California Vegetation. Kendall/Hunt Publishing Company, Iowa. 516 pp.

agricultural weeds. Other areas of the Project site are composed of native communities where topography inhibits grazing activities.

5.1 BASELINE CONDITIONS

5.1.1 Special Status Species

The database searches and literature review identified a total of 184 special status species with the potential to occur at the Proposed Project site based on historical occurrences and range (Appendix B, *Record Search Results* and Appendix C, *Special Status Species and Communities with the Potential to Occur in the Project Vicinity*):

- 109 plants
- 7 invertebrates
- 3 fish
- 9 reptiles or amphibians
- 43 birds
- 13 mammals

Of these, 26 are listed or are candidates for listing as endangered or threatened pursuant to the federal Endangered Species Act (FESA) or California ESA (CESA), including 12 plant species, 2 invertebrates, 3 fish, 2 reptiles and amphibians, and 7 birds (Appendix C-1, *Listed Species with the Potential to occur in the Project Vicinity*). Three listed or candidate species were observed at the site during field surveys conducted between 2002 and 2018, including Gaviota tarplant (*Deinandra increscens* ssp. *villosa*), El Segundo blue butterfly (*Euphilotes battoides allyni*), and tricolored blackbird (*Agelaius tricolor*). Potentially suitable habitat was present for an additional five listed or candidate species, including Lompoc yerba santa (*Eriodictyon capitatum*), California red-legged frog (*Rana draytonii*), southwestern willow flycatcher (*Empidonax traillii extimus*), California condor (*Gymnogyps californianus*), and bald eagle (*Haliaeetus leucocephalus*). Critical habitat has been designated within the Project area for Gaviota tarplant and California red-legged frog.

The remaining 158 species considered are other special status species not listed pursuant to the FESA or CESA. Of these, 146 are afforded special recognition by federal and/or State resource agencies or jurisdictions, or recognized resource conservation organizations, including 89 plant species, 5 invertebrates, 7 reptiles and amphibians, 32 birds, and 13 mammals (Appendix C-2, *Other Special Status Species with the Potential to occur in the Project Vicinity*). Forty (40) other special status species were observed at the site during field surveys conducted between 2002 and 2018, including 6 plant species, 27 birds, and 7 mammals. Potentially suitable habitat was present for an additional 46 species, including 30 plants, 3 invertebrates, 4 reptiles and amphibians, 3 birds, and 6 mammals. The remaining 60 other special status species considered were not observed, and it was determined that the Project site does not provide suitable habitat for these species (Appendix C-2).

Ninety-five (95) plant and wildlife species that are considered locally important within the region by Santa Barbara County, the Santa Barbara Botanical Garden, the La Purisima Audubon Society, Environmental Defense Council, or other local agencies and/or organizations were evaluated in this BRTR, including 76 plants, 1 reptile, 17 birds, and 1 mammal. Of these, 12 species that were solely locally important and did not have another special status were considered for the potential

to occur at the Project site, including eight plant species and four bird species (Appendix C-3, *Locally Important Species with the Potential to occur in the Project Vicinity*). Of these, 10 locally important species were observed at the Project site (6 plants and 4 birds), and suitable habitat was present for one locally important plant species.

Many common, non-special status species were observed at the Project site during field surveys. These are listed in a floral and faunal compendium (Appendix D, *Floral and Faunal Compendium*).

Listed Species and Critical Habitat

Listed Plant Species

Review of the California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) Electronic Inventory, U.S. Fish and Wildlife Service (USFWS) species lists, and previous technical reports identified 12 plant species listed as rare, threatened or endangered pursuant to FESA and/or CESA with the potential to occur at the Proposed Project site (Table 5.1.1-1, *Listed Plant Species with the Potential to occur in the Project Area*; Section 7.0, *Figures*: Figure 5.1.1-1, *CNDDB Records of Listed Plant Species in the Project Vicinity*; and Appendices B and C-1). Of these, one is federally listed; three are State-listed; and eight are both federally and State-listed.

One of these species, Gaviota tarplant, was observed at the Project site (Table 5.1.1-1). Gaviota tarplant is listed as endangered under both FESA and CESA, and designated critical habitat has been designated for this plant by the USFWS. The entire 791-acre Sudden Peak Unit of critical habitat for this species occurs within the Project site (Section 7.0: Figure 5.1.1-2, *Critical Habitat for Plant Species Designated in the Project Vicinity*; Appendix C).[5] There is no designated critical habitat for any of the other listed plant species within 5 miles of the Project area.

[5] U.S. Fish and Wildlife Service. 7 November 2002. Endangered and Threatened Wildlife and Plants; Designation for Critical Habitat for *Eriodyction capitatum* (Lompoc yerba santa) and *Deinandra increscens* ssp. *villosa* (Gaviota tarplant). Vol. 67, No. 216: 67968-68001.

TABLE 5.1.1-1
LISTED PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species Name	Status	General Habitat	Presence	Habitat Assessment
marsh sandwort *(Arenaria paludicola)*	FE, SE, CRPR: 1B.1	Wet meadows, marshes, < 300 m	A	Suitable habitat not present; Project area outside of its elevation range. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
salt marsh bird's-beak *(Chloropyron maritimum* ssp. *maritimum)*[6]	FE, SE, CRPR: 1B.2, LI	Coastal salt marsh, < 10 m	A	Suitable habitat not present; Project area outside its elevation range. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
surf thistle *(Cirsium rhothophilum)*	ST, CRPR: 1B.2, LI	Dunes, bluffs, < 20 m	A	Suitable habitat not present; Project area out its elevation range. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 4.9 miles west of the Project area in Point Arguello (Section 7.0: Figure 5.1.1-1).
La Graciosa thistle *(Cirsium scariosum* var. *loncholepis)*[7]	FE, ST, CRPR: 1B.1, LI	Marshes, dunes, wetlands, < 50 m	A	Suitable habitat not present; Project area out its elevation range. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 5 miles north of the Project area in Rocky Point (Section 7.0: Figure 5.1.1-1).
seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*)	SE, CRPR: 1B.1, LI	Dunes, < 200 m	A	Suitable habitat not present; Project area is outside of its elevation range. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 1.2 miles northeast of the Project area in the vicinity of the City of Lompoc in 1928, adjacent to a developed area of the proposed transmission line corridor (Section 7.0: Figure 5.1.1-1).
Gaviota tarplant *(Deinandra increscens* ssp. *villosa)*[8]	FE, SE, CRPR: 1B.1, LI	Coastal bluffs, fields, 30–50 m	O	Suitable habitat present; plants observed in foothill grassland areas throughout the Project site in 2002, 2005, 2006, and 2017. The entire 791-acre Sudden Peak Unit of critical habitat for this species occurs within the Project area (Figure Section 7.0: 5.1.1-2). Similar grassland

[6] Formerly *Cordylanthus maritimus* ssp. *maritimus*.

[7] Formerly *Cirsium loncholepis*.

[8] Formerly *Hemizonia increscens* ssp. *villosa*.

TABLE 5.1.1-1
LISTED PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
				habitat was observed on along the northernmost extent of the transmission corridor.
beach spectaclepod *(Dithyrea maritima)*	ST, CRPR: 1B.1	Seashores, coastal sand dunes, < 50 m	A	Suitable habitat not present; Project area outside of elevation range. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 6 miles north of the Project area in the VAFB.
Lompoc yerba santa *(Eriodictyon capitatum)*	FE, SR, CRPR: 1B.2, LI	Ravines, mesas, chaparral, bishop-pine woodland, 40–900 m	HP	Habitat present; ravines, chaparral. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 5.9 miles north of the Project area in the VAFB. Similar chaparral habitat was observed on along the northernmost extent of the transmission corridor.
Beach layia *(Layia carnosa)*	FE, SE, CRPR: 1B.1, LI	Coastal dunes, coastal scrub, <70 m	A	Suitable habitat not present; Project area outside of known elevation range. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 5.1 miles north of the Project area in the VAFB.
Vandenberg monkeyflower *(Mimulus fremontii* var. *vandenbergensis)*[9]	FE, CRPR: 1B.1, LI	Open, sandy sites among shrubs, 75–120 m	A	Suitable habitat not present; Project area out its elevation range. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 5.7 miles north of the Project area.
Gambel's water cress *(Nasturtium gambelii)*[10]	FE, SE, LI	Marshes, lake margins, streambanks, < 350 m	A	Suitable habitat not present; suitable marshes not present. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
California Orcutt grass *(Orcuttia californica)*	FE, SE, CRPR:1B.1	Vernal pools, <700 m	A	Suitable habitat not present; required habitats not present. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB.

KEY:
A = Absent; no suitable habitat present and species not observed during field surveys; CRPR = California Rare Plant Rank; FE = Federally Endangered; FT = Federally threatened; HP = Habitat Present; habitat is, or may be present; the species may be present; LI = Locally Important; called out as having local importance by Olson and Rindlaub (plants confirmed with the Santa Barbara Botanical Garden Central Coast Center for Plant Conservation); or by the Santa Barbara County Comprehensive Plan; O = Observed within the Project study area, and suitable habitat is present for the species; m = meter; SE = State Endangered; SR = State Rare; ST = State Threatened

CRPR Rankings:
1A - Presumed extirpated in California and either rare or extinct elsewhere

[9] Listed in the CNDDB and by the USFWS as *Diplacus vandenbergensis*.

[10] Formerly *Rorippa gambelii*.

TABLE 5.1.1-1
LISTED PLANT SPECIES WITH THE POTENTIAL
TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment

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

Threat Ranks:
0.1 - Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)
0.2 - Moderately threatened in California (20–80 percent occurrences threatened / moderate degree and immediacy of threat)
0.3 - Not very threatened in California (less than 20 percent of occurrences threatened / low degree and immediacy of threat or no current threats known)

**Sources are listed in Appendix C-1*

Gaviota tarplant

Gaviota tarplant is listed as endangered pursuant to both the FESA and CESA, is ranked as a 1B.1 plant by the CNPS, and is considered locally important. This species is a late-season annual species that flowers from about June through September. Blooming period and individuals present from year to year vary and are dependent on rainfall, timing of rainfall, and temperature. Plants are often clustered, possibly because it does not disperse easily over longer distances, and likely is dependent on animal dispersal. Gaviota tarplant is frequently found in conjunction with areas that have been subject to disturbance, such as road cuts or burning, or within grassland vegetation that has been subject to grazing by livestock. Gaviota tarplant prefers full sun and apparently compete poorly with introduced annual grasses.[11] Currently, additional investigation into the genetic relationships of Gaviota tarplant and Santa Barbara County populations of its close relatives is underway at University of California, Berkeley. Close relatives of this subspecies of grassland tarweed (*Deinandra increscens*) may involve more than one entity.[12]

Gaviota tarplant has been affected by a number of oil and gas development projects in the Gaviota area. When listed by the California Department of Fish and Wildlife (CDFW), Gaviota tarplant was thought to be restricted to about 1 mile along the coastal terraces in Gaviota. Additional sites documented in later years have expanded the current distribution in western Santa Barbara County with seven main populations in Lion's Head (near Point Sal), Point Arguello, Tranquillion Mountain/Sudden Peak, Point Conception, Hollister Ranch, Santa Ynez Mountains, and Gaviota.[13] Private property, including some of the Proposed Project area, was included in the Federal Critical Habitat designated by the USFWS.[14] This unit supports populations that are away from the coast at

[11] Chevron U.S.A., Inc. 1988. Management of the Gaviota Tarweed, *Hemizonia increscens* ssp. *villosa*. Prepared by: URS Corporation.

[12] Baldwin, Bruce. 26 September 2005. Personal communication. Professor at University of California, Berkeley, California.

[13] U.S Fish and Wildlife Service. August 2011. *Deinandra increscens* ssp. *villosa* (Gaviota tarplant), *5-Year Review: Summary and Evaluation*. Prepared by: Ventura Fish and Wildlife Office, Ventura, CA.

[14] U.S. Fish and Wildlife Service. 7 November 2002. *Endangered and Threatened Wildlife and Plants; Designation for*

higher elevation, experience different seasonal temperatures, and receive less summer fog than other known populations.

Surveys were conducted for Gaviota tarplant within the Project area, which is described by region on Section 7.0: Figure 4.0-1. Surveys conducted in 2002 and 2005 resulted in Gaviota tarplant was observations on most of Middle Ridge (North and South), North Ridge -- Central, North Ridge -- East, Quarry Flank, Sudden Ridge – West, Scolari Bench, Signorelli Bench and Signorelli Ridge. Gaviota tarplant were mapped in areas that are traversed by the proposed access road alignments and turbine corridors on Middle Ridge – South, Middle Ridge – North, Middle Ridge – Flank, North Ridge – East, and North Ridge -- Central. A small population found near the western boundary fence with VAFB, adjacent and north of Honda Creek is outside the impact area. Gaviota tarplant also occurs in the area north of South Ridge -- East northwest of Sudden Ridge – West, and southwest of Quarry Flank. Gaviota tarplant occurs intermittently on Signorelli Ridge and Bench. The population found on Scolari Bench was observed along the established dirt road (Table 5.1.1-2, *Gaviota Tarplant Survey Results*; Section 7.0: Figure 5.1.1-3, *Historical Occurrences of Gaviota Tarplant* [*2002 and 2005*]; and Appendix A-1). These occurrences were submitted to the CNDDB (Figure 5.1.1-1).

In 2017, Gaviota tarplant was confirmed in 10 locations within the Proposed Project area (Table 5.1.1-2; Section 7.0: Figure 5.1.1-4, *Gaviota Tarplant Locations in Spring 2017*; and Appendix A-19). These locations include Scolari Bench, Signorelli Ridge, Middle Ridge – South, Middle Ridge – North, Middle Ridge – Flank, North Ridge - West, North Ridge – East, Sudden Ridge – West, Quarry Flank, and Quarry Ridge.

Critical Habitat for Eriodyction capitatum (*Lompoc yerba santa*) *and Deinandra increscens* ssp. *villosa* (*Gaviota tarplant*), *67*: 216.

TABLE 5.1.1-2
GAVIOTA TARPLANT SURVEY RESULTS

Project Area	Observed 2002 and 2005	Observed 2017*
West Ridge		
Scolari Bench	X	
Scolari Ridge		
South Ridge - West		
South Ridge - Central		
South Ridge - East		
Signorelli Bench		X
Signorelli Ridge	X	
Middle Ridge - South	X	X
Middle Ridge - North	X	X
Middle Ridge - Flank	X	X
North Ridge - West	X	X
North Ridge - East	X	
Sudden Ridge - West	X	
Quarry Flank	X	X
Quarry Ridge	X	
Sudden Ridge, NW Bench		
Sudden Ridge, NE Bench		
Sudden Ridge, East		

*Surveys in 2017 were not conducted identical to 2002 and 2005, only in areas with proposed roads. For example, Scolari Bench and Sudden Ridge were not surveyed in 2017.

During spring 2017 botanical surveys, areas identified as habitat for Gaviota tarplant in previous surveys were confirmed as still having suitable habitat for the species (Section 7.0: Figure 5.1.1-4). All previously mapped polygons that fell within the 2017 study area were surveyed. Several young plants in several grassland areas throughout the Project site were observed, ranging from 3 to 25 centimeters in height, in their vegetative state (Appendix A-19). Gaviota tarplant was found in grassland slopes and ridges that included critical habitat of the Gaviota Tarplant Sudden Peak Unit. This annual species can bloom outside of its general blooming period given suitable conditions, as was observed incidentally during avian surveys at the Project site on November 16, 2016 (Appendix A-19).

Lompoc yerba santa

Lompoc yerba santa is a federally endangered species, is ranked as a 1B.2 plant by the CNPS, and is a locally important species. This endemic shrub is associated with chaparral and closed-cone pine forest. It generally blooms from April to July. It has been found on the crest of the Santa Ynez Mountains on Hollister Ranch, and in the Purisima Hills north of Lompoc. It has not been found in the Sudden Peak or Tranquillon Mountain areas.[15]

[15] Hendrickson, et al. 1998. Botanical Resources of Hollister Ranch, Santa Barbara County, California. Draft. Museum of Systematics and Ecology, Department of Ecology, Evolution, and Marine Resources, University of California at Santa Barbara. Environmental Report No. 10.

Although fog frequents the area and much of the shrubland habitat has been converted to rangeland, suitable habitat for this species may occur within chaparral and ravines within the Project area. Lompoc yerba santa was not observed during any of the multiple botanical surveys conducted at the site between 2002 and 2017. The nearest occurrence in the CNDDB was recorded 5.9 miles north of the Project area in the VAFB.

Listed Plant Species with No Suitable Habitat Present

Ten (10) federally and/or State-listed plant species were determined to be absent from the Project area due to a lack of suitable habitat and a lack of observations from multiple surveys at the site (Table 5.1.1-1 and Appendix C-1). These species generally inhabit coastal marsh or dune habitats along the shoreline that occur at lower elevations than the Project site, which is 192 to 610 meters above MSL:

- **Marsh sandwort** (*Arenaria paludicola*): marsh habitats required are not present within the Project area, and the site is higher than the elevation range for this species.
- **Salt marsh bird's-beak** (*Chloropyron maritimum* ssp. *maritimum*):[16] saltmarsh habitats required are not present within the Project area, and the site is higher than the elevation range for this species.
- **Surf thistle** (*Cirsium rhothophilum*): dune habitats required are not present within the Project area, and the site is higher than the elevation range for this species.
- **La Graciosa thistle** (*Cirsium scariosum* var. *loncholepis*):[17] marsh or dune habitats required are not present within the Project area, and the site is higher than the elevation range for this species.
- **Seaside bird's-beak** (*Cordylanthus rigidus* ssp. *littoralis*): dune habitats required are not present within the Project area, and the site is higher than the elevation range for this species.
- **Beach spectaclepod** (*Dithyrea maritima*): dune habitats required are not present within the Project area, and the site is higher than the elevation range for this species.
- **Beach layia** (*Layia carnosa*): dune habitats required are not present within the Project area, and the site is higher than the elevation range for this species.
- **Vandenberg monkeyflower** (*Mimulus fremontii* var. *vandenbergensis*):[18] sand habitats required are not present within the Project area, and the site is higher than the elevation range for this species.
- **Gambel's water cress** (*Nasturtium gambelii*):[19] marsh habitats required are not present within the Project area, and the site is higher than the elevation range for this species.
- **California Orcutt grass** (*Orcuttia californica*): vernal pool habitats required are not present within the Project area, and the site is higher than the elevation range for this species.

[16] Formerly *Cordylanthus maritimus* ssp. *maritimus*.

[17] Formerly *Cirsium loncholepis*.

[18] Listed in the CNDDB and by the USFWS as *Diplacus vandenbergensis*.

[19] Formerly *Rorippa gambelii*.

Listed Wildlife Species

The database searches and literature review identified 14 wildlife species listed as rare, threatened, and/or endangered with the potential to be present in the vicinity of the Project site and the transmission corridor; including two invertebrates, three fish, two amphibians, and seven birds (Table 5.1.1-3, *Listed Animal Species with the Potential to occur in the Project Area*; Section 7.0: Figure 5.1.1-5, *CNDDB Records of Listed Animal Species in the Project Vicinity*; Appendix B; and Appendix C-1). No listed mammal species were identified in the literature searches. Of these 14 species, six are federally listed; two are State-listed or candidate listed; and six are both federally and State-listed.

One federally listed invertebrate species, El Segundo blue butterfly, was observed at the Project site during focused surveys conducted in 2008, and one bird species that is a candidate for State listing as endangered, tricolored blackbird, was observed during avian surveys conducted in 2002 (Table 5.1.1-3). No federally or State-listed wildlife species were observed as a result of field surveys conducted for avian and bat species in autumn 2016 and spring 2017, or during a winter 2018 habitat assessment of the proposed transmission line corridor.

Suitable habitat was present at the site for four additional wildlife species: California red-legged frog, southwestern willow flycatcher, California condor, and bald eagle. The southeast portion of the Project area overlaps with approximately 204 acres of critical habitat for the California red-legged frog designated by the USFWS (Section 7.0: Figure 5.1.1-6, *Critical Habitat for Animal Species Designated in the Project Vicinity* and Appendix C).[20]

[20] U.S. Fish and Wildlife Service. 17 March 2010. Endangered and Threatened Wildlife and Plants: Revised Designation for Critical Habitat for California Red-Legged Frog; Final Rule. Vol 75, No. 51: 12816-12959.

TABLE 5.1.1-3
LISTED ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species Name	Status	General Habitat	Presence	Habitat Assessment
Vernal pool fairy shrimp *(Branchinecta lynchi)*	FT	Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	A	Suitable habitat not present; required habitats not present. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 7.7 miles north of the Project area in the VAFB.
El Segundo blue butterfly *(Euphilotes battoides allyni)*	FE	Restricted to remnant coastal dune habitat in Southern California. Host plant is coast buckwheat (*Eriogonum parvifolium*); larvae feed only on the flowers and seeds; used by adults as major nectar source. A geographically distinct population has been documented at VAFB.	O	Suitable habitat present; coast buckwheat habitat is present along the southern border of the Project area adjacent to VAFB. Species was observed in these habitats during focused surveys conducted in 2008. Suitable habitat is limited along the transmission corridor.
tidewater goby *(Eucyclogobius newberryi)*	FE, SSC	Brackish water habitats along the Calif coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water & high oxygen levels.	A	Suitable habitat not present; perennial water and suitable migration corridor to the ocean are not present in the Project area. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 3.5 miles south of the Project area in Jalama Creek (Section 7.0: Figure 5.1.1-5).
unarmored threespine stickleback *(Gasterosteus aculeatus williamsoni)*	FE, SE, FP	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams. Cool (< 24°C), clear water with abundant vegetation.	A	Suitable habitat not present; perennial water and suitable migration corridor to the ocean are not present in the Project area. Species not observed as a result of habitat assessment and focused surveys conducted in 2008. The nearest occurrence in the CNDDB was recorded 0.9 mile north of the Project area in Cañada Honda Creek (Section 7.0: Figure 5.1.1-5).
steelhead – southern California DPS[21]	FE	Utilize an area extending from the Pacific Ocean to the freshwater streams	A	Suitable habitat not present; perennial water and suitable migration corridor to the ocean are not present in the

[21] DPS = Distinct Population Segment.

TABLE 5.1.1-3
LISTED ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
(*Oncorhynchus mykiss irideus)*		where spawning occurs. Adults need water approximately 10 to 20 centimeters deep to move upstream and downstream. Do not tolerate temperatures much above 21°C.		Project area. Species not observed as a result of habitat assessment and focused surveys conducted in 2008. The nearest occurrence in the CNDDB was recorded 11.6 miles north of the Project area in the Santa Ynez River.
California tiger salamander – Santa Barbara County DPS *(Ambystoma californiense)*	FE,[22] ST,[23] WL	Found in permanent and seasonal ponds and pools, usually in grassland and savanna habitats. Seasonal pools must hold surface water for at least 10 weeks to allow successful breeding to take place. This species spends a majority of its life underground in small mammal burrows that can be up to 1.2 miles from the breeding pond or pool.	A	Suitable habitat not present; seasonally wet ponds not present within the Project area. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded approximately 9 miles northeast of the Project area in Santa Rita Valley.
California red-legged frog *(Rana draytonii)*	FT, SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11–20 weeks of permanent water for larval development. Must have access to estivation habitat.	HP, CH	Marginal to poor habitat was identified for this species within riparian areas throughout the Project site during a habitat assessment and focused surveys conducted in 2007 and 2008. Approximately 204 acres of critical habitat for this species has been designated within the southeast portion of the Project area. No suitable riparian habitat is present for this species within the critical habitat area; however, upland habitats are present. The nearest occurrence in the CNDDB was recorded 0.23 mile north of the Project area in San Miguelito Creek in 2008, near the transmission corridor (Section 7.0: Figure 5.1.1-5). There are five other occurrences within 1 mile east of the project site, along Cañada Honda Creek in VAFB, recorded in 2008 (Section 7.0: Figure 5.1.1-5).
tricolored blackbird *(Agelaius tricolor)*	SSC, PSTE	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and	O	Suitable habitat present; foraging habitat for this species in grasslands within the Project area, although no suitable breeding habitat is present. During avian surveys in May 2002, a flock of approximately 12 individuals was

[22] The Federally Endangered status of this species is only applicable to the Santa Barbara County and Sonoma County DPS. The central California DPS is Federally Threatened.

[23] The California tiger salamander is State Threatened throughout the entire state of California.

TABLE 5.1.1-3
LISTED ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
		foraging area with insect prey within a few km of the colony.		observed in grasslands along an existing access road on Middle Ridge. In the autumn of 2008, 66 individuals were observed at Sudden Road Pass, in grasslands and agricultural fields. Suitable habitat is also present along the grassland areas of the transmission corridor
marbled murrelet *(Brachyramphus marmoratus)*	FT, SE	Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	A	Suitable habitat is not present due to the distance of the Project site to the shoreline and the lack of old-growth redwood forests. Species not observed as a result of multiple surveys. There are no occurrences of this species within a 9-quadrangle radius around the Project area in the CNDDB.
western snowy plover *(Charadrius alexandrines nivosus)*	FT, SSC, BCC	Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	A	Suitable habitat not present; Project area outside of its known range, which is located on beaches on the immediate shoreline. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 7.9 miles north of the Project area along the Santa Ynez River.
southwestern willow flycatcher *(Empidonax traillii extimus)*	FE, SE[24]	Riparian and wetland thickets, generally of willow, tamarisk, or both, sometimes box elder or Russian olive.	HP	Suitable habitat is present in riparian willow thickets within the Project area. Species not observed as a result of multiple surveys. Suitable habitat also exists along San Miguelito Creek and the transmission corridor.
California condor *(Gymnogyps californianus)*	FE, SE, FP, LI	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	HP	Potentially suitable habitat is present over the entire Project site, which is located within the historical range for the species. However, given the current limited range of the species to inland areas of Central California, there is very low potential for this species to be present. The nearest occurrence in the CNDDB was recorded over 40 miles away in eastern Santa Barbara County in 1975. Species not observed as a result of multiple surveys.
bald eagle *(Haliaeetus leucocephalus)*	SE, FP, BCC, LI, Federal	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree	HP	Potentially suitable habitat is present in woodlands and eucalyptus groves throughout the Project area. However, the nearest CNDDB record is located near Lake Cachuma in 1996 over 30 miles inland from the Project site.

[24] State listing as endangered pursuant to the CESA is for the willow flycatcher (*Empidonax traillii*), but includes the subspecies of southwestern willow flycatcher as well as all other subspecies.

TABLE 5.1.1-3
LISTED ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
	ly Delisted[25]	with open branches, especially ponderosa pine. Roosts communally in winter.		Therefore, bald eagles have the potential to occur within 10 miles of the Project site, but are likely rare transients rather than residents. No bald eagles or bald eagle nests were observed as a result of multiple surveys, including during aerial surveys conducted in a 9-mile radius around the site in 2013 and 2016.
California least tern *(Sternula antillarum browni)*	FE, SE, FP, LI	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas.	A	Suitable habitat is not present due to the distance of the Project site to the shoreline. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 7.3 miles north of the Project area in the VAFB.

KEY:
A = Absent; no suitable habitat present and species not observed during field surveys; BCC = U.S. Fish and Wildlife Service (USFWS) Bird of Conservation Concern; CH = Critical habitat present; CRPR = California Rare Plant Rank; FE = Federally Endangered; FP = California Department of Fish and Wildlife (CDFW) Fully Protected; FT = Federally threatened; HP = Habitat Present; habitat is, or may be present; the species may be present.; LI = Locally Important; called out as having local importance by Olson and Rindlaub, the Audubon Society, the Environmental Defense Council, or by the Santa Barbara County Comprehensive Plan O = Observed within the Project area, and suitable habitat is present for the species; PSTE = Petitioned for state-listing as threatened or endangered; m = meter; SE = State Endangered; SSC = CDFW Species of Special Concern; ST = State Threatened; WL = CDFW Watch List
**Sources are listed in Appendix C-1*

[25] This species was federally delisted in 2011. It is protected pursuant to the federal Bald and Golden Eagle Protection Act. It is State-Listed as Endangered, under review.

El Segundo blue butterfly

The El Segundo blue butterfly is listed as endangered pursuant to the FESA. No critical habitat has been designated for this species. Until 2005, it was known from only three extant populations in coastal dune habitat in Los Angeles County, including El Segundo, near the Los Angeles International Airport, and at Malaga Cove on the Palos Verdes Peninsula. These populations inhabit a total of approximately 220 acres at these locations, and are located over 120 miles southeast of the Project site (Appendix A-13).[26] The Los Angeles County populations of this species are closely associated with their host plant, coast buckwheat (*Eriogonum parvifolium*). The larvae feed and develop in the developing seed heads, pupate under the bush, and the adults feed on nectar produced by the flowers. They typically fly within 200 feet of this food plant for their lifetime.

In 2005, possible El Segundo blue butterflies were identified on VAFB, and were also associated with coast buckwheat. The Project area is adjacent to the southern portion of VAFB (Section 7.0: Figure 2.1-2). However, taxonomic studies are still underway to confirm that the population at VAFB is in fact this subspecies. Currently, the USFWS considers the VAFB population to be El Segundo blue butterfly.[27,28] A five-year review for this species was initiated by USFWS in 2011, but has not yet been completed.[29]

During directed surveys for this species at the Project site in August 2008, 26 adult butterflies and 3 larvae were identified, along with approximately 51.1 acres of suitable coast buckwheat habitats concentrated in the southern portion of the Project area, adjacent to VAFB (Section 7.0: Figure 5.1.1-7, *El Segundo Blue Butterfly Observations and Suitable Habitat* [*2008*]; Appendix A-3; and Appendix A-13). Although these observations were recorded 10 years ago, the pupae of this species are known to survive in the ground for several years.[30] As a result, these areas of the Project site are considered to be occupied El Segundo blue butterfly habitat.

California red-legged frog

The California red-legged frog is listed as a federally threatened species under the FESA, and is also a CDFW Species of Special Concern. The habitat of California red-legged frogs is characterized by dense, shrubby riparian vegetation associated with deep (0.7 m), still, or slow-moving water.[31] The most structurally suitable riparian vegetation for the species is provided by arroyo willow (*Salix lasiolepis*), cattails (*Typha* spp.), and bulrushes (*Scirpus* spp.) Although California red-legged frogs may occur in ephemeral or permanent streams or ponds, populations probably cannot be maintained in ephemeral streams in which surface water disappears.

---

[26] U.S. Fish and Wildlife Service. 2008. *El Segundo Blue Butterfly 5-Year Review: Summary and Evaluation*. March 2008. Available at: https://ecos.fws.gov/docs/five_year_review/doc1896.pdf

[27] U.S. Fish and Wildlife Service. 2008. *El Segundo Blue Butterfly 5-Year Review: Summary and Evaluation*. March 2008. Available at: https://ecos.fws.gov/docs/five_year_review/doc1896.pdf

[28] Tipton, Heather. 1 March 2018. Personal communication. U.S. Fish and Wildlife Service Biologist, Ventura, CA.

[29] U.S. Fish and Wildlife Service. 2011. Endangered and Threatened Wildlife and Plants: 5-Year Reviews of Species in California, Nevada, and the Klamath Basin of Oregon; Notice. Vol 76, No. 101 (May 25, 2010): 30377-30382.

[30] Tipton, Heather. 1 March 2018. Personal communication. U.S. Fish and Wildlife Service Biologist, Ventura, CA.

[31] Hayes, M.P., and M.M. Miyamoto. 1984. "Biochemical, Behavioral, and Body Size Differences between *Rana aurora aurora* and *Rana aurora draytonii*." *Copeia*, 1018-1022.

Approximately 204 acres of the southeastern portion of the Project area lie within the Critical Habitat Unit STB-4 Jalama Creek of designated critical habitat for the species.[32] The 204-acre portion within the Project site consists of about 2.7 percent of the total 7,685 acres in the unit. Although no aquatic habitat is present within the portion of this unit on the site, the unit includes both breeding and non-breeding aquatic habitat, as well as upland habitat for foraging and dispersal. It provides connectivity between locations along the coast and the Santa Ynez River Watershed.[33] Upland habitat is one of the Physical or Biological Features essential to the conservation of the species.[34]

During field surveys and a habitat assessment conducted at the Project site in 2006 and 2008, marginal to poor habitat in the Project area was determined to be present within Cañada Honda Creek, an ephemeral stream which supports arroyo willow thickets. No individuals of these species have been observed during any surveys at the Project site (Appendix A-5). However, the nearest occurrence in the CNDDB was recorded 0.23 mile north of the project area in San Miguelito Creek in 2008 (Section 7.0: Figure 5.1.1-5). In addition, there are five other occurrences within 1 mile east of the project site along Cañada Honda Creek in VAFB that were also recorded in 2008 (Section 7.0: Figure 5.1.1-5). These occurrences are located downstream of the Proposed Project site, suggesting that the riparian habitat upstream of these occurrences in portions of San Miguelito Creek and Cañada Honda Creek within the Project Area may serve as potentially suitable California red-legged frog. Furthermore, during periods of rain, California red-legged frog may distribute to upland habitats at the site from nearby riparian areas.

Tricolored blackbird

The tricolored blackbird is a candidate species for listing as endangered under the CESA, and it is also a CDFW Species of Special Concern. It is usually found in scattered, large colonies that use dense stands of bulrushes and cattails for roosting and nesting. This species often forages in agricultural fields and grasslands grazed by cattle. Nesting occurs between April and early July.

The nearest observation to the Project area was recorded in grasslands along Sudden Road, about 0.5 mile south of the VAFB boundary.[35] During avian surveys in 2002, a flock of approximately 12 was observed on May 31 in grasslands along the existing access road in Middle Corridor (Appendix A-1). In the autumn of 2008, 66 individuals were observed at Sudden Road Pass and in grasslands and agricultural fields (Appendix A-14). No tricolored blackbirds were observed in surveys conducted since that time. This species is not expected to breed in the Project area due to a lack of suitable nesting habitat. According to CDFW, the Project area lies outside of the species' year-round range. Its primary foraging activity is expected to occur at the ground surface.

[32] U.S. Fish and Wildlife Service. 17 March 2010. Endangered and Threatened Wildlife and Plants: Revised Designation for Critical Habitat for California Red-Legged Frog; Final Rule. Vol 75, No. 51: 12816-12959.

[33] U.S. Fish and Wildlife Service. 17 March 2010. Endangered and Threatened Wildlife and Plants: Revised Designation for Critical Habitat for California Red-Legged Frog; Final Rule. Vol 75, No. 51: 12816-12959.

[34] Yang, Dou-Shuan. 2 March 2018. Personal communication. U.S. Fish and Wildlife Service Biologist, Ventura, CA.

[35] Holmgren, M.A., and P.W. Collins, eds. June 1999. Distribution and habitat associations of six bird species of special concern at Vandenberg Air Force Base, Santa Barbara County, California. Prepared by the Museum of Systematics and Ecology, University of California Santa Barbara, and the Vertebrate Zoology Section of the Santa Barbara Museum of Natural History. Prepared for Vandenberg Air Force Base, 30 CES/CEVPN Natural Resources.

Southwestern willow flycatcher

The southwestern willow flycatcher is both federally and State-listed as endangered. This species is an uncommon breeder and spring and autumn transient in Santa Barbara County. It inhabits riparian and wetland thickets, generally of willow, tamarisk, or both, and sometimes box elder or Russian olive. Suitable breeding habitat with appropriate vegetative characteristics is lacking along Cañada Honda Creek and San Miguelito Creek at the Project site. However, this species has the potential to be a rare spring and autumn migrant at the Project area. No individuals of this species were observed at the site during field surveys conducted between 2002 and 2017. There are no occurrences of this species within nine quadrangles of the Project site in the CNDDB. Its primary flying activity is expected to occur up to 13 feet above the ground surface.

California condor

The California condor is federally and State-listed, and is also a CDFW Fully Protected Species and a locally important bird. It has not been recorded in western Santa Barbara County, but occurs in wilderness areas in eastern Santa Barbara County more than 30 miles away from the Project area. The three condor feeding stations in eastern Santa Barbara County and environs often concentrate condors there. Though the California condor may travel over 50 miles in a day, the closest single occurrence to the Project site in the CNDDB was recorded 43.8 miles away in eastern Santa Barbara County at the Sisquoc-San Rafael Condor Area in 1975. Nesting habitat is unavailable at the Project site, although cattle and mule deer are present and could provide this species large carrion to feed on. Therefore, potentially suitable habitat is present, but this species is unlikely to occur. According to CDFW, the Project area lies outside of the species' year-round range.[36] Its primary flying activity would be expected to occur up to 15,000 feet above the ground surface.

Bald eagle

The bald eagle is a State-listed endangered species, a CDFW Fully Protected Species, a USFWS Bird of Conservation Concern, and a locally important species, but has been de-listed under the FESA. It is also protected pursuant to the federal Bald and Golden Eagle Protection Act. The CNDDB search revealed the nearest record of the species near Lake Cachuma in 1996 over 30 miles inland from the Project site. Consistent with this record, bald eagle sightings in the area on eBird are concentrated at Lake Cachuma, and occur as recently autumn 2016.[37] Within 10 miles of the Project site, the most recent sighting on eBird occurred in January 2015. In Southern California, bald eagles are known to be migratory winter visitors.[38] No bald eagles or bald eagle nests were observed during avian surveys conducted at the Project site, or during aerial raptor surveys conducted in 2013 and 2016 (Appendix A-20). Therefore, bald eagles have the potential to occur within 10 miles of the Project site, but are likely rare transients rather than residents. The species primary foraging activity would be expected to occur up to 10,000 feet above the ground surface or water.

---

[36] California Department of Fish and Wildlife, California Interagency Wildlife Task Group, CWHR Program. 1995. California Wildlife Habitat Relationships System Range Map for California Condor. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1656&inline=1

[37] eBird. 2018. eBird: An online database of bird distribution and abundance. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available at: http://www.ebird.org.

[38] California Department of Fish and Wildlife Branch – Nongame Wildlife Program. 2016. *Bald Eagles in California*. Available at: https://www.wildlife.ca.gov/Conservation/Birds/Bald-Eagle

Listed Wildlife Species with No Suitable Habitat Present

Eight federally and/or State-listed species were determined to be absent from the Project area due to a lack of observations during field surveys and a lack of suitable habitat at the site (Table 5.1.1-3 and Appendix C-1):

- **Vernal pool fairy shrimp** (*Branchinecta lynchi*): vernal depression pools required for this species are not present at the site.
- **Tidewater goby** (*Eucyclogobius newberryi*): perennial water and suitable migration corridor to the ocean required for this species are not present at the site.
- **Unarmored threespine stickleback** (*Gasterosteus aculeatus williamsoni*): perennial water and suitable migration corridor to the ocean required for this species are not present at the site (Appendix A-5).
- **Steelhead – Southern California Distinct Population Segment** (*Oncorhynchus mykiss irideus*, DPS): perennial water and suitable migration corridor to the ocean required for this species are not present at the site (Appendix A-5).
- **California tiger salamander – Santa Barbara County DPS** (*Ambystoma californiense*): seasonally wet ponds required for this species are not present at the site.
- **Marbled murrelet** (*Brachyramphus marmoratus*): shoreline habitats or old-growth redwood forests required for this species are not present at the site.
- **Western snowy plover** (*Charadrius alexandrines nivosus*): shoreline habitats required for this species are not present at the site.
- **California least tern** (*Sternula antillarum browni*): shoreline habitats required for this species are not present at the site.

Other Special Status Species

Other Special Status Plants

Review of the CNDDB, CNPS Electronic Inventory, and previous technical reports identified 89 other special status plant species with the potential to occur at the Project site and the transmission corridor (Table 5.1.1-4, *Other Special Status Plant Species with the Potential to Occur in the Project Area*; Section 7.0: Figure 5.1.1-8, *CNDDB Records of Other Special Status Plant Species in the Project Vicinity*; Appendix B; and Appendix C-2, *Other Special Status Species with the Potential to Occur in the Project Vicinity*).

Of these, six special status plants were observed during botanical surveys conducted between 2002 and 2018. Suitable habitat was present for an additional 30 special status plants. The remaining plant species identified in the database searches were determined to be absent from the Project area based on a lack of both suitable habitat and observations; these are described in further detail in Appendix C-2.

TABLE 5.1.1-4
OTHER SPECIAL STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species Name	Status	General Habitat	Habitat Assessment	Presence
Hoover's bent grass *(Agrostis hooveri)*	CRPR: 1B.2, LI	Dry sandy soils, open chaparral, oak woodland, < 600 m	Habitat present, limited, usually occurs on sandy places. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 6 miles northeast of the Project area in La Purisima Mission State Historic Park. Limited habitat is also present along the transmission corridor.	HP
Eastwood's brittle-leaf manzanita *(Arctostaphylos crustacea* ssp. *eastwoodiana)*[39]	CRPR: 1B.1, LI	Chaparral, closed-cone conifer forest, < 650 m	Habitat present, limited due to rangeland. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 2 miles north of the Project area between Sloans Canyon and La Salle Canyon (Section 7.0: Figure 5.1.1-8). Limited habitat exists along the transmission corridor.	HP
Pecho manzanita *(Arctostaphylos pechoensis)*	CRPR: 1B.1	Closed-cone coniferous forest, chaparral, shale outcrops, < 500 m	Habitat present, limited due to low number of sand/sandstone/shale outcrops. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Limited habitat exists along the transmission corridor.	HP
La Purisima manzanita *(Arctostaphylos purissima)*	CRPR: 1B.1, LI	Sandstone outcrops, sandy soils, chaparral, < 300 m	A manzanita specimen identified as the globose La Purisima manzanita (*Arctostaphylos purissima* ssp. *globosa*) was observed during the tree survey in winter 2018. The individual occurs in an isolated opening between the tanoak forest and coast live oak woodland, northeast of Sudden Peak. The nearest occurrence in the CNDDB was recorded within 1 mile northwest of the Project area in the VAFB (Section 7.0: Figure 5.1.1-8). Limited habitat exists along the transmission corridor.	O

[39] Formerly *Arctostaphylos tomentosa* ssp. e*astwoodiana*

TABLE 5.1.1-4
OTHER SPECIAL STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Habitat Assessment	Presence
Refugio manzanita *(Arctostaphylos refugioensis)*	CRPR: 1B.2, LI, petition for listing as FE[40]	Sandstone outcrops, chaparral, 300–820 m	Habitat present, limited due to low number of sand/sandstone/shale outcrops. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 4.3 miles northeast of the Project area in Burton Mesa (Section 7.0: Figure 5.1.1-8). Limited habitat exists along the transmission corridor.	HP
Coulter's saltbush (*Atriplex coulteri*)	CRPR: 1B.2, LI	Alkaline or clay soils, open sites, scrub, coastal bluff scrub, < 500 m	Habitat present, limited due to alkaline or clay soils requirement. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 1.7 miles south of the Project area in Sudden Flats (Section 7.0: Figure 5.1.1-8). Limited habitat exists along the transmission corridor.	HP
Plummer's baccharis *(Baccharis plummerae* ssp. *plummerae)*	CRPR: 4.3	Rocky slopes near beach, sea bluffs, brushy canyons, < 1,850 m	Habitat present; chaparral and coastal sage scrub. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB.	HP
Brewer's calandrinia *(Calandrinia breweri)*	CRPR: 4.2, LI	Sandy to loamy soil, disturbed sites, burns, < 1,200 m	Habitat present, limited due to fire suppression. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Limited habitat exists along the transmission corridor.	HP
Catalina mariposa lily *(Calochortus catalinae)*	CRPR: 4.2	Heavy soil, open grassland or scrub, < 700 m	Habitat present; grassland and southern ridges. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Habitat exists along the transmission corridor.	HP

[40] Los Padres Forest Watch and California Chaparral Institute. 30 November 2017. Petition to List the Refugio Manzanita (*Arctostaphylos refugioensis*) as an Endangered Species and to Concurrently Designate Critical Habitat. Santa Barbara, CA. Escondido, CA. Available at: https://ecos.fws.gov/docs/petitions/92210/1033.pdf

TABLE 5.1.1-4
OTHER SPECIAL STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Habitat Assessment	Presence
late-flowered mariposa lily *(Calochortus fimbriatus)*	CRPR 1B.3, LI	Dry, open coastal woodland, chaparral, < 900 m	Habitat present; chaparral and coastal woodland. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 9.2 miles southeast of the Project area in the Santa Ynez Mountains.	HP
dwarf calycadenia *(Calycadenia villosa)*	CRPR: 1B.1	Dry, rocky hills, ridges, grassland, openings in foothill woodlands, 250–850 m	Habitat present; grassland and southern ridges. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 11.1 miles northeast of the Project area in Los Alamos. Habitat exists along the transmission corridor.	HP
Cambria morning-glory *(Calystegia subacaulis* ssp. *episcopalis)*	CRPR: 4.2, LI	Dry, open scrub, woodland, < 500 m	Habitat present in open scrub and woodland. However, majority of population occurs in San Luis Obispo County. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB.	HP
small-flowered morning-glory *(Convolvulus simulans)*	CRPR: 4.2, LI	Clay substrates, occasionally serpentine, annual grassland, coastal-sage scrub, chaparral, 30–875 m	Habitat present; grassland and coastal sage scrub habitats. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Similar habitat exists along the transmission corridor.	HP
paniculate tarplant *(Deinandra paniculata)*[41]	CRPR: 4.2	Grassland, open chaparral and woodland, disturbed areas, often in sandy soils, < 1,320 m	Habitat present; grassland and chaparral habitats. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Similar habitat exists along the transmission corridor.	HP
umbrella larkspur *(Delphinium umbraculorum)*	CRPR: 1B.3, LI	Moist oak forest, 400–1,600 m	Habitat present; limited suitable habitat restricted to oak forest within Project area. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 3.2 miles northeast of the Project area in the Santa Ynez Mountains (Section 7.0: Figure 5.1.1-8). Limited habitat exists along the transmission corridor.	HP

[41] Formerly *Deinandra increscens* ssp. *foliosa*.

TABLE 5.1.1-4
OTHER SPECIAL STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Habitat Assessment	Presence
western dichondra *(Dichondra occidentalis)*	CRPR: 4.2, LI	Among rocks, shrubs, in coastal scrub, chaparral, oak woodland, < 520 m	Habitat present. Authors of 2002/2005 survey note that plants in a vegetative state that were potentially this species were observed on South and West Corridors. No occurrences of this species have been recorded in the CNDDB. Similar habitat exists along the transmission corridor.	O
elegant wild buckwheat *(Eriogonum elegans)*	CRPR: 4.3	Cismontane woodland, valley and foothill grassland, 200–1,200 m	Habitat present; limited due to low number of sandy exposed areas or outcrops. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Limited habitat exists along the transmission corridor.	HP
San Luis Obispo wallflower (*Erysimum capitatum* ssp. *lompocense*)[42]	CRPR: 4.2, LI	Chaparral, coastal sage scrub, 60–500 m	Habitat present; limited due to low number of sandy exposed areas or outcrops. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Limited habitat exists along the transmission corridor.	HP
vernal barley *(Hordeum intercedens)*	CRPR: 3.2, LI	Vernal pools, dry, saline streambeds, alkaline flats, < 500 m	Habitat present; limited due to low number of vernally wet areas. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Limited habitat exists along the transmission corridor.	HP
mesa horkelia *(Horkelia cuneata* var. *puberula)*	CRPR: 1B.1, LI	Dry, sandy, coastal chaparral, 70–870 m	Habitat present; limited due to low number of sandy exposed areas or outcrops. Authors of 2002/2005 observed plants possibly of this species (identification not confirmed) on the Middle Corridor, Sudden Corridor and Quarry Ridge areas, Signorelli Corridor, and South Corridor – East and Central. These occurrences were submitted to the CNDDB (Section 7.0: Figure 5.1.1-8). Limited habitat exists along the transmission corridor.	O

[42] *The Jepson Manual,* 2nd Ed. considers this species to be a synonym of a common, non-special status species, western wallflower (*Erysimum capitatum* var. *capitatum*).

TABLE 5.1.1-4
OTHER SPECIAL STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Habitat Assessment	Presence
Kellogg's horkelia *(Horkelia cuneata* var. *sericea)*	CRPR: 1B.1, LI	Old dunes, coastal sand hills, generally < 200 m	Suitable habitat present. Authors of 2002/2005 observed plants possibly of this species (identification not confirmed) on the Middle Corridor, Sudden Corridor and Quarry Ridge areas, Signorelli Corridor, and South Corridor – East and Central. These occurrences were submitted to the CNDDB (Section 7.0: Figure 5.1.1-8). However, Project site is outside of its elevation range. Limited habitat exists along the transmission corridor.	O
Robinson's pepper-grass *(Lepidium virginicum* var. *robinsonii)*	CRPR: 4.3	Chaparral, coastal scrub, dry, disturbed areas, cliffs, < 2,800 m	Habitat present; field, pastures, disturbed areas. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 6 miles north of the Project area in La Purisima Mission State Historic Park. Similar habitat exists along the transmission corridor.	HP
Humboldt lily (Lilium humboldtii ssp. ocellatum)	CRPR: 4.2, LI	Oak canyons, chaparral, yellow-pine forest, < 1,800 m	Suitable habitat present; coast live oak woodland. Observed along San Miguelito Road across from San Miguelito Creek in 2017. Limited habitat exists along the transmission corridor.	O
Santa Barbara honeysuckle *(Lonicera subspicata* var. *subspicata)*	CRPR: 1B.2, LI	Chaparral, cismontane woodland, coastal scrub , < 1,000 m	Habitat present; suitable habitat in coastal scrub. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 6 miles north of the Project area in La Purisima Mission State Historic Park. Limited habitat exists along the transmission corridor.	HP
Mount Diablo cottonweed *(Micropus amphibolus)*	CRPR: 3.2, LI	Openings on slopes, ridges, shallow soils, 40–900 m	Habitat present; scrub openings and in low and open grassland with a high native component. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Habitat exists along the transmission corridor.	HP
one-sided monkeyflower *(Mimulus subsecundus)*	CRPR: 4.3	Sandy, shrubby, disturbed areas, generally on streambanks, < 2,100 m	Habitat present; suitable habitat in most of Project area. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Habitat exists along the transmission corridor.	HP

TABLE 5.1.1-4
OTHER SPECIAL STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Habitat Assessment	Presence
white-veined monardella *(Monardella hypoleuca* ssp. *hypoleuca)*	CRPR: 1B.3	Chaparral, cismontane woodland, oak woodland, < 1,500 m	Habitat present; limited suitable habitat in oak woodland. The nearest occurrence in the CNDDB was recorded 7 miles southeast of the Project area along Los Amoles creek. Limited habitat exists along the transmission corridor.	HP
California spineflower *(Mucronea californica)*	CRPR: 4.2	Sand, < 1,000 m	Habitat present; limited due to low number of sandy exposed areas or outcrops. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Limited habitat exists along the transmission corridor.	HP
California adder's-tongue (*Ophioglossum californicum*)	CRPR: 4.2	Grassy pastures, chaparral, vernal pool margins, 60–450 m	Habitat present; limited due to disturbed nature of grassland. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Limited habitat exists along the transmission corridor.	HP
Hubby's phacelia *(Phacelia hubbyi)*	CRPR: 4.2	Chaparral, coastal scrub, valley and foothill grassland, open gravel or rocky slopes, < 1,000 m	Habitat present; limited due to low number of exposed gravel areas or outcrops. Plant not observed as a result of multiple surveys. There are no occurrences of this plant recorded in the CNDDB. Limited habitat exists along the transmission corridor.	HP
south coast branching phacelia *(Phacelia ramosissima* var. *austrolitoralis)*[43]	CRPR: 3.2	Sandy, sometimes rocky chaparral, coastal dunes, coastal scrub, marshes and swamps (coastal salt), < 3,800 m	Suitable habitat present in rocky chaparral. Observed on Sudden Creek Road during 2017 surveys. Limited habitat exists along the transmission corridor.	O
Michael's rein orchid *(Piperia michaelii)*	CRPR: 4.2, LI	Generally dry sites, coastal scrub, woodland, mixed-evergreen or closed-cone-pine forest, < 700 m	Habitat present; limited due to requirement for dry sites. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB.	HP
Fish's milkwort *(Polygala cornuta* var. *fishiae)*	CRPR: 4.3, LI	Chaparral, oak woodland, 90–1,270 m	Habitat present in oak woodland. However, the majority of the population occurs further south. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB.	HP

[43] *The Jepson Manual.* 2nd Edition. considers this subspecies to be a synonym of a common, non-special status species, branching phacelia (*Phacelia ramosissima*).

TABLE 5.1.1-4
OTHER SPECIAL STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Habitat Assessment	Presence
bitter gooseberry *(Ribes amarum* var. *hoffmannii)*	CRPR: 3	Chaparral, 15–1,910 m	Habitat present in chaparral. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Limited habitat exists along the transmission corridor.	HP
Hoffmann's sanicle (*Sanicula hoffmannii*)	CRPR: 4.3, LI	Broad-leafed upland forest, coastal bluff scrub, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, shrubby coastal hills, pine woodland, < 500 m	Habitat present in coastal scrub and woodland. Plant not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Limited habitat exists along the transmission corridor.	HP
black-flowered figwort *(Scrophularia atrata)*	CRPR: 1B.2	Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, or riparian scrub in calcium and diatom rich soils, < 400 m	Habitat present in coastal scrub and chaparral. Plant not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 0.02 mile northeast of the Project area in San Miguelito Creek (Section 7.0: Figure 5.1.1-8). Limited habitat exists along the transmission corridor.	HP

KEY:
A = absent; no habitat present and no further work needed; CRPR = California Rare Plant Rank; HP = habitat present; habitat is, or may be present; the species may be present; LI = Locally important, as specified by the Santa Barbara County Comprehensive Plan, the Santa Barbara Botanical Garden Central Coast Center for Plant Conservation, or by Olson and Rindlaub; O = Observed; m = meter

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

Threat Ranks
0.1 - Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)
0.2 - Moderately threatened in California (20–80 percent occurrences threatened / moderate degree and immediacy of threat)
0.3 - Not very threatened in California (less than 20 percent of occurrences threatened / low degree and immediacy of threat or no current threats known).

**Sources are listed in Appendix C-2*

La Purisima manzanita (*Arctostaphylos purissima*)

La Purisima manzanita has a CNPS Rare Plant Rank of 1B.1. A manzanita specimen identified as the globose La Purisima manzanita (*Arctostaphylos purissima* ssp. *globosa*), a subspecies of the La Purisima manzanita, was observed during the tree survey in winter 2018. The specimen has characteristics that resemble the globose La Purisima (leaf size) and the Refugio manzanita (*A. refugioensis*; glandular-hairy on stems and inflorescences). In addition to *The Jepson Manual*, a key published by Parkey and Vasey in 2016 was used, which provides an updated dichotomous key for *Arctostaphylos* genus.[44] Parker and Vasey recommend a CNPS Rare Plant Rank in the 1B category for this subspecies. The individual plant was observed in isolated chaparral, forest/woodland canopy opening, on a hilltop where the tanoak forest and coast live oak woodland transition, northeast of Sudden Peak, within the WTG 28 impact area (Section 7.0: Figure 5.1.5.1, *Native Tree Inventory within Proposed Impact Areas* in Section 5.1.5, *Local Policies and Ordinances*). The specimen was observed early in the flowering stage. A fruit sample may further support the identification, as there is a considerable difference in fruit size and features between the globose La Purisima manzanita (5–8 mm wide) and the Refugio manzanita (12–15 mm wide). The Project area is located in the overlapping ranges of both the La Purisima and Refugio manzanitas.

Western dichondra (*Dichondra occidentalis*)

Western dichondra is ranked as a 4.2 plant by the CNPS, and is a locally important species. This perennial herb has suitable habitat in chaparral, coastal scrub, and oak woodland, among rocks and shrubs. The 2002 and 2005 surveyors noted that plants in a vegetative state that were potentially this species were observed on South and West Corridors (Appendix A-1). There are no occurrences of this plant recorded in the CNDDB. This plant species was not observed in spring 2017.

Mesa horkelia (*Horkelia cuneata* var. *puberula*)

Mesa horkelia is ranked as a 1B.1 plant by the CNPS, and is a locally important species. This perennial herb grows in sandy or gravelly soils in coastal scrub, chaparral, and woodland habitats. It flowers from February to September. The known range is from 70–810 meters elevation, from San Luis Obispo to San Diego Counties along the coast and inland to Riverside and San Bernardino Counties. Populations in Ventura, Riverside, San Bernardino, and San Diego have been extirpated. According to the regional flora, the Santa Barbara County occurrences of this entity are likely part of a hybrid population.[45]

Plants with some of the characteristics of mesa horkelia were found occasionally during the 2002 and 2005 surveys, scattered among the more common wedge-leaved horkelia (*Horkelia cuneata* var. *cuneata*) populations of Middle Ridge and South Ridge – East where plants that keyed to Kellogg's horkelia also were found (Appendix A-1). These occurrences were submitted to the CNDDB (Section 7.0: Figure 5.1.1-8). Even if the plants in the Project area are not "pure" mesa horkelia, the mixed gene pool may be characteristic of plants in this region of the coast. Mesa

[44] Parker, V. T., Vasey, M. C. August 2016. *Two New Subspecies of Artostaphylos (Ericaceae) from California and Implications for Understanding Diversification in the Genus*. Madroño Vol. 63, No. 3, pp.283-291. Available at: https://www.researchgate.net/publication/306296702_Two_New_Subspecies_of_Arctostaphylos_Ericaceae_From_California_and_Implications_For_Understanding_Diversification_In_This_Genus

[45] Smith, C. F. 1998. *A Flora of the Santa Barbara Region, California*. 2nd Edition. Santa Barbara, CA: Santa Barbara Botanic Garden and Capra Press.

horkelia may occur with low probability on the upper elevations of the transmission line corridor. In spring 2017, the common wedge-leaved horkelia was also observed along the southern corridor within the proposed impact area. Populations of the common horkelia may harbor mesa horkelia.

Kellogg's horkelia (*Horkelia cuneata* var. *sericea*)

Kellogg's horkelia is ranked as a 1B.1 plant by the CNPS, and is a locally important species. It is closely related to mesa horkelia and wedge-leaved horkelia discussed above. It also grows in chaparral and coastal scrub habitats. Kellogg's horkelia has recently been recorded from Gaviota State Park, approximately 15.9 miles southeast of the Project area.[46,47]

Glandular plants that keyed to this entity were found during the 2002 and 2005 surveys on central and southern Middle Ridge and eastern South Ridge (Appendix A-1). The number of individuals of this subspecies present was not quantified. Other populations of horkelia within the Project area may also include this subspecies, particularly in areas with sandy-loam soil, such as Signorelli Ridge, Scolari Bench, the Sudden Ridge area, particularly Quarry Flank, and North Ridge – East. In spring 2017, as with the mesa horkelia, the common wedge-leaved horkelia was also observed along the south ridge. Kellogg's horkelia may be present amongst that population of the common horkelia; however, further study is needed to fully identify and quantify the species presence within the Project impact area.

Ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*)

The ocellated Humboldt lily is ranked as a 4.2 plant by the CNPS, and is a locally important species. It grows in shaded woodland and stream channels. This species was observed in spring 2017 along San Miguelito Road, growing on the west facing slope, under the canopy of coast live oak woodland, within the Project impact area (Appendix A-19). The oak woodland edge, on the west facing slope, next to San Miguelito Creek provides suitable habitat and similar conditions may be found elsewhere within the Project site and transmission line corridor, especially where oak woodland and tanoak forest are present.

South Coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*)

South Coast branching phacelia is ranked as a 3.2 plant by the CNPS. It is a perennial herb inhabits sandy, sometimes rocky chaparral, coastal dunes, coastal scrub, marshes, and swamps. This species was observed during spring 2017 along Sudden Creek Road (Appendix A-19). The *Jepson Manual, 2nd Edition* considers this subspecies to be a synonym of a common, non-special status species, branching phacelia (*Phacelia ramosissima*).[48]

[46] Ballard, Larry. 12 September 2005b. Personal communication. Botanist, Carpinteria, CA.

[47] Hendrickson, et al. 1998. Botanical Resources of Hollister Ranch, Santa Barbara County, California. Draft. Museum of Systematics and Ecology, Department of Ecology, Evolution, and Marine Resources, University of California at Santa Barbara. Environmental Report No. 10.

[48] Baldwin, B.G., D.H. Goldman, D.K. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. *The Jepson Manual of Vascular Plants of California.* 2nd Edition. Berkeley, CA: University of California Press.

Other Special Status Plants Not Observed with Suitable Habitat Present

Suitable habitat was determined to be present within the Project area for 30 other special status plant species (Table 5.1.1-4). These species were not observed during field surveys conducted between 2002 and 2017.

- **Hoover's bent grass** (*Agrostis hooveri*): Suitable habitat present, but limited because it usually occurs on sandy places. The nearest occurrence in the CNDDB was recorded approximately 6 miles north of the Project area in La Purisima Mission State Historic Park.
- **Eastwood's brittle-leaf manzanita** (*Arctostaphylos crustacea* ssp. *eastwoodiana*):[49] Suitable habitat present, but limited due to the encroachment of rangeland. The nearest occurrence in the CNDDB was recorded 2 miles north of the Project area between Sloans Canyon and La Salle Canyon.
- **Pecho manzanita** (*Arctostaphylos pechoensis*): Suitable habitat present, but limited due to the low number of sand, sandstone, or shale outcrops. There are no occurrences of this species within the 9-quadrangle search area in the CNDDB.
- **Refugio manzanita** (*Arctostaphylos refugioensis*): Suitable habitat present, but limited due to the low number of sand, sandstone, or shale outcrops. The nearest occurrence in the CNDDB was recorded 4.3 miles north of the Project area in Burton Mesa (Section 7.0: Figure 5.1.1-8).
- **Coulter's saltbush** (*Atriplex coulteri*): Suitable habitat present, but limited due to the alkaline or clay soils requirement. The nearest occurrence in the CNDDB was recorded 1.7 miles south of the Project area in Sudden Flats (Section 7.0: Figure 5.1.1-8).
- **Plummer's baccharis** (*Baccharis plummerae* ssp. *plummerae*): Suitable habitat present in chaparral and coastal sage scrub. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Brewer's calandrinia** (*Calandrinia breweri*): Suitable habitat present, but limited due to fire suppression. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Catalina mariposa lily** (*Calochortus catalinae*): Suitable habitat present in grassland and southern ridges. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Late-flowered mariposa lily** (*Calochortus fimbriatus*): Suitable habitat present in chaparral and coastal woodland. The nearest occurrence in the CNDDB was recorded 9.2 miles southeast of the Project area in the Santa Ynez Mountains.
- **Dwarf calycadenia** (*Calycadenia villosa*): Suitable habitat present in grassland and southern ridges. The nearest occurrence in the CNDDB was recorded 11.1 miles northeast of the Project area in Los Alamos.
- **Cambria morning-glory** (*Calystegia subacaulis* ssp. *episcopalis*): Suitable habitat present in open scrub and woodland. However, majority of population occurs in San Luis Obispo County. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Small-flowered morning-glory** (*Convolvulus simulans*): Suitable habitat present in grasslands and coastal sage scrubs. There are no occurrences of this species within the 9-quadrangle in the CNDDB.

[49] Formerly *Arctostaphylos tomentosa* ssp. *eastwoodiana*

- **Paniculate tarplant** (*Deinandra paniculata*):[50] Suitable habitat present in grassland and chaparral habitats. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Umbrella larkspur** (*Delphinium umbraculorum*): Suitable habitat present, but restricted to oak forest within Project area. The nearest occurrence in the CNDDB was recorded 3.2 miles east of the Project area in the Santa Ynez Mountains (Section 7.0: Figure 5.1.1-8).
- **Elegant wild buckwheat** (*Eriogonum elegans*): Suitable habitat present, but limited due to the low number of sandy exposed areas or outcrops. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **San Luis Obispo wallflower** (*Erysimum capitatum* ssp. *lompocense*[51]): Suitable habitat present, but limited due to the low number of sandy exposed areas or outcrops. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Vernal barley** (*Hordeum intercedens*): Suitable habitat present, but limited due to the low number of vernally wet areas. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Robinson's pepper-grass** (*Lepidium virginicum* var. *robinsonii*): Suitable habitat present in field, pastures, disturbed areas. The nearest occurrence in the CNDDB was recorded approximately 6 miles north of the Project area in La Purisima Mission State Historic Park.
- **Santa Barbara honeysuckle** (*Lonicera subspicata* var. *subspicata*): Suitable habitat present in coastal scrub. The nearest occurrence in the CNDDB was recorded approximately 6 miles north of the Project area in La Purisima Mission State Historic Park.
- **Mount Diablo cottonweed** (*Micropus amphibolus*): Suitable habitat present in scrub openings and in low and open grassland with a high native component. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **One-sided monkeyflower** (*Mimulus subsecundus*): Suitable habitat present in most of Project area. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **White-veined monardella** (*Monardella hypoleuca* ssp. *hypoleuca*): Suitable habitat present in oak woodland. The nearest occurrence in the CNDDB was recorded 7 miles southeast of the Project area along Los Amoles creek.
- **California spineflower** (*Mucronea californica*): Suitable habitat present, but limited due to the low number of sandy exposed areas or outcrops. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **California adder's-tongue** (*Ophioglossum californicum*): Suitable habitat present, but limited due to the disturbed nature of grassland. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Hubby's phacelia** (*Phacelia hubbyi*): Suitable habitat present, but limited due to low number of exposed gravel areas or outcrops. There are no occurrences of this species recorded in the CNDDB.
- **Michael's rein orchid** (*Piperia michaelii*): Suitable habitat present, but limited due to its requirement for dry sites. There are no occurrences of this species within the 9-quadrangle in the CNDDB.

[50] Formerly *Deinandra increscens* ssp. *foliosa*.

[51] *The Jepson Manual,* 2nd ed. considers this species to be a synonym of a common, non-special status species, western wallflower (*Erysimum capitatum* var. *capitatum*).

- **Fish's milkwort** (*Polygala cornuta* var. *fishiae*): Suitable habitat present in oak woodland. However, the majority of the population occurs further south. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Bitter gooseberry** (*Ribes amarum* var. *hoffmannii*): Suitable habitat present in chaparral. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Hoffmann's sanicle** (*Sanicula hoffmannii*): Suitable habitat present in coastal scrub and woodland. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Black-flowered figwort** (*Scrophularia atrata*): Suitable habitat present in coastal scrub and chaparral. The nearest occurrence in the CNDDB was recorded 0.02 mile northeast of the Project area in San Miguelito Creek (Section 7.0: Figure 5.1.1-8).

Other Special Status Wildlife Species

Review of the CNDDB, USFWS species lists, and previous technical reports identified 57 other special status wildlife species with the potential to occur at the Project site, including 5 invertebrates, 7 reptiles and amphibians, 32 birds, and 13 mammals (Section 7.0: Figure 5.1.1-9, *CNDDB Records of Other Special Status Wildlife Species in the Project Vicinity*; Appendix B; and Appendix C-2).

Of these, 34 other special status wildlife species were observed during field surveys conducted between 2002 and 2018, including 27 birds and 7 mammals (Table 5.1.1-5, *Other Special Status Wildlife Species with the Potential to Occur in the Project Area*). Suitable habitat was present for an additional 16 special status animal species, including 3 invertebrates, 4 reptiles and amphibians, 3 birds, and 6 mammals. The remaining wildlife species identified in the database searches were determined to be absent from the Project area based on a lack of both suitable habitat and observations; these are described in further detail in Appendix C-2.

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species Name	Status	General Habitat	Presence	Habitat Assessment
obscure bumble bee *(Bombus caliginosus)*	CSA	Coastal areas from Santa Barbara County to north to Washington State. Food plant genera include *Baccharis, Cirsium, Lupinus, Lotus, Grindelia* and *Phacelia*.	HP	Habitat present; several food plants are present in the Project area. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 4 miles east of the Project area in the Santa Ynez mountains. Limited habitat exists along the transmission corridor.
monarch butterfly – California overwintering population *(Danaus plexippus)* pop. 1	CSA	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	HP	Habitat present in eucalyptus groves. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 1.4 miles southwest of the Project area in Water Canyon (Section 7.0: Figure 5.1.1-9). Limited habitat exists along the transmission corridor.
Lompoc grasshopper *(Trimerotropis occulens)*	CSA	Known only from Santa Barbara and San Luis Obispo counties. Habitat requirements unknown.	HP	Because the habitat requirements are unknown for this species and it was observed most recently along a dirt road at VAFB north of the Project area, the potential for suitable habitat should be considered. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 1.2 miles north of the Project area in Lompoc (Section 7.0: Figure 5.1.1-9). Potential suitable habitat along the transmission corridor.
northern California legless lizard[52] (*Anniella pulchra pulchra)*	SSC	It inhabits areas with sandy or loose, loamy soils under the sparse vegetation of beaches, riparian, oak woodland, coastal sage scrub, chaparral, and alluvial fans of the coastal	HP	Approximately 379.2 acres of suitable habitat for this species was determined to be present within the oak woodland, riparian scrub, agricultural fields, and eucalyptus groves in the Project area.

[52] Also known as silvery legless lizard.

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
		scrub. It requires moist sandy soil with leaf litter.		Species not observed as a result of habitat assessment and focused surveys conducted in winter 2007 to 2008. The nearest occurrence in the CNDDB was recorded 4.3 miles north of the Project area near the Village Country Club (Section 7.0: Figure 5.1.1-9). Habitat exists along the transmission corridor.
coast horned lizard *(Phrynosoma blainvillii)*[53]	SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	HP	Approximately 2,630 acres of suitable habitat for this species was determined to be present within the grasslands, coastal sage scrub, and agricultural fields in the Project area. Species not observed as a result of habitat assessment and focused surveys conducted in winter 2007 to 2008. The nearest occurrence in the CNDDB was recorded 7.5 miles north of the Project area. Habitat exists along the transmission corridor.
coast patch-nosed snake *(Salvadora hexalepis virgultea)*	SSC, LI	Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites.	HP	Suitable habitat is present within coastal sage scrub habitats. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 8.9 miles northeast of the Project area in Purisima Hills. Habitat exists along the transmission corridor.
two-striped garter snake *(Thamnophis hammondii)*	SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 feet elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	HP	A limited amount of marginally suitable habitat is present within San Miguelito Creek. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 3.1 miles east of the Project area along Salsipuedes creek. Limited habitat exists along the transmission corridor.

[53] Formerly *Phrynosoma coronatum*.

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
Cooper's hawk *(Accipiter cooperii)*	SSC, WL, LI	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	O	Suitable habitat for this species is present in woodland within the Project area. This species was observed during avian surveys at the site conducted in 2002, 2005, 2006, 2008, 2016, and 2017. In 2008, one active nest, one possible nest, and two inactive nests were observed at the site. In 2013, it was observed during aerial raptor surveys conducted in a 9-mile radius around the site. Habitat exists along the transmission corridor.
sharp-shinned hawk *(Accipiter striatus)*	SSC, WL	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests usually within 275 feet of water.	O	Suitable habitat for this species is present near riparian areas at the Project site. This species was observed during avian surveys conducted at the site in 2002, 2005, 2008, and 2016. Habitat exists along the transmission corridor.
grasshopper sparrow *(Ammodramus savannarum)*	SSC, LI	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	O	Suitable habitat is present within coastal sage scrub and grassland mosaic habitats. It was observed in these habitats throughout the Project area during avian surveys conducted in 2002, 2005, 2008, 2016, and 2017. Habitat exists along the transmission corridor.
golden eagle *(Aquila chrysaetos)*	FP, WL, BCC[54]	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	O	Suitable foraging habitat for this species occurs throughout the entire Project area. This species was observed during every avian survey conducted at the site in the years 2002, 2005, 2006, 2007, 2008, 2016, and 2017. Also, it was observed during aerial surveys conducted in 2013 and 2016 in a 9-mile radius around the Project site. However, no golden eagle nesting has been observed at the site during any of the surveys. Habitat exists along the transmission corridor.

[54] This species is also protected pursuant to the federal Bald and Golden Eagle Protection Act.

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
great egret *(Ardea alba)*	CSA	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	O	An individual of this species was observed flying over the Project area during avian surveys conducted in 2016. However, suitable roosting and foraging habitat is not present due to the lack of wetland habitats within the Project area. Therefore, it is likely that this species is a passage migrant through the site and the transmission corridor.
Bell's sage sparrow *(Artemisiospiza belli belli)*[55]	WL, BCC	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6–18 inches above ground. Territories about 50 yards apart.	HP	Suitable habitat is present within coastal sage scrub. However, this species generally prefers upland chaparral. Species not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Habitat exists along the transmission corridor.
short-eared owl *(Asio flammeus)*	SSC	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	HP	Suitable habitat is present in grasslands within the Project area. One individual of this species was observed within 1 mile to the south of the Project site during aerial raptor surveys conducted in 2013. Habitat exists along the transmission corridor.
long-eared owl *(Asio otus)*	SSC	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	HP	Suitable habitat is present within the riparian areas and adjacent oak woodlands at the Project site. Species not observed as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Habitat exists along the transmission corridor.

[55] Formerly *Amphispiza belli belli*; this name is still used by the USFWS.

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
burrowing owl *(Athene cunicularia)*	SSC, BCC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	O	Suitable habitat is present in agricultural fields and grasslands within the Project area. Two individuals were observed in annual grassland on the North Ridge during avian surveys conducted in winter 2008. Habitat exists along the transmission corridor.
oak titmouse *(Baeolophus inornatus)*	BCC	Oak and pine-oak woodland, arborescent chaparral, oak-riparian associations. Cavity nester.	O	Suitable habitat is present in oak woodland within the Project area. Individuals were observed within oak woodlands throughout the Project site during avian surveys conducted in 2002, 2005, 2008, 2016, and 2017. Habitat exists along the transmission corridor.
ferruginous hawk *(Buteo regalis)*	WL, BCC, LI	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	O	Suitable habitat is present in grasslands and coastal sage scrub within the Project area. This species was observed in coastal sage scrub during avian surveys conducted in 2008 and 2016. Habitat exists along the transmission corridor.
Vaux's swift *(Chaetura vauxi)*	SSC	Prefers redwood and Douglas-fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out stubs. Forages over most terrains and habitats.[56]	O	Suitable habitat present in woodlands within the Project area. This species was observed at the Project site during avian surveys conducted in 2008. Habitat exists along the transmission corridor.
northern harrier *(Circus cyaneus)*	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain ciénegas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	O	Suitable habitat is present for this species in grassland, agricultural field, and coastal sage scrub mosaic within the Project area. This species was observed during every avian survey conducted at the site in the years 2002, 2005, 2006, 2007, 2008, 2016, and 2017. Also, it was

[56] California Department of Fish and Wildlife, California Interagency Wildlife Task Group, Harris, J., D. Alley, and R. Duke. 2017. California Wildlife Habitat Relationships System Life History Account for Vaux's Swift. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1893&inline=1

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
				observed during aerial surveys conducted in 2013 in a 9-mile radius around the Project site. However, no northern harrier nesting has been observed at the site during any of the surveys. Habitat exists along the transmission corridor.
olive-sided flycatcher *(Contopus borealis)*	SSC	Wide variety of forest and woodland habitats below 2,800 m in elevation throughout California, excluding the deserts, the Central Valley, and other lowland valleys and basins. Preferred nesting habitats include coniferous forests and sometimes mixed-deciduous forest. Typically use dead branches or trees.	O	Suitable habitat is present in woodlands within the Project area for this species during spring migration; however, it is limited due to the minimal amount of coniferous and dead trees. One individual was observed in a willow thicket and eucalyptus grove during avian surveys conducted in spring 2008. Habitat exists along the transmission corridor.
white-tailed kite *(Elanus leucurus)*	SSC, FP, LI	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	O	Suitable habitat is present in woodlands, riparian areas, and grasslands at the Project site. An individual of this species was observed on a fence post in a pasture during avian surveys conducted in spring 2008. Also, this species was observed approximately 8 miles northeast of the Project site during an aerial raptor survey conducted in a 9-mile radius around the site in 2013. Habitat exists along the transmission corridor.
California horned lark *(Eremophila alpestris actia)*	WL, LI	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	O	Suitable breeding and foraging habitat is present for this species in grasslands and agricultural fields throughout the Project site. Large numbers of this species have been observed nesting and foraging in grasslands and agricultural fields throughout the Project site during every avian survey conducted in 2002, 2005, 2006, 2007, 2008, 2016, and 2017. Habitat exists along the transmission corridor.
merlin *(Falco columbarius)*	WL, LI	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.	O	Suitable foraging habitat is present in grasslands and coastal sage scrub mosaic within the Project area. Several individuals were observed in such habitat during avian surveys conducted at the site in autumn 2016. Habitat exists along the transmission corridor.

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
prairie falcon *(Falco mexicanus)*	SSC	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	O	Suitable habitat is present in grasslands within the Project area. This species was observed flying on the east ridge of the site during avian surveys conducted in autumn 2008. Also, it was observed during aerial surveys conducted in 2016 in a 9-mile radius around the Project site; the nearest observation was approximately 4 miles to the east. Habitat exists along the transmission corridor.
American peregrine falcon *(Falco peregrinus anatum)*	FP, BCC, LI, Federally Delisted, State Delisted	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	O	Suitable foraging habitat is present throughout open habitats within the Project area. This species was observed during avian surveys conducted in 2006, 2007, 2008, and 2016. Also, a nesting pair was observed on a cliff approximately five miles northeast of the site during aerial raptor surveys conducted in 2013 in a 9-mile radius around the site, and at the same location in 2016. Habitat exists along the transmission corridor.
common loon *(Gavia immer)*	SSC	Estuarine and subtidal marine habitats along entire coast from September to May; sometimes by lakes in valleys and foothills throughout entire state. In November and May, it is a common migrant along the coast in November and May.[57]	O	Several flocks of this species were observed flying over the Project area during avian surveys conducted in autumn 2008 and 2016. However, suitable roosting and foraging habitat is not present due to the lack of wetland habitats within the Project area. Therefore, it is likely that this species is a passage migrant through the site and the transmission corridor.
yellow-breasted chat *(Icteria virens)*	SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	O	Suitable habitat is present in riparian thickets within the Project area. This species was observed in La Honda Creek during avian surveys conducted in spring 2008. Habitat exists along the transmission corridor.

[57] California Department of Fish and Wildlife, California Interagency Wildlife Task Group, Granholm, S., D. Raveling, R. Duke, and D. Airola. 2017. California Wildlife Habitat Relationships System Life History Account for Common Loon. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1545&inline=1

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
loggerhead shrike *(Lanius ludovicianus)*	SSC, BCC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub, and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	O	Suitable habitat is present in woodlands, grasslands, and coastal sage scrub within the Project area. This species was observed perching on fence posts and telephone poles during avian surveys conducted at the site in 2006, 2008, 2016, and 2017. Habitat exists along the transmission corridor.
California gull *(Larus californicus)*	WL	Littoral waters, sandy beaches, waters and shorelines of bays, tidal mud-flats, marshes, lakes, etc. Colonial nester on islets in large interior lakes, either fresh or strongly alkaline.	O	An individual of this species was observed flying over the Project area during avian surveys conducted in autumn 2008. However, suitable roosting and foraging habitat is not present due to the distance of the site to the shoreline. Therefore, it is likely that this species is a passage migrant through the site and the transmission corridor.
long-billed curlew *(Numdnius americanus)*	WL, BCC, LI	Prairies and grasslands, usually near water.	O	Suitable habitat is present in grasslands within the Project area. An individual of this species was observed flying over grasslands during avian surveys conducted in winter 2008. Habitat exists along the transmission corridor.
California brown pelican *(Pelecanus occidentalis)*	FP, LI, Federally Delisted, State Delisted	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	O	An individual of this species was observed flying over the Project area during avian surveys conducted in autumn 2016. However, suitable roosting and foraging habitat is not present due to the distance of the site to the shoreline. Therefore, it is likely that this species is a passage migrant through the site only.
double-crested cormorant *(Phalacrocorax auritus)*	WL	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	O	This species was observed flying over the Project area during avian surveys conducted in autumn 2008 and autumn 2016. However, suitable roosting and foraging habitat is not present due to the distance of the site to the shoreline. Therefore, it is likely that this species is a passage migrant through the site only.
yellow-billed magpie *(Pica nuttalli)*	BCC	Oak woodlands, grasslands, agricultural fields.	O	Suitable habitat is present in oak woodlands, grasslands, and agricultural fields within the Project area. An individual of this species was

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
				observed during avian surveys conducted in autumn 2008. Habitat exists along the transmission corridor.
yellow warbler *(Setophaga petechial)*[58]	SSC, BCC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	O	Suitable habitat is present in riparian woodlands within the Project area. Individuals of this species, including breeding pairs, were observed in arroyo willow thickets at the Project site during avian surveys conducted in 2002, 2005, and 2008. Habitat exists along the transmission corridor.
red-breasted sapsucker *(Sphyrapicus ruber)*	CSA	Breeds in mixed coniferous and mixed deciduous-coniferous forests and woodlands. Requires standing snags or hollow trees for nesting cavity.	O	Suitable habitat is present in woodlands within the Project site. An individual of this species was observed flying over the site on Sudden Road at the border of VAFB during avian surveys conducted during autumn 2017. Habitat exists along the transmission corridor.
Lawrence's goldfinch *(Spinus lawrencei)*[59]	BCC, LI	Nests in open oak or other arid woodland and chaparral, near water. Nearby herbaceous habitats used for feeding. Closely associated with oaks.	O	Suitable habitat is present in oak woodland and chaparral within the Project area. This species was observed on Sudden Road at the border of VAFB during avian surveys conducted during spring 2017. Habitat exists along the transmission corridor.
pallid bat *(Antrozous pallidus)*	SSC	Deserts, grasslands, shrublands, woodlands and forests. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	O	Suitable habitat is present in grasslands, coastal sage scrub, and woodlands throughout the Project area. Calls identified as this species were recorded during bat surveys conducted in autumn 2008 and spring 2017. Habitat exists along the transmission corridor.
Townsend's big-eared bat	SSC[60]	Throughout California in a wide variety of habitats, most common in mesic sites. Roosts	HP	Suitable habitat is present throughout the Project area. Species not recorded as a result of multiple

[58] Formerly *Dendroica petechia*.

[59] Formerly *Carduelis lawrencei*.

[60] In August 2016, the California Fish and Game Commission found that a petitioned action to add Townsend's big-eared bat to the list of threatened species pursuant to CESA was not warranted, pursuant to Fish and Game Code Section 2075.5. The Commission adopted this finding in October 2016.

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
(Corynorhinus townsendii)		in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.		surveys. The nearest occurrence in the CNDDB was recorded 0.13 miles north of the Project area in La Honda Canyon (Section 7.0: Figure 5.1.1-9). Habitat exists along the transmission corridor.
Western mastiff bat *(Eumops perotis)*	SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	O	Suitable habitat is present in grasslands, woodlands, and coastal sage scrub throughout the Project area. Calls identified as this species were recorded during bat surveys conducted in autumn 2008. Habitat exists along the transmission corridor.
silver-haired bat *(Lasionycteris noctivagans)*	CSA	Primarily a coastal and montane forest dweller, feeding over streams, ponds, and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	HP	Suitable habitat is present within riparian thickets and adjacent oak woodlands and eucalyptus groves within the Project area. Species not recorded as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded 0.29 miles east of the Project area in Miguelito County Park (Section 7.0: Figure 5.1.1-9). Habitat exists along the transmission corridor.
western red bat *(Lasiurus blossevillii)*	SSC	Roosts primarily in trees, 2-40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	O	Suitable habitat is present in woodlands within the Project area. Calls identified as possibly this species were recorded during bat surveys conducted in autumn 2008. However, these calls could not be distinguished from the non-special status canyon bat (*Parastrellus hesperus*) calls due to their acoustic similarity. These calls could have been from either species or a combination of both. Habitat exists along the transmission corridor.
hoary bat *(Lasiurus cinereus)*	CSA	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	O	Suitable habitat is present in coastal sage scrub and grassland habitats nearby woodlands and riparian thickets throughout the Project area. Calls identified as this species were recorded during bat surveys conducted in 2008. Habitat exists along the transmission corridor.

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
western small-footed myotis *(Myotis ciliolabrum)*	CSA	Wide range of habitats mostly arid wooded and brushy uplands near water. Seeks cover in caves, buildings, mines, and crevices. Prefers open stands in forests and woodlands. Requires drinking water. Feeds on a wide variety of small flying insects.	HP	Suitable habitat is present in woodlands and coastal sage scrub within the Project area. Species not recorded as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Habitat exists along the transmission corridor.
Long-eared myotis *(Myotis evotis)*	CSA	Found in all brush, woodland and forest habitats from sea level to about 9,000 feet. Prefers coniferous woodlands and forests. Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.	O	Suitable habitat is present in woodlands within the Project area. Calls identified as this species were recorded in oak woodlands in the east of the Project site during bat surveys conducted in 2008 and 2017. Habitat exists along the transmission corridor.
Fringed myotis *(Myotis thysanodes)*	CSA	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood, and hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts.	HP	Suitable habitat is present in woodlands within the Project area. However, it is highly unlikely due to its preference for coniferous forest habitats found at higher elevations.[61] Species not recorded as a result of multiple surveys. There are no occurrences of this species within the 9-quadrangle in the CNDDB. Habitat exists along the transmission corridor.
Yuma myotis *(Myotis yumanensis)*	CSA	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	O	Suitable habitat is present in woodlands within the Project area. Calls identified as possibly this species were recorded during bat surveys conducted in 2008 and 2017. However, these calls could not be distinguished from the non-special status California myotis (*Myotis californica*) calls due to their acoustic similarity. These calls could have been from either species or a combination of both. Habitat exists along the transmission corridor.

[61] California Department of Fish and Wildlife, California Interagency Wildlife Task Group, Harris, J., D. Alley, and R. Duke. N.d. California Wildlife Habitat Relationships System Life History Account for Fringed Myotis. Accessible at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2325&inline=1

TABLE 5.1.1-5
OTHER SPECIAL STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment
San Diego desert woodrat *(Neotoma lepida intermedia)*	SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	HP	Approximately 2,768 acres of suitable habitat was determined to be present within coastal sage scrub, grasslands, and woodlands in the Project area. Species not observed as a result of multiple surveys. The nearest occurrence in the CNDDB was recorded approximately 10 miles north of the Project area in the Lompoc oil fields. Habitat exists along the transmission corridor.
American badger *(Taxidea taxus)*	SSC, LI	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	O	Approximately 2,753 acres of suitable habitat was determined to be present within the majority of the Project area, with the exception of woodlands. Evidence of badger dens, digs, and inactive burrows was observed during 2002/2005 surveys on the Sudden Corridor to the East and North Corridor. Habitat exists along the transmission corridor.

NOTE: California Special Animal (CSA) is a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. The Department of Fish and Wildlife considers the taxa on this list to be those of greatest conservation need. For those species with statuses identified by USFWS and/or CDFW, the status is noted. Those species included on the list due to identification by other governmental agencies and/or non-governmental conservation organizations are listed as CSA.

KEY:
A = absent; no habitat present and no further work needed.
BCC = U.S. Fish and Wildlife Service Bird of Conservation Concern
CSA = California Special Animal
FP = Fully protected animal in California per Section 5050 of the California Fish and Game Code
HP = Habitat present; habitat is, or may be present; the species may be present.
LI = Locally rare or locally threatened or called out by Santa Barbara
O = Observed
m = meter
SSC = CDFW Species of Special Concern
WL = CDFW Watch List

**Sources are listed in Appendix C-2*

Cooper's hawk (*Accipiter cooperii*)

Cooper's hawk is a CDFW Species of Special Concern, a CDFW Watch List species, and a locally important species. Suitable habitat for this species is present in woodland within the Project area. This species was observed during avian surveys at the site conducted in 2002, 2005, 2006, 2008, 2016, and 2017 (Appendices A-1, A-9, A-10, A-12, A-14, A-17, and A-20). In 2008, one active nest, one possible nest, and two inactive nests were observed at the site (Appendix A-12). In 2013, it was observed during aerial raptor surveys conducted in a 10-mile radius around the site (Appendix A-18). This species would generally be present year-round using arroyo willow thickets, tanoak forest, and coast live oak woodland. Its primary flight activity would be expected to occur up to 400 feet above the ground surface.

Sharp-shinned hawk (*Accipiter striatus*)

The sharp-shinned hawk is a CDFW Species of Special Concern and a CDFW Watch List species. Suitable habitat for this species is present near riparian areas at the Project site. This species was observed during avian surveys conducted at the site in 2002, 2005, 2008, and 2016 (Appendices A-1, A-9, A-10, A-12, A-14, and A-17). This species would normally be present in winter using arroyo willow thickets, tanoak forest, and coast live oak woodland. Its primary flying activity would be expected to occur above and below the canopy.

Grasshopper sparrow (*Ammodramus savannarum*)

The grasshopper sparrow is a CDFW Species of Special Concern and a locally important species. Suitable foraging and breeding habitat is present within coastal sage scrub and grassland mosaic habitats. It was observed in these habitats throughout the Project area during avian surveys conducted in 2002, 2005, 2008, 2016, and 2017 (Appendices A-1, A-9, A-10, A-12, A-14, A-17, and A-20). This species would generally be present in summer using California sagebrush scrub and purple needle grass grassland. Its primary foraging activity would be expected to occur at the ground surface.

Golden eagle (*Aquila chrysaetos*)

The golden eagle is a CDFW Fully Protected species, a CDFW Watch List species, and a USFWS Bird of Conservation Concern. In addition, it is afforded protection under the federal Bald and Golden Eagle Protection Act. Suitable foraging habitat for this species occurs throughout the entire Project area. This species was observed during every avian survey conducted at the site in the years 2002, 2005, 2006, 2007, 2008, 2016, and 2017 (Appendices A-1, A-9, A-10, A-12, A-14, A-17, and A-20). Also, it was observed during aerial surveys conducted in 2013 and 2016 in a 10-mile radius around the Project site (Appendix A-18). One golden eagle nest was recorded approximately five miles southeast of the Project area during the 2013 survey. However, no golden eagle nesting has been observed within the Project area during any of the surveys. This species would generally be present year-round across the Project site, and its primary flight activity would be expected to occur up to 300 feet above the ground surface.

Great egret (*Ardea alba*)

The great egret is a CDFW California Special Animal. An individual of this species was observed flying over the Project area during avian surveys conducted in 2016 (Appendix A-17). However, suitable roosting and foraging habitat is not present due to the lack of wetland habitats within the

Project area. The Project site is located within the winter range for the species, but it is more likely that this species is a passage migrant through the site only. Its primary foraging activity would be expected to occur at the ground surface.

Burrowing owl (*Athene cunicularia*)

The burrowing owl is a CDFW Species of Special Concern and a USFWS Bird of Conservation Concern. Suitable habitat is present in open shrub and grasslands within the Project area. Two individuals were observed in annual grassland on the North Ridge during avian surveys conducted in winter 2008 (Appendix A-9). This species would generally be present year round using grassland, California sagebrush scrub, and arroyo willow thickets. Its primary foraging activity would be expected to occur at the ground surface.

Oak titmouse (*Baeolophus inornatus*)

The oak titmouse is a USFWS Bird of Conservation Concern. Suitable foraging and breeding habitat is present in oak woodland within the Project area. Individuals were observed within oak woodlands throughout the Project site during avian surveys conducted in 2002, 2005, 2008, 2016, and 2017 (Appendices A-1, A-9, A-10, A-12, A-14, A-17, and A-20). This species would generally be present year round using arroyo willow thickets and coast live oak woodland. Its primary flight activity would be expected to occur up to 30 feet from the ground surface.

Ferruginous hawk (*Buteo regalis*)

The ferruginous hawk is a CDFW Watch List Species, a USFWS Bird of Conservation Concern, and a locally important species. Suitable habitat is present in grasslands and coastal sage scrub within the Project area. This species was observed in coastal sage scrub during avian surveys conducted in 2008 and 2016 (Appendices A-9, A-10, A-12, A-14, and A-17). This species would generally be present in winter using California sagebrush scrub, and grasslands. Its primary flight activity would be expected to occur up to 300 feet from the ground surface.

Vaux's swift (*Chaetura vauxi*)

Vaux's swift is a CDFW Species of Special Concern. Suitable habitat present in woodlands within the Project area. This species was observed at the Project site during avian surveys conducted in 2008 (Appendices A-9, A-10, A-12, and A-14). According to CDFW, this species' range is outside of the Project area; therefore, it is more likely that this species is a passage migrant through the site only, generally in April and May. Its primary flight activity would be expected to occur at low levels in forest openings and above water.

Northern harrier (*Circus cyaneus*)

The northern harrier is a CDFW Species of Special Concern. Suitable habitat is present for this species in grassland, agricultural field, and coastal sage scrub mosaic within the Project area. This species was observed during every avian survey conducted at the site in the years 2002, 2005, 2006, 2007, 2008, 2016, and 2017 (Appendices A-1, A-9, A-10, A-12, A-14, A-17, and A-20). Also, it was observed during aerial surveys conducted in 2013 in a 10-mile radius around the Project site (Appendix A-18). However, no northern harrier nesting has been observed at the site during any of the surveys. This species would generally be present in winter using grasslands and agricultural

fields. Its primary flight activity would be expected to occur up to 30 feet from the ground surface, but commonly may occur up to 1,000 feet.

Olive-sided flycatcher (*Contopus borealis*)

The olive-sided flycatcher is a CDFW Species of Special Concern. Suitable habitat is present in woodlands within the Project area for this species during spring migration; however, it is limited due to the minimal amount of coniferous and dead trees. One individual was observed in a willow thicket and eucalyptus grove during avian surveys conducted in spring 2008 (Appendix A-10). This species would generally be present in winter using tanoak forest and coast live oak woodland, and its primary flight activity would be expected to occur up to 70 feet from the ground surface.

White-tailed kite (*Elanus leucurus*)

The white-tailed kite is a fully protected animal in California per Section 5050 of the California Fish and Game Code, a CDFW Species of Special Concern, and a locally important species. Suitable habitat is present in woodlands, riparian areas, and grasslands at the Project site. An individual of this species was observed on a fence post in a pasture during avian surveys conducted in spring 2008 (Appendix A-10). Also, this species was observed approximately 8 miles northeast of the Project site during an aerial raptor survey conducted in a 10-mile radius around the site in 2013 (Appendix A-18). This species would generally be present year-round using arroyo willow thickets, coast live oak woodland, and grasslands. Its primary flight activity would be expected to occur up to 100 feet from the ground surface.

California horned lark (*Eremophila alpestris actia*)

The California horned lark is a CDFW Watch List species and a locally important species. Suitable breeding and foraging habitat is present for this species in grasslands and agricultural fields throughout the Project site. Large numbers of this species have been observed nesting and foraging in grasslands and agricultural fields throughout the Project site during every avian survey conducted in 2002, 2005, 2006, 2007, 2008, 2016, and 2017 (Appendices A-1, A-9, A-10, A-12, A-14, A-17, and A-20). This species would generally be present year-round using grasslands and agricultural fields. Its primary foraging activity is at the ground surface.

Merlin (*Falco columbarius*)

The merlin is a CDFW Watch List species and a locally important species. Suitable foraging habitat is present in grasslands and coastal sage scrub mosaic within the Project area. Several individuals were observed in such habitat during avian surveys conducted at the site in autumn 2016 (Appendix A-17). This species would generally be present from September to May using California sagebrush scrub and grasslands. Its primary flight activity would be expected to occur above and below the canopy.

Prairie falcon (*Falco mexicanus)*

The prairie falcon is a CDFW Species of Special Concern. Suitable habitat is present in grasslands within the Project area. This species was observed flying on the east ridge of the site during avian surveys conducted in autumn 2008 (Appendix A-14). Also, it was observed during aerial surveys conducted in 2016 in a 10-mile radius around the Project site; the nearest observation was approximately 4 miles to the east (Appendix A-18). This species would generally be present in

winter using California sagebrush scrub and grasslands. Its primary flight activity would be expected to occur up to 300 feet above the ground surface.

American peregrine falcon (*Falco peregrinus anatum*)

The American peregrine falcon is a Fully Protected bird species, a USFWS Bird of Conservation Concern, a locally important species, but has been both federally and State delisted. Suitable foraging habitat is present throughout open habitats within the Project area. This species was observed during avian surveys conducted in 2006, 2007, 2008, and 2016 (Appendices A-9, A-10, A-12, A-14, A-17, and A-20). Also, a nesting pair was observed on a cliff approximately 5 miles northeast of the site during aerial raptor surveys conducted in 2013 in a 10-mile radius around the site, and at the same location in 2016 (Appendix A-18). This species would generally be present year-round using all habitats: arroyo willow thickets, tanoak forest, coast live oak woodland, California sagebrush scrub, grasslands, Eucalyptus Groves, and Agricultural Fields. Its primary flight activity would be expected to occur up to 3,300 feet from the ground surface.

Common loon (*Gavia immer*)

The common loon is a CDFW Species of Special Concern. Several flocks of this species were observed flying over the Project area during avian surveys conducted in autumn 2008 and 2016 (Appendix A-14 and A-17). The Project site is located within the winter range for the species, however suitable roosting and foraging habitat is not present due to the lack of wetland habitats within the Project area. Therefore, it is more likely that this species is a passage migrant through the site only. Its primary foraging activity would be expected to occur at the water surface and up to 200 feet below the surface.

Yellow-breasted chat (*Icteria virens*)

The yellow-breasted chat is a CDFW Species of Special Concern. Suitable habitat is present in riparian thickets within the Project area. This species was observed in La Honda Creek during avian surveys conducted in spring 2008 (Appendix A-10). This species would generally be present April to September using Arroyo Willow Thickets and its primary flight activity would be expected to occur up to 8 feet from the ground surface.

Loggerhead shrike (*Lanius ludovicianus*)

The loggerhead shrike is a CDFW Species of Special Concern and a USFWS Bird of Conservation Concern. Suitable habitat is present in woodlands, grasslands, and coastal sage scrub within the Project area. This species was observed perching on fence posts and telephone poles during avian surveys conducted at the site in 2006, 2008, 2016, and 2017 (Appendices A-1, A-9, A-10, A-12, A-14, A-17, and A-20). This species would generally be present year-round using all habitats: arroyo willow thickets, tanoak forest, coast live oak woodland, California sagebrush scrub, grasslands, eucalyptus groves, and agricultural fields. Its primary flight activity is expected to occur up to 50 feet from the ground surface.

California gull (*Larus californicus*)

The California gull is a CDFW Watch List species. An individual of this species was observed flying over the Project area during avian surveys conducted in autumn 2008 (Appendix A-14). The Project site is located within the year-round range for the species; however, suitable roosting and

foraging habitat is not present due to the distance of the site to the shoreline. Therefore, it is more likely that this species is a passage migrant through the site only. Its primary foraging activity would be expected to occur at the ground surface.

Long-billed curlew (*Numdnius americanus*)

The long-billed curlew is a CDFW Watch List Species, a USFWS Bird of Conservation Concern, and a locally important species. Suitable habitat is present in grasslands within the Project area. An individual of this species was observed flying over grasslands during avian surveys conducted in winter 2008 (Appendix A-9). This species would generally be present in winter using grasslands. Its primary foraging activity would be at the ground surface.

California brown pelican (*Pelecanus occidentalis*)

The California brown pelican is a Fully Protected bird species, a locally important species, and has been both federally and state delisted. An individual of this species was observed flying over the Project area during avian surveys conducted in autumn 2016 (Appendix A-17). The Project site is located within the winter range for the species, however, suitable roosting and foraging habitat is not present due to the distance of the site to the shoreline. Therefore, it is more likely that this species is a passage migrant through the site only. Its primary flying activity would be expected to occur up to 66 feet above the water surface.

Double-crested cormorant (*Phalacrocorax auritus*)

The double-crested cormorant is a CDFW Watch List species. This species was observed flying over the Project area during avian surveys conducted in fall 2008 and fall 2016 (Appendices A-14 and A-17). The Project site is located within the year-round range for the species, however, suitable roosting and foraging habitat is not present due to the distance of the site to the shoreline. Therefore, it is more likely that this species is a passage migrant through the site only. Its foraging activity would be expected to occur at the water surface and up to 72 feet below the surface.

Yellow-billed magpie (*Pica nuttalli*)

The yellow-billed magpie is a USFWS Bird of Conservation Concern. Suitable habitat is present in oak woodlands, grasslands, and agricultural fields within the Project area. An individual of this species was observed during avian surveys conducted in fall 2008 (Appendix A-14). According to CDFW, the species' range is outside of the Project area; therefore it is more likely that this species is a passage migrant through the site only. Its primary flight activity is expected to occur up to 80 feet above the ground surface.

Yellow warbler (*Setophaga petechia*)

The yellow warbler is a CDFW Species of Special Concern and a USFWS Bird of Conservation Concern. Suitable habitat is present in riparian woodlands within the Project area. Individuals of this species, including breeding pairs, were observed in arroyo willow thickets at the Project site during avian surveys conducted in 2002, 2005, and 2008 (Appendices A-1, A-9, A-10, A-12, and A-14). This species would generally be present in summer using arroyo willow thickets and its primary flying activity is expected to occur up to 16 feet above the ground surface.

Red-breasted sapsucker (*Sphyrapicus ruber)*

The red-breasted sapsucker is a CDFW California Special Animal. Suitable habitat is present in woodlands within the Project site. An individual of this species was observed flying over the site on Sudden Road at the border of VAFB during avian surveys conducted during fall 2017 (Appendix A-17). This species would generally be present in winter using coast live oak woodland and tanoak forest. Its primary flight activity would be expected to occur up to 115 feet above the ground surface.

Lawrence's goldfinch (*Spinus lawrencei*)

Lawrence's goldfinch is a USFWS Bird of Conservation Concern and a locally important species. Suitable habitat is present in oak woodland and chaparral within the Project area. This species was observed on Sudden Road at the border of VAFB during avian surveys conducted during spring 2017 (Appendix A-20).

Pallid bat (*Antrozous pallidus*)

The pallid bat is a CDFW Species of Special Concern. Suitable habitat is present in grasslands, coastal sage scrub, and woodlands throughout the Project area. Calls identified as this species were recorded during bat surveys conducted in autumn 2008 and spring 2017 (Appendices A-15 and A-21). This species would generally be present year-round using all habitats: arroyo willow thickets, tanoak forest, coast live oak woodland, California sagebrush scrub, grasslands, eucalyptus groves, and agricultural fields. Its primary flying activity would be expected to occur up to 8 feet above the ground surface.

Western mastiff bat (*Eumops perotis*)

The western mastiff bat is a CDFW Species of Special Concern. Suitable habitat is present in grasslands, woodlands, and coastal sage scrub throughout the Project area. Calls identified as this species were recorded during bat surveys conducted in fall 2008 (Appendix A-15). This species would generally be present year-round using all habitats: arroyo willow thickets, tanoak forest, coast live oak woodland, California sagebrush scrub, grasslands, eucalyptus groves, and agricultural fields. Its primary flying activity would be expected to occur up to 195 feet from the ground surface.

Western red bat (*Lasiurus blossevillii*)

The western red bat is a CDFW Species of Special Concern. Suitable habitat is present in woodlands within the Project area. Calls identified as possibly this species were recorded during bat surveys conducted in fall 2008 (Appendix A-15). However, these calls could not be distinguished from the non-special status canyon bat (*Parastrellus hesperus*) calls due to their acoustic similarity. These calls could have been from either species or a combination of both. According to CDFW, this species' range is outside of the Project area; therefore it is more likely that this species is a passage migrant through the site only. However, the nearest occurrence in the CNDDB was recorded 0.29 mile east of the Project area. Its primary flying activity would be expected to occur no higher than 20 feet above ground surface or water.

Silver-haired Bat

The silver-haired bat was not recorded as a result of acoustical monitoring. Although the Project site contains adequate tree-roosting habitat for many arboreal species, the requirement of old growth forests by silver-haired bats may not met by the habitat present. This species primarily feeds in disturbed areas that include a matrix of open and forested habitats, both of which are found throughout the entire Project site, which includes approximately 2,950 acres.

Hoary bat (*Lasiurus cinereus*)

The hoary bat is a CDFW California Special Animal. Suitable habitat is present in coastal sage scrub and grassland habitats nearby woodlands and riparian thickets throughout the Project area. Calls identified as this species were recorded during bat surveys conducted in 2008 (Appendix A-15). This species would generally be present year-round across the entire Project area. Its primary flying activity would be expected to occur up to 40 feet above ground surface.

Long-eared myotis (*Myotis evotis)*

The long-eared myotis is a CDFW California Special Animal. Suitable habitat is present in woodlands within the Project area. Calls identified as this species were recorded in oak woodlands in the east of the Project site during bat surveys conducted in 2008 and 2017 (Appendices A-15 and A-21). This species would generally be present year-round using coast live oak woodland and tanoak forest and its primary flying activity would be expected to occur up to 40 feet from the ground surface.

Yuma myotis (*Myotis yumanensis*)

The Yuma myotis is a CDFW California Special Animal. Suitable habitat is present in woodlands within the Project area. Calls identified as possibly this species were recorded during bat surveys conducted in 2008 and 2017 (Appendices A-15 and A-21). However, these calls could not be distinguished from the non-special status California myotis (*Myotis californica*) calls due to their acoustic similarity. These calls could have been from either species or a combination of both. This species would generally be present year-round using coast live oak woodland and tanoak forest and its primary flying activity would be expected to occur at canopy height or low over the water surface.

American badger (*Taxidea taxus*)

The American badger is a CDFW Species of Special Concern and a locally important species. Approximately 2,753 acres of suitable habitat was determined to be present within the majority of the Project area, with the exception of woodlands (Appendix A-4). Evidence of badger dens, digs, and inactive burrows was observed during 2002 and 2005 surveys on the Sudden Corridor to the East and North Corridor (Appendix A-1).

Other Special Status Wildlife with Suitable Habitat Present Not Observed

Although none of these were observed during multiple field surveys conducted between 2002 and 2018, suitable habitat was determined to be present within the Project area and the transmission corridor for an additional 16 special status wildlife species, including 3 invertebrates, 4 reptiles and amphibians, 2 birds, and 6 mammals (Table 5.1.1-5):

- **Obscure bumble bee** (*Bombus caliginosus*): suitable food plants such as *Baccharis, Cirsium, Lupinus, Lotus, Grindelia,* and *Phacelia* species are present at the site. The nearest occurrence in the CNDDB was recorded 4 miles east of the Project area in the Santa Ynez Mountains (Section 7.0: Figure 5.1.1-9).
- **Lompoc grasshopper** (*Trimerotropis occulens*): because the habitat requirements are unknown for this species and it was observed most recently along a dirt road at VAFB north of the Project area, the potential for suitable habitat should be considered. The nearest occurrence in the CNDDB was recorded 1.2 miles north of the Project area in Lompoc (Section 7.0: Figure 5.1.1-9).
- **Monarch butterfly – California overwintering population** (*Danaus plexippus* pop. 1): suitable habitat is present in eucalyptus groves at the site. The nearest occurrence in the CNDDB was recorded 1.4 miles southwest of the Project area in Water Canyon (Section 7.0: Figure 5.1.1-9).
- **Northern California legless lizard** (*Anniella pulchra pulchra*): approximately 379.2 acres of suitable habitat for this species was determined to be present within the oak woodland, riparian scrub, agricultural fields, and eucalyptus groves in the Project area (Appendix A-4). The nearest occurrence in the CNDDB was recorded 4.3 miles north of the Project area near the Village Country Club (Section 7.0: Figure 5.1.1-9).
- **Coast horned lizard** (*Phrynosoma blainvillii*): approximately 2,630 acres of suitable habitat for this species was determined to be present within the grasslands, California sage scrub, and agricultural fields in the Project area. The nearest occurrence in the CNDDB was recorded approximately 7.5 miles north of the Project area in Burton Mesa.
- **Coast patch-nosed snake** (*Salvadora hexalepis virgultea*): suitable California sage scrub habitat with small mammal burrows required for this species are present at the site. The nearest occurrence in the CNDDB was recorded approximately 8.9 miles northeast of the Project area in Purisima Hills.
- **Two-striped garter snake** (*Thamnophis hammondii*): a limited amount of marginally suitable habitat is present within San Miguelito Creek. The nearest occurrence in the CNDDB was recorded 3.1 miles east of the Project area along Salsipuedes creek (Section 7.0: Figure 5.1.1-9).
- **Bell's sage sparrow** (*Artemisiospiza belli belli*): suitable California sage scrub habitat is present at the site, although it generally prefers chaparral in more upland areas. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Short-eared owl** (*Asio flammeus*): grasslands and agricultural fields suitable for this species are present at the Project site. One individual of this species was observed within 1 mile to the south of the Project site during aerial raptor surveys conducted in 2013 (Appendix A-18).
- **Long-eared owl** (*Asio otus*): riparian areas and adjacent oak woodlands suitable for this species are present at the Project site. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Townsend's big-eared bat** (*Corynorhinus townsendii*): suitable habitat is present throughout the Project area. The nearest occurrence in the CNDDB was recorded 0.13 mile north of the Project area in La Honda Canyon (Section 7.0: Figure 5.1.1-9).
- **Silver-haired bat** (*Lasionycteris noctivagans*): suitable habitat is present within riparian thickets and adjacent oak woodlands and eucalyptus groves within the Project area. The nearest occurrence in the CNDDB was recorded 0.29 mile east of the Project area in Miguelito County Park (Section 7.0: Figure 5.1.1-9).

- **Western small-footed myotis** (*Myotis ciliolabrum*): suitable habitat is present in woodlands and California sage scrub within the Project area. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **Fringed myotis** (*Myotis thysanodes*): suitable habitat is present in woodlands within the Project area. There are no occurrences of this species within the 9-quadrangle in the CNDDB.
- **San Diego desert woodrat** (*Neotoma lepida intermedia*): approximately 2,768 acres of suitable habitat was determined to be present within California sage scrub, grasslands, and woodlands in the Project area (Appendix A-4). The nearest occurrence in the CNDDB was recorded approximately 10 miles north of the Project area in the Lompoc oil fields.

Locally Important Species

Locally Important Plant Species

The literature review identified eight locally important species (beyond those that are afforded some level of protection or recognition by USFWS, CDFW, or CNPS) with the potential to occur at the Project site (Table 5.1.1.1-6, *Locally Important Plant Species with the Potential to Occur in the Project Area* and Appendix C-3, *Locally Important Species with the Potential to Occur in the Project Vicinity*).

TABLE 5.1.1-6
LOCALLY IMPORTANT PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species Name	Status	General Habitat	Habitat Assessment	Presence
island morning-glory *(Calystegia macrostegia* ssp. *macrostegia)*	LI	Coastal scrub, < 500 m	Habitat present; coastal scrub. Plant not observed as a result of multiple surveys. The nearest occurrence of this species has been recorded approximately 28.1 miles to the north of the Project area. Habitat exists along the transmission corridor.	HP
seaside alumroot *(Heuchera pilosissima)*	LI	Ocean bluffs, shaded slopes, < 500 m	Habitat present. Observed on old road linking Signorelli and Scolari benches in 2002/2005 surveys and again in 2017 surveys on northernmost Signorelli bench. Habitat exists along the transmission corridor.	O
Douglas iris *(Iris douglasiana)*	LI	Grassy coastal habitat, generally < 200 m	Habitat present; observed along San Miguelito Road in Middle Ridge flank during 2017 surveys. Habitat exists along the transmission corridor.	O
sickle-leaved rush *(Juncus falcatus* ssp. *falcatus)*	LI	Peatland, moist sandy coastal areas, < 100 m	Project site is outside of known elevation range. However, it was observed in 2002/2005 surveys on the Middle Corridor – South, South	O

TABLE 5.1.1-6
LOCALLY IMPORTANT PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Habitat Assessment	Presence
			Corridor – East, and possibly upper Signorelli Corridor. Habitat exists along the transmission corridor.	
canyon gooseberry *(Ribes menziesii)*	LI	Forest openings, chaparral, < 1820 m	Suitable habitat present in woodland and chaparral. Plant not positively observed as a result of multiple surveys. An occurrence of this species was recorded within the Project area in 1938.[62] Habitat exists along the transmission corridor.	HP
California globemallow *(Sidalcea malviflora* ssp. *californica)*	LI	Coastal scrub, chaparral, < 1,000 m	Habitat present. Observed during 2002/2005 surveys on the Middle Corridor and during 2017 surveys in grassland habitats on ridges throughout the Project area. Habitat exists along the transmission corridor.	O
Lompoc monkeyflower *(Mimulus aurantiacus* ssp. *lompocensis)*[63]	None (formerly LI)	Shrubland/chaparral; Lompoc Mesa and low hills.	Habitat present. Plant observed in coastal sage scrub habitats throughout Project site in 2002, 2005, and 2017. Habitat exists along the transmission corridor.	O
Hoffmann's nightshade *(Solanum xanti* var. *hoffmannii)*[64]	None (formerly LI)	Shrubland, oak/pine woodland, conifer forest, < 2700 m	Habitat present; plant observed in coastal sage scrub habitats throughout Project site during 2017 surveys. Habitat exists along the transmission corridor.	O

KEY:
A = absent; no habitat present and no further work needed.
CRPR = California Rare Plant Rank
HP = habitat present; habitat is, or may be present; the species may be present.
LI = Locally important, as specified by the Santa Barbara County Comprehensive Plan, the Santa Barbara Botanical Garden Central Coast Center for Plant Conservation, or by Olson and Rindlaub
O = Observed
m = meter

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

[62] Consortium of California Herbaria (record from the Santa Barbara Botanic Garden) recorded the species February 27, 1938 in the Santa Ynez Mountains: Honda Canyon, Dickerson Ranch, west of Lompoc by botanists H. Dearing and M. Dearing.

[63] Considered to be an intervarietal hybrid of a non-special status species, sticky monkeyflower (*Mimulus aurantiacus*).

[64] Considered to be a synonym of chaparral nightshade (*Solanum xanti*).

TABLE 5.1.1-6
LOCALLY IMPORTANT PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Habitat Assessment	Presence

Threat Ranks
0.1 - Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)
0.2 - Moderately threatened in California (20–80 percent occurrences threatened / moderate degree and immediacy of threat)
0.3 - Not very threatened in California (less than 20 percent of occurrences threatened / low degree and immediacy of threat or no current threats known).

**Sources are listed in Appendix C*

Of these, six locally important plants were observed during botanical surveys conducted between 2002 and 2017 (Appendix A-19):

- **Seaside alumroot** (*Heuchera pilosissima*): Found in two locations during the 2002 and 2005 surveys, one in a seep along a small stream between Scolari and Signorelli benches, and one in coastal scrub in the Sudden Peak area (Appendix A-1). It was again observed in 2017 on north Signorelli bench (Appendix A-19).
- **Douglas iris** (Iris douglasiana): In southern limit of its range, and is known from a site near Honda Canyon on VAFB with Bishop pines. It was observed along San Miguelito Road in Middle Ridge flank during 2017 surveys (Appendix A-19).
- **Sickle-leaved rush** (*Juncus falcatus* ssp. *falcatus*): A small population was found in the grassland/coastal scrub mosaic downslope of a small seep on Middle Ridge – South. This species may occur downslope of other seep areas in similar soils, such as upper Signorelli Ridge and Middle Ridge – West (Appendix A-1). The species was not observed in 2017.
- **California globemallow** (*Sidalcea malviflora* ssp. *californica*): It was recorded from south Middle Ridge - South, but no voucher was collected (Appendix A-1). Globemallows also were seen on South Ridge- Central and South Ridge – East during the 2009 Project surveys, and could be this entity.[65] It was observed during the 2017 surveys (Appendix A-19).
- **Lompoc monkeyflower** (*Mimulus aurantiacus* ssp. *lompocensis*): during previous surveys, this species was considered locally important; however, it is now considered to be an intervarietal hybrid of a non-special status species, sticky monkeyflower (*M. aurantiacus*).[66] It was observed during botanical surveys conducted at the Project site in 2002, 2005, and 2017 (Appendix A-1 and A-9).
- **Hoffmann's nightshade** (*Solanum xanti* var. *hoffmannii*[67]): during previous surveys, this species was considered locally important; however, it is now considered to be included in the non-special status species, chaparral nightshade (*S. xanti*). Chaparral nightshade was observed during 2017 botanical surveys in coastal sage scrub habitats (Appendix A-19).

[65] County of Santa Barbara, Department of Planning and Development. Certified February 2009. *Final Environmental Impact Report, Lompoc Wind Energy Project*. Prepared by: Aspen Environmental Group

[66] Baldwin, B.G., D.H. Goldman, D.K. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. *The Jepson Manual of Vascular Plants of California.* 2nd Edition. Berkeley, CA: University of California Press.

[67] Considered to be a synonym of chaparral nightshade (*Solanum xanti*).

Locally Important Plant Species Not Observed

Although none of these were observed during 2017 field surveys, suitable habitat was determined to be present for two locally important plant species, Canyon gooseberry (*Ribes menziesii*) and island morning-glory (*Calystegia macrostegia* ssp. *macrostegia*) (Table 5.1.1-6). Canyon gooseberry suitable habitat is present in woodland and chaparral habitats within the Project area and the transmission corridor. An occurrence of this species was recorded inside the Project area in 1938.[68] Suitable habitat for island-morning glory at the Project site and the transmission corridor consists of California sagebrush scrub.

In addition, surveyors noted the possible identification of two plants that could be the locally important seaside agoseris (*Agoseris apargioides*) on the Middle Ridge and South Ridge – East during the 2002 and 2005 botanical surveys (Appendix A-1). However, they noted that the identification was doubtful. Given that the elevation of the Project site exceeds the elevation range for this species (less than 100 meters), and this plant inhabits coastal dunes that are not present within the Project area, suitable habitat for this species was determined to not be present at the site. The nearest occurrence of this species in the CNDDB was recorded approximately 30.3 miles to the north of the Project area.

The remaining plant species identified in the database searches were determined to be absent from the Project area based on a lack of both suitable habitat and observations; these are described in further detail in Appendix C-3.

Locally Important Wildlife Species

Review of locally important species lists identified four bird species (Appendix C-3 and Table 5.1.1-7, *Locally Important Avian Species Observed in the Project Area*). The remaining wildlife species identified in the database searches were determined to be absent from the Project area based on a lack of both suitable habitat and observations; these are described in further detail in Appendix C-3.

[68] Consortium of California Herbaria (record from the Santa Barbara Botanic Garden) recorded the species February 27, 1938 in the Santa Ynez Mountains: Honda Canyon, Dickerson Ranch, west of Lompoc by botanists H. Dearing and M. Dearing.

TABLE 5.1.1-7
LOCALLY IMPORTANT AVIAN SPECIES
OBSERVED IN THE PROJECT AREA

Species Name	Status	General Habitat	Presence	Habitat Assessment
Swainson's thrush *(Catharus ustulatus)*	LI	In California, riparian woodland and thickets of willow or alder; and sometimes coastal scrub. Nesting occurs at elevations from sea level to 2,600 m or higher.	O	Suitable habitat is present within riparian woodland and coastal scrub within the Project area. Individuals of this species, including breeding pairs, were observed in the riparian and oak woodland along San Miguelito Road during avian surveys conducted in 2008. Habitat exists along the transmission corridor.
blue grosbeak *(Passerina caerulea)*[69]	LI	Partially open habitats including, riparian woodland, scrub, thickets, and agricultural lands. Nest in low trees or bushes typically 1 to 3 m above ground.	O	Suitable habitat is present in coastal sage scrub and grassland habitats within the Project area. Individuals of this species were observed breeding at the Project site in such habitats during surveys conducted in spring 2008 and 2017. Habitat exists along the transmission corridor.
common poor-will *(Phalaenoptilus nuttallii)*	LI	Scrub and brush, grasslands, desert, rocky canyons, open woodland and broken forest in dry habitats. Nest in open on bare areas.	O	Suitable habitat is present along roadsides, coastal sage scrub, and grasslands within the Project area. This species was observed along paved roads during avian surveys conducted in 2008, 2016, and 2017. Habitat exists along the transmission corridor.
rock wren *(Salpinctes obsoletus)*	LI	Bare rock, talus, or scree, cliff, desert, shrubland, and chaparral.	O	Suitable habitat is present in coastal sage scrub and rocky areas within the Project area. This species was observed in such habitat during avian surveys conducted in 2002, 2005, 2008, and 2016. Habitat exists along the transmission corridor.

NOTE: California Special Animal (CSA) is a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. The Department of Fish and Wildlife considers the taxa on this list to be those of greatest conservation need. For those species with statuses identified by USFWS and/or CDFW, the status is noted. Those species included on the list due to identification by other governmental agencies and/or non-governmental conservation organizations are listed as CSA.

KEY:
A = absent; no habitat present and no further work needed.
BCC = U.S. Fish and Wildlife Service Bird of Conservation Concern
CSA = California Special Animal
FP = Fully protected animal in California per Section 5050 of the California Fish and Game Code
HP = Habitat present; habitat is, or may be present; the species may be present.
LI = Locally rare or locally threatened or called out by Santa Barbara
O = Observed

[69] Formerly *Guiiraca caerulea*.

TABLE 5.1.1-7
LOCALLY IMPORTANT AVIAN SPECIES
OBSERVED IN THE PROJECT AREA, *Continued*

Species Name	Status	General Habitat	Presence	Habitat Assessment

m = meter
SSC = CDFW Species of Special Concern
WL = CDFW Watch List

**Sources are listed in Appendix C*

The following four locally important bird species were observed within the Project area during avian surveys (Table 5.1.1-7):

- **Swainson's thrush** (*Catharus ustulatus*): suitable habitat is present within riparian woodland and coastal scrub within the Project area. Individuals of this species, including breeding pairs, were observed in the riparian and oak woodland along San Miguelito Road during avian surveys conducted in 2008. This species would generally be present April to September using California sagebrush scrub and Arroyo Willow Thickets and its primary flight activity would be expected to occur below the canopy height.
- **Blue grosbeak** (*Passerina caerulea*): suitable habitat is present in coastal sage scrub and grassland habitats within the Project area. Individuals of this species were observed breeding at the Project site in such habitats during surveys conducted in spring 2008 and 2017. This species would generally be present April to August using California sagebrush scrub and grasslands. Its primary flying activity would be expected to occur below the canopy height.
- **Common poor-will** (*Phalaenoptilus nuttallii*): suitable habitat is present along roadsides, coastal sage scrub, and grasslands within the Project area. This species was observed along paved roads during avian surveys conducted in 2008, 2016, and 2017. This species would generally be present year-round using California sagebrush scrub and grasslands. Its primary flying activity would be expected to occur below the canopy height.
- **Rock wren** (*Salpinctes obsoletus*): suitable habitat is present in coastal sage scrub and rocky areas within the Project area. This species was observed in such habitat during avian surveys conducted in 2002, 2005, 2008, and 2016.This species would generally be present year-round using California sagebrush scrub and its primary flying activity would be expected to occur at the ground surface.

5.1.2 Plant Communities

CDFW assigns a state rarity ranking of S1, S2, S3, S4, S5, or S6 to natural communities, with S1 being the rarest and of most concern and S6 being common and of least concern. CDFW considers natural communities ranked S1, S2, and S3 as being of special concern. Communities ranked as S4, S5, or S6 are not included as habitats of special concern. Additional natural communities are described as Ecological Communities of Greatest Interest (or locally important) based on the Conservation Element of the Santa Barbara County Comprehensive Plan.[70] In addition, the Santa Barbara County Conservation Element Oak Tree Protection Plan emphasizes the protection of native oak woodlands such as the Coast Live Oak Woodland present at the project site.[71] Finally,

[70] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 1979; amended August 2010. Conservation Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf

[71] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 2003; republished

the CNDDB maps aquatic communities with the potential to serve as habitat for sensitive aquatic species.

A total of seven plant communities were mapped at the Project site, with three additional communities in the proposed transmission line corridor. Of these, three are considered State sensitive, and one is considered riparian. In addition to natural communities, two other land cover types were mapped: agricultural fields and developed areas.

Literature Search

The CNDDB search revealed 10 special status plant communities and aquatic habitats with historical occurrences within the 9-quadrangle search radius around the Project site (Section 7.0: Figure 5.1.2-1, *CNDDB Records of Terrestrial and Aquatic Communities in the Project Vicinity* and Appendix C-4*, Special Status Plant Communities and Habitats with the Potential to Occur in the Project Vicinity*): Central Coast Arroyo Willow Riparian Forest, Central Dune Scrub, Central Foredunes, Central Maritime Chaparral, Northern Coastal Salt Marsh, Southern California Coastal Lagoon, Southern California Steelhead Stream, Southern Cottonwood Willow Riparian Forest, Southern Vernal Pool, and Southern Willow Scrub. As noted in Section 4.0, *Methods*, the plant communities in the CNDDB are classified using the Holland system; for the purposes of this report, their corresponding MCV II names and updated sensitivity rankings are used (Appendix C-4, *Special Status Plant Communities and Habitats with the Potential to Occur in the Project Vicinity*).

Plant Community Mapping

Based on the results of plant community mapping in 2008 (Appendix A-6), and on refinements made during the botanical, avian, bat, tree surveys conducted in between 2016 and 2018, a total of seven natural and semi-natural vegetation communities were mapped within the Project area using the MCV II classification system[72] (Table 5.1.2-1, *Plant Communities Observed at the Project Site and Transmission Line Corridor Study Area* and Section 7.0: Figure 5.1.2-2, *Plant Communities*). Of these, three are considered State sensitive: tanoak forest, purple needle grass grassland, and sawtooth golden bush scrub. Although arroyo willow thickets are not considered sensitive, their presence indicates riparian habitat that may be subject to the jurisdiction of CDFW under Section 1600 of the State Fish and Game Code. Three additional communities were mapped as overlapping with the proposed transmission line corridor, none of which are considered sensitive.

May 2009. *Oak Tree Protection in the Inland Rural Areas of Santa Barbara County*. Supplement to the Mapped Areas and Communities Section. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/ConservationOakSupp.pdf

[72] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation*, 2nd Edition. California Native Plant Society, Sacramento, CA.

TABLE 5.1.2-1
PLANT COMMUNITIES OBSERVED AT THE PROJECT SITE AND TRANSMISSION LINE CORRIDOR STUDY AREA

Name (MCV II)	Former Name (2008)	Status	Total Area on Wind Farm Area (acres)	Total Area in Transmission Line Corridor Study Area (acres)
Arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance)	Central Coast Arroyo Willow Riparian Forest	S4, G4, riparian	87.18	2.92
Tanoak forest (*Notholithocarpus densiflorus* Forest Alliance)	Tanoak Forest	S3.2, G4, LI	47.52	0.00
Purple needle grass grassland (*Stipa pulchra* Herbaceous Alliance)	Valley Needlegrass Grassland	S3?, G4, LI	5.07	0.00
Coast live oak woodland (*Quercus agrifolia* Woodland Alliance)	Coast Live Oak Woodland	S4, G5, LI	172.79	14.20
California sagebrush scrub (*Artemisia californica* Shrubland Alliance)	Central Coastal Scrub	S5, G5	860.68	42.23
Mixed disturbed grassland communities: Sawtooth golden bush scrub (*Hazardia squarrosa* Shrubland Alliance), California Annual and Perennial Grassland Macrogroup, and milk thistle stands (undescribed in MCV II)	Non-native Grassland	Various*	1,633.14	5.58
Eucalyptus groves (*Eucalyptus* spp. Woodland Semi-Natural Alliance)	Eucalyptus Groves	NR	24.40	0.10
Poison hemlock or fennel patches (*Conium maculatum - Foeniculum vulgare* Herbaceous Semi-Natural Alliance)	N/A	NR	0.00	2.18
Coyote brush scrub (*Baccharis pilularis* Shrubland Alliance)	N/A	S5, G5	0.00	13.21
Upland mustards (*Brassica nigra* and other mustards Herbaceous Semi-Natural Alliance)	N/A	NR	0.00	3.25
Agricultural fields	Agricultural Fields	N/A	114.32	2.50
Developed	N/A	N/A	26.62	3.59
TOTAL			**2,971.72**	**89.76**

*__Note__: Sawtooth golden bush scrub is the only ranked natural community in this group, with a ranking of S3, G3.

CDFW Global and State ranks:
S1, G1: fewer than 6 viable occurrences; S2, G2: 6–20 viable occurrences worldwide/statewide; S3, G3: 21–100 viable occurrences worldwide/statewide; S4, G4: greater than 100 viable occurrences worldwide/statewide; S5, G5: demonstrably secure because of its worldwide/statewide abundance; LI: Locally important in Santa Barbara County; NR: not ranked.

Additional threat ranks: 0.1: very threatened; 0.2 threatened; 0.3 no current threat known.

State Sensitive and Riparian Communities

Two State sensitive plant communities, tanoak forest and purple needle grass grassland, and one riparian community, arroyo willow thickets, were mapped within the Project area. In addition, sawtooth golden bush scrub areas were observed during 2016–2018 field surveys, but their precise area was not mapped; these areas are included in the mixed disturbed grassland communities designation consisting of sawtooth golden bush scrub, the California Annual and Perennial Grassland Macrogroup, and milk thistle stands (discussed below).

*Tanoak Forest (*Notholithocarpus densiflorus *Forest Alliance*)

Tanoak forest (*Notholithocarpus densiflorus* Forest Alliance) is ranked as S3.2 by CDFW, and is considered an ecological community of greatest interest by Santa Barbara County as a mixed evergreen forest (Appendix C-4). In the Project area, 47.5 acres (1.55 percent of the Project area) were mapped as tanoak forest of the *Notholithocarpus densiflorus - Vaccinium ovatum* Association. This community is dominated by tanoak (*Notholithocarpus densiflorus* var. *densiflorus*) in the tree canopy and California huckleberry (*Vaccinium ovatum*) in the understory, and is uncommon in Santa Barbara County. Tanoak forest is more common north of the County, along the coastal ranges and Sierra Nevada foothills in California.

At the site, tanoak, also known as tanbark oak, was most commonly seen on the tops and northeasterly slopes of ridges surrounding the project site (lee slopes). As a cool temperate forest, the higher elevations of the project site offer additional year round moisture by way of the dynamic coastal movement of cloud and/or fog cover. Coast live oak trees were observed interspersed and co-dominant among the tree canopy where tanoak forest and coast live oak woodland converged, near the eastern project boundary northeast of Sudden Peak. California huckleberry was observed in the understory along with chaparral shrubs such as toyon (*Heteromeles arbutifolia*), and coastal scrub herbaceous plants such as California hedge nettle (*Stachys bullata*), yerba buena (*Clinopodium douglasii*), bedstraw (*Gallium* sp.), and poison oak (*Toxicodendron diversilobum*). Tanoak trees grow in hilltops, slope drainages, along San Miguelito Road, and at lower elevations where conditions are favorable. Lichens and bryophytes are readily more present in this forest type than in coast live oak forest due to the relatively greater moisture retention and more frequent cloud and fog cover.

*Purple needle grass grassland (*Stipa pulchra *Herbaceous Alliance)*

Purple needle grass grassland (*Stipa pulchra*[73] Herbaceous Alliance) is ranked as S3 (with further study needed) by CDFW, and is considered an ecological community of greatest interest by Santa Barbara County as a native grassland (Appendix C-4). This community also corresponds to Valley Needlegrass Grassland in the CNDDB (Appendix C-4). There are 5.1 acres (0.17 percent of the Project area) mapped as purple needle grass grassland at the Project site. Patches of native grassland on the southwestern portion of the project area were found primarily on north-facing hillsides in the 2008 mapping effort (Appendix A-6). Aside from purple needle grass, California barley (*Hordeum brachyantherum* ssp. *californicum*), and native and non-native herbaceous species occur in this community.[74] Other species of native grasses, including little California melica

[73] Formerly *Nassella pulchra*.

[74] Holland, Robert F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game, Non-Game Heritage Program. Sacramento, CA.

(*Melica imperfecta*), beardless wild rye (*Elymus triticoides*), and foothill needle grass (*Stipa lepida*) were observed in this grassland as well.

Native grasses, particularly the purple needle grass, may be more widely distributed within the project site. Native grasses can be difficult to see outside of the blooming period and/or depending on grazing activity. Native perennial grasses such as purple needle grass were observed dense in several areas, in 2008, both on clay and sandy soils. The botanical surveys in 2017 documented 197 plant species (132 native and 65 non-native species) within the survey area (Appendix A-19). Approximately 65 percent, or 129, of these species occur in grasslands. With the project lying mostly on rangeland and/or grassland vegetation, it is possible that purple needle grass grassland (composed of both grasses and herbaceous species) comprises more of the landscape than the current map indicates. Grazing activity may influence grassland composition from year to year, especially annual plants, and those observed in 2008 may have changed in coverage. Changes in grazing, or lack thereof, and non-native vegetation establishment since may have changed this and other grassland communities at the site since 2008 (see Other Communities below).

*Sawtooth Golden Bush Scrub (*Hazardia squarrosa *Shrubland Alliance)*

Sawtooth golden bush scrub is (*Hazardia squarrosa* Shrubland Alliance) is ranked as S3 by CDFW. This community is characterized by sawtooth golden bush (*Hazardia squarrosa*) being dominant or co-dominant in the shrub canopy with species such as California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), and sticky monkeyflower (*Mimulus aurantiacus*). The shrubs are less than 2 meters in height, with an open to intermittent, two-tiered canopy on gentle, northeast facing slopes.[75] Substantial areas of the mixed disturbed grassland communities mapped at the Project site were observed to match these characteristics during the spring 2017 botanical surveys; however, the precise area of these was not mapped at that time. Areas of sawtooth golden bush scrub were grouped with communities classified as grassland due to the low visual profile of sawtooth golden bush, especially in aerial imagery, and the dominance of non-native grasses such as bromes (*Bromus* spp.) and wild oat (*Avena* sp.). Furthermore, this alliance is known to be transitional from heavily disturbed annual or perennial grasslands, such as the ones that characterize much of the Project area, to shrublands such as the California sagebrush scrub.[76] It is likely that areas of the site used less heavily for grazing since the 2008 mapping effort have been colonized by sawtooth golden bush. Further plant community mapping efforts are needed to quantify the acreage of this vegetation type. Other vegetation communities in the mixed disturbed grasslands are described below (see Other Communities).

[75] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation*, 2nd Edition. California Native Plant Society, Sacramento, CA.

[76] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation*, 2nd Edition. California Native Plant Society, Sacramento, CA.

*Arroyo Willow Thickets (*Salix lasiolepis *Shrubland Alliance)*

There are 90.1 acres (2.94 percent of the Project area) that were mapped as arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance) of the *Salix lasiolepis* Association. This community occurs in drainages, with any open terrain dominated by arroyo willow, and thus its presence indicates riparian habitat. In addition, this community corresponds to Southern Willow Scrub and Central Coast Arroyo Willow Riparian Forest in the CNDDB (Appendix C-4). Well-developed willow thickets were more common in bottomlands, and followed Cañada Honda Creek west along Miguelito Canyon Road. Arroyo willow thickets also follow unnamed tributaries to Cañada Honda Creek that originate upland near the southwest ridge and the southern boundary. Thickets grow near the western boundary with VAFB, along San Miguelito Road and occasionally near seeps. Other characteristic species in the arroyo willow thickets include poison oak, hoary nettle (*Urtica dioica* ssp. *holosericea*), California blackberry (*Rubus ursinus*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and sometimes red willow (*Salix laevigata*). Ruderal species such as milk thistle (*Silybum marianum*) were common along the banks. Common rush (*Juncus patens*) was found among willow shrubs in some areas along creeks such as the small drainages that flow in the vicinity of Sudden Peak Road and San Miguelito Road intersection.

Santa Barbara County Protected Communities

*Coast Live Oak Woodland (*Quercus agrifolia *Woodland Alliance)*

Coast live oak woodland (*Quercus agrifolia* Woodland Alliance), dominated by coast live oak trees, is considered an ecological community of greatest interest by Santa Barbara County. There are 187 acres (6.11 percent of the Project area) mapped as coast live oak woodland. Coast live oak woodland, a warm temperate forest, is common at the lower elevations in Miguelito Canyon and towards the east end of the Project site. Northeast of Sudden Peak, at the eastern end of the project site, coast live oak woodland covers much of the hillsides below the tanoak forest and the hilltops. The moist character of the foggy hilltops enables the distribution of coast live oak on the lower elevations and south-facing slopes, while tanoak lies on the hilltops and north-facing exposures. Both trees co-dominate in the tree canopy where coast live oak woodland and tanoak forest transition into each other. Shrubs from the surrounding California sage scrub community are present in or near the understory. In addition, coast live oak woodland areas cover hills and slopes along San Miguelito Road.

Other Communities

Three other natural or semi-natural communities were mapped on the Project site that do not have a special status designation (Section 7.0: Figure 5.1.2-2 and Table 5.1.2-1).[77] In addition, three natural or semi-natural communities were identified as occurring within the proposed transmission line corridor, outside of the main Project area (Section 7.0: Figure 5.1.2-2).

[77] An additional vegetation type, Bishop Pine, was also mapped in 2008, but during the 2017 botanical surveys (and in this report) the mapped area was determined to be an extension of a eucalyptus stand near the western boundary of the project site, outside of the project impact area and therefore excluded as a plant community in this report.

*California Sagebrush Scrub (*Artemisia californica *Shrubland Alliance)*

There are 902.9 acres (29.49 percent of the Project area) mapped as California sagebrush scrub (*Artemisia californica* Shrubland Alliance).[78] Large areas of California sagebrush scrub are most commonly found on steep slopes in the project area. Scrub vegetation often surrounded rock outcrops, large rocks, and grew among boulder piles, and other places where access was difficult for cattle and wildlife such as deer. Grazing likely limits the extent of scrub vegetation in many areas of gentler terrain. California sagebrush scrub is composed of both summer deciduous and evergreen shrubs. Dominant species in most areas included California sagebrush (*Artemisia californica*), coyote brush, poison oak, and coffeeberry. Higher diversity of plants was observed on north-facing slopes at higher elevations, where wild strawberry (*Fragaria vesca*), western bracken fern (*Pteridium aquilium* ssp. *pubescens*), bedstraws (*Galium* spp.), and sticky monkeyflower were established among more widely distributed species. Wedge-leaved horkelia, lotus (*Acmispon* spp.), sanicle (*Sanicula* sp.), wild hyacinth (*Dichelostemma capitatum*), bee plant (*Scrophularia californica*), Indian paintbrush (*Castilleja affinis*), everlasting and cudweeds (*Pseudognaphalium* spp.) were often found in openings.

Mixed Disturbed Grassland Communities

Mixed disturbed grassland communities comprise 1638.7 acres (53.53 percent) of the Project area, and consist of several vegetation classifications under the MCV II system. These types were initially mapped as one unit under a generic grassland group due to the long history of use of the site for agriculture and ranching, and the subsequent prevalence of non-native grass and other herbaceous species visually dominating the landscape. During the 2016–2018 field surveys, the primary vegetation types observed within the mixed disturbed grasslands were sawtooth golden bush scrub (described above), the California Annual and Perennial Grassland Macrogroup, and milk thistle stands (undescribed in the MCV II). It is highly likely that precise plant community mapping efforts would yield a greater number of more specific plant communities.

In this broad category of vegetation types across the Project site, species composition shifts with soil types (dark clays vs. lighter sandy loams) and slope exposure, but may also respond to grazing intensity, and other factors related to land use history. As described above, the botanical surveys in 2017 documented 129 of 197 total species, or 65 percent of species diversity (native and non-native), within the survey area occurring in grassland communities. Dominant non-native annual species consist of wild oats, introduced bromes, foxtail barley (*Hordeum murinum*), ryegrass (*Lolium sp*.), milk thistle, bur clover (*Medicago polymorpha*), big heron bill (*Erodium botrys*), and Crete weed (*Hedypnois rhagadioloides*).[79] These species are common throughout the grasslands, and especially grazed sites.

Annual and perennial ruderal species occur along roadsides, cattle trails, agricultural fields, along fences, water sources, and areas where livestock gather. Many of these plant species produce copious amounts of seed. Ruderal species may replace grassland species in the understory of trees or shrubs where cattle can frequently gather and compact the soil. Knotweed (*Polygonum aviculare*

[78] For the purposes of this BRTR, areas described in previous technical reports as a "mosaic" of "non-native grassland" and "Central Coast scrub" have been updated to be classified as either a grassland community or California sagebrush scrub, per the MCV II. The term "mosaic" was likely used to describe the transitions between the two vegetation types or represented disturbed scrub with openings in the shrub cover that were taken over by grassland species.

[79] Holland, V.L. and David J. Keil. 1995. *California Vegetation*. Iowa: Kendall/Hunt Publishing Company. 516 pp.

ssp. *depressum*) is an example of a species commonly found on very compacted soils. Dense stands of ruderal species such as black mustard (*Brassica nigra*) and milk thistle were found on some knolls and ridge tops, especially the western portion of the Proposed Project site. Under MCV II, there black mustard stands can be classified under *Brassica (nigra) and other mustards Semi-natural Stands* (described below in the transmission line corridor), but there is no corresponding classification for milk thistle. Italian thistle (*Carduus pycnocephalus*), bull thistle (*Cirsium vulgare*), and tocalote (*Centaurea melitensis*) were also observed, but dense stands of these were less frequent. Poison hemlock and fennel (*Foeniculum vulgare*) frequently colonized disturbed margins near riparian areas or moist depressions.

Areas with less grazing pressure had more native diversity, such as east Scolari Ridge, Scolari Bench, Signorelli Bench, Middle Ridge, and south-facing slopes of North Ridge Central, South Ridge East, and Sudden Ridge West. Common native species in these areas included dwarf coastweed (*Amblyopappus pusillus*), wedge leaved horkelia (*Horkelia cuneata*), silver puffs (*Uropappus lindleyi*), tidy tips (*Layia platyglossa*), goldfields (*Lasthenia californica* ssp. *californica*), owl's clover (*Castilleja exserta* ssp. *exserta*), mountain dandelion (*Agoseris spp.*), lupines (*Lupinus* spp.), lotus (*Acmispon* sp.), clovers (*Trifolium* sp.), and Gaviota tarplant. Native grasses, particularly needle grasses (*Stipa* spp.) and beardless wild rye often were associated with concentrations of native herbs. The annual Crete weed was abundant in most grassland areas, particularly on clay soil.

Eucalyptus Groves (Eucalyptus *spp. Woodland Semi-Natural Alliance)*

Eucalyptus groves (*Eucalyptus* spp. Woodland Semi-Natural Alliance) of the *Eucalyptus (globulus, camaldulensis* Association[80] comprised of 24.5 acres (0.8 percent) of the Project area. These are the results of introduced blue gum (*Eucalyptus globulus*) trees being planted around most of the residences in the Project area. The largest grove of eucalyptus trees is near the VAFB boundary, south of San Miguelito Road, and south and west of the Scolari farmstead buildings. These trees are found downslope of the willow-dominated seep area near the east end of Scolari Ridge. The trees are clustered with an interwoven canopy and small openings. Other stands of eucalyptus trees exist west and adjacent to Middle Ridge South, and in windrows along San Miguelito Road. All the eucalyptus trees likely originated from the same planting period as they are generally of the same height.

[80] The full name of this alliance in the MCV II is Eucalyptus - tree of heaven - black locust groves (*Eucalyptus* spp. - *Ailanthus altissima* - *Robinia pseudoacacia* Woodland Semi-Natural Alliance), but was shortened to eucalyptus groves for the purposes of this BRTR due to the absence of the other two tree species.

*Poison hemlock or fennel patches (*Conium maculatum - Foeniculum vulgare *Herbaceous Semi-Natural Alliance)*

Poison hemlock or fennel patches are dominated or co-dominated by non-native members of the Apiaceae family. The community comprises 2.2 acres within the proposed transmission line corridor along San Miguelito Road. This community of annual to perennial herbs occurs in moist areas, bottomlands, and upland areas.

*Coyote brush scrub (*Baccharis pilularis *Shrubland Alliance)*

Coyote brush scrub is dominated by coyote brush, a prostrate to erect shrub. This community occurs on open slopes and ridges on various soil types. It can be found along the northernmost extent of the transmission corridor as it traverses the mine property. This vegetation cover comprises 13.2 acres of the proposed transmission line corridor.

*Upland mustards (*Brassica nigra *and other mustards Herbaceous Semi-Natural Alliance)*

Upland mustards can be dominated or co-dominated by non-native black mustard, field mustard (*Brassica rapa)*, short pod mustard (*Hirschfeldia incana*), or wild radish (*Raphanus sativus)*. Upland mustards occur in fields, grasslands, roadsides, and disturbed coastal scrub. These stands of upland mustards occur along the northernmost extent of the transmission corridor as it makes its way to the City of Lompoc. It is also likely that this community may exist within the mixed disturbed grasslands at the Project site. A total of 3.3 acres of upland mustards occur along the transmission corridor.

Other Land Cover Types

Two other land cover types besides natural communities were mapped at the Project site: agricultural fields and developed areas.

Agricultural Fields

There are 116.8 acres (3.82 percent of the Project area) that are currently in use as agricultural fields. There are four large cultivation areas located on the western portion of the proposed project site. Two narrow areas are established along riparian areas: one at the bottom of Honda Canyon adjacent to San Miguelito Road, and one along the bottom of the unnamed drainage southwest of Honda Canyon between Scolari Ridge and the West Ridge. A third large narrow field was established upland along the North Ridge Central. The fourth area is composed of a series of irregular fields just west of the Middle Ridge. The crops under cultivation have been forage crops such as red fescue (*Festuca rubra*). Agricultural fields usually are surrounded by ruderal species when in use. When fields are not in use for cultivation, ruderal species tend to grow instead.

Developed

A total of 30.2 acres (1 percent) of the Project site was classified as developed. This consisted of the areas around residential and business structures, parking lots, pre-existing roads, staging areas, and other concrete or man-made gravel substrates.

5.1.3 Wetlands and Other Waters of the United States

The majority of blueline features within the Project area are associated tributaries of Cañada Honda Creek, an intermittent stream that exits at the Pacific Ocean (Section 7.0: Figure 5.1.3-1, *National Wetland Inventory and USGS Blueline Drainages in the Project Area*). Other features within the Proposed Project site include San Miguelito Creek and Espada Creek and their respective tributaries.

Blueline Drainages

There are 11.6 miles of USGS blueline drainages within the Proposed Project area and transmission line corridor (Section 7.0: Figure 5.1.3-1). Ephemeral drainages and tributaries to Cañada Honda Creek, a southeast-northwest trending feature have been the subject of delineations. In 2008, four out of five tributaries delineated had the characteristics of wetland and riparian habitat pursuant to the *County of Santa Barbara Environmental Thresholds and Guidelines Manual* (Appendix A-7). The same four crossings were also found to be subject to USACE jurisdiction, and two had riparian vegetation subject to CDFW jurisdiction. They had a defined bed and bank and the presence of water at some time during the growing season. Riparian scrub was present, and no hydric soils were observed. These crossings generally supported degraded willow-dominated riparian scrub. Evidence of cattle was present throughout the Proposed Project area including eroded creek banks, paths, and reduced riparian cover (Appendix A-7).

Identified blueline drainages were non-navigable creeks and washes that start and end in Santa Barbara County and do not cross state lines (i.e., no interstate connection). Although most the blueline features are associated with Cañada Honda Creek, which connects to the Pacific Ocean, the drainages that cross the Project property are non-navigable and isolated, in which do not connect to any navigable waterway. As a result of the 2008 field investigations, it was determined that no other activity that may be considered interstate commerce—including recreational use, industrial use, or fishing or harvest of shellfish for sale—occurs within the property or on any of the drainages or dry washes upstream or downstream of the property (Appendix A-7).

Federal Wetlands

The NWI shows 42.3 acres of wetlands located in the Project area, and 1.1 acres in the proposed transmission line corridor (Section 7.0: Figure 5.1.3-1; Table 5.1.3-1*, Federal Wetlands in the Project Site and Transmission Line Corridor Study Area*).

TABLE 5.1.3-1
FEDERAL WETLANDS IN THE PROJECT SITE AND TRANSMISSION LINE CORRIDOR STUDY AREA

Name	Total Area on Wind Farm Area	Area in Transmission Line Corridor Study Area
Freshwater Emergent/Wetland	0.7	0.1
Freshwater Forested/Shrub Wetland	30.8	0.5
Freshwater pond	0.0	0.3
Riverine	10.8	0.2
Total	**42.3**	**1.1**

SOURCE: National Wetlands Inventory

In 2008, Sapphos Environmental, Inc. reviewed and delineated three areas that had the potential to be affected by the Proposed Project for development (Appendix A-11). These likely jurisdictional areas are located in the vicinity of the intersection of San Miguelito and Sudden Roads. However, because these areas do not correspond to the current Project and were delineated over three years ago, further delineations would be required.

The first area, located directly southeast of Sudden Road, was characterized by a large swale (seasonal wetland) dominated by brownheaded rush (*Juncus phaeocephalus*) and disturbed by cattle grazing. The feature described as occurring on a tributary of San Miguelito Creek (tributary to Santa Ynez River), which is an intermittent stream. Scattered individuals of common rush and California buttercup were identified within the swale. Because the feature was dominated by hydrophytic plants, exhibited hydric soils, and was associated with a tributary to a True Navigable Water, it was determined to be within USACE jurisdiction (Appendix A-11). The feature conformed to the definition of a wetlands and riparian habitat pursuant to the CDFW code and Santa Barbara County guidelines.

The second and southeast feature, continued northeast via a culvert, and runs parallel to San Miguelito Road. The feature started as a large shallow basin that narrowed significantly downstream (to the northeast) where it formed an incised, but heavily degraded, channel. The feature occurred in the grassland plant community, dominated by a perennial juncus, brass buttons, California buttercup, and non-native grasses. Because the feature supports hydrophytic plants, hydric soils, and indicators of hydrology sufficient to support a wetland community, this feature was determined to be a wetland subject to USACE jurisdiction under Section 404 (Appendix A-11). The feature also conforms to the definition of a wetlands and riparian habitat pursuant to the CDFW and Santa Barbara County guidelines.

The final feature, southwest of the intersection of Sudden and San Miguelito Roads, was characterized by a narrow, shallow channel exhibiting an eroded bank caused by a trail used as a cattle crossing. Soils consisted of gleyed hydric soils that formed streaks within the sandy loam. The stream gradually widened downstream. The area occurred in non-native grassland and was flanked by riparian vegetation dominated by arroyo willow, blackberry, poison oak, and common rush. Wetlands species included plantain and lily. Several coyote brush and non-native grasses were observed in upland areas. Due to the presence of hydrophytic vegetation, gleyed soils, and wetland hydrology, this feature was subject to USACE jurisdiction under Section 404 (Appendix A-11). The feature also conformed to the definition of a wetlands and riparian habitat pursuant to the CDFW and Santa Barbara County Environmental Thresholds and Guidelines Manual.

Freshwater Seeps, Springs, and Ponds

A number of seeps and springs are scattered through the Project area, particularly at high elevations in Middle and South corridors (Appendix A-1). Because of the steep terrain these areas exhibit seasonally saturated soils but generally lack surface water. A small pond is also located on the western slope of the northern part of Middle Corridor.

5.1.4 Migratory Corridors and Nursery Sites

Birds migrate within a wide range of altitudes, from 10 to 10,000 feet, and the height of migratory flights can be extremely variable. Some species such as the common loon fly only a few feet over water, but fly 3,000 to 5,000 feet over land.[81] Furthermore, weather conditions have been shown in many radar studies to influence migration passage rates and flight altitudes of nocturnal birds.[82] Wind is a key factor in migratory flight altitudes. Birds typically fly at heights at which headwinds are minimized and tailwinds are maximized.[83] In pre-construction surveys at a Chautauqua Study Area, New York, it was observed that flight altitudes were significantly lower during foggy daytime periods than during periods with no fog; in contrast, at night, birds flew significantly higher during foggy periods.[84] The migratory patterns of passerines, waterfowl, and shorebirds vary.

The majority of passerines' flight occurs in the first 2,000 feet above the ground surface. A radar study conducted in the eastern United States demonstrated that more than 75 percent of passerines in their study migrated at altitudes between the ground and 2,000 feet.[85] A survey conducted in the Appalachian Mountains found that during nights of heavy southward migration over the Appalachian ridgelines, there were an exceptional number of birds flying less than 100 feet from the ground surface.[86]

The migratory flights of ducks and other waterfowl over water are typically within 100 to 200 feet of the ocean. In studies along the Atlantic Coast, 90 percent of thousands of scoters, mergansers, black ducks, loons, gannets and other birds flew at less than 90 feet above the ocean.[87] Another study observed common loons and some ducks regularly migrating overland at 3,000 to more than 5,000 feet above ground level.[88] A radar study conducted in Scandinavia found that migrating eiders and oldsquaws flew at less than 300 feet above the ocean, but when crossing the Scandinavian Peninsula they flew at altitudes between 2,000 and 6,000 feet.

A visual study of overland migration of shorebirds in eastern Alaska found that approximately 80 percent of shorebirds within the study area flew within 100 feet of the ground surface.[89] However, a few long-distance shorebirds such as red knots and semi-palmated plovers were observed to migrate at very high altitudes, from 5,000 to even 12,000 feet above the ground surface. These are some of the highest flights known for migrants.[90]

---

81 California Department of Fish and Wildlife, California Interagency Wildlife Task Group, Granholm, S., D. Raveling, R. Duke, and D. Airola. 2017. California Wildlife Habitat Relationships System Life History Account for Common Loon. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1545&inline=1

82 Kerlinger, P. 1995. *How Birds Migrate*. Mechanicsburg, PA: Stackpole Books.

83 Cooper et al. 27 April 2004. A Visual and Radar Study of 2003 Spring Bird Migration at the Proposed Chautauqua Wind Energy Facility, New York. Prepared by: ABR, Inc. Prepared for: Chautauqua Windpower, LLC.

84 Cooper et al. 27 April 2004. A Visual and Radar Study of 2003 Spring Bird Migration at the Proposed Chautauqua Wind Energy Facility, New York. Prepared by: ABR, Inc. Prepared for: Chautauqua Windpower, LLC.

85 Able, Kenneth P. 1970. "A Radar Study of the Altitude of Nocturnal Passerine Migration." *Bird Banding*. Vol. 41, pp. 282-290.

86 Williams, Timothy C. 2001. "Bird Migration through a Mountain Pass Studies with High Resolution Radar, Ceilometers, and Census." *The Auk*. Vol. 118, pp. 389-403.

87 Kerlinger, P. 1995. *How Birds Migrate*. Mechanicsburg, PA: Stackpole Books.

88 Kerlinger, P. 1995. *How Birds Migrate*. Mechanicsburg, PA: Stackpole Books.

89 Kerlinger, P. 1995. *How Birds Migrate*. Mechanicsburg, PA: Stackpole Books.

90 Kerlinger, P. 1995. *How Birds Migrate*. Mechanicsburg, PA: Stackpole Books.

Regionally Connected Habitat

The Project area is located within or adjacent to three distinct migratory corridors recognized by resource agencies and organizations. Moderately important natural areas within the Project area may serve as wildlife movement corridors and breeding sites for native species.

California Habitat Connectivity Project

The California Habitat Connectivity Project, a collaboration of 60 federal, State, local, tribal, and non-governmental organizations identified large remaining blocks of intact habitat or natural landscape and model linkages between them that need to be maintained, particularly as corridors of wildlife.[91] Approximately 2,251.02 acres within the Project area are located within the Santa Ynez Mountains West Natural Landscape Block designation (78,580 total acres).

Approximately 221.46 acres on the eastern border of the Project area are located within the Santa Ynez Mountains West – Casmalia Hills Essential Connectivity Area (79,321 total acres) designation, along with several Potential Riparian Connections pass through the site (Section 7.0: Figure 5.1.4-1, *Potential Connected Habitat Areas in the Local Vicinity*).[92] These areas represent coarse-scale natural areas that have the potential to serve as migratory corridors for terrestrial and aquatic wildlife species in the region. In particular, the Santa Ynez Mountains West connectivity areas link the Santa Ynez Mountains, the Santa Maria Valley, the Santa Ynez Valley and Hills, and the Santa Ynez-Sulphur Mountains.

Pacific Flyway

The Project site lies within the Pacific Flyway, which is one of the four major north-south migratory bird routes that extends from Alaska in the north to Chile in the south. The Pacific Flyway spans from the Pacific Ocean on the west to Utah and Arizona on the east (Section 7.0: Figure 5.1.4-2, *Pacific Flyway Overview Map*).[93] Audubon Society affirms hundreds of species use the Pacific Flyway; however, many species do not travel the entire flyway, but will migrate until they reach warmer temperatures.[94] During avian migration surveys conducted at the site, species that use the Pacific Flyway were recorded at low levels as a result of the Project area not serving as an important stop. It is more likely for migrants to fly the most direct route, through the Great Valley, or along the coast, which is 2.2 miles from the Project area. Minimal individuals may fly in between the more defined migratory routes surrounding the site.

---

91 California Department of Fish and Wildlife. 2017. California Essential Habitat Connectivity Project. Available at: https://www.wildlife.ca.gov/conservation/planning/connectivity/CEHC

92 California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration. 2010. *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California*. Prepared by: W.D. Spencer, P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler.

93 Pacific Flyway Council. 2017. Pacific Flyway map. Available at: http://pacificflyway.gov/Documents/Pacific_map.pdf

94 "Bird Migration: Birds of the Pacific Flyway." Perky Pet. Accessed February 2018. Available at: https://www.perkypet.com/articles/pacific-flyway-migration

Important Bird Areas

The Project site encompasses fewer native habitats that would be ideal for avian species that use the adjacent important bird area. The VAFB and Santa Ynez Estuary Important Bird Areas (IBA) designated by the Audubon Society borders the Project site to the west and south (Section 7.0: Figure 5.1.4-1).[95] Because of the high concentration of migratory birds within the adjacent IBA, the Project site has the potential to serve as habitat but to a lesser extent given the difference in land use and habitats available.

Avian Migration

Waterfowl and Shorebird Migration and the Pacific Coastline

Migratory movements of birds in the region include both seabird migration along the Pacific coastline, approximately 2.2 miles from the Project location, and overland migration of large numbers of aquatic and terrestrial avian species. Migration typically occurs twice per year, when birds fly north in the spring, and south in autumn. However, due to Southern California's mild and homogenous climate, birds could be expected to migrate through and/or over the Project area during any month of the year.

Waterfowl and shorebirds generally migrate along the Pacific coastline; during the 2017 spring survey, 2 (6 percent) of 36 species of spring migrants were migratory water birds (Appendix A-20). This included greater yellowlegs and solitary sandpiper (*Tringa solitaria*).

During the 2016 autumn survey, 3 of 28 species (11 percent) of passage autumn migrants were migratory water birds (Appendix A-17). This included great egret, common loon, and California brown pelican. Wind recorded during the survey dates was light to moderate (5–22mph); weather recorded during the survey included 47 percent of the survey time with clear skies and fog 53 percent of the survey time. There were two rain events during the survey time as well.

During the 2008 autumn survey, 3 of 98 species (3 percent) of passage autumn migrants were migratory water birds (Appendix A-14). This included common loon, greater yellowlegs, and Wilson's snipe (*Gallinago delicata*). Data collection occurred on days with clear skies with excellent visibility and light to moderate wind speeds (4–15mph). Birds were recorded flying up to 150 feet under light winds (>7 mph) less than 100 feet for moderate winds (8–15 mph) and less than 30 feet above ground level during strong winds.

During the 2008 spring survey, of the 52 species of spring migrants observed, only 1 species (2 percent), greater yellowlegs (*Tringa melanoleuca*), was a migratory water bird (Appendix A-10). Wind recorded during the survey was between 2 and 30 miles per hour (mph); weather recorded during the survey included 48 percent of the survey time with clear skies and cloudy/foggy 52 percent of the survey time.

[95] Audubon. 2017. Vandenberg Air Force Base and Santa Ynez Estuary. Available at: http://www.audubon.org/important-bird-areas/vandenberg-air-force-base-and-santa-ynez-estuary

Local Migration

The abundance of diurnal avian migrants (waterbirds, raptors, and songbirds) during autumn migration was generally low, an average of about 30–40 passage migrants per day (Appendix A-14). This measure of the volume of autumn avian migrants at the Project area is approximately three times greater than in spring, when weather conditions were poor for avian migration (Appendix A-10). Most avian migrants, excluding migrants that winter at or in the vicinity of the Project area, would infrequently include this geographic area because it is located away from more favorable routes, such as the Great Valley, to their wintering destinations.[96] Migratory songbirds generally avoid this geographic area of southwestern Santa Barbara County based on energy or time minimization hypotheses: birds would have to fly longer distances using more energy than more direct routes to their wintering destinations. Flying further inland under more favorable weather conditions using less energy is more efficient. In addition, the Project site is located close to the coast and regularly has heavy fog from spring through the summer months. Fog normally sharply depresses avian activity, which in turn lessens collision risk. High northwesterly winds are also typical of the site, except in August through October, when westerly winds prevail. During and immediately prior to major storms, winds often shift and head in from the south and east, which may influence avian flight patterns. Mean wind speed at the Santa Maria station ranges from 5.9 to 8.3 mph. As reported by the Project applicant, mean wind speed at the Project property is nearly double that, at 15 mph.[97] Since the prevailing winds in both spring and autumn are generally north or northwest, during the peak of autumn migration birds would be generally flying with strong tailwinds at elevations of approximately 778 to 1,900 feet at the Project property.

Spring and Fall Avian Migration at the Project Site

Avian migratory surveys were conducted at the Project site in the spring and autumn of 2008, autumn of 2016, and spring of 2017. A total of 61 species of migratory birds were observed (Appendix D). Due to the high diversity of migratory birds, it is likely that the Project site serves as a migratory corridor for these species. Furthermore, all native birds are afforded protection pursuant to the MBTA.

During the 2017 spring survey, 83 total species were observed, in which 36 were migratory (Appendix A-20). The most numerous migrants were black-headed grosbeak (21), barn swallow (21), white crowned sparrow (20), and orange-crowned warbler (16). Three special status migratory bird species were observed: northern harrier, ferruginous hawk, and grasshopper sparrow. Two locally important migratory species were observed: blue grosbeak and Swainson's thrush.

During the 2016 autumn survey, 82 total species were observed, in which 28 were migratory (Appendix A-17). The most numerous migrants were yellow-rumped warbler (420), white-crowned sparrow (182), American pipit (179), and golden-crowned sparrow (115). Eight special status migratory species were observed: sharp-shinned hawk, great egret, ferruginous hawk, northern harrier, common loon, red-breasted sapsucker, California brown pelican, and merlin.

During the 2008 autumn survey, 133 total species were observed, in which 56 were migratory (Appendix A-14). The most numerous migrants were: yellow-rumped warbler (~*513*), American

[96] Humple D.L., and G.R. Geupel. 2002. "Autumn Populations of Birds in Riparian Habitat of California's Central Valley." *Western Birds 33*: 34–50.

[97] Acconia Energy North America, unpublished data.

pipit (~*103*), western gull (~129), and white-crowned sparrow (~*96*). Eleven (11) special status migratory species were observed: northern harrier, Vaux's swift, yellow warbler, yellow-breasted chat, grasshopper sparrow, common loon, double-crested cormorant, sharp-shinned hawk, ferruginous hawk, merlin, and prairie falcon. One locally important migratory species was observed: blue grosbeak.

During the 2008 spring survey, 93 total species were observed, in which 52 were migratory (Appendix A-10). The most numerous migrants were: cedar waxwing (38), barn swallow (23), cliff swallow (20), and western gull (16). Four special status migratory species were observed: sharp-shinned hawk, Vaux's swift, olive-sided flycatcher, and yellow-breasted chat. One locally important migratory species was observed: Swainson's thrush.

Nocturnal Bird Migration Radar Analysis

The NEXRAD radar study conducted during the 2006 and 2007 spring and autumn migration seasons provides estimates of the average density and movement of nocturnal migrating birds in a surveillance area above the Project area (Appendix A-8).[98] The study also provides information on patterns of migration in the northern Santa Barbara region.

The maximum bird density recorded above the Project site was 86 birds per cubic kilometer (km^3) on one day in May 2006. Density was much lower on most days during the peak migration period. The overall level of nocturnal migration above the Project site in both autumn and spring migratory seasons in 2006–2007 was typical for those recorded along the West Coast, but very low compared to other sites previously analyzed by the author in other parts of the United States (Appendix A-8). Because the bird migration density increased with altitude, it is likely that a major proportion of the birds recorded in the study area were above the estimated rotor sweep zones for wind turbines.

The highest densities of birds observed in the region were flying between 2,000 to 5,000 feet, which is much higher than the turbine rotor sweep zones. In addition, most of the migration followed trajectories just west of the Sierra Madre and San Rafael Mountains, which would locate the majority of migration approximately 20 to 40 miles east of the Project area.

Observed bird densities for the region were generally very low compared to over 70 sites also analyzed by the author of the radar study; maximum densities exceeding 100 birds km^{-3} were detected on only 22 occasions during the four migratory periods analyzed (Appendix A-8). By comparison, peak bird densities observed in other studies in other parts of the U.S. described by the author ranged from 400 to 1,148 birds per km^3.[99] The direction of migration observed in the spring was toward the north-northwest, and in the autumn was toward the south-southeast. The results indicate that most overland migration in Santa Barbara County follows an inland route, cutting diagonally north-northwest from the Gaviota Coast, rather than following the coastline around Point Conception or above the coastal ridges and Project site.

[98] Gauthreaux, Sidney A. 30 May 2008. Analysis of WSR-88D Data to Assess Nocturnal Bird Migration Over the Lompoc Wind Energy Project in California. Prepared for Aspen Environmental Group.

[99] Gauthreaux, Sidney A. 30 May 2008. Analysis of WSR-88D Data to Assess Nocturnal Bird Migration Over the Lompoc Wind Energy Project in California. Prepared for Aspen Environmental Group.

The observed peak migration periods were from mid-April to mid-May and from mid-August to the end of September (Section 7.0: Figure 5.1.4-3, *Nocturnal Bird Migration Patterns Spring and Autumn 2006–2007*). Autumn migration over the Project site and regionally was between 1.1 to 1.5 times greater than what was observed in spring. In the spring, migration was recorded beginning in mid-April, peaks near the end of April and the beginning of May, and then declines after the first weeks of May. In the autumn, the patterns of migration were similar in 2006 and 2007 with more of the migration occurring between August 15 and September 30 than between October 1 and November 15. A pulse of autumn migration began in late August and early September and another pulse of greater magnitude occurred in late September. From the beginning of October, the density of migration declined, and by November very little migration was recorded. Bird densities above the Project site were closer to the region-wide densities in the autumn than in the spring. This is likely due to more favorable winds at low altitudes in autumn than in spring. The seasonal patterns of migration show year-to-year variation (Appendix A-8).

Bat Migration

During the spring and autumn bat surveys conducted at the Project site in 2008, 2016, and 2017, nine total bat species were recorded. In 2017, six species were recorded (Appendix A-17). Three were other special status residents, including pallid bat, Yuma myotis, and long-eared bat, and three were common residents, including the big brown bat (*Eptesicus fuscus*), California myotis, Mexican free-tailed bat (*Tadarida brasiliensis*). In 2016, only one bat call was recorded, before surveys were cancelled due to low temperatures, high winds, and dense fog (Appendix A-16). The species was identified as belonging to the genus *Myotis*, either California myotis (*Myotis californicus*) or Yuma myotis (*M. yumanensis*); the former being another special status species resident and the latter a common resident species.

In 2008, eight species were identified during the spring and autumn migration period (from 85 total recordings during 672 hours recorded hours).[100] Six were other special status residents: pallid bat (*Antrozous pallidus*), long-eared bat (*Myotis evotis*), Yuma myotis (*Myotis yumanensis*), and western mastiff bat (*Eumops perotis*). And two were sensitive species migrants: western red bat (*Lasiurus blossevillii*) and hoary bat (*Lasiurus cinereus*).

Although bat activity was relatively low at most sampling sites, resident and common bats have been recorded using the Project site for foraging. Migrating bats may find suitable foraging habitat as well, given the variety of vegetation communities available and use the site as a layover during migration as well. Bats may roost for a period of time to forage within the Project area before moving on to migratory destination. There is suitable habitat for migratory bat species silver-haired bat (not recorded in the Project area), western red bat (recorded in 2008) , and hoary bat (recorded in 2008); however no migratory species were recorded in 2016 and 2017, suggesting that individuals move through the property but are more likely not foraging locally. Western red bat and silver-haired bat primary flying activity would be expected to occur no higher than 20 feet above the ground surface or water and hoary bat would be expected to occur up to 40 feet above the ground surface.

[100] Pacific Renewable Energy Generation, LLC, Solana Beach, CA. 16 December 2008. *Lompoc Wind Energy Project Final Spring and Autumn Bat Migration Pre-construction Survey Technical Report*. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

Nesting Birds and Mammals

There are a large number of trees, shrubs, and ground nesting sites in natural and semi-natural communities located within the Project area. Evidence of several species of burrowing animals was present during field surveys, including badger, ground squirrel, and pocket gopher burrows. Stick nests of dusky-footed woodrats (*Neotoma fuscipes*) were also found during surveys.

During the spring 2017 avian surveys, a total of 54 avian species were found to be nesting or likely nesting at the site, including four special status species: grasshopper sparrow, Cooper's hawk, oak titmouse, and California horned lark (Appendix A-20).

During avian breeding surveys conducted in 2008, a total of 57 avian species were found to be nesting or likely nesting at the site, including five sensitive species: grasshopper sparrow, Cooper's hawk, oak titmouse, California horned lark, and yellow warbler (Appendix A-12). The most numerous breeding species included Anna's hummingbird (*Calypte anna*), Nuttall's woodpecker (*Picoides nuttallii*), black phoebe (*Sayornis nigricans*), bushtit (*Psaltriparus minimus*), spotted towhee (*Pipilo maculatus*), song sparrow (*Melospiza melodia*), California scrub jay (*Aphelocoma californica*), oak titmouse, California quail (*Callipepla californica*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivim*), California towhee (*Pipilo crissalis*), turkey vulture, mourning dove (*Zenaida macroura*), western bluebird (*Sialia mexicana*), European starling, lark sparrow (*Chondestes grammacus*), western meadowlark (*Sturnella neglecta*), Brewer's blackbird (*Euphagus cyanocephalus*), house finch (*Carpodacus mexicanus*), American robin (*Turdus migratorius*), lesser goldfinch (*Carduelis psaltria*), dark-eyed junco (*Junco hyemalis*), and purple finch (*Carpodacus purpureus*). Active nests of red-tailed hawks (*Buteo jamaicensis*), great horned owls (*Bubo virginianus*), and California horned lark were observed, as well as one inactive Cooper's hawk nest. Breeding sites in grasslands for California horned lark, grasshopper sparrow, and blue grosbeak; and riparian areas for yellow warbler and Swainson's thrush were observed throughout the Project site (Section 7.0: Figure 5.1.4-4, *Avian Breeding Areas* [*Spring 2008*]).

Nursery Sites

Because the streams within the Proposed Project area are ephemeral, there are no potential nursery sites for fish present.

5.1.5 Local Policies and Ordinances

Santa Barbara County Comprehensive Plan Conservation Element

The area of the Proposed Project does not lie within any mapped ecological units with special value in the Conservation Element of the Santa Barbara County Comprehensive Plan. However, the Comprehensive Plan highlights species and ecological communities of particular value that were considered in this evaluation.[101]

[101] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 1979; amended August 2010. *Conservation Element, Santa Barbara County Comprehensive Plan*. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf

Species of Particular Value

The Comprehensive Plan lists 25 species of particular value, including 11 animals and 14 plants. The Project site is located outside of the known range of six of these animal species and eight of these plant species, so they were not considered in this evaluation; the remaining five animal and six plant species were considered. Of these, two bird species and four plant species were determined to have the potential to occur at the Project site, including: California condor, bald eagle, Hoover's bent grass, Refugio manzanita, Lompoc yerba santa, and black-flowered figwort (Section 5.1.1, *Special Status Species*). Two bird species of particular value, American peregrine falcon and California brown pelican, were observed within the Project area during multiple surveys; however, these species are afforded other special statuses by CDFW that would surpass their locally important status (Table 5.1.1-5).

Ecological Communities of Greatest Interest

The Comprehensive Plan outlines 14 ecological communities of greatest interest. Of these, three were mapped on the Project site: southern oak woodland, native grassland, and mixed evergreen forest, which correspond to the mapped coast live oak woodland, purple needle grass grassland, and tanoak forest, respectively (Table 5.1.2-1; Section 7.0: Figure 5.1.2-1; and Appendix C-4). Within the Project area and transmission line corridor, 14.2 acres of southern oak woodland (coast live oak woodland), 5.1 acres of native grassland (purple needle grass grassland), and 47.5 acres of mixed evergreen forest (tanoak forest) were mapped (Table 5.1.2-1; see Section 5.1.2).

Protected Oaks and Individual Native Trees

The Mapped Areas and Communities Section of the Conservation Element was amended in 2003 to include Oak Tree Protection in the Inland Rural Areas of Santa Barbara County, which covers areas outside of the Coastal Zone.[102] Oak Tree Protection Policy 1 establishes the goal of protecting all native oak trees, oak woodlands, and oak savannas (see Section 3.0, Regulatory Framework). As discussed above, within the Project area and proposed transmission line corridor, approximately 172.8 acres of coast live oak woodland are present that would be subject to protection under this policy, concentrated on the eastern portion of the site (Section 7.0: Figure 5.1.2-2). In addition, the *County Environmental Thresholds and Guidelines Manual* notes that impacts to individual native trees should be assessed due to their role in native communities.[103]

A survey was undertaken in November 2017 to provide an estimation of the individual oaks and other native trees scheduled for removal, most of which lie within the coast live oak woodland and tanoak forest communities (Appendix A-22). In January and February 2018, a full tree inventory survey was conducted to document all native trees above 6 inches DBH within the proposed impact areas of WTG 15, 27, 28, a 35-foot buffer along San Miguelito Road (transportation corridor), and the transmission corridor (Table 5.1.5-1, *Tree Inventory Summary* and Appendix A-

[102] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 2003, Republished May 2009. *Conservation Element, Oak Tree Protection in the Inland Rural Areas of Santa Barbara County, Supplement to the Mapped Areas and Communities Section, Santa Barbara County Comprehensive Plan*. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf

[103] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

23). Along San Miguelito Road, an additional failing slope area was surveyed because it is proposed for modification.

A total of 651 oaks and native trees above 6 inches DBH were measured within the proposed turbine pads, San Miguelito Road, and transmission corridor pole locations (Table 5.1.5-1 and Section 7.0: Figure 5.1.5-1, *Native Tree Inventory within Proposed Impact Areas*). Within the proposed impact area of WTG 15, a total of four trees were measured, including three coast live oaks and one tanoak. Only one tree, Monterey cypress (*Hesperocyparis macrocarpa*), was located at WTG 23. Within the proposed impact area of WTG 27, a total of 10 trees were measured, including 4 tanoaks, 5 coast live oaks, and 1 toyon. Within the proposed impact area of WTG 28, a total of 390 trees were measured, including 63 coast live oaks and 327 tanoaks (Appendix A-23). Along San Miguelito Road within the Proposed Project boundary, including the failing slope area, a total of 112 trees were measured, comprising of 114 coast live oaks, 1 arroyo willow (*Salix lasiolepis*), 1 red willow (*Salix laevigata*), 1 box elder (*Acer negundo*), 1 tanoak, and 4 toyon (Appendix A-23). The 124 trees in the transmission line pole areas were 2 canyon live oak (*Quercus chrysolepis*), 116 coast live oak, 5 pine, and 1 toyon.

TABLE 5.1.5-1
TREE INVENTORY SUMMARY

Location	Species	No. of trees	Height Range (ft.)	DBH Range (in.)
WTG 15	coast live oak (*Quercus agrifolia*)	3	19.7	4.9–11.3
	tanoak (*Notholithocarpus densiflorus*)	1	19.7	5.5–10.7
WTG 23	Monterey cypress (*Hesperocyparis macrocarpa*)	1	29.5	21.4
WTG 27	coast live oak	5	19.7–45.9	14.2–34.8
	tanoak	4	23.0–52.5	10.9–39.5
	toyon (*Heteromeles artbutifolia*)	1	16.4	9.0
WTG 28	coast live oak	63	2.8–52.5	3.4–37.6
	tanoak	327	11.2–82.0	2.4–42.6
San Miguelito Road	arroyo willow (*Salix lasiolepis*)	1	9.8	5.6–8.8
	box elder (*Acer negundo*)	1	19.7	8.8–12.5
	coast live oak	114	6.6–39.4	5.9–41.4
	red willow (*Salix laevigata*)	1	26.2	6.4
	tanoak	1	14.8	8.9–13.4
	toyon	4	19.7–26.2	7.5–10.3
P17	coast live oak	1	32.8	35.7
P30	toyon	1	13.1	9.0
P35	coast live oak	17	4.9–19.7	4.0–20.3
P37	coast live oak	19	6.6–29.5	2.5–28.7
	pine (*Pinus* sp.)	5	29.5	21.4
P61	coast live oak	5	11.5–16.4	4.7–22.6
P66	coast live oak	3	16.4–23.0	11.3–22.6
P67	coast live oak	4	19.7–26.2	11.3–31.3
P68	coast live oak	14	16.4–32.8	6.3–35.1
P69	coast live oak	3	9.8–13.1	5.0–10.7
P70	coast live oak	27	9.8–26.2	6.3–31.3
P71	coast live oak	23	8.2–26.2	5.0–31.1
P72	blue gum (*Eucalyptus globulus*)*	1	32.8	40.4
P84	blue gum	1	8.2	7.3
P104	canyon live oak	2	16.4–19.7	13.2–38.6

TABLE 5.1.5-1
TREE INVENTORY SUMMARY, *Continued*

Location	Species	No. of trees	Height Range (ft.)	DBH Range (in.)
TOTAL		651		

KEY:
WTG = Wind Turbine Generator
P = Pole Number (Transmission Line Corridor)
*Note: Non-native tree species, so it is not included in the total.

Santa Barbara County Coastal Land Use Plan

Approximately 249.95 acres of the southeastern portion of the Project area are located within the California Coastal Zone, and are subject to the Santa Barbara County Coastal Land Use Plan, which is a certified Local Coastal Program.[104] The Proposed Project does not fall within any mapped ESHA. However, according to Section 3.9.4 of the Coastal Land Use Plan, native plant communities are considered a county-wide ESHA that "are not designated on the land use maps because they occur in so many areas," and as such, "the policies will have to be applied on a case-by-case basis as projects are reviewed." Native plant communities include coastal sage scrub, chaparral, California native oak woodland and individual oak trees, and endangered, rare, or endemic plant species, all of which are present within the Coastal Zone at the Project site. For example, one rare plant species, globose La Purisima manzanita, was mapped within the proposed impact area in the Coastal Zone. The proposed impact area within the Coastal Zone at the Project site is also located in dense tanoak forest, which is a State sensitive plant community. Approximately 40 coast live oak trees, 73 tanoak trees, and 1 toyon were counted within the proposed impact area within the Coastal Zone.

Other Locally Important Species

Locally important species include those avian species recognized by the La Purisima Audubon Society at Lompoc, Santa Barbara Audubon Society, the Community Environmental Council, EDC at Santa Barbara, and several private individuals as defined in the 2009 FEIR. Ninety-five (95) locally important species were identified from these sources as well as the County-designated species of particular value, including 76 plants, 1 reptile, 17 birds, and 1 mammal. Of these, 83 were listed or considered special status by State or federal agencies. Six listed or special status plants that were also considered locally important were observed, including Gaviota tarplant, La Purisima manzanita (globose subspecies), western dichondra, mesa horkelia, and ocellated Humboldt lily, and 18 had suitable habitat present (Appendices C-1, C-2, and C-3; Tables 5.1.1-1, 5.1.1-4, and 5.1.1-6). Ten (10) avian species and 1 mammal (American badger) that are listed or afforded special status and are considered locally important were observed, and suitable habitat was present for three other listed or special status wildlife species (Appendices C-1, C-2, and C-3; Tables 5.1.1-3, 5.1.1-5, and 5.1.1-7). Eight (8) plants and four birds that were solely considered locally important were evaluated in this report, as well as two formerly locally important plants (Tables 5.1.1-6 and 5.1.1-7; Appendix C-3). Six of these plants were observed, including seaside alumroot, Douglas iris, sickle-leaved rush, California globemallow, Lompoc monkeyflower, and Hoffman's nightshade, and two had suitable habitat present, including island morning-glory and canyon gooseberry.

[104] County of Santa Barbara Department of Planning and Development. Adopted 1982, republished 2014. *Coastal Land Use Plan, Santa Barbara County Comprehensive Plan*. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/CoastalPlan.pdf

5.1.6 HCPs and NCCPs

The proposed does not lie within the boundaries of a known Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP). The nearest HCP or NCCP is the Pacific Gas and Electric San Joaquin Valley Operation and Maintenance Study Area HCP, which is 65 miles to the east in Kern County. Therefore, there are no applicable HCPs or NCCPs to the Proposed Project.

5.2 IMPACT ANALYSIS

This section of the BRTR evaluates the potential for the Proposed Project to result in significant direct, indirect, and cumulative impacts to biological resources. These numbers are estimated and are subject to change based on the Project grading plan updates. The impacts described in this section are analyzed in accordance with Appendix G of the CEQA Guidelines for biological resources and the Santa Barbara County Environmental Thresholds.[105] This analysis includes the consideration of rare, threatened, and endangered species; other special status species; and locally important species; goals and policies related to the conservation of biological resources articulated in the Conservation Element of the Santa Barbara County Comprehensive Plan; areas potentially subject to the jurisdiction of the USACE pursuant to Section 404 of the Clean Water Act; riparian and other state-designated sensitive habitats, including those requiring a Lake or Streambed Alteration Agreement pursuant to Section 1600 of the State Fish and Game Code; designated critical habitat; native resident or migratory species of fish and wildlife; and federal, state, and regional conservation plans.

5.2.1 Significance Thresholds

The State CEQA Guidelines recommend the consideration of the following six questions when addressing the potential for significant impacts to biological resources:

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

(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations; or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

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

[105] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

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

(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Potential impacts to biological resources due to the Project include *direct impacts* to individual animals, plants, and habitats, along with *indirect impacts*, such as increases in noise and human activity. Impacts are described in detail below by construction phase, operation and maintenance phase, and individual species.

Thresholds of the significance of impacts to biological resources were also assessed in accordance with the *Santa Barbara County Environmental Thresholds and Guidelines Manual*.[106] Guidelines were provided inclusive of federal and state laws as well as adopted County policies regarding the specific ecosystems within Santa Barbara County.

This impact assessment is intended to assist the lead agency under CEQA, Santa Barbara County, and the preparer of an Environmental Impact Report to determine the level of significance for impacts to biological resources due to the Proposed Project. As a result, the determinations of significance in this BRTR should be considered recommendations, and are subject to review by responsible agencies.

5.2.2 Impact Characterization

Construction

Construction phase impacts include disturbance that would occur during the construction of WTGs and associated facilities, including access roads, the substation, the control/maintenance facility, permanent meteorological towers, and the transmission line. The potential impacts would include direct impacts, such as the loss of wildlife and plant individuals, habitat used by wildlife species, and indirect impacts, such as increases in noise, night lighting, introduction and spread of weeds, localized alterations in soil hydrology, and human activity.

Disturbance to the Project site would include a permanent loss of 41.0 acres (1.4 percent of the total area) and temporary loss of 117.2 acres (3.9 percent of the total area) (Table 5.2.2-1, *Plant Communities Affected by the Proposed Project*; and Section 7.0: Figure 5.2.2-1, *Impacts to Plant Communities*). Disturbance to the transmission line corridor study area would include a permanent loss of 0.04 acre (less than 0.1 percent of the study area) and a temporary loss of 32.1 acres (35.8 percent of the study area) (Table 5.2.2-1). For both the Project site and the transmission line

[106] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

corridor study area, the permanent disturbance would be 41.1 acres (1.3 percent of the total area) and the temporary disturbance would be 149.4 acres (4.9 percent of the total area). The permanent disturbance would occur primarily in areas with mixed disturbed grassland communities. Areas that are temporarily disturbed for construction, but would not be permanently used for Project components, would be restored or revegetated (Section 5.3, *Mitigation Measures*). Following construction, portions of the WTG pad sites, unused portions of roads and the electrical collection system right-of-way (ROW), and extra workspace areas would be reclaimed. Some temporary impact areas, particularly in annual grassland on flat terrain, should successfully be returned to near pre-Project conditions fairly quickly. Other areas where temporary impacts include excavation, such as around turbine footings and along road cuts in shrubby vegetation or rocky terrain, would likely require more time to recover. The duration of impacts to vegetation would depend, in part, on the success of mitigation and revegetation efforts and the time needed for natural succession to return revegetated areas to pre-disturbance conditions.

TABLE 5.2.2-1
PLANT COMMUNITIES AFFECTED BY THE PROPOSED PROJECT

Name	Disturbance to Wind Farm Area (acres)		Disturbance to Transmission Line Corridor Study Area (acres)		Total Disturbance (acres)	
	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
Arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance)	1.70	0.36	0.49	< 0.01	2.19	0.36
Tanoak forest (*Notholithocarpus densiflorus* Forest Alliance)	3.04	0.53	0.00	0.00	3.04	0.53
Purple needle grass grassland (*Stipa pulchra* Herbaceous Alliance)	0.56	0.02	0.00	0.00	0.56	0.02
Coast live oak woodland (*Quercus agrifolia* Woodland Alliance)	0.88	< 0.01	4.45	< 0.01	5.33	< 0.01
California sagebrush scrub (*Artemisia californica* Shrubland Alliance)	15.89	3.46	14.51	0.02	30.39	3.48
Mixed disturbed grassland communities: Sawtooth golden bush scrub (*Hazardia squarrosa* Shrubland Alliance), California Annual and Perennial Grassland Macrogroup, and milk thistle stands (undescribed in MCV II)	89.65	33.70	3.24	< 0.01	92.89	33.70
Eucalyptus groves (*Eucalyptus* spp. Woodland Semi-Natural Alliance)	< 0.01	0.00	0.09	0.00	0.09	0.00
Coyote brush scrub (*Baccharis pilularis* Shrubland Alliance)**	0.00	0.00	6.14	< 0.01	6.14	< 0.01
Poison hemlock or fennel patches (*Conium maculatum - Foeniculum vulgare* Herbaceous Semi-Natural Alliance)**	0.00	0.00	0.51	< 0.01	0.51	< 0.01
Upland mustards (*Brassica nigra* and other mustards Herbaceous Semi-Natural Alliance)**	0.00	0.00	0.76	< 0.01	0.76	< 0.01
Agricultural fields	4.24	2.60	1.39	< 0.01	5.63	2.60
Developed Areas	1.28	0.37	0.56	< 0.01		
TOTAL	**117.22**	**41.04**	**32.14**	**0.04**	**41.08**	**149.36**

NOTE: Numbers are subject to change with adjustments to the grading plan.

Direct Impacts

Permanent construction-phase impacts to wildlife and plant habitat would include those areas used for footings of WTGs, meteorological towers, and transmission line poles; placement of the substation; and access roads and spurs leading to each turbine that shall also be used in the future for maintenance. Areas adjacent to the proposed WTG pad sites, access roads, and underground electrical collection system would experience temporary disturbance associated with equipment access, materials, stockpile locations, and workspace requirements.

Actual impact areas for WTGs may vary depending on the terrain, soil, and substrate. For impact area estimates, permanent habitat loss of 0.09 acre is assumed for each turbine, with another 0.13–0.36 acre of temporary disturbance for construction of each pad. The Project configuration model that includes 30 WTGs distributed among the Project ridges as well as 3 meteorological towers, 115 power poles, a substation, an operations and maintenance (O&M) building, a well site and waterline, and seven transmission line pull sites. As discussed above, this would result in a total permanent habitat loss of about 41.1 acres, encompassing both the Project area and transmission line corridor, with an additional 149.4 acres that would be restored. Some additional habitat disturbance may occur where extra soil is used for erosion repair. Turbine locations and roads have not been finalized; these estimates are presented only to give an approximation of the amount of affected habitats. Project components would be placed almost entirely in common vegetation types, such as mixed disturbed grasslands and California sagebrush scrub (Table 5.2.2-1). Details on sensitive and riparian community impacts are discussed below (Section 5.2.3.2, *Riparian or Other State-Designated Sensitive Plant Communities*).

Indirect Impacts

Indirect impacts during construction include increases in human activity, night lighting, dust, topsoil loss, noise, and vehicle emissions. Indirect impacts such as increases in human activity and noise may potentially result in displacement of bird species from areas near the WTGs. This potential impact may continue from the construction phase into the operations and maintenance (O&M) phase, as described below. Construction shall be limited to WTGs and associated facilities. This would be a limited, temporary increase in the above sources of impact. Construction would take place only during daylight hours, thus minimizing the need for night lighting. Measures would be taken to further limit adverse effects, such as a worker education program and the use of water to suppress dust. Mitigation measures are described below (Section 5.2.3, *Impact Analysis*). With the implementation of these measures, the indirect impacts to wildlife during Project construction would be considered adverse, but less than significant.

Indirect impacts would include noxious weeds, exposure of soils to accelerated wind and water erosion, shifts in vegetation community composition, increase in the potential for fires, and loss of biodiversity. Disturbances from construction would increase the potential for the establishment and spread of invasive and noxious weed species. Noxious weeds tend to be aggressive colonizers of disturbed areas where the native vegetation has been removed. Therefore, disturbances associated with construction of the proposed WTG pad sites, access roads, and electrical collection system would provide opportunities for invasive and noxious weeds to become established. Once established, weeds would increase fuel levels and the potential for increased intensity and numbers of wildfires. Wildfire within the Project area, where vegetation is generally intolerant of fire, could potentially lead to mortality of native plant species and transform the vegetation community from native vegetation to non-native grassland. To minimize the potential for adverse effects from invasive and noxious weed establishment, monitoring for invasive and noxious weeds would be

necessary. If invasive and noxious weeds are found, control and eradication measures would be implemented as outlined in an integrated pest management (IPM) plan.

Additional indirect construction-related impacts could include soil compaction, disruption of microphytic crusts, and an increased potential for wind and water erosion of disturbed surfaces prior to reclamation.

Operation and Maintenance Impacts

Impacts to plants and wildlife during the O&M phase of the Project facilities following the construction phase would include direct impacts, such as the loss of birds to collisions with WTGs, as well as indirect impacts, such as increases in human activity, night lighting, dust creation, noise, and vehicle emissions. Little additional impact to plants and to wildlife habitat is anticipated because roads and parking areas to be used during operation and maintenance would be areas already disturbed during construction. Minor additional habitat disturbance could occur on a temporary basis for repairs to facilities.

Direct Impacts

Direct loss of individual animals during the operation and maintenance phase as a result of collisions by birds and bats with transmission line poles, lines, WTGs, and turbine blades shall be less than significant with the implementation of mitigation measures. Unlike direct impacts during construction, losses of individual animals in burrows is not expected; there shall be little additional habitat disturbance with less than significant impacts to native plants during operation and maintenance.

The loss of individuals by collisions with vehicles during operation and maintenance is expected to be less than significant. The number of trips necessary for maintenance shall be relatively limited, and vehicle speeds shall be kept to less than 20 miles per hour.

Indirect Impacts

Indirect impacts during the operation and maintenance phase include increases in human activity, night lighting, dust, weed spread, noise, and vehicle emissions. As mentioned in the construction phase, indirect impacts such as increases in noise and human activity, may potentially result in displacement of birds.

As noted above, the number of site visits necessary for Project maintenance shall be small. As such, the increase over pre-Project levels of human activity, dust, weed populations, noise, and vehicle emissions shall be minor. Lighting on the WTGs, and associated buildings shall also be minimal and directed inward to the extent possible. As such, these potential impacts are not expected to be significant. Based on review of previous studies, displacement impacts to some groups of birds utilizing grassland and chaparral habitats, including passerines, are expected to be limited to areas within several hundred feet of the WTGs.

5.2.3 Impact Analysis

5.2.3.1 Federally and State-listed, Candidate, and Locally Important Species

Santa Barbara County defines disturbance to habitats or species as significant if impacts substantially reduce or eliminate species diversity or abundance, quantity or quality of nesting areas, limit reproductive capacity through losses of individuals or habitat, fragment or disrupt foraging areas or access to food sources, limit or fragment range and movement, interfere with natural processes, such as fire or flooding, upon which the habitat depends.[107] Assessment of impacts accounts for both short-term and long-term impacts.

In addition, factors used in assessing significance of impacts on biological resources considers size of the resource impacted; type of impact, whether it adversely indirectly affects wildlife, removes the resource, causes an animal to abandon the area, or fragments the area's resource; if the impact occurs at a critical time in the life cycle of an important plant or animal, if the impact is temporary or permanent, how long the resource would take to recover, or if the impact is periodic.[108]

In general, potential impacts to any special status plant species include the removal of individuals and temporary and permanent conversion of suitable habitat. Potential impacts to special status wildlife species include temporary and permanent conversion of suitable habitat. For special status avian and bat species, mortalities from collision with turbine blades may occur.

Listed Species

Plants

The analysis of the Proposed Project's potential to result in significant impacts to plants listed as rare, threatened, or endangered considers two species: Gaviota tarplant and Lompoc yerba santa.

Gaviota tarplant. The Proposed Project would result in a significant impact to Gaviota tarplant as a result of permanent and temporary impacts to designated critical habitat, potentially suitable habitat, and occupied habitat, requiring the consideration of mitigation measures. The development and operation of the turbines and access roads would result in the conversion of 6.3 acres of permanent impacts, 12.93 acres of temporary impacts for a total of 19.23 acres of suitable habitat for Gaviota tarplant, outside of critical habitat. There would be 26.32 acres of permanent impact and 71.16 acres of temporary impacts within critical habitat associated with over widened roads to accommodate construction equipment. The total 97.48 acres of temporary and permanent impacts are located in the 791-acre Sudden Bench Unit of designated critical habitat for Gaviota tarplant. The Proposed Project would adversely affect 11.2 percent of this management unit and 1.4 percent of 6,121 acres of designated critical habitat for this species (Section 7.0: Figure 5.2.3.1-1, *Impacts for Gaviota Tarplant*).

---

[107] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

[108] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

Gaviota tarplant may recover when the seed bank is conserved and replaced. Tarplants may take longer to recolonize excavated areas where the soil profile has been disturbed, such as around WTGs, due to encroachment of non-native grasses and forbs until the soil has had a few years to settle and microorganism populations have become reestablished. Its distribution continues beyond the Project area onto north and south VAFB, and on to the Bixby Ranch; and critical habitat is also located south of Jalama Beach County Park. The Project components shall not eliminate Gaviota tarplant within the sub-populations on the Project sites, although the habitat shall become more fragmented. The undisturbed habitat that shall surround the finished Project components shall continue to support a mixture of grassland, shrubland, and woodland habitats, and shall thus continue to provide habitat for pollinators. Gaviota tarplant is an annual plant that produces seed which, when dormant, is capable of surviving for many years in the soil.[109] Occasional disturbance to small areas of Gaviota tarplant habitat is likely to occur from time to time during the operations phase of the Project when maintenance and repairs necessitate work beyond the paved areas. These impacts would be temporary in nature, and can be mitigated to less than significant levels with the recommended measures.

With the implementation of mitigation measures, impacts in areas of disturbance would be reduced to less than significant. Mitigation measures for Gaviota tarplant are listed in Section 5.3, *Recommended Mitigation Measures*.

Lompoc yerba santa. The Proposed Project would result in no impacts to Lompoc yerba santa. Although the Project site contains potentially suitable habitat, Lompoc yerba santa was not observed in the Project area as a result of multiple surveys for rare plants between 2002 and 2006, and again in 2017. This species has suitable habitat that exists in approximately 394 acres within Santa Barbara County. Potential suitable habitat is limited to the central coastal scrub community at higher elevations. It is unlikely to occur along San Miguelito Canyon Road due to the shaded nature of most of the habitat.

Wildlife

The analysis of the potential for the Proposed Project to result in significant impacts to wildlife listed as rare, threatened, or endangered considers six species: El Segundo blue butterfly, tricolored blackbird, California Red-legged frog, southwestern willow flycatcher, California condor, and bald eagle.

El Segundo blue butterfly. The Proposed Project would result in a less than significant impact to El Segundo blue butterfly as a result of permanent and temporary impacts to suitable and occupied habitat, with the implementation of mitigation measures. The development and operation of the turbines and access roads would result in the permanent conversion of 1.57 acres of habitat for El Segundo blue butterfly, which encompasses the area where one of 29 observations of the species were recorded in 2008 (Section 7.0: Figure 5.2.3.1-2, *Impacts to El Segundo Blue Butterfly*). There would be 4.94 acres of temporary impacts associated with roads to accommodate construction equipment, which encompass the area where six butterflies were recorded in 2008 (Section 7.0: Figure 5.2.3.1-2).

[109] Santa Barbara Resource Management Department, Santa Barbara, CA. 1990. *Mitigation Plan for Gaviota Tarplant* (*Hemizonia Increscens Villosa*). Prepared by: All American Pipeline Company, Long Beach, CA.

The total 6.51 acres of temporary and permanent impacts are located in the southern portion of the Project area (Section 7.0: Figure 5.2.3.1-2). Approximately 17,470 acres of suitable habitat exist on the adjacent VAFB; therefore, the impacts to the species could be reduced to less than significant, considering the overall region.

Tricolored Blackbird. The Proposed Project would result in less than significant impacts to tricolored blackbird as a result of permanent and temporary impacts to suitable habitat. The development and operation of the turbines and access roads would result in the conversion of 33.7 acres of tricolored blackbird suitable foraging habitat in mixed grassland. There would be 92.9 acres of temporary impacts associated with over widened roads to accommodate construction equipment in grassland communities. The primary foraging activity occurs at the ground surface. Due to a lack of extensive wetland habitat, there is no available nesting habitat for tricolored blackbird. Approximately 7,457 acres of suitable habitat exist within Santa Barbara County for tricolored blackbird; therefore, overall habitat loss is small.

California red-legged frog. California red-legged frog was not observed in the Project impact areas as a result of habitat assessments conducted in 2007 and 2008 due to lack of permanent water; however, an occurrence of the species was recorded in CNDDB in 2008 along San Miguelito Creek, and there are five other occurrences within 1 mile northeast of the project site along Cañada Honda Creek in VAFB recorded in 2008. The proposed modification of wetlands and potentially jurisdictional streams may result in impacts to suitable habitat for California red-legged frog in San Miguelito Creek and Cañada Honda Creek within the Project site. In addition, the development and operation of the turbines and access roads, mostly upland rangeland, would result in the conversion of 1.53 acres of critical habitat (0.75 percent of the critical habitat at the site, and 0.01 percent of the entire STB-4 unit) for California red-legged frog. There would be approximately 7.0 acres of temporary impacts within critical habitat (3.4 percent of the critical habitat at the site, and 0.09 percent of the entire unit) associated with widened roads to accommodate construction equipment in the southeastern section of the Project area, where it borders California red-legged frog designated critical habitat (Section 7.0: Figure 5.2.3.1-3, *Impacts to California Red-legged Frog*).

Permanent habitat loss is not anticipated, and the temporary impacts are not considered a significant impact to the species survival, as its critical habitat and distribution extends beyond the Project area. Of approximately 41,513 acres of California red-legged frog distribution within Santa Barbara County, only 0.004 percent is expected to be affected by the Proposed Project. Therefore, with the implementation of mitigation measures, the Proposed Project would result in less than significant impacts to the species.

Southwestern willow flycatcher. The Proposed Project would result in no impacts to southwestern willow flycatcher. Although the Project site contains suitable foraging and nesting habitat, southwestern willow flycatcher was not observed in the Project area as a result of multiple surveys for avian breeding and migration between 2002 and 2017. Approximately 912 acres of suitable habitat exist within Santa Barbara County for southwestern willow flycatcher; therefore, overall habitat loss would be small.

California condor. The Proposed Project would result in no impacts to California condor. Although the Project site contains suitable foraging habitat, California condor was not observed in the Project area as a result of multiple surveys for avian breeding and migration between 2002 and 2017. Suitable foraging habitat includes all plant communities within the Project site. No nesting habitat was observed. Potential impacts to this species would include loss of individuals due to collisions

with WTGs, transmission poles, and lines. The species' range exists outside the Project area and condors can cover many miles, therefore it is expected to occur only as a passing migrant.

The applicant shall integrate avoidance measures in the event of future condor sightings near or within the Project area, which would include the management of microtrash.

Bald eagle. The Proposed Project would result in no impacts to bald eagle. Although the Project site contains potentially suitable foraging habitat, bald eagle was not observed in the Project area as a result of multiple surveys for avian breeding and migration between 2002 and 2017. Should bald eagle be observed as a passing migrant in the future, recommended mitigation measures would reduce impacts to below the level of significance.

Other Special Status Species

Plants

The Proposed Project would result in less than significant impacts to five other special status plants species: western dichondra, mesa horkelia, Kellogg's horkelia, ocellated Humboldt lily, and south coast branching phacelia.

La Purisima manzanita. The Project would result in less than significant impact to the globose La Purisima manzanita, a subspecies of La Purissima manzanita, with mitigation measures. The manzanita, growing between the tanoak forest and coast live oak woodland on a hilltop, is likely thriving on an isolated and protected area provided by the surrounding two tree communities. It is unknown whether the removal of the surrounding vegetation (trees, shrubs, and herbs) will be detrimental to the individual in question or if others exist in other difficult to reach areas among the forest and woodland. Botanical surveys in spring 2018 may provide further information.

Western dichondra. The Proposed Project has the potential to result in permanent and temporary impacts to western dichondra individuals and suitable habitat. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Mesa horkelia. The Proposed Project has the potential to result in permanent and temporary impacts to mesa horkelia individuals and suitable habitat. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Kellogg's horkelia. The Proposed Project has the potential to result in permanent and temporary impacts to Kellogg's horkelia individuals and suitable habitat. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Ocellated Humboldt lily. The Proposed Project has the potential to result in permanent and temporary impacts to ocellated Humboldt lily individuals and suitable habitat. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

South Coast branching phacelia. The Proposed Project has the potential to result in permanent and temporary impacts to South Coast branching phacelia individuals and suitable habitat. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

The Proposed Project would result in no impacts to 31 other special status plant species. Although the Project site contains suitable habitat, these species were not observed in the Project area as a result of repeated surveys for rare plants between 2002 and 2006, and again in 2017. The species are Hubby's phacelia, vernal barley, elegant wild buckwheat, small-flowered morning-glory, Catalina mariposa lily, Brewer's calandrinia, Hoover's bent grass, Eastwood's brittle-leaf manzanita, Pecho manzanita, la Purisima manzanita, Refugio manzanita, Coulter's saltbush, Plummer's baccharis, late-flowered mariposa lily, dwarf calycadenia, white-veined monardella, Cambria morning-glory, umbrella larkspur, paniculate tarplant, San Luis Obispo wallflower, Robinson's pepper-grass, Santa Barbara honeysuckle, Mount Diablo cottonweed, one-sided monkeyflower, California spineflower, California adder's tongue, Michael's rein orchid, Fish's milkwort, bitter gooseberry, Hoffmann's sanicle, and black-flowered figwort.

Wildlife

The Proposed Project would result in less than significant impacts to 34 other special status wildlife species and their suitable habitats, with the implementation of recommended mitigation measures: Cooper's hawk, sharp-shinned hawk, grasshopper sparrow, golden eagle, great egret, western burrowing owl, oak titmouse, ferruginous hawk, Vaux's swift, northern harrier, olive-sided flycatcher, white-tailed kite, California horned lark, merlin, prairie falcon, American peregrine falcon, common loon, yellow-breasted chat, loggerhead shrike, California gull, long-billed curlew, California brown pelican, double-crested cormorant, yellow-billed magpie, yellow warbler, red-berated sapsucker, Lawrence's goldfinch, pallid bat, western mastiff bat, western red bat, hoary bat, long-eared myotis, Yuma myotis, and American badger.

Cooper's hawk. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for Cooper's hawk, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Sharp-shinned hawk. This species is expected to occur as an uncommon migrant and winter resident at the margins of grassland and woodland. The Proposed Project has the potential to result in permanent and temporary impacts to foraging habitat for sharp-shinned hawk, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Grasshopper sparrow. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for grasshopper sparrow. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Golden eagle. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for golden eagle, as well as individual mortalities from WTG blades. Several golden eagle individuals have been observed flying over and foraging within the Project area in surveys between 2002 and 2017. Nesting golden eagles have been reported in 2013 approximately 5 miles southeast of the Project area, but not within the Project area, up to 300 feet from the ground surface. The vast majority of the 3,000-acre Project area serves as suitable foraging habitat, and large areas of suitable foraging habitat are available immediately adjacent and beyond the boundaries of the Project area (10,000-acre Bixby Ranch and about 30,000 acres on south VAFB). However, potential impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Great egret. The Proposed Project would result in less than significant impacts to great egret. No suitable foraging or nesting habitat was present within the Project area. This species is expected to occur within the Project area as an uncommon migrant species.

Burrowing Owl. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for burrowing owl. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Oak titmouse. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for oak titmouse. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Ferruginous hawk. This species is expected to occur as an uncommon migrant in grasslands and coastal sage scrub. The Proposed Project has the potential to result in permanent and temporary impacts to foraging habitat for ferruginous hawk, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Vaux's swift. The Proposed Project has the potential to result in permanent and temporary impacts to foraging habitat for Vaux's swift, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Northern harrier. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for northern harrier, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Olive-sided flycatcher. The Proposed Project has the potential to result in permanent and temporary impacts to foraging habitat for olive-sided flycatcher, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

White-tailed kite. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for white-tailed kite, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

California Horned Lark. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for California horned lark. Losses of individuals during construction are expected to be limited due to speed limits imposed on Project-related vehicles. The amount of foraging and nesting habitat to be disturbed is small relative to that available in the region. Implementation of mitigation measures, such as bird diverters on guyed wires at permanent meteorological towers, is expected to reduce the level of impact to less than significant.

Merlin. The Proposed Project has the potential to result in permanent and temporary impacts to foraging habitat for merlin, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Prairie falcon. The Proposed Project has the potential to result in permanent and temporary impacts to foraging habitat for prairie falcon, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

American peregrine falcon. During migration, peregrine falcons fly up to 3,300 feet from the ground surface. This species is regularly observed in the Project area and is known to nest elsewhere within a 10-mile radius of the Project site. This species has the potential to use the Project area for foraging; however, the type of nesting habitat used by peregrine falcons on VAFB is not present in the Project area. Therefore, the Proposed Project has the potential to result in permanent and temporary impacts to foraging habitat for American peregrine falcon, as well as individual mortalities from WTG blades. Considering the relatively low number of peregrine falcons in the area, Project design considerations, including the reduced number of WTGs and placement away from the ends of ridges, and implementation of mitigation measures, impacts are expected to be reduced to below the level of significance.

Common loon. The Proposed Project would result in less than significant impacts to common loon. No suitable foraging or nesting habitat was present within the Project area. This species is expected to occur within the Project area as an uncommon migrant species.

Yellow-breasted chat. This species inhabits arroyo willow thickets, and was observed in Cañada Honda Creek at the Project site. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for yellow-breasted chat, as well as individual mortalities from WTG blades. However, these impacts would be relatively small, given the small area of arroyo willow thickets to be affected (3.0 acres). The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Loggerhead shrike. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for loggerhead shrike, as well as individual mortalities from WTG blades. Collisions with WTGs during operation are expected to be very low because its primary flying activity occurs up to 50 feet from the ground surface. Loggerhead shrike collisions with vehicles and equipment during construction would be mitigated with speed limits. Therefore, the impacts would be reduced to below the level of significance with the implementation of mitigation measures.

California gull. The Proposed Project would result in less than significant impacts to California gull. No suitable foraging or nesting habitat was present within the Project area due to its distance from the shoreline. This species is expected to occur within the Project area as an uncommon migrant species.

Long-billed curlew. The Proposed Project has the potential to result in permanent and temporary impacts to foraging habitat in grasslands for long-billed curlew, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

California brown pelican. The Proposed Project would result in less than significant impacts to California brown pelican. No suitable foraging or nesting habitat was present within the Project area due to its distance from the shoreline. This species is expected to occur within the Project area as an uncommon migrant species.

Double-crested cormorant. The Proposed Project would result in less than significant impacts to double-crested cormorant. No suitable foraging or nesting habitat was present within the Project area due to its distance from the shoreline. This species is expected to occur within the Project area as an uncommon migrant species.

Yellow-billed magpie. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for yellow-billed magpie, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Yellow warbler. This species occurs in arroyo willow thickets at the Project site. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for yellow warbler, as well as individual mortalities from WTG blades. However, these impacts would be relatively small, given the small area of arroyo willow thickets to be affected (3.0 acres). The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Red-breasted sapsucker. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for red-breasted sapsucker, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Lawrence's goldfinch. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for Lawrence's goldfinch, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Pallid bat. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for pallid bat, as well as individual mortalities from WTG blades. Although no roosts were observed, audio recordings indicate the presence of this species in the Project area and indicate potential roosting in the Project area. The susceptibility of bats to wind WTGs, transmission poles, and lines has not been studied extensively. The numbers of bats involved in fatal collisions with WTGs has been small in most studies to date.[110] Considering the 30 WTGs in the Project and the implementation of mitigation measures, impacts to pallid bat due to construction, operation, and maintenance of this Project are expected to be less than significant.

Western mastiff bat. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for western mastiff bat, as well as individual mortalities from WTG blades. Although no roosts were observed, audio recordings indicate the presence of this species in the Project area and indicate potential roosting in the Project area. Considering the 30 WTGs in the Project and the implementation of mitigation measures, impacts to western mastiff bat due to construction, operation, and maintenance of this Project are expected to be less than significant.

[110] FPL Energy Services, Juno Beach, FL and Mountaineering Wind Energy Center Technical Review Committee, Tucker County, WV. 14 February 2004. *A Study of Bird and Bat Collision Fatalities at the Moutaineer Wind Energy Center, Tucker County, West Virginia. Annual Report for 2003*. Prepared by: Curry & Kerlinger, LLC, Mc Lean VA.

Western red bat. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for western red bat, as well as individual mortalities from WTG blades. Although no roosts were observed, audio recordings indicate the presence of this species in the Project area and indicate potential roosting in the Project area. Considering the 30 WTGs in the Project and the implementation of mitigation measures, impacts to western red bat due to construction, operation, and maintenance of this Project are expected to be less than significant.

Hoary bat. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for hoary bat, as well as individual mortalities from WTG blades. Although no roosts were observed, audio recordings indicate the presence of this species in the Project area and indicate potential roosting in the Project area. Considering the 30 WTGs in the Project and the implementation of mitigation measures, impacts to hoary bat due to construction, operation, and maintenance of this Project are expected to be less than significant.

Long-eared myotis. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for long-eared myotis, as well as individual mortalities from WTG blades. Although no roosts were observed, audio recordings indicate the presence of this species in the Project area and indicate potential roosting in the Project area. Considering the 30 WTGs in the Project and the implementation of mitigation measures, impacts to long-eared myotis due to construction, operation, and maintenance of this Project are expected to be less than significant.

Yuma myotis. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for Yuma myotis, as well as individual mortalities from WTG blades. Although no roosts were observed, audio recordings indicate the presence of this species in the Project area and indicate potential roosting in the Project area. Considering the 30 WTGs in the Project and the implementation of mitigation measures, impacts to Yuma myotis due to construction, operation, and maintenance of this Project are expected to be less than significant.

American Badger. Based on 2002, 2005, and 2009 survey results, badgers occur in relatively low densities across 2,753 acres of the Project area, with the exception of woodlands. Evidence of badger dens, digs and inactive burrows was observed in the southeast part of the Project area, within Sudden Bench and Sudden Ridge. Therefore, the Proposed Project has the potential to result in permanent and temporary impacts to foraging and breeding habitat for American badger. Facilities such as WTGs would be accessed via established, graveled roads at low speeds minimizing risk of collisions or impact to burrows. With the implementation of mitigation measures, impacts to this species would be reduced to below the level of significance.

The Proposed Project would result in no significant impacts to 15 other special status wildlife species with suitable habitat as they were not observed in the Project area as a result of multiple surveys between 2002 and 2017. These species include: obscure bumble bee, monarch butterfly, Lompoc grasshopper, Northern California legless lizard, coast horned lizard, coast patch-nosed snake, two-striped garter snake, Bell's sage sparrow, short-eared owl, long-eared owl, Townsend's big-eared bat, silver-haired bat, western small-footed myotis, fringed myotis, and San Diego desert woodrat.

Locally Important Species

Plants

The Proposed Project may result in significant impacts to four plants recognized as locally important species: seaside alumroot, Douglas iris, sickle-leaved rush, and California globemallow.

Seaside alumroot. Seaside alumroot was observed on an old road between Signorelli and Scolari in 2002, 2005, and 2017. The Proposed Project has the potential to result in permanent and temporary impacts to seaside alumroot individuals and suitable habitat. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Douglas iris. This iris was observed in 2017 along San Miguelito Road. The Proposed Project has the potential to result in permanent and temporary impacts to this species from road widening. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Sickle-leaved rush. This rush was observed on the Middle Ridge-South, South Ridge-East, and upper Signorelli Ridge in 2002 and 2005. The Proposed Project has the potential to result in permanent and temporary impacts to seaside alumroot individuals and suitable habitat. However, a large population of sickle-leaved rush found on Middle Ridge-South would be largely avoided by the Project. Therefore, the impacts would be reduced to below the level of significance with the implementation of mitigation measures.

California globemallow. This species was observed in 2002, 2005, and 2017 in grassland habitats and along ridges throughout the Middle Ridge. Therefore, the Proposed Project has the potential to result in permanent and temporary impacts to California globemallow individuals and suitable habitat. However, the impacts would be reduced to below the level of significance with the implementation of mitigation measures.

The Proposed Project would result in impacts to two locally important plant species island morning-glory and canyon gooseberry. Although the Project site contains suitable habitat for these species, they were not observed in the Project area as a result of multiple surveys between 2002 and 2017. Suitable habitat is limited to the California sagebrush scrub community.

Wildlife

The analysis of the potential for the Proposed Project to result in significant impacts to wildlife recognized as locally important considers four species: Swainson's thrush, blue grosbeak, common poor-will, and rock wren.

Swainson's thrush. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for Swainson's thrush. Breeding pairs were observed along San Miguelito Road in 2008. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Blue grosbeak. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for blue grosbeak, as well as individual mortalities from WTG blades. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Common poor-will. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for common poor-will. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

Rock wren. The Proposed Project has the potential to result in permanent and temporary impacts to foraging and nesting habitat for rock wren. The impacts would be reduced to below the level of significance with the implementation of mitigation measures.

5.2.3.2 Riparian or Other State-Designated Sensitive Plant Communities

Impacts to Riparian Habitat

Santa Barbara County considers the following impacts to riparian habitats as potentially significant:[111]

1. Direct removal of riparian vegetation.
2. Disruption of wildlife habitat, particularly animal dispersal corridors and/or understory vegetation.
3. Intrusion within the upland edge of the riparian canopy (generally within 100 feet in rural areas, leading to potential disruption of animal migration, breeding, etc. through increased noise, light and glare, and human or domestic animal intrusion.
4. Disruption of substantial amounts of adjacent upland vegetation where such vegetation plays a critical role in supporting riparian-dependent wildlife species or aids in stabilizing steep slopes, which reduces erosion and sedimentation potential.
5. Construction activity that disrupts critical time periods (nesting or breeding) for fish and other wildlife species.

Approximately 0.36 acre (0.4 percent of the community present) of permanent impacts and 1.70 acres (2.0 percent) of temporary impacts would occur to arroyo willow thickets, a riparian plant community, within the Project site (Table 5.2.2-1). Within the transmission line corridor study area, permanent impacts would be less than 0.01 acre (0.05 percent of the community present) and temporary impacts would be 0.49 acre (16.8 percent of the community present) (Table 5.2.2-1). Because the impacts would occur to a small percentage of the total riparian habitat available, impacts to riparian habitat are expected to be less than significant, with the implementation of best management practices, avoidance measures, and mitigation measures. In addition, these areas may be subject to CDFW jurisdiction under Section 1600 of the State Fish and Game Code. Should these areas be determined to be under CDFW jurisdiction, mitigation measures would be determined in a Lake or Streambed Alteration Agreement with CDFW.

[111] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

Impacts to State-Designated Sensitive Plant Communities

Santa Barbara County considers the following impacts to riparian habitats as potentially significant:[112]

1. Habitat fragmentation.
2. Removal of understory.
3. Alteration to drainage patterns.
4. Disruption of canopy.
5. Removal of a significant number of trees that would cause a break in the canopy or disruption of the animal movement in and through the woodland.

Regarding native grasslands, the County Thresholds and Guidelines manual states that "removal or severe disturbance to a patch or patches of native grasses less than 0.25 acres, clearly isolated and not part of significant native grassland, is considered insignificant."[113]

State sensitive plant communities at the Project site include tanoak forest and purple needle grass grassland, as well as sawtooth golden bush scrub within the mixed disturbed grassland communities. No sensitive plant communities were observed in the transmission line corridor study area, so no impacts would occur in that area. Impacts to plant communities considered to be of particular value by the County are discussed in Section 5.2.3.5 below.

Tanoak forest. The Project would result in significant impacts to the tanoak forest. Tanoak forest grows on the steep slopes and hilltops, upstream of Cañada Honda Creek near WTG 15, adjacent to WTG 27, and at WTG 28. Construction of the Project is anticipated to include 3.04 acres (6.4 percent of the community) of temporary impacts and 0.53 acre (1.1 percent) of permanent impacts to tanoak forest in the main Project area (Section 7.0: Figure 5.2.3.2-1). The majority of permanent impacts stems from the location of WTG 28 in the eastern portion of the wind farm area where the service road and turbine placement necessitates the removal of dense forest, encompassing about 390 trees. As a result, habitat fragmentation, the removal of understory, and disruption of the canopy would occur. Tanoak was not observed along the transmission corridor. Permanent disturbance is considered complete removal of mature trees. Temporary impacts may include pruning, trimming, and intrusion of up to 20 percent into the critical root zone of trees. Section 5.3, *Mitigation Measures*, describes compensation for temporary and permanent impacts.

Purple needle grass grassland. This plant community is currently mapped in the southern ridge and southern boundary with VAFB of the wind farm area. The Project currently proposes 0.56 acre (11.2 percent of the community) of temporary impacts and 0.02 acre (0.4 percent) of permanent impacts to purple needle grass grassland (Section 7.0: Figure 5.2.3.2-1). Because permanent impacts would be less than the threshold of 0.25 acre, and occur in isolated areas of this community, the Project impacts to purple needle grass grassland can be reduced to below the level

[112] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

[113] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

of significance with the implementation of mitigation measures. Nonetheless, further study of the mixed disturbed grassland communities is recommended in order to fully quantify potential impacts to any purple needle grass grassland that has not yet been mapped.

Sawtooth golden bush scrub. This plant community occurs on gentle slopes within the mixed disturbed grassland communities throughout the Project area, intergrading with the California Annual and Perennial Grassland Macrogroup. It is often found on the edge of California sagebrush scrub. Further study of the mixed disturbed grassland communities is recommended in order to fully quantify potential impacts to sawtooth golden bush scrub. However, impacts to this community are anticipated to be less than significant with mitigation measures. Sawtooth golden bush scrub is a transitional community that often colonizes disturbed areas before they succeed into sagebrush scrub, and is thus likely to respond to restoration efforts. In addition, a large portion of the impacts to mixed disturbed grassland communities are expected to occur in areas with higher concentrations of non-native grass species.

5.2.3.3 Impacts to Federal Wetlands

Impacts to wetlands may be considered significant by Santa Barbara County if there is a net loss of important wetland area or wetland habitat value, either direct or indirect impacts to wetland vegetation, degradation of water quality, or if impacts would threaten the continuity of wetland-dependent animal or plant species considered to have a potentially significant effect of the environment. In addition, if impacts substantially interrupt wildlife access, use and dispersal in wetland areas, they would be considered potentially significant.[114]

Areas subject to the jurisdiction of USACE pursuant to Section 404 of the Federal Clean Water Act could be authorized pursuant to Nationwide Permit for approximately 18 stream crossings within the Project area and 10 crossings in the transmission line corridor (Section 7.0: Figure 5.2.3.3-1, *Impacts to NWI and Blueline Drainages*). Some features may be subject to USACE, CDFW, or Santa Barbara County jurisdiction based on the presence of riparian vegetation.

Within the Project area, permanent impacts to NWI mapped wetlands are anticipated to be 0.3 acre (0.7 percent of the total wetlands on site), and temporary impacts are anticipated to be 0.7 acre (1.7 percent) (Table 5.2.3.3-1, *Impacts to NWI Wetlands*). Within the transmission line corridor study area, temporary impacts to NWI mapped wetlands are anticipated to be 0.17 acre (15.3 percent of the wetlands in the study area), and no permanent impacts are anticipated (Table 5.2.3.3-1). Linear impacts to NHD mapped bluelines in the Project area would be 0.04 mile of permanent alteration, and 0.18 mile of temporary disturbance. Linear impacts to NHD mapped bluelines in the transmission line corridor study area would be 0.16 mile of temporary disturbance.

[114] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

TABLE 5.2.3.3-1
IMPACTS TO NWI WETLANDS

	Wind Farm Area Wetland Disturbance (acres)		Transmission Line Corridor Study Area Wetland Disturbance (acres)	
Wetland Type	**Permanent**	**Temporary**	**Permanent**	**Temporary**
Freshwater Emergent Wetland	0.00	0.00	0.00	0.03
Freshwater Forested/Shrub Wetland	0.07	0.37	0.00	0.09
Freshwater Pond	0.00	0.00	0.00	0.02
Riverine	0.26	0.33	0.00	0.03
TOTAL	**0.33**	**0.70**	**0.00**	**0.17**

Due to the limited occurrence of wetland and aquatic habitats in the Project area, direct loss of fish is not expected, and direct loss of amphibians would involve a small number of common species. Potentially significant impacts may occur because of direct and indirect impacts to wetland vegetation, degradation of water quality, and interruption of wildlife access. However, these may be reduced to below the level of significance with best management practices, appropriate avoidance measures, and mitigation measures. Indirect impacts to wetlands result from disturbances that occur in areas outside of the wetlands, such as uplands, other wetlands, or waterways. These include influx of surface water and sediments, fragmentation of wetland from a contiguous wetland complex, loss of recharge area, or changes in local drainage patterns.[115] Under local implementation, wetland protection can be provided by a watershed management plan. As a result, with the implementation of mitigation measures, impacts to federally protected wetlands and waterways are expected to be less than significant.

5.2.3.4 Impacts to Migratory Corridors and Nursery Sites

Migration corridors such as the corridors mapped by the California Habitat Connectivity Project, the Pacific Flyway, and IBAs are located within and adjacent to the Project area. Of the two mapped corridors located within the Project area, approximately 89.66 acres of the Santa Ynez Mountains West Natural Landscape Block (4.0 percent of this area within the Project site) would be temporarily disturbed with 25.25 acres permanently disturbed (1.1 percent of this area within the Project site), and 34.03 acres of the Santa Ynez Mountains West – Casmalia Hills Essential Connectivity Area (15.4 percent of this area within the Project site) would be temporarily disturbed with 0.04 acres (0.02 percent of this area within the Project site) permanently disturbed (Section 7.0: Figure 5.2.3.4-1, *Impacts to Connected Habitat*). Given the large area of natural landscapes and corridors in the local vicinity of the Project, and the relatively small percentage of the mapped corridors that would be disturbed, wildlife movement is not anticipated to be affected by the Project, and impacts to migratory corridors would be less than significant, with the implementation of mitigation measures.

In addition, approximately 0.3 mile of riparian connections would be temporarily disturbed, with 0.05 mile permanently disturbed. The riparian connections mapped coincide with the riparian habitats and wetlands discussed above (Section 5.2.3.2, Impacts to Riparian or Other State

[115] "Wetland Disturbance and Impact." 1998. Maryland Department of the Environment, Baltimore, MD. Available at: http://www.mde.state.md.us/programs/Water/WetlandsandWaterways/AboutWetlands/Pages/disturbance.aspx

Sensitive Plant Communities, and Section 5.2.3.3, Impacts to Federal Wetlands). Like the riparian habitats and wetlands discussed above, impacts to riparian connections are expected to be less than significant, with the implementation of mitigation measures.

Birds were recorded at the site flying up to 150 feet under light winds (>7 mph) less than 100 feet for moderate winds (8–15mph) and less than 30 feet above ground level during strong winds (Appendix A-20). Turbines and blades are estimated to reach 503.6 feet in height, and therefore birds were observed within potential blade range. The majority of bird species that were observed within the Project area, with the exception of non-native species such as European starling and house sparrow, are protected under the MBTA.[116] Migratory birds use the site due to Natural Landscape Blocks, the Pacific Flyway, and IBAs near the Project area. Disruption of foraging areas and access to food sources, limits or fragmentation of range and movement, abandonment of the area by animals, and potential disturbances during a critical time in the life cycle of an important animal would be reduced with mitigation measures and the presence of large areas of suitable habitat available within and adjacent to the Project site. As a result, with the implementation of mitigation measures, impacts to migratory birds protected under the MBTA are expected to be less than significant.

Similarly, less than significant impacts to migratory and resident bats are expected to occur, with the implementation of mitigation measures. Disruption of foraging areas and access to food sources, limits or fragmentation of range and movement, abandonment of the area by bats, and potential disturbance during a critical time in the life cycle of an important bat would be mitigated to below the level of significance.

There are no fish nursery sites that were observed within the Project area as a result of multiple site surveys between 2002 and 2017, and thus no impacts are expected to nursery sites.

5.2.3.5 Conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

Species of Particular Value and Other Locally Important Species

Impacts to locally important species, including those considered to be of particular value by the County, are discussed above in Section 5.2.3.1, *Federally and State-listed, Candidate, and Locally Important Species*.

[116] U.S. Fish and Wildlife Service, Department of the Interior. 1 November 2013. "General Provisions; Revised List of Migratory Birds." *Federal Register, 78*(212). Accessed September 2017. Available at: https://www.fws.gov/migratorybirds/pdf/policies-and-regulations/MBTAListofBirdsFinalRule.pdf

Ecological Communities of Greatest Interest

Santa Barbara County considers the following impacts to oak woodlands and forest as potentially significant:[117]

1. Habitat fragmentation.
2. Removal of understory.
3. Alteration to drainage patterns.
4. Disruption of the canopy.
5. Removal of a significant number of trees that would cause a break in the canopy or disruption in animal movement in and through the woodland.

Ecological communities that are considered to be of greatest interest by Santa Barbara County at the site include coast live oak woodland, tanoak forest, and purple needle grass grassland. Impacts to tanoak forest and purple needle grass grassland are discussed in Section 5.2.3.2, *Riparian or Other State-Designated Sensitive Plant Communities*.

Coast live oak woodland occurs along the adjacent slopes that follow San Miguelito Creek northward, parallel to San Miguelito Road and in the eastern portion of the wind farm area northeast of Sudden Peak. The Project is expected to incur 0.88 acre (0.5 percent of the community) of temporary impacts and less than 0.01 acre of permanent impacts (0.01 percent) to coast live oak in the wind farm area. The transmission corridor is expected to result in 4.45 acres (31.3 percent of the community in the study area) of temporary impacts and less than 0.01 acre (0.1 percent) of permanent impacts to coast live oak woodland. Permanent disturbance is considered complete removal of mature trees. Temporary impacts may include pruning, trimming, and intrusion of up to 20 percent into the critical root zone of trees. The majority of coast live oak woodland to be removed occurs in isolated fragments along the side of pre-existing roads, as well as on one failing slope that could be considered a safety hazard (Section 7.0: Figure 5.2.3.2-1 and Figure 5.1.5-1). Considering the small acreage of coast live oak woodland to be removed and its location, significant habitat fragmentation, removal of understory, alteration of drainage patterns, disruption to the canopy, or disruption to animal movement through the woodland would not be expected. The individual oak trees that constitute the coast live oak woodland are discussed below. Section 5.3, *Mitigation Measures*, describes compensation for temporary and permanent impacts.

Protected Oaks and Individual Native Trees

Approximately 651 individual oaks and other native trees above 6 inches DBH protected under the Santa Barbara County Comprehensive Plan policy goals would be removed as part of the Proposed Project (Table 5.1.5-1 and Section 7.0: Figure 5.1.5-1). Most of the trees to be removed are associated with the ecological communities discussed above (tanoak forest and coast live oak woodland). Of these trees to be removed, approximately 301 are coast live oaks, 333 are tanoak, 6 are toyon, 5 are pine, 2 are canyon live oak, 1 is arroyo willow, 1 is red willow, 1 is box elder, and 1 is Monterey cypress. Therefore, impacts to individual oaks and other native trees are expected to be significant, and would require compensatory mitigation.

[117] County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

Santa Barbara County Coastal Land Use Plan

The Santa Barbara County Coastal Land Use Plan states that a permit is required if the WTGs are built in the Coastal Zone, or if turbine blades cross the coastal zone boundary line.[118] The Project was specifically designed to avoid any WTGs or turbine blades crossing the Coastal Zone boundary. A small segment of access roads shall be placed within the Coastal Zone consisting of approximately 3.42 acres of permanent impacts and 10.31 acres of temporary impacts (Section 7.0: Figure 5.2.3.5-1, *Impacts in the Coastal Zone*). Within the Coastal Zone impact area, the primary plant communities are tanoak forest, a State sensitive community, and mixed disturbed grasslands. One rare plant, the globose La Purisima manzanita, was observed in January 2018 during a tree inventory survey (Figure 5.1.5-1). In addition, approximately 40 coast live oak trees, 73 tanoak trees, and 1 toyon would be removed in the Coastal Zone. Therefore, a Coastal Development Permit shall be required and obtained. A Coastal Development Permit Application for this Project was submitted on February 14, 2018.

5.2.3.6 Habitat Conservation Plans and Natural Community Conservation Plans

Habitat Conservation Plans (HCP) and Natural Community Conservation Plans (NCCP) are absent within the Proposed Project site and will not experience impacts from the Proposed Project. Therefore, the Proposed Project would not result in impacts to biological resources in relation to a conflict with an applicable HCP or NCCP.

5.3 RECOMMENDED MITIGATION MEASURES

This section of the BRTR identifies feasible measures capable of avoiding or reducing the significant impacts that would result from reasonably foreseeable development of the Proposed Project. These mitigation measures include actions to avoid or reduce any significant impacts from the Proposed Project to rare, threatened, and endangered species and other special status and locally important species; goals and policies related to the conservation of biological resources articulated in the Conservation Element of the Santa Barbara County Comprehensive plan; areas potentially subject to the jurisdiction of the USACE pursuant to Section 404 of the Clean Water Act; riparian and other state-designated sensitive habitats, including those requiring a Lake or Streambed Alteration Agreement pursuant to Section 1600 of the State Fish and Game Code; special-status species and designated critical habitat; native resident or migratory species of fish and wildlife; and federal, state, and regional conservation plans.

The applicant understands that the previous mitigation measures approved in 2009 shall be put in place. The following mitigation measures are suggested changes applicable to specific transformations of the Project. There was a substantial downgrading of turbines proposed for the Project area, which shall include a smaller footprint than the temporary and permanent impacts proposed in 2009.

[118] County of Santa Barbara Department of Planning and Development. [Adopted 1982] Republished 2014. *Coastal Land Use Plan, Santa Barbara County Comprehensive Plan*. Accessed September 2017. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/CoastalPlan.pdf

5.3.1 Mitigation Measures for Special Status Species

BIO-1: Worker Education and Awareness Program. The Applicant shall fund a County-approved biologist to develop and implement a Worker Education and Awareness program (WEAP) specific to the Project. The program shall be presented in electronic video format to all individuals involved in the construction and O&M phases of the Project. The program shall include seven key areas of information related to sensitive habitats and species and any additional information deemed appropriate by the biologist to meet or exceed the levels of avoidance of impacts to which the Project applicant has committed:

a. The natural history, including sensitive species and habitats, shall be described as well as the current status, reasons for decline, and protection measures relevant to the species and habitats.
b. Contact points shall be provided for workers to report sightings of sensitive biological resources such as Gaviota tarplant, El Segundo blue butterfly, active bird nests, badger dens, and roosting bats and raptors in the vicinity of Project facilities.
c. Workers shall be provided with photographs of sensitive biological resources including sensitive wildlife and plant species, den and burrow entrances, and nest structures. Qualified biologists familiar with El Segundo blue butterfly and Gaviota tarplant shall provide a brief educational program for all personnel prior to initiation of any construction activities within the Project site. The program shall include identification of El Segundo blue butterfly, its host plant, coast buckwheat, and Gaviota tarplant; the general provisions and protections afforded to El Segundo blue butterfly and Gaviota tarplant by the ESA; and measures to be implemented during the Project to avoid and minimize adverse effects to El Segundo blue butterfly and Gaviota tarplant.
d. Workers shall be informed of the various Project tasks that require biological surveys and monitoring for resource protection.
e. Workers shall be provided with a photograph or description of the markers for active bird nests, trees, salvaged topsoil piles and windrows, or other mitigation areas, so that they shall know these are not to be disturbed without a biological monitor present.
f. Workers shall be provided with photographs of invasive weeds and instructed to report to the biologist(s) any new populations observed near Project facilities.
g. Workers shall be informed not to litter. All trash shall be picked up and removed from the construction sites at the end of each day.
h. Workers shall be informed to obey a speed limit of 15 miles per hour while traveling on the Project site to avoid collisions with wildlife.
i. Workers shall avoid driving over or otherwise disturbing areas outside the designated construction areas.

Plan Requirements: The Applicant shall submit the WEAP to the County for review and approval 30 days prior to implementation. All workers, contractors, and visitors shall attend the WEAP prior to entering the Project site and performing any work. The Applicant shall provide copies of the training attendance sheets to County staff as a record of compliance with this measure on a monthly basis. Trained crew members shall receive a sticker for their hardhat from the County Environmental Quality Assurance Program (EQAP) Inspector demonstrating WEAP training.

Timing: The WEAP shall be reviewed and approved by the County prior to zoning clearance. Implementation of WEAP training shall occur prior to the start of construction and as new crew members are added to the Project.

MONITORING: The County shall ensure compliance with the WEAP throughout all phases of construction and operation by review of attendance sheets and hardhats, inspection of the site, and interviewing workers, as appropriate.

BIO-2: Ground Disturbance. The Applicant shall minimize the amount of disturbance, to meet or exceed the commitments made in the CUP application, including in areas devoted to WTGs; power line poles; temporary and permanent access roads; stockpiles; staging, parking and lay down areas; areas where spoil shall be used to control erosion, build new roads, and improve road shoulders; and areas for appurtenant facilities. Construction activities shall avoid sensitive areas, such as riparian zones, forests, etc., where feasible. Construction shall avoid all wetlands regulated by Santa Barbara County, CDFW, and the USACE to the greatest extent feasible.

Consistent with the limits of grading identified in the conceptual grading plan, parking, lay down, storage areas, and other sites of surface disturbance shall be located to maximize use of previously disturbed areas or in annual grassland. Where feasible and consistent with requirements for fire safety, vegetation shall be mowed rather than graded to keep root structures in place and thereby facilitating future revegetation. A biologist shall conduct a sweep of the site before mowing or removing vegetation and monitor for special status species during work activities. Permanent access roads shall follow routes used for construction access to reduce the amount of new road construction. Vehicles and equipment access shall follow marked routes, and indiscriminate cross-country vehicle travel shall be prohibited.

Plan Requirements: Limits of ground disturbance, grading, access, and areas for installation of facilities shall be clearly shown on Project building plans.

Timing: Building plans shall be submitted by the Applicant and reviewed and approved by Santa Barbara County Planning and Development (P&D) staff prior to approval of the Land Use Permit for each construction phase.

MONITORING: P&D staff shall review Project building plans and inspect the Project site as needed during construction. P&D staff shall ensure the approved Project plans are consistent with the Site Restoration and Revegetation Plan. P&D staff shall monitor construction and revegetation activities to verify compliance and ensure requirements are fully implemented.

BIO-3: Pre-construction Plant Surveys. The Applicant shall retain a County-approved botanist to conduct appropriately timed pre-construction surveys for sensitive native plant species, including lichens, in all areas to be disturbed, including power line pole locations and access roads. In the unlikely event that a federally listed plant species, other than Gaviota tarplant impacts evaluated in the EIR, is found on or near an area to be disturbed by the Project, the USFWS shall be consulted and if needed, additional protection measures recommended by the USFWS shall be implemented. In impact areas that where adjustment of disturbance area boundaries are not feasible, for every one (1) acre loss of a CNPS-listed or locally rare species that shall be removed within the Project, three (3) acres shall be re-established by collection of seeds or other propagules from the plants

during the appropriate time of year.[119] The seed or propagules shall be used for restoration in the immediate area (if suitable habitat continues to be present), or on a nearby, suitable location. In the case of lichens with regional significance, a qualified lichenologist shall recommend feasible methods to relocate and re-establish the lichens at a suitable nearby site, if avoidance is not feasible. Methods may include collecting, moving, and emplacing a sample of substrate supporting the lichen at a suitable site nearby. The upper 3 to 6 inches of soil (topsoil and seedbank) shall be salvaged in all areas where the terrain allows it. Topsoil shall be windrowed and marked to keep it separated from other spoil. Topsoil piles shall be stabilized by covering the windrows or by spraying with hydromulch and binder to protect the soil from wind erosion. Salvaged topsoil shall be spread over all restored areas.

Plan Requirements: The detailed grading plan, showing the limits of the grading, shall be reviewed and approved by County staff prior to approval of the tentative Project map. If surveys indicate that replacement of sensitive native plants is necessary, the Applicant shall prepare a detailed mitigation plan and submit it to the County for approval. The Applicant shall file a performance security with the County to complete restoration.

Timing: The mitigation plan shall be approved by the County prior to zoning clearance for the first and all subsequent construction phases.

MONITORING: County staff shall inspect the Project plans and site as well as review the mitigation plan to ensure compliance with this measure as appropriate. County staff shall monitor construction and revegetation activities to ensure the plan is fully implemented.

BIO-4: Gaviota Tarplant Disturbance. The Applicant shall retain a qualified botanist approved by the County to oversee flagging of the perimeter of all approved work areas in Gaviota tarplant habitat. Gaviota tarplant habitat shall include all areas of previously identified habitat plus any additional areas that are discovered during preconstruction surveys prior to ground disturbance. Gaviota tarplant shall be assumed to be present within all areas where it had been previously mapped, even if it is not evident during preconstruction surveys (because seedbank may be present that could germinate and establish under different environmental conditions). The Project design shall continue to be refined to minimize Gaviota tarplant habitat disturbance, the size of temporary excavation areas, and the size of areas where permanent loss shall occur, in such a manner that is consistent with or reduces the level of impact associated with the Applicant's conceptual grading plan. A determination shall be made of the total areas of (1) permanent habitat loss, (2) temporary excavations, and (3) surface disturbance for the construction phase of the Project. CDFW will be consulted regarding an appropriate mitigation strategy, and an Incidental Take Permit pursuant to CESA shall be obtained if required. Compensatory mitigation for Gaviota Tarplant shall include a Habitat Protection Plan. In consultation with the County and CDFW, an Environmental Quality Assurance Program (EQAP) shall also be developed. Examples of the measures included in the Mitigation and Monitoring plan may include the following:

- Seed collection procedures
- Translocating of individual plants

[119] California Department of Parks and Recreation. September 2010. California Coastal Trail – Gaviota Segment Final Mitigated Negative Declaration. Available at: http://www.parks.ca.gov/pages/980/files/Gaviota%20Coastal%20Trail%20FINAL%20Mitigated%20Neg%20Dec%209-21-07.pdf

- Preservation and management of stockpiled material
- Soil stabilization, reseeding, and restoration of habitat

Performance criteria include no evidence of soil erosion and presence of a viable population. Any temporary impacts to Gaviota tarplant individuals shall be restored on a 2:1 basis and achieved by the fifth year of operation.

Plan Requirements: The detailed grading plan, showing the limits of the grading shall be reviewed and approved by County staff prior to approval of the final plans. The Applicant shall prepare a detailed mitigation plan that conforms to the above requirement and submit it to the County for approval. The Applicant shall file a performance security with the County to complete restoration. A separate mitigation plan for Gaviota tarplant is likely to be required by the CDFW, which would address ongoing impacts during the operations phase of the Project, as well as the more extensive impacts that would result from Project construction.

Timing: The mitigation plan shall be approved by the County prior to zoning clearance for the first and all subsequent construction phases.

MONITORING: County staff shall inspect the Project plans and site as well as review the mitigation plan to ensure compliance with this measure as appropriate. County staff shall ensure the flagging of the perimeter of all approved work areas in Gaviota tarplant habitat prior to ground disturbance and shall monitor construction and revegetation activities to ensure the plan is fully implemented.

BIO-5A: Kellogg's and Mesa Horkelia Habitats. For Kellogg's and mesa horkelia occupied habitats identified during pre-construction surveys (see Mitigation Measure BIO-2), the Applicant shall minimize plant removal to the extent feasible and facilitate *in situ* conservation of extant Kellogg's and mesa horkelia. The seedbank shall be salvaged and stockpiled separately from other spoil along roads and adjacent to other facilities constructed in Kellogg's and mesa horkelia habitat as described for Gaviota tarplant. Salvaged stockpiles shall be covered or sprayed with hydromulch and binder to crust the surface to minimize soil loss to wind erosion. Salvaged seedbank shall be spread over restored areas as described for Gaviota tarplant except that a normal mixture of mulch and binder shall be used. If the area is within Gaviota tarplant habitat, methods for the latter shall be used.

Plan Requirements: The detailed grading plan, showing the limits of the grading shall be reviewed and approved by County staff prior to approval of the tentative Project map. If surveys indicate that replacement of horkelia is necessary, the Applicant shall prepare a detailed mitigation plan and submit it to the County for approval. The Applicant shall file a performance security with the County to complete restoration.

Timing: The mitigation plan shall be approved by the County prior to zoning clearance for the first and all subsequent construction phases.

BIO-5B: La Purisima manzanita (globose subspecies). For globose La Purisima manzanita individuals identified during pre-construction surveys (see Mitigation Measure BIO-2), the Applicant shall minimize avoid removal to the extent feasible and facilitate *in situ* conservation of extant the globose La Purisima manzanita. During pre-construction surveys, the globose La Purisima manzanitas shall be flagged identified on the grading plan, and a 25-foot buffer established in accordance with approved Santa Barbara County mitigation measures for this manzanita species.[120]

Plan Requirements: The detailed grading plan, showing the limits of the grading shall be reviewed and approved by County staff prior to approval of the tentative Project map. If surveys indicate that replacement of the globose La Purisima manzanita is necessary, the Applicant shall prepare a detailed mitigation plan and submit it to the County for approval. The Applicant shall file a performance security with the County to complete restoration.

Timing: The mitigation plan shall be approved by the County prior to zoning clearance for the first and all subsequent construction phases.

MONITORING: County staff shall inspect the Project plans and site as well as review the mitigation plan to ensure compliance with this measure as appropriate. County staff shall monitor construction and revegetation activities to ensure the plan is fully implemented.

BIO-6: General Mitigation Measures for Wildlife Species

BIO-6a: Pre-construction Wildlife Surveys. The Applicant shall retain a County-approved biologist to perform a wildlife survey prior to the excavation of the WTG sites to define avoidance and minimize direct loss of wildlife. The biologist shall survey the surrounding area out to a 300-foot radius from the turbine site, the turbine footings, access roads, and staging, parking, and lay down areas prior to grading. Surveys shall be completed within three days before the start of initial vegetation clearance or ground disturbance in any affected area. If any wildlife species are found, they shall be relocated to similar habitat at least 300 feet away from construction activity. Relocation procedures shall be applied based on the results of pre-construction surveys.

The Designated Biologist shall hard release captured special status species into suitable habitat outside and adjacent to the Project area. Hard release is defined as a direct release of the animal without providing additional protection.

Plan Requirements: This condition shall be printed on all Project plans. On a monthly basis, the Applicant shall report compliance with this measure in writing to County staff on survey and relocation activities.

Timing: This measure shall be implemented throughout all ground disturbances for the first and all subsequent construction phases.

MONITORING: County staff shall inspect the Project plans and site, as well as review the monthly reports to ensure compliance with this measure, as appropriate.

[120] County of Santa Barbara Planning and Development. 3 December 2013. Final Mitigated Declaration Richardson Tentative Parcel Map. Available at: http://sbcountyplanning.org/environmental/Documents/Richardson%20TPM.pdf

Mitigation Measure BIO-6b: Fencing. To minimize the amount of disturbance to wildlife habitat, the Applicant shall clearly define the environmentally sensitive areas in the Project area. Project boundaries shall be clearly marked with fencing or staking that shall be replaced as needed.

Plan Requirements: The detailed fencing plan, showing the location of required fencing shall be reviewed and approved by County staff prior to approval of the tentative Project map. This condition shall be printed on all Project plans.

Timing: The detailed fencing plan, showing the location of required fencing shall be reviewed and approved by County staff prior to approval of the tentative Project map.

MONITORING: County shall inspect the Project plans and site, to ensure compliance with this measure as appropriate. County staff shall monitor construction monitoring reports to ensure the plan is fully implemented.

BIO-6b: Biological Monitoring. The Applicant shall fund a County-approved, Environmental Monitor during construction to monitor construction activities and to ensure compliance with all mitigation measures. The Environmental Monitor shall be present on site during all vegetation removal and during all of the initial ground disturbance activities for all aspects of the Project, and shall regularly inspect the Project site as needed after the initial ground disturbances to ensure that all mitigation measures are being implemented. The Environmental Monitor shall ensure that wildlife do not become entrapped in the excavations during installation of the WTGs and associated underground collection system from the turbines to the substation (i.e., open trenches). Safeguards shall be implemented during daytime periods of non-activity and overnight, such as a placing a platform over the entire excavation site, flush with the ground surface, installing escape ramps in trenches, or exclusionary fencing. The Environmental Monitor shall be responsible for ensuring these safeguards are in place on a daily basis. Should relocation be required, construction shall be halted until the Designated Biologist could be deployed to the site.

Plan Requirements: The Environmental Monitor shall work closely and cooperatively with County staff and County's consultants on a daily basis or as needed.

Timing: The Environmental Monitor shall be designated prior to the start of construction and shall be retained throughout all construction phases.

MONITORING: County staff shall confirm that the Environmental Monitor is employed prior to start of construction and continues throughout all construction phases.

BIO-6c: Monitoring Report. On a bi-weekly basis, the County-approved, Environmental Monitor shall provide the County with a Construction Monitoring and Biological Resources Mitigation Report. This report shall include a description of the activities that have occurred onsite, wildlife species encountered, relocation efforts, wildlife mortalities and injuries, violations or issues with construction activities, and any Project-related resolutions.

Timing: The Environmental Monitor shall submit the Construction Monitoring Report on the first and third week of each month to detail the previous two week's activities. This report may be submitted electronically.

Plan Requirements: The Applicant shall consult and obtain any necessary permits from the appropriate regulatory agencies and provide copies to County staff. On a bi-weekly basis, the Applicant shall report compliance with this measure in writing to County staff on survey and monitoring activities.

MONITORING: County staff shall confirm that the Environmental Monitor is submitting the required Construction Monitoring Report throughout all construction phases.

BIO-7 Sensitive Wildlife Species

BIO-7a: Pre-construction Surveys and Conservation of El Segundo Blue Butterfly. The applicant shall retain a qualified, County-approved entomologist to conduct directed surveys for the El Segundo blue butterfly during the flight season (approximately mid-June to August) within all areas of coast buckwheat known on the Project site, including areas that would be affected by construction, operation, or maintenance of the Project. The surveys shall be documented including a description of methodology, description and maps of the surveyed areas, and identification of locations of any El Segundo blue butterfly observed within the proposed Project area (including maps and GPS coordinates). Conditions of the sites where El Segundo blue butterfly are located shall be described by the entomologist including vegetation, soils, exposure, and other factors that may influence the occurrence of El Segundo blue butterfly at that site.

A plan to restore and/or enhance El Segundo blue butterfly habitat shall be prepared by a County-approved botanist with input from a County-approved entomologist. The goal of the plan shall be to establish coast buckwheat with other coastal scrub species on areas having sandy soils and judged suitable for this type of restoration or enhancement by the Project biologist and County-approved entomologist. The restoration or enhancement would preferably occur in or adjacent to an area of existing habitat supporting coast buckwheat on sandy soils, or it could occur in an area disturbed by the Project. The plan shall identify sites to be restored or enhanced and the approach to restoration and enhancement, including proposed density of coast buckwheat plants, which shall be generally consistent with the density of coast buckwheat in observed El Segundo blue butterfly habitat in the Project region, and performance criteria shall reflect that density. Restoration or enhancement shall be conducted on an acre-for-acre basis. If El Segundo blue butterfly has been found on the site, the plan shall be submitted to USFWS for approval prior to implementation.

Suitable El Segundo blue butterfly habitat adjacent to construction areas shall be clearly marked for avoidance (e.g., by orange plastic construction fencing). The delineation shall be directed and approved by the County-approved entomologist.
Plan Requirements: This condition shall be printed on all Project plans. On a monthly basis, the Applicant shall report compliance with this measure in writing to County staff on surveying and monitoring activities.

Timing: This measure shall be implemented during the first and all subsequent Project phases.

MONITORING: County staff shall inspect the Project plans and site as well as review the monthly reports for compliance with this measure as appropriate.

BIO-7b: American Badger. The Applicant shall retain a County-approved biologist to survey, prior to construction, for badger dens in the Project area, including areas within 250 feet of all Project facilities, WTG sites, and access roads. The survey shall be performed regardless of the season. If badger dens are found, each den shall be classified as inactive, potentially active, or active.

Inactive dens shall be excavated by hand and backfilled to prevent reuse by badgers. Potentially and active dens shall be monitored for three consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) at the entrance. If no tracks are observed in the tracking medium after three nights, the den shall be excavated and backfilled by hand. If tracks are observed, the den shall be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage the badger from continued use. The den shall then be excavated and backfilled by hand to ensure that no badgers are trapped in the den.

Plan Requirements: This condition shall be printed on all Project plans. On a monthly basis, the Applicant shall report compliance with this measure in writing to County staff on survey and burrow excavation activities.

Timing: This measure shall be implemented throughout the first and all subsequent construction phases.

MONITORING: County staff shall inspect the Project plans and site as well as review the monthly reports to ensure compliance with this measure as appropriate.

BIO-7c: Nesting Birds and Roosting Bats. The County-approved biologist shall conduct a study in the spring season prior to the onset of construction activities to assess the density of special status passerines, ground-nesting birds, raptors, and bats in areas of the Project site potentially subject to disturbance to support scheduling of construction activities, including vegetation removal, in a manner that complies with the MBTA. Wherever feasible, vegetation within temporary and permanent impact areas shall be removed outside the nesting season (February 1 to August 31). Plots shall be established in various habitats and checked at weekly intervals to monitor for new nests of ground-nesting birds that are sensitive species, including California horned lark, Southern California rufous-crowned sparrow, grasshopper sparrow, burrowing owls, raptors, and bats. The surveys shall be conducted as long as birds are nesting or bats are roosting in the Project area between February 1 and August 31. The surveys shall be discontinued when it is apparent that nesting has ceased for the season. Surveys for burrowing owls shall be conducted prior to construction in the Project area, including areas within 300 feet of all Project facilities, WTG sites, and access roads to the extent feasible. The survey shall be performed regardless of season of the year due to this species' presence in the winter.

If construction is to occur between February 1 and August 31, all sites to be disturbed shall be surveyed for ground-nesting and shrub-nesting birds, raptors, and bats immediately prior to construction in a given area. The emphasis shall be on California horned lark, burrowing owl, southern California rufous-crowned sparrow, grasshopper sparrow, raptors, and bats. If an active nest or roost is found, appropriate construction buffers shall be established based on the species and the activities planned as determined by the biological monitor in coordination with the County and CDFW as appropriate. Updated maps showing active nesting locations shall be distributed to the biological monitors, EQAP inspector, and crew foreman on a weekly basis. The nest or roost shall be monitored to record any potential construction-related effects. Construction activities, buffer zones, and timing may be modified as directed by the County to avoid impacts to nesting birds or bats.

The CDFW shall be consulted prior to any disturbance of bat maternity roosts. During the breeding season (February 1 through August 31) efforts shall be made and directed by the biological monitor to dissuade birds from using facilities and construction equipment. Active nests and roosts shall be

temporarily marked with flagging to warn workers; and monitored by a biologist to ensure that construction activities do not impact these sites. The applicant shall provide all workers on the site an updated map of active nests so that construction activities within the buffers can be avoided. Construction activities and timing shall be modified to avoid impacts to nesting avian species, and bat maternity roosts. Buffer areas shall be maintained until fledglings have left the nest and the biological monitor has cleared the area.

Frequent disturbance (every few days) may be initiated in some Project areas just prior to the nesting season to discourage nesting in the construction corridor.

During both the construction and O&M phases, a speed limit of 15 mph shall be established and enforced. The speed limit shall reduce the potential for loss of bird and bat species due to collisions with vehicles.

Plan Requirements: The Applicant shall consult and obtain any necessary permits from the appropriate regulatory agencies and provide copies to County staff. This condition shall be printed on all Project plans. On a bi-weekly basis, the Biological Monitor shall report compliance with this measure in writing to County staff on survey results, monitoring activities, and buffer area design.

Timing: This measure shall be implemented throughout the first nesting season from February 1 through August 31 for nesting species and year-round for burrowing owls and all subsequent nesting seasons during the construction phases. The Environmental Monitor shall submit the Monitoring Report on the first and third week of each month to detail the previous two week's activities. This report may be submitted electronically.

MONITORING: County staff shall inspect the Project plans and site as well as review the bi-weekly reports to ensure compliance with this measure as appropriate.

BIO-7d: California Condor Awareness. A qualified biologist with demonstrated knowledge of California condor identification shall be on site to monitor impacts to biological resources all construction activities within the Project area and assist the Project proponent in the implementation of the monitoring program.

Workers shall be trained on the issue of microtrash or litter during WEAP training, including what constitutes litter, its potential effects to California condors, and how to avoid the deposition of microtrash. In addition, daily sweeps of the work area shall occur to collect and remove trash. All spills of ethylene glycol shall be cleaned up immediately and a report documenting the actions taken to remediate the spill shall be provided to Santa Barbara County within five calendar days.

All California condor sightings in the Project area during construction shall be reported directly to the USFWS, CDFW, and Santa Barbara County.

BIO-7e: Pre-construction Surveys and Conservation of California Red-Legged Frog. The applicant shall retain a qualified, County-approved herpetologist to conduct pre-construction surveys for the species within all areas of critical habitat and suitable riparian habitat known on the Project site, including areas that would be affected by construction, operation, or maintenance of the Project, in accordance with the most current USFWS protocols.[121] The surveys shall be documented including

[121] U.S. Fish and Wildlife Service. August 2005. Revised Guidelines on Site Assessments and Field Surveys for the California Red-Legged Frog. Available at:

a description of methodology, description and maps of the surveyed areas, and identification of locations of any California red-legged frog observed within the proposed Project area (including maps and GPS coordinates). If the species is identified in the Project area at any time, the USFWS, CDFW, and the County shall be notified within 48 hours and the applicant shall consult with these agencies to determine the appropriate next steps. Construction monitoring and pre-construction surveys for the species shall be conducted in conjunction with other sensitive species monitoring as detailed in BIO-6. Best management practices and avoidance measures to prevent impacts to wetland habitats shall be implemented as detailed in BIO-11. In addition, habitat restoration of upland habitats for the species shall be implemented as part of BIO-10.

Plan Requirements: The Applicant shall consult and obtain any necessary permits from the appropriate regulatory agencies and provide copies to County staff. On a bi-weekly basis, the Applicant shall report compliance with this measure in writing to County staff on survey and monitoring activities.

Timing: This measure shall be implemented during the first and all subsequent Project phases.

MONITORING: County staff shall review the results of the survey reports, and confirm that the Environmental Monitor is submitting the required Construction Monitoring Report throughout all construction phases.

BIO-8: Bird and Bat Collisions with Turbines, Power Lines, or Met Towers

BIO-8a: Siting. The turbines shall be constructed with appropriate construction buffers as determined by the biological monitor in coordination with the County and CDFW based on the critical biological resources or nests identified in preconstruction surveys.

Plan Requirements: This measure shall be printed on all Project plans.

Timing: During the preconstruction and construction phases, the Applicant shall provide the County with weekly written survey results and buffer area design, which may be provided electronically. This measure shall be implemented throughout the first and all subsequent construction phases.

MONITORING: County staff shall inspect the Project plans and site and review the monthly reports to ensure compliance with this measure as appropriate.

BIO-8b: Appropriate Wind Turbine and Project-Element Design. To minimize the likelihood of collisions of birds the design features of all applicable Project related facilities shall comply with the Avian Power Line Interaction Committee *Reducing Avian Collisions with Power Lines: State of the Art in 2012*[122] or most recent guidelines in effect at the time of preparation of design drawings:

a) Underground (rather than overhead) collection lines shall be used to minimize perching locations and electrocution hazards to birds, except where undergrounding would create potential for serious erosion (e.g., crossing steep

https://www.fws.gov/arcata/es/amphibians/crlf/documents/20050801_CRLF_survey-guidelines.pdf

[122] Avian Power Line Interaction Committee. 2012. *Reducing Avian Collisions with Power Lines: State of the Art in 2012* Available at: http://www.aplic.org/uploads/files/15518/Reducing_Avian_Collisions_2012watermarkLR.pdf

canyons) or other more severe impacts that could be avoided with overhead lines.

b) All overhead collection lines shall be spaced to minimize the potential for raptor electrocution using the latest Avian Power Line Interaction Committee guidelines for line spacing.[123] Further, construction and work procedures shall be consistent with these guidelines.

c) WTGs with low rotational speed shall be used. Wind turbine blades shall not rotate when the WTG is not in operation.

d) All permanent meteorological towers shall be unguyed.

e) The Applicant shall coordinate with the Federal Aviation Administration (FAA) to minimize the number of WTGs and meteorological towers that require night lighting and to use lighting that would minimize attraction of birds and bats to the Project area. The Project shall utilize only red, or dual red and white strobe, strobe-like, or flashing lights, not steady burning lights, to meet FAA requirements for visibility lighting of WTGs, permanent met towers, and communication towers.

Plan Requirements: These measures shall be printed on Project plans. The Applicant shall provide the County final plans including design element plans for review and approval.

Timing: This measure shall be implemented throughout the first and all subsequent construction phases.

MONITORING: County staff shall inspect the Project plans and site to ensure compliance with this measure as appropriate.

BIO-9: Bird and Bat Conservation Strategy. A Bird and Bat Conservation Strategy (BBCS) shall be developed and implemented in an effort to reduce risks to bats and birds during construction and operation and provide maximum feasible mitigation for those impacts. These strategies shall take into consideration the guidelines of MBTA and BGEPA enforcement. The BBCS shall document Project-specific analyses, studies, and reasoning that describe the steps a developer could or has taken to mitigate for adverse impacts. It is highly suggested to coordinate with the FWS in the planning phase. Post construction monitoring efforts the developer intends to undertake shall be addressed for mortality and habitat effects.

Mitigation Measure BIO-9a: Adaptive Management Plan (AMP): The applicant shall develop an Adaptive Management Plan (AMP) to be activated in the event that bird or bat mortality exceeds specified threshold levels. The AMP provides a structured framework to guide response, in case Project operations result in excessive mortality that was unforeseeable at the time of EIR certification and Project approval.

[123] Avian Power Line Interaction Committee. 2012. *Reducing Avian Collisions with Power Lines: State of the Art in 2012* Available at: http://www.aplic.org/uploads/files/15518/Reducing_Avian_Collisions_2012watermarkLR.pdf

5.3.2 Riparian and State-Sensitive Natural Communities

BIO-10: Site Restoration and Revegetation. The Applicant shall retain a County-approved botanist to prepare and implement a site restoration and revegetation plan to be included in an all-encompassing Habitat Restoration and Monitoring Plan for all native habitats subject to temporary impacts during construction of the Proposed Project:

- Grassland communities shall be surveyed using standard MCV II protocols to determine and quantify the presence of native grasslands during spring pre-construction surveys. Native grassland communities shall be avoided to the greatest extent feasible.
- Top soil, and the seed bank it contains, shall be conserved on areas where soil is excavated such as WTG sites, access roads, and transmission pole locations.
- Woody material shall be removed from the soil surface and piled in an area that shall be out of the way during construction. The upper 6 to 8 inches of soil shall be scraped from the disturbance footprint and piled into a windrow in an area that shall not be disturbed during construction.
- Topsoil stockpiles shall be clearly marked for avoidance.
- Windrows shall be immediately protected from wind erosion by covering them or hydromulching them to protect the pile from wind erosion. Wind erosion protection shall be renewed as needed.
- Salvaged topsoil shall be re-spread on areas that shall be revegetated following construction. Salvaged topsoil versus subsoil shall be used for this purpose unless the location is very weedy.
- Where central coast scrub or central coast scrub/grassland mosaic has been removed by construction, revegetation shall include coast buckwheat in the seed mix.
- The restoration areas shall be monitored for a minimum of three years by a qualified botanist. Weed control shall be started within three months of planting, or earlier if weeds have begun to flower. Weeding shall proceed as frequently as necessary to prevent weeds from spreading off the Project site into the adjacent area and to prevent seed set. An effort shall be made to cut weeds before they develop seeds to minimize the spread of invasive weeds. Cut mustard shall be hauled off the site and disposed of where the toxins in the stems shall not affect other plants. Any new weed species not present in the Project area prior to construction shall be eradicated to the extent feasible. At the end of the three year monitoring period the qualified biologist shall prepare a monitoring report detailing the success of the restoration efforts and shall provide recommendations, if needed. This monitoring report shall be submitted to the County for review and approval.

Potential restoration sites for tanoak forest and coast live oak woodland have been proposed in disturbed grassland areas in the southeastern and northeastern portions of the Project area, respectively, but are subject to evaluation during the creation of the Habitat Restoration and Monitoring Plan (Section 7.0: Figure 5.3.2-1, *Potential Forest Restoration Sites*).

For tanoak forest, the north-facing slope, downslope of proposed grading for WTG 25, WTG 26, and WTG 27, may provide similar conditions as those found on WTG 27 and WTG 28 where tanoak is expected to be removed (Section 7.0: Figure 5.3.2-1). The elevation (between 1,490 and 1,700 feet) allows for plantings to take advantage of fog and/or cloud moisture that frequents the

higher elevations in the Project site, thus lessening the need for irrigation. The restoration area would be close to existing tanoak trees, facilitating connectivity over time. Another area with similar north-facing slope conditions is east of Sudden Peak and south of WTG 28; the southeastern most corner of the Project area. The primary land use in this area is rangeland and cattle frequent this area. This area is part to the federally listed California red-legged frog's critical habitat and is also within the Coastal Zone. Restoration of tanoak in the upland areas may enhance downstream condition for California red-legged frog. Tree restoration in this area, if considered, shall be planned and designed in coordination with USFWS and the Coastal Commission.

Potential restoration sites for coast live oak are present on the northeast portion of the main Project area (Section 7.0: Figure 5.3.2-1). There are several areas adjacent to established coast live oak woodland that has been disturbed. Placing coast live oak restoration areas next this woodland would restore tree cover, expand the existing woodland, and/or re-establish connectivity. A coast live oak potential restoration area may also include the southeastern most portion of the main project area. This area provides slopes where coast live oak does well and may expand existing woodland.

Plan Requirements: The detailed grading plan, showing the limits of the grading, shall be reviewed and approved by the County staff prior to approval of the tentative Project map. The Applicant shall prepare a restoration plan and submit it to County staff for approval. The plan shall be designed to address restoration during all phases of development of the site and shall include success criteria to determine whether restoration is proceeding as expected. The Applicant shall file a performance security with the County to complete restoration.

Timing: The plan shall be approved by the County prior to zoning clearance for the first and all subsequent construction phases. The plan shall be implemented during and after construction of the first and all subsequent Project phases. Seed application using a hydroseeder shall occur between October 1 and mid-December. Other methods of applying native seed (e.g., drill seeding, broadcast seeding followed by incorporation) can be implemented at other times, however it is preferable to apply the seed to coincide with the onset of the fall-winter rainy season. The monitoring report shall be submitted to the County at the end of the three year monitoring period.

MONITORING: County staff shall inspect the Project plans and site as well as review the restoration plan and final monitoring report for compliance with this measure as appropriate. County staff shall monitor construction and revegetation activities to ensure the plan is fully implemented.

BIO-11: Protection of Riparian Habitat, Creeks, and Wetlands. The applicant shall make every effort to minimize the area and degree of impact to state and federal wetlands and other Waters of the U.S. associated with placement of bridges, siting of the O&M facility, and other construction related tasks through a wetland avoidance plan and riparian habitat restoration plan.

BIO-11a: Riparian Habitat Restoration. During consultation with the USACE and CDFW for impacts to Honda Creek (and other crossings, if applicable), a determination shall be made regarding whether a riparian habitat restoration plan shall be required. If so, the Applicant shall retain a qualified biologist to prepare and implement a site-specific creek restoration plan to be included in an all-encompassing Habitat Restoration and Monitoring Plan such that there is no net loss of habitat functions or values, as a result of construction, operation, and maintenance of the

project. The feasibility of compensatory mitigation for riparian and wetland habitats has been established by the USACE.[124] The plan shall be designed using state-of-the-industry practices, and monitored to ensure attainment of performance criteria within three years, or remedial actions shall be undertaken until the performance criteria is achieved. The plan shall include, but not be limited to, specific elements that would normally be required for the successful achievement of the performance standard:

- Restoration shall include native riparian species from locally obtained plants and seed stock.
- The new plantings shall be monitored for a period of two to three years to ensure successful establishment. Dead plants shall be replaced in kind.
- The new plantings shall be irrigated with drip irrigation on a timer and shall be weaned off of irrigation when root zones are established.
- Removal of native species in the creek shall be prohibited.
- Non-native species located in the work area shall be removed from the creek.

Plan Requirements: The detailed grading plan showing the limits of the grading and the Habitat Restoration and Monitoring Plan including wetland avoidance and riparian habitat restoration shall be reviewed and approved by the County, CDFW, and USACE prior to approval of the tentative Project map. The Habitat Restoration and Monitoring Plan and grading plan shall be submitted to the County for approval prior to any Project construction that may affect wetlands. The Applicant shall also file a performance security with the County to complete restoration. This condition shall be printed on all Project plans.

Timing: Any proposed removal or temporary disturbance to jurisdictional features shall be approved by the County, CDFW, and the USACE prior to any construction that may affect wetland features. Site-specific wetland creation/restoration plans shall be developed and approved by the County, in consultation with CDFW, and USACE as appropriate, prior to final land use clearance. The applicant shall independently consult with CDFW and USACE as necessary. The plan shall be implemented within one year of the disturbance and in consultation with CDFW and County staff. This measure shall be implemented throughout the first and all subsequent Project phases.

MONITORING: The County shall inspect the Project plans and site, as well as review the avoidance and restoration plan to ensure compliance with this measure as appropriate. A biological/wetland monitor shall be present for all activities that have the potential to directly or indirectly affect regulated wetland features and County staff shall monitor construction and revegetation activities to ensure the plan is fully implemented. Permit compliance signature is required for performance security release.

[124] U.S. Army Corps of Engineers, South Pacific Division. 12 January 2015. *Final 2015 Regional Compensatory Mitigation and Monitoring Guidelines*. Available at: http://www.spd.usace.army.mil/Portals/13/docs/regulatory/mitigation/MitMon.pdf

Bio-11b: Wetland Avoidance. All potential jurisdictional areas that may be disturbed by construction shall be delineated following all applicable standards associated with features regulated by the State of California, Santa Barbara County, and USACE for regulated wetlands, including documentation of specific surveys for presence of listed plant, invertebrate, or wildlife species that may occur there. The delineations shall apply the Arid West Supplement to the *USACE Wetland Delineation Manual* guidelines and shall map all features using a sub-meter Differential Global Positioning System (DGPS). Based on the delineation, the Applicant shall consult with a wetland hydrologist and botanist to design construction, so that direct loss of wetland communities shall be minimized and hydrological conditions supporting the wetland shall be conserved to the maximum extent feasible consistent with Project objectives. All final construction design plans and mapped wetland features shall be clearly presented in a wetland avoidance plan to be included in an all-encompassing Habitat Restoration and Monitoring Plan for approval by the County. The avoidance plan for the WTG corridor shall be included as part of the wetland restoration and avoidance plan for other Project components and shall also present an approach for the restoration of lost and/or disturbed features associated with bridge crossings and siting of the O&M facility including calculations, proposed restoration locations, cattle or other disturbance barriers, plant mixes, quantitative restoration goals (maximum criteria for weedy species and minimum criteria for native hydrophytic plants), and temporal and native plant composition success criteria. At a minimum, any temporarily disturbed wetlands associated with bridge crossings or siting of the O&M facility shall be restored to its former condition at an aerial ratio of 1:1 with a clearly defined temporal goal and success criteria. If any jurisdictional feature is permanently lost, it shall be mitigated by the creation of the same type of wetland in the Project area at an aerial ratio of 2:1. Additionally, all wetland areas within 50 feet of ground disturbance shall be protected from siltation by placement of silt fence, straw bales (composed of certified weed-free straw), or other barriers. Barriers shall be in place prior to ground disturbance.

No fueling of vehicles or equipment shall occur within 100 feet of the top of any creek bank or within 100 feet of any seep or spring. Further, spill containment measures shall be implemented at all refueling sites. In the event that petroleum products escape into a creek, seep, or spring, every effort shall be made to immediately remove the material using plastic sheets, absorbent blankets, or other materials, as necessary.

Runoff from fresh concrete shall be directed away from the top of any creek bank and from any seep or spring into a plastic-lined hollow. Any washout from concrete trucks shall be collected within a designated contained and lined area and removed from the site. Dried concrete scraps shall be removed and all trash and litter shall be picked up and removed from the construction sites at the end of each day.

5.3.3 Wetlands and Other Waters of the United States

Impacts to wetlands and other Waters are addressed in Mitigation Measures BIO-11.

5.3.4 Wildlife Corridors and Nursery Sites

Mitigation Measures for Wildlife Movement and Corridors

Impacts on migratory corridors, which involve avian and bat species, are addressed in Mitigation Measures BIO-7, BIO-8, and BIO-9.

BIO-12. Scheduled Ground Disturbance to Avoid Nesting Season. All construction-related activities that include vegetation removal and initial ground disturbances in habitats where biological monitor does not have a clear view of the ground, shall be scheduled, as feasible, to avoid the bird nesting season (February 1 through August 31) to reduce impacts to nesting birds in the Project vicinity. If construction activities are scheduled to begin during the nesting season, the applicant shall still attempt to remove or mow vegetation before the onset of nesting season to reduce the threat of violating the MBTA.

Plan Requirements: This condition shall be printed on all Project plans. The Environmental Monitor shall be designated to monitor the implementation of this mitigation and shall be retained throughout all construction phases.

Timing: Construction-related activities that include vegetation removal and initial ground disturbances shall be scheduled, as feasible, from August 31 through February 1.

MONITORING: County staff shall inspect the Project plans and review the monthly reports for compliance with this measure as appropriate.

Impacts to breeding and roosting sites shall also be mitigated by Mitigation Measures BIO-5a, BIO-7c, d, and e, and BIO-8e.

5.3.5 Local Policies or Ordinances

BIO-13: Tree Protection. The Applicant shall retain a County-approved botanist or arborist to design and implement a tree protection plan to be included in an all-encompassing Habitat Restoration and Monitoring Plan in order to protect existing native trees, minimize adverse effects of grading and construction, and compensate the removal of native trees. No ground disturbance, including grading for buildings, access ways, easements, and subsurface grading, shall occur within the critical root zone of any native tree unless specifically authorized by the approved tree protection and replacement plan. The tree protection and replacement plan shall include the following measures:

a. The plan shall include tree locations, diameter at breast height (DBH), estimated height, and critical root zone for all native and specimen trees that are potentially subject to disturbance (temporary or permanent) due to Project construction and operational activities. These activities include transport of large loads and/or project components via San Miguelito Road or onsite access/service roads.
b. The tree protection plan shall clearly identify any areas where grading, trenching, or other construction related activities would encroach within 6 feet of the drip line of the critical root zone of any native or specimen tree.
c. Fencing and/or staking/marking of all native and specimen trees shall be installed to protect the critical root zone of trees to remain intact near the vicinity of tree removal. Fencing shall be placed at least 6 feet outside the dripline and of a height

of at least 3 feet high. Fencing with a minimum distance from the ground to the first rung shall be at least 18 inches to allow for animal passage. The Applicant shall place signs stating "tree protection area" at 15-foot intervals along the exclusion area. Fencing and signs shall remain in place throughout all grading and construction activities. Similar signage shall be placed around tree restoration areas, as part of compensatory measures.

d. Any trees located within 25 feet of buildings, turbine, or other structure shall be protected from stucco and/or paint during construction or maintenance. No irrigation shall be permitted within 6 feet of the dripline of any protected tree unless authorized.

e. Any encroachment within the critical root zone of native trees within 6 feet of the drip line shall adhere to the following standards:
   i. Any paving shall be of pervious material (gravel, brick without mortar, or turf block).
   ii. Any trenching required within the critical root zone of a protected tree is not permitted.
   iii. Any roots 1 inch in diameter or greater that are encountered during grading or trenching shall not be cleanly cut.

f. Grading shall be designed and constructed to avoid ponding and ensure proper drainage within driplines of oak trees.

g. Construction equipment staging and storage areas shall be located in designated staging and lay-down areas depicted on Project plans submitted for zoning clearance. No construction equipment shall be parked, stored, or operated within the protected areas. No fill soil, rocks, or construction materials shall be stored or placed within the protected area.

h. Access routes for equipment shall be checked for clearance prior to bringing any equipment onto the site. All trees and shrubs that require limbing or pruning shall be prepared at least two days prior to the arrival of the equipment and adhere to the following standards:
   i. All limbing shall be done under the supervision of a licensed arborist or qualified biologist.
   ii. Any inadvertently broken limbs shall be cleanly cut under the direction of a licensed arborist or qualified biologist.
   iii. In the event that damage to a native tree is so severe that its survival is compromised, the tree shall be replaced in kind as mentioned below for native trees.

i. Only trees designated for removal on the approved tree protection plan shall be removed. Any native trees which are removed, relocated, or damaged (by more than 20 percent encroachment into the critical root zone or drip line) shall be replaced on a 10:1 basis (15:1 for blue oak and valley oak trees). Acorns or seed shall be obtained from the same watershed as the Project site to be used in restoration and/or propagation of 10 gallon size saplings of the same species to be replaced. Where it is necessary to remove a tree and feasible to replant, trees shall be boxed and replanted with the approval and supervision of an arborist or County approved biologist. The original location and new location shall be documented in TPP.

j. The trees shall be gopher fenced.

k. If replacement trees cannot be accommodated on site, the Owner/Applicant shall submit a plan for County approval for replacement trees to be planted off site. The plan shall establish minimum success criteria for the replacement of trees and

restoration of forest and woodland habitat and a five-year monitoring plan. If criteria is not met after five years of monitoring, continued restoration efforts would be required until success criteria are met.

l. In the event of unexpected damage or removal, this mitigation shall include but is not limit to posting of a performance security and hiring an outside consulting biologist or arborist to assess damage and recommend mitigation. The required mitigation shall be done under the direction of the County prior to any further work occurring on site. Any performance securities required for installation and maintenance of replacement trees will be released by County after its inspection and approval of such installation and maintenance.

m. Damaged trees shall be mitigated on a minimum of 10:1 ratio for oaks and 1:1 for other native trees. If it becomes necessary to remove a tree not planned for removal, if feasible, the tree shall be boxed and replanted. If not feasible to replant, it shall be replaced on a 10:1 basis (15:1 for blue oak and valley oak trees). Acorns or seed shall be obtained from the same watershed as the Project site to be used in restoration and/or propagation of 10-gallon size saplings of the same species to be replaced. Where it is necessary to remove a tree and feasible to replant, trees shall be boxed and replanted with the approval and supervision of an arborist or County approved biologist. The original location and new location shall be documented in TPP.

Plan Requirements: This requirement shall be recorded with the final Project plans. The Applicant shall submit grading plans, building plans, and the tree protection and replacement plan to the County for review and approval. All aspects of the plan shall be implemented as approved. The Applicant shall post a performance security that is acceptable to the County to guarantee tree replacement.

Timing: The TPP included in an all-encompassing Habitat Restoration and Monitoring Plan shall be approved by the County, and evidence of having obtained the performance security shall be provided to the County prior to zoning clearance for the first and all subsequent Project phases. Timing on each measure shall be stated where applicable; where not otherwise stated, all measures must be in place throughout all grading, construction, and operational activities.

BIO-14: Coastal Development Permit. The turbines shall be sited so that no turbines or turbine blades overlap with the California Coastal Zone. For any grading impacts to areas located within the Coastal Zone associated with the construction of roads, the Applicant shall demonstrate that a Coastal Development Permit has been obtained in accordance with the policies of the Santa Barbara County Local Coastal Program. All measures stipulated in the Coastal Development Permit (CDP) shall be implemented by the Applicant.

Plan Requirements: A complete CDP application was submitted on February 14, 2018, to the County for review and approval. The Applicant shall implement all measures included in the issued CDP prior to construction, during construction, and post-construction.

Timing: The Coastal Development Permit shall be issued by the County prior to zoning clearance for the first and all subsequent construction phases.

MONITORING: County staff shall review the CDP application, and should a CDP be issued, County staff shall ensure that all mitigation measures stipulated in the CDP are fully implemented.

5.3.6 Habitat Conservation Plans, Natural Community Conservation Plans, or Other Habitat Conservation Plans

The Proposed Project is not located within or near the boundaries of any HCP or NCCP; therefore the Proposed Project would not conflict with the provisions of any adopted HCP or NCCP. Given the lack of an HCP/NCCP or other approved local, regional, or state habitat conservation plan, mitigation measures are not required.

SECTION 6.0
REFERENCES

"Bird Migration: Birds of the Pacific Flyway." Perky Pet. Accessed February 2018. Available at: https://www.perkypet.com/articles/pacific-flyway-migration

"Wetland Disturbance and Impact." 1998. Maryland Department of the Environment, Baltimore, MD. Available at: http://www.mde.state.md.us/programs/Water/WetlandsandWaterways/AboutWetlands/Pages/disturbance.aspx

Able, Kenneth P. 1970. "A Radar Study of the Altitude of Nocturnal Passerine Migration." *Bird Banding*. Vol. 41, pp. 282-290.

Acconia Energy North America, unpublished data.

Audubon. 2017. Vandenberg Air Force Base and Santa Ynez Estuary. Available at: http://www.audubon.org/important-bird-areas/vandenberg-air-force-base-and-santa-ynez-estuary

Avian Power Line Interaction Committee. 2012. *Reducing Avian Collisions with Power Lines: State of the Art in 2012* Available at: http://www.aplic.org/uploads/files/15518/Reducing_Avian_Collisions_2012watermarkLR.pdf

Baldwin, B.G., D.H. Goldman, D.K. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. *The Jepson Manual of Vascular Plants of California*. 2nd Edition. Berkeley, CA: University of California Press.

Baldwin, Bruce. 26 September 2005. Personal communication. Professor at University of California, Berkeley, California.

Ballard, Larry. 12 September 2005b. Personal communication. Botanist, Carpinteria, CA.

Calflora. 2017. The Calflora Database: CalFlora Information on California Plants for Education, Research and Conservation. Berkeley, CA. Available at: http://www.calflora.org/

California Coastal Commission. 2017. Public Resources Code Division 20. California Coastal Act. Available at: https://www.coastal.ca.gov/coastact.pdf

California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

California Department of Fish and Game, Code of Regulations. 2003. Sections 2800 et. seq. Natural Community Conservation Planning Act. Available at: http://www.buttehcp.com/documents/Documents/Other%20Documents/NCCP_ACT_language.pdf

California Department of Fish and Game. 24 November 2009. "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities." Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline=1

California Department of Fish and Game. November 2001. California Code of Regulations, Section 1600, Lake or Streambed Alteration Agreement, California Code of Regulations. Available at: http://www.calwater.ca.gov/content/Library/RegGuide/Volume%202/Voume%202%20PDF%20f/vol2chp2FINAL%20S1600_1101.pdf

California Department of Fish and Wildlife Biogeographic Data Branch. 2017. "Natural Communities - Background Information." Available at: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background

California Department of Fish and Wildlife Biogeographic Data Branch. 2018. *Natural Communities - Background Information*. Available at: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background.

California Department of Fish and Wildlife Branch – Nongame Wildlife Program. 2016. *Bald Eagles in California*. Available at: https://www.wildlife.ca.gov/Conservation/Birds/Bald-Eagle

California Department of Fish and Wildlife, Biogeographic Data Branch. 2017. Rarefind 5: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Database. Sacramento, CA.

California Department of Fish and Wildlife, California Code of Regulations. 16 June 2015. Bird Nesting Regulations Sections 3503 and 3503.5. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=105302

California Department of Fish and Wildlife, California Interagency Wildlife Task Group, CWHR Program. 1995. California Wildlife Habitat Relationships System Range Map for California Condor. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1656&inline=1

California Department of Fish and Wildlife, California Interagency Wildlife Task Group, Harris, J., D. Alley, and R. Duke. 2017. California Wildlife Habitat Relationships System Life History Account for Vaux's Swift. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1893&inline=1

California Department of Fish and Wildlife, California Interagency Wildlife Task Group, Granholm, S., D. Raveling, R. Duke, and D. Airola. 2017. California Wildlife Habitat Relationships System Life History Account for Common Loon. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1545&inline=1

California Department of Fish and Wildlife, California Interagency Wildlife Task Group, Harris, J., D. Alley, and R. Duke. N.d. California Wildlife Habitat Relationships System Life History Account for Fringed Myotis. Accessible at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2325&inline=1

California Department of Fish and Wildlife, Code of Regulations. Amended 1997. Chapter 1.5, Sections 2050 et. Seq. California Endangered Species Act. Available at: https://www.wildlife.ca.gov/Conservation/CESA/FESA

California Department of Fish and Wildlife, Code of Regulations. 3 April 2014. Laws and Regulations Related to Abandoned and Injured Wildlife Section 3511, Ch. 735, Sec. 1. Available at: http://www.fgc.ca.gov/meetings/2014/apr/14_3_LawsRegs_AbandonedInjured_Wildlife_140403.pdf

California Department of Fish and Wildlife, Code of Regulations. 3 April 2014. Laws and Regulations Related to Abandoned and Injured Wildlife Section 4700. Available at: http://www.fgc.ca.gov/meetings/2014/apr/14_3_LawsRegs_AbandonedInjured_Wildlife_140403.pdf

California Department of Fish and Wildlife, Code of Regulations. Amended 2003. California Code, Fish and Game Code – FGC 5050. Available at: http://codes.findlaw.com/ca/fish-and-game-code/fgc-sect-5050.html

California Department of Fish and Wildlife, Code of Regulations. Amended 2003. California Code, Fish and Game Code – FGC 5515. Available at: http://codes.findlaw.com/ca/fish-and-game-code/fgc-sect-5515.html

California Department of Fish and Wildlife. 2015. California Code of Regulations, Section 1900, Native Plant Protection Act, California Code of Regulations. Available at: http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?division=2.&chapter=10.&lawCode=FGC

California Department of Fish and Wildlife. 2017. "Natural Community Conservation Planning." Available at: https://www.wildlife.ca.gov/Conservation/Planning/NCCP

California Department of Fish and Wildlife. 2017. California Essential Habitat Connectivity Project. Available at: https://www.wildlife.ca.gov/conservation/planning/connectivity/CEHC

California Department of Fish and Wildlife. September 2010. List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program. Sacramento, CA.

California Department of Parks and Recreation. September 2010. California Coastal Trail – Gaviota Segment Final Mitigated Negative Declaration. Available at: http://www.parks.ca.gov/pages/980/files/Gaviota%20Coastal%20Trail%20FINAL%20Mitigated%20Neg%20Dec%209-21-07.pdf

California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration. 2010. *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California*. Prepared by: W.D. Spencer, P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler.

California Native Plant Society. 2017. CNPS Electronic Inventory. Available at: www.cnps.org

CH2M HILL. September 2006a. Lompoc Wind Energy Project Field Surveys: Vegetation. Los Angeles, CA.

Chevron U.S.A., Inc. 1988. Management of the Gaviota Tarweed, *Hemizonia increscens* ssp. *villosa*. Prepared by: URS Corporation.

Consortium of California Herbaria (record from the Santa Barbara Botanic Garden) recorded the species February 27, 1938 in the Santa Ynez Mountains: Honda Canyon, Dickerson Ranch, west of Lompoc by botanists H. Dearing and M. Dearing.

Cooper et al. 27 April 2004. A Visual and Radar Study of 2003 Spring Bird Migration at the Proposed Chautauqua Wind Energy Facility, New York. Prepared by: ABR, Inc. Prepared for: Chautauqua Windpower, LLC.

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. "Environmental Thresholds and Guidelines Manual." Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. May 2009. Environmental Resource Management Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/ermelement/erm_element.php

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 1979; amended August 2010. Conservation Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 1980; amended December 2016. Land Use Element, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/LandUseElement.pdf

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Published October 2008; revised July 2015. "Environmental Thresholds and Guidelines Manual." Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. 2008. Final Environmental Impact Report, Lompoc Wind Energy Project. Prepared by: Aspen Environmental Group, Agoura Hills, CA. Available at: http://www.sbcountyplanning.org/energy/projects/Wind/Lompoc_FEIR.htm

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Published October 2008; revised July 2015. "Environmental Thresholds and Guidelines Manual." Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. February 2009. Final Environmental Impact Report, Lompoc Wind Energy Project. Prepared by: Aspen Environmental Group, Agoura Hills, CA.

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 2003; republished May 2009. *Oak Tree Protection in the Inland Rural Areas of Santa Barbara County*. Supplement to the Mapped Areas and Communities Section. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/ConservationOakSupp.pdf

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. Adopted 2003, Republished May 2009. *Conservation Element, Oak Tree Protection in the Inland Rural Areas of Santa Barbara County, Supplement to the Mapped Areas and Communities Section, Santa Barbara County Comprehensive Plan*. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf

County of Santa Barbara Department of Planning and Development, Santa Barbara, CA. [October 2008] July 2015. *Environmental Thresholds and Guidelines Manual*. Available at: http://www.sbcountyplanning.org/permitting/ldpp/auth_reg/documents/Environmental%20Thresholds%20October%202008%20(Amended%20July%202015).pdf

County of Santa Barbara Department of Planning and Development. 28 December 2017. Determination of Application Incompleteness for Strauss Wind Energy Project Conditional Use Permit (Case No. 16CUP-0000-00031).

County of Santa Barbara Department of Planning and Development. Adopted 1982, republished 2014. Coastal Land Use Plan, Santa Barbara County Comprehensive Plan. Available at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/CoastalPlan.pdf

County of Santa Barbara Planning and Development Department, Energy Division. August 2008. Certified 10 February 2009. Final Environmental Impact Report: Lompoc Wind Energy Project. County EIR No. 06EIR-00000-00004. State Clearinghouse No. 2006071008. Prepared by Aspen Environmental Group, Agoura Hills, CA.

County of Santa Barbara Planning and Development. 3 December 2013. Final Mitigated Declaration Richardson Tentative Parcel Map. Available at: http://sbcountyplanning.org/environmental/Documents/Richardson%20TPM.pdf

County of Santa Barbara, Santa Barbara, CA. June 2003. Santa Barbara County Code of Ordinances, Chapter 35, Article IX: Deciduous Oak Tree Protection and Regeneration. Available at: https://www.municode.com/library/ca/santa_barbara_county/codes/code_of_ordinances?nodeId=CH35ZO_ARTIXDEOATRPRRE

County of Santa Barbara. 12 August 2016. Santa Barbara County Code of Ordinances, Chapter 35, Article IX: Deciduous Oak Tree Protection And Regeneration. Available at: https://www.municode.com/library/ca/santa_barbara_county/codes/code_of_ordinances?nodeId=CH35ZO_ARTIXDEOATRPRRE

eBird. 2018. eBird: An online database of bird distribution and abundance. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available at: http://www.ebird.org.

Federal Register. 24 May 1977. Executive Orders 11990 Protection of Wetlands. 42 FR 26961, 3

FPL Energy Services, Juno Beach, FL and Mountaineering Wind Energy Center Technical Review Committee, Tucker County, WV. 14 February 2004. *A Study of Bird and Bat Collision Fatalities at the Moutaineer Wind Energy Center, Tucker County, West Virginia. Annual Report for 2003*. Prepared by: Curry & Kerlinger, LLC, Mc Lean VA.

Gauthreaux, Sidney A. 30 May 2008. Analysis of WSR-88D Data to Assess Nocturnal Bird Migration Over the Lompoc Wind Energy Project in California. Prepared for Aspen Environmental Group.

Hayes, M.P., and M.M. Miyamoto. 1984. "Biochemical, Behavioral, and Body Size Differences between *Rana aurora aurora* and *Rana aurora draytonii*." *Copeia*, 1018-1022.

Hendrickson, et al. 1998. Botanical Resources of Hollister Ranch, Santa Barbara County, California. Draft. Museum of Systematics and Ecology, Department of Ecology, Evolution, and Marine Resources, University of California at Santa Barbara. Environmental Report No. 10.

Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

Holland, V.L. and David J. Keil. 1995. California Vegetation. Kendall/Hunt Publishing Company, Iowa. 516 pp.

Holmgren, M.A., and P.W. Collins, eds. June 1999. Distribution and habitat associations of six bird species of special concern at Vandenberg Air Force Base, Santa Barbara County, California. Prepared by the Museum of Systematics and Ecology, University of California Santa Barbara, and the Vertebrate Zoology Section of the Santa Barbara Museum of Natural History. Prepared for Vandenberg Air Force Base, 30 CES/CEVPN Natural Resources.

Humple D.L., and G.R. Geupel. 2002. "Autumn Populations of Birds in Riparian Habitat of California's Central Valley." *Western Birds 33*: 34–50.

Jepson Flora Project (eds.) 2017. Jepson eFlora. Available at: http://ucjeps.berkeley.edu/eflora/

Kerlinger, P. 1995. *How Birds Migrate*. Mechanicsburg, PA: Stackpole Books.

Los Padres Forest Watch and California Chaparral Institute. 30 November 2017. Petition to List the Refugio Manzanita (*Arctostaphylos refugioensis*) as an Endangered Species and to Concurrently Designate Critical Habitat. Santa Barbara, CA. Escondido, CA. Available at: https://ecos.fws.gov/docs/petitions/92210/1033.pdf

Martin, Kevin. 9 May 2008. Personal communication with Pacific Renewable Energy Generation, LLC, Solana Beach, CA.

National Audubon Society. 2017. "Guide to North American Birds." Available at: http://www.audubon.org/bird-guide

Pacific Flyway Council. 2017. Pacific Flyway map. Available at: http://pacificflyway.gov/Documents/Pacific_map.pdf

Pacific Gas and Electric. Understand PG&E distribution qualifications, Connect your project to our wholesale distribution system. September 2017. Available at: https://www.pge.com/en_US/for-our-business-partners/interconnection-renewables/energy-transmission-and-storage/wholesale-generator-interconnection/wholesale-distribution-fast-track-interconnection-process.page

Pacific Renewable Energy Generation, LLC, Solana Beach, CA. 16 December 2008. *Lompoc Wind Energy Project Final Spring and Autumn Bat Migration Pre-construction Survey Technical Report*. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

Parker, V. T., Vasey, M. C. August 2016. *Two New Subspecies of Artostaphylos (Ericaceae) from California and Implications for Understanding Diversification in the Genus*. Madroño Vol. 63, No. 3, pp.283-291. Available at: https://www.researchgate.net/publication/306296702_Two_New_Subspecies_of_Arctostaphylos_Ericaceae_From_California_and_Implications_For_Understanding_Diversification_In_This_Genus

Potter, Martin. 9 May 2008. Personal communication with Doug McNair, Sapphos Environmental, Inc., Pasadena, CA.

Santa Barbara Resource Management Department, Santa Barbara, CA. 1990. *Mitigation Plan for Gaviota Tarplant* (*Hemizonia Increscens Villosa*). Prepared by: All American Pipeline Company, Long Beach, CA.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation*, 2nd Edition. California Native Plant Society, Sacramento, CA.

Shipman, Gordon E. 1981. Soil Survey of Santa Barbara County, California, South Coastal Part. United States Department of Agriculture Soil Conservation and Forest Service in Cooperation with University of California Agricultural Experiment Station.

Shuford, W. D. and T. Gardali, eds. 2008. California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California. Studies of Western Birds No. 1. Western Field Ornithologists, Camarillo, CA, and California Department of Fish and Wildlife, Sacramento, CA.

Sibley, D. A. 2000. The Sibley Guide to Birds. New York, NY: Alfred A. Knopf, Inc.

Small, A. 1994. California Birds: Their Status and Distribution. Vista, CA: Ibis Publishing Company.

Smith, C. F. 1998. *A Flora of the Santa Barbara Region, California*. 2nd Edition. Santa Barbara, CA: Santa Barbara Botanic Garden and Capra Press.

State Water Resources Control Board. 2009. Section 4.6 Jurisdictional Waters and Streams. Available at: http://www.waterboards.ca.gov/academy/courses/wqstandards/materials/water_us_ca/ca_water042508.pdf

The Cornell Lab of Ornithology. 2017. All About Birds: Bird Guide. Available at: https://www.allaboutbirds.org/

Tipton, Heather. 1 March 2018. Personal communication. U.S. Fish and Wildlife Service Biologist, Ventura, CA.

U.S Fish and Wildlife Service. 2017. Endangered Species List. Available at: https://ecos.fws.gov/ecp0/pub/SpeciesReport.do?groups=B&listingType=L&mapstatus=1

U.S Fish and Wildlife Service. August 2011. *Deinandra increscens* ssp. *villosa* (Gaviota tarplant), *5-Year Review: Summary and Evaluation*. Prepared by: Ventura Fish and Wildlife Office, Ventura, CA.

U.S. Army Corps of Engineers, South Pacific Division. 12 January 2015. *Final 2015 Regional Compensatory Mitigation and Monitoring Guidelines*. Available at: http://www.spd.usace.army.mil/Portals/13/docs/regulatory/mitigation/MitMon.pdf

U.S. Energy Information Administration. 2015. Average monthly residential electricity consumption, prices, and bills by state. Available at: https://www.eia.gov/tools/faqs/faq.php?id=97&t=3

U.S. Environmental Protection Agency. Clean Water Act, as amended in 1972. §401. 1972. Available at: https://www.epa.gov/cwa-404/section-404-permit-program

U.S. Fish and Wildlife Service, Department of the Interior. 1 November 2013. "General Provisions; Revised List of Migratory Birds." *Federal Register, 78*(212). Accessed September 2017. Available at: https://www.fws.gov/migratorybirds/pdf/policies-and-regulations/MBTAListofBirdsFinalRule.pdf

U.S. Fish and Wildlife Service. 17 March 2010. Endangered and Threatened Wildlife and Plants: Revised Designation for Critical Habitat for California Red-Legged Frog; Final Rule. Vol 75, No. 51: 12816-12959.

U.S. Fish and Wildlife Service. 1918. Migratory Bird Treaty Act of 1918. Available at: http://www.fws.gov/laws/lawsdigest/migtrea.html

U.S. Fish and Wildlife Service. 1973. 1973 Federal Endangered Species Act. Available at: https://www.fws.gov/endangered/laws-policies/esa.html

U.S. Fish and Wildlife Service. 2008. *El Segundo Blue Butterfly 5-Year Review: Summary and Evaluation*. March 2008. Available at: https://ecos.fws.gov/docs/five_year_review/doc1896.pdf

U.S. Fish and Wildlife Service. 2011. Endangered and Threatened Wildlife and Plants: 5-Year Reviews of Species in California, Nevada, and the Klamath Basin of Oregon; Notice. Vol 76, No. 101 (May 25, 2010): 30377-30382.

U.S. Fish and Wildlife Service. 2016. The Bald and Golden Eagle Protection Act. Available at: https://www.fws.gov/midwest/midwestbird/eaglepermits/bagepa.html

U.S. Fish and Wildlife Service. 2017. Environmental Conservation Online System: Information for Planning and Conservation. Available at: https://ecos.fws.gov/ipac/

U.S. Fish and Wildlife Service. 2017. National Wetlands Inventory – Wetlands Mapper. Available at: https://www.fws.gov/wetlands/Data/Mapper.html

U.S. Fish and Wildlife Service. 7 November 2002. Endangered and Threatened Wildlife and Plants; Designation for Critical Habitat for *Eriodyction capitatum* (Lompoc yerba santa) and *Deinandra increscens* ssp. *villosa* (Gaviota tarplant). Vol. 67, No. 216: 67968-68001.

U.S. Fish and Wildlife Service. 7 November 2002. *Endangered and Threatened Wildlife and Plants; Designation for Critical Habitat for Eriodyction capitatum* (*Lompoc yerba santa*) *and Deinandra increscens* ssp. *villosa* (*Gaviota tarplant*), *67*: 216.

U.S. Fish and Wildlife Service. August 2005. Revised Guidelines on Site Assessments and Field Surveys for the California Red-Legged Frog. Available at: https://www.fws.gov/arcata/es/amphibians/crlf/documents/20050801_CRLF_survey-guidelines.pdf

U.S. Fish and Wildlife Service. May 2007. National Bald Eagle Management Guidelines. Available at: https://www.fws.gov/southdakotafieldoffice/NationalBaldEagleManagementGuidelines.pdf

U.S. Geological Survey. 2017. National Hydrography Dataset. Available at: https://nhd.usgs.gov/NHD_High_Resolution.html

U.S. Government Printing Office. 2008. Federal Register. "Notices." 73 (98): 29075–29084.

Williams, Timothy C. 2001. "Bird Migration through a Mountain Pass Studies with High Resolution Radar, Ceilometers, and Census." *The Auk*. Vol. 118, pp. 389-403.

Yang, Dou-Shuan. 2 March 2018. Personal communication. U.S. Fish and Wildlife Service Biologist, Ventura, CA.

SECTION 7
FIGURES

Feb 2006
Olson and Rindlaub BRTR
Lompoc Wind Energy Project BRTR, Olson and Rindlaub

Feb 2007
Olson Results of Winter Bird Surveys
Lompoc Wind Energy MFR, Winter Bird Surveys, Olson

August 2008
AEG FEIR
FEIR, Santa Barbara and Aspen Environmental Group

SEI Final Avian Breeding Season Pre-Con Tech Report
Final Avian Breeding Season Pre-construction Survey Report, SEI

December 2008
SEI Final Pre-Con Tech Reports
- Final Avian Autumn Migration Pre-construction Survey Report, SEI
- Final Spring and Autumn Bat Migration Pre-Construction Survey Report, SEI

Winter 2008
SEI Winter Surveys MFRs
- MFR No. 9, SEI, Plant Communities
- MFRNo. 8,SEI, Habitat Suitability for Sensitive Aquatic Species
- MFR No. 10, SEI, Project Jurisdictional Area
- MFR No. 6, SEI, Habitat Suitability for El Segundo Blue Butterfly
- MFR No. 7, SEI, Habitat Suitability for Sensitive Terrestrial Species

Summer 2017
SEI Spring Surveys MFRs
- MFR No. 6, SEI, Spring Botanical Survey
- MFR No. 7, SEI, Spring Avian Migration Survey
- MFR No. 8, SEI, Bat Survey

November 2017
SEI Fall Raptor Survey
- Fall Aerial Raptor Field Survey, SEI
- Second Major CUP Application

November 16, 2017
SEI Fall Surveys
- Fall Bat Field Surveys, SEI
- Fall Avian Migration Field Surveys, SEI

Winter 2018
SEI Tree Inventory and Transmission Line Corridor Surveys

2006 2007 2008 2016 2017

February 2009
Certification of Lompoc Wind Energy Project Final EIR

July 2008
SEI Jurisdictional Areas Surveys
MFR No. 16, SEI, Project Jurisdictional Areas

SEI Final Avian Spring Migration Pre-Con Survey Tech Report
Final Avian Spring Migration Pre-Construction Survey Report, SEI

June 2008
SEI Final Winter Season Avian Pre-Con Survey Tech Report
Winter Season Avian Pre-construction SurveyReport, SEITerrestrial Species

GMI Analysis of WSR-88D
Nocturnal Bird Migration Analysis, GMI

December 2016
SEI Major CUP App
Major CUP Application, SEI

SEI Fall Surveys MFRs
- MFR No. 3, SEI, Autumn Aerial Raptor Survey
- MFR No. 2, SEI, Autumn Avian Migration Survey
- MFR No. 1, SEI, Fall Bat Survey

Spring 2017
SEI Spring Surveys
- Spring Botanical Field Surveys, SEI
- Spring Avian Migration Field Surveys, SEI
- Spring Bat Field Surveys, SEI
- Spring Bat Field Surveys, SEI
- Spring Bat Field Surveys, SEI

April 2017
SEI Spring Surveys
- Spring Botanical Field Surveys, SEI
- Spring Bat Field Surveys, SEI
- Spring Bat Field Surveys, SEI

March 13, 2017
SEI Spring Aerial Raptor Surveys
Spring Aerial Raptor Field Survey, SEI

FIGURE 1.3-1
Strauss Wind Energy Project Timeline

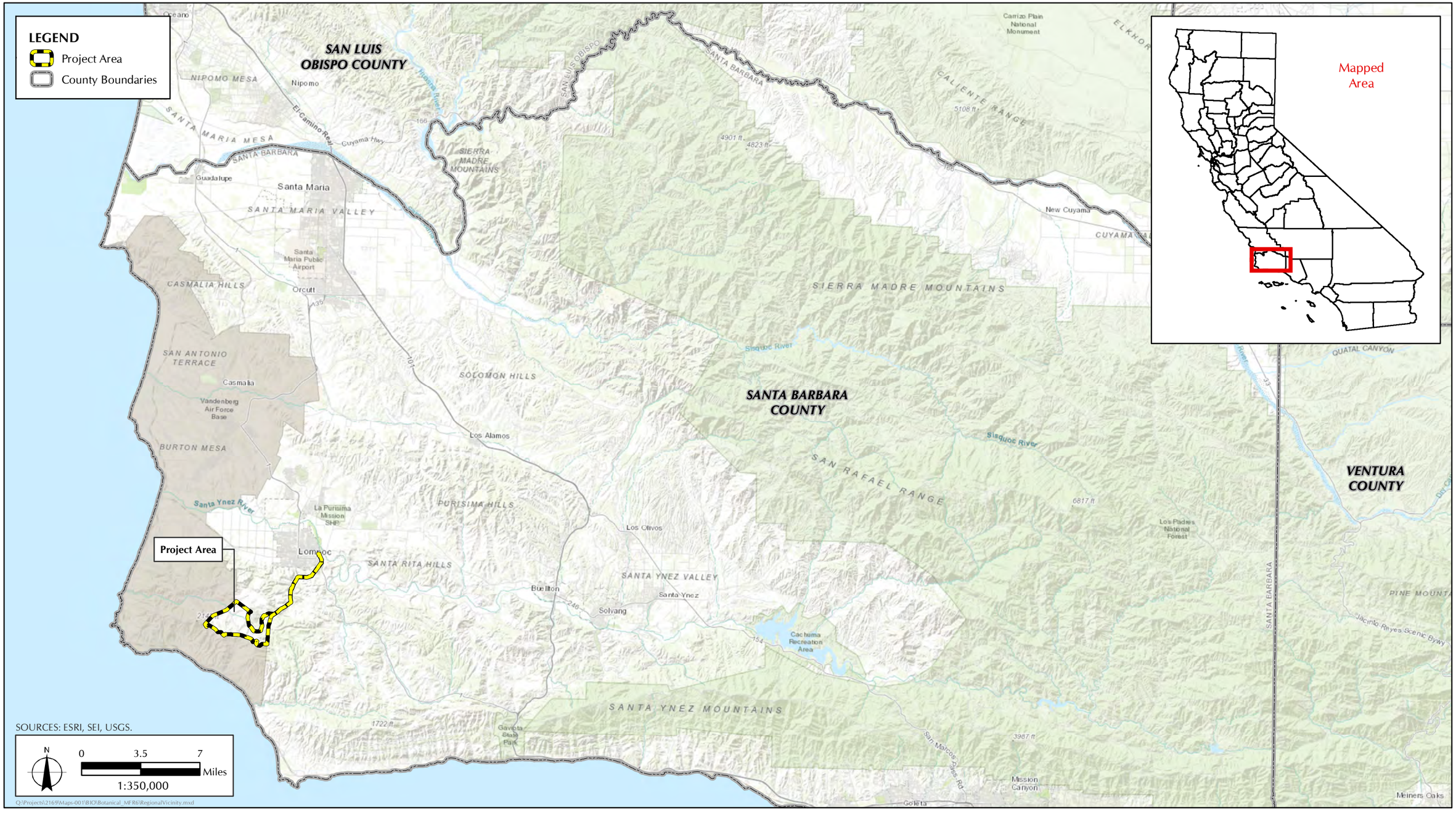


FIGURE 2.1-1
Regional Vicinity

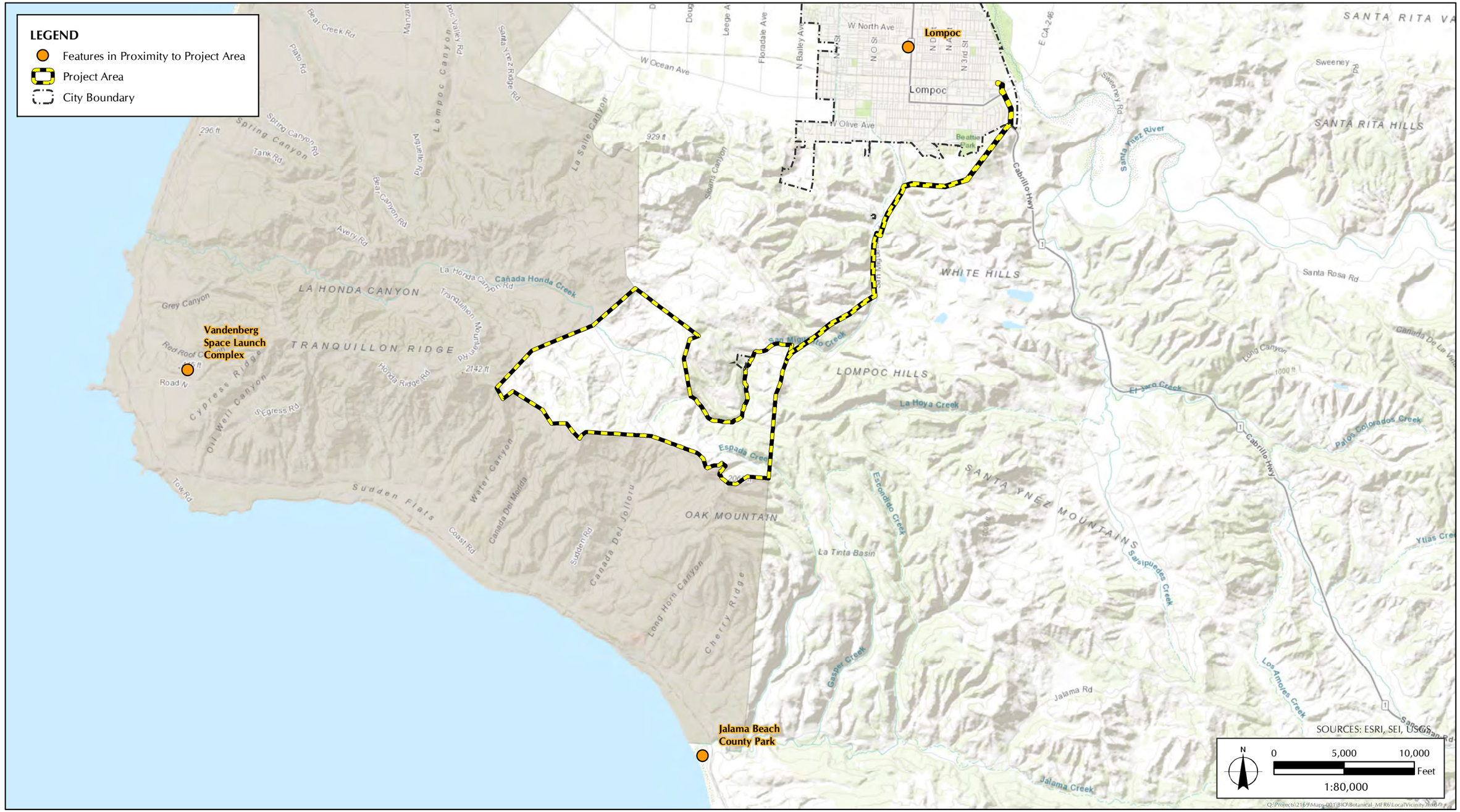


FIGURE 2.1-2
Local Vicinity

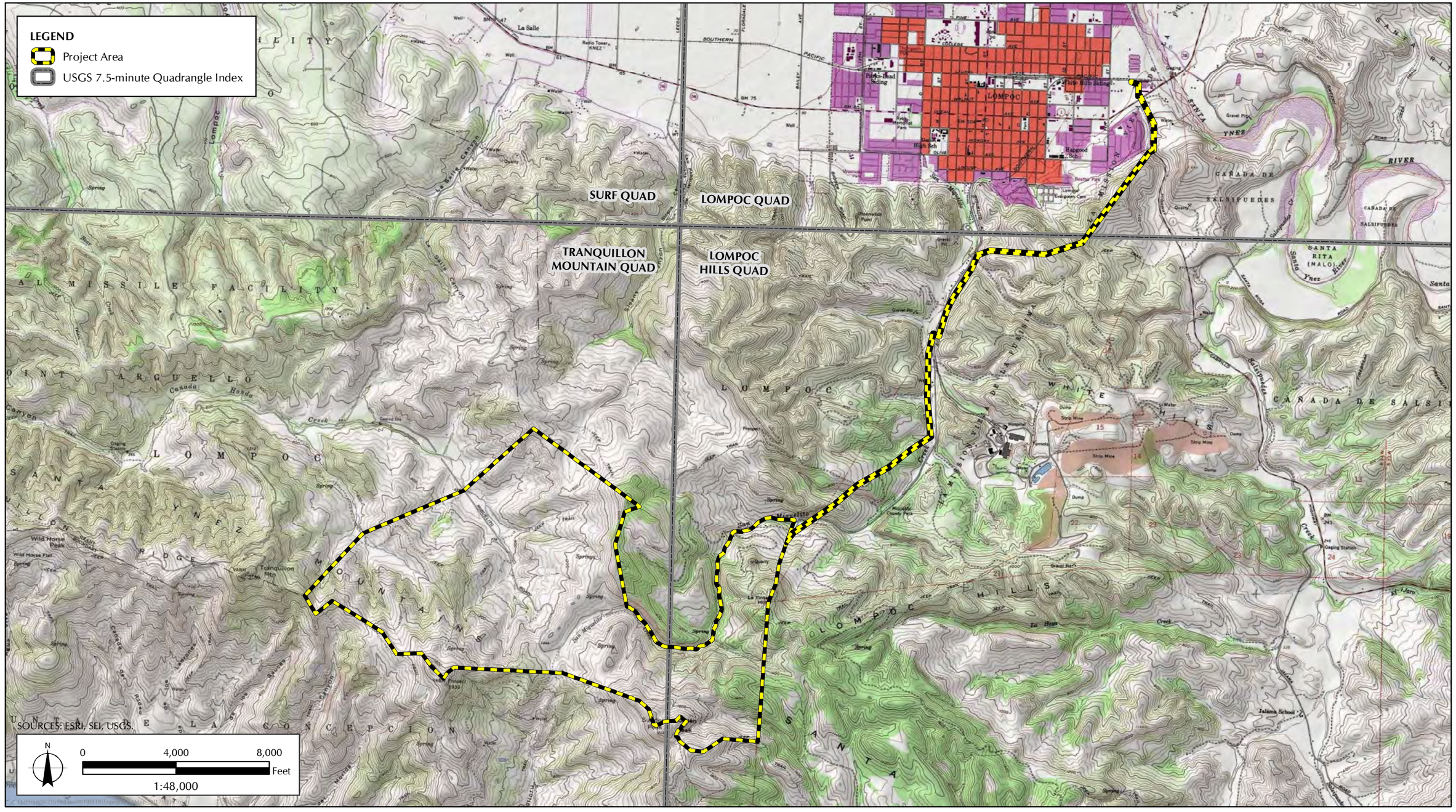


FIGURE 2.1-3
Topographic Map

SITE PLAN
STRAUSS WIND ENERGY PROJECT
SANTA BARBARA COUNTY

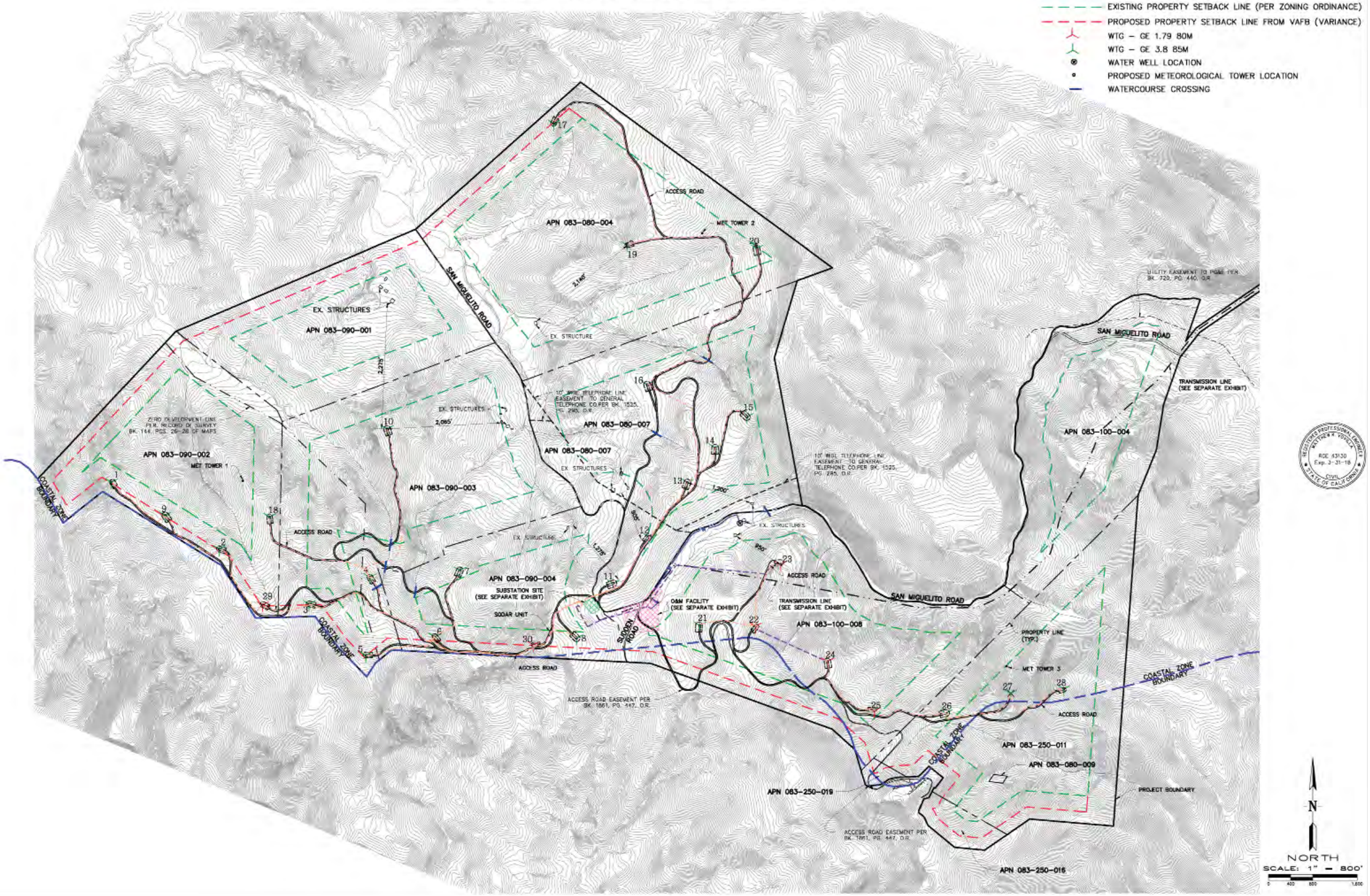


FIGURE 2.3-1
Site Plan

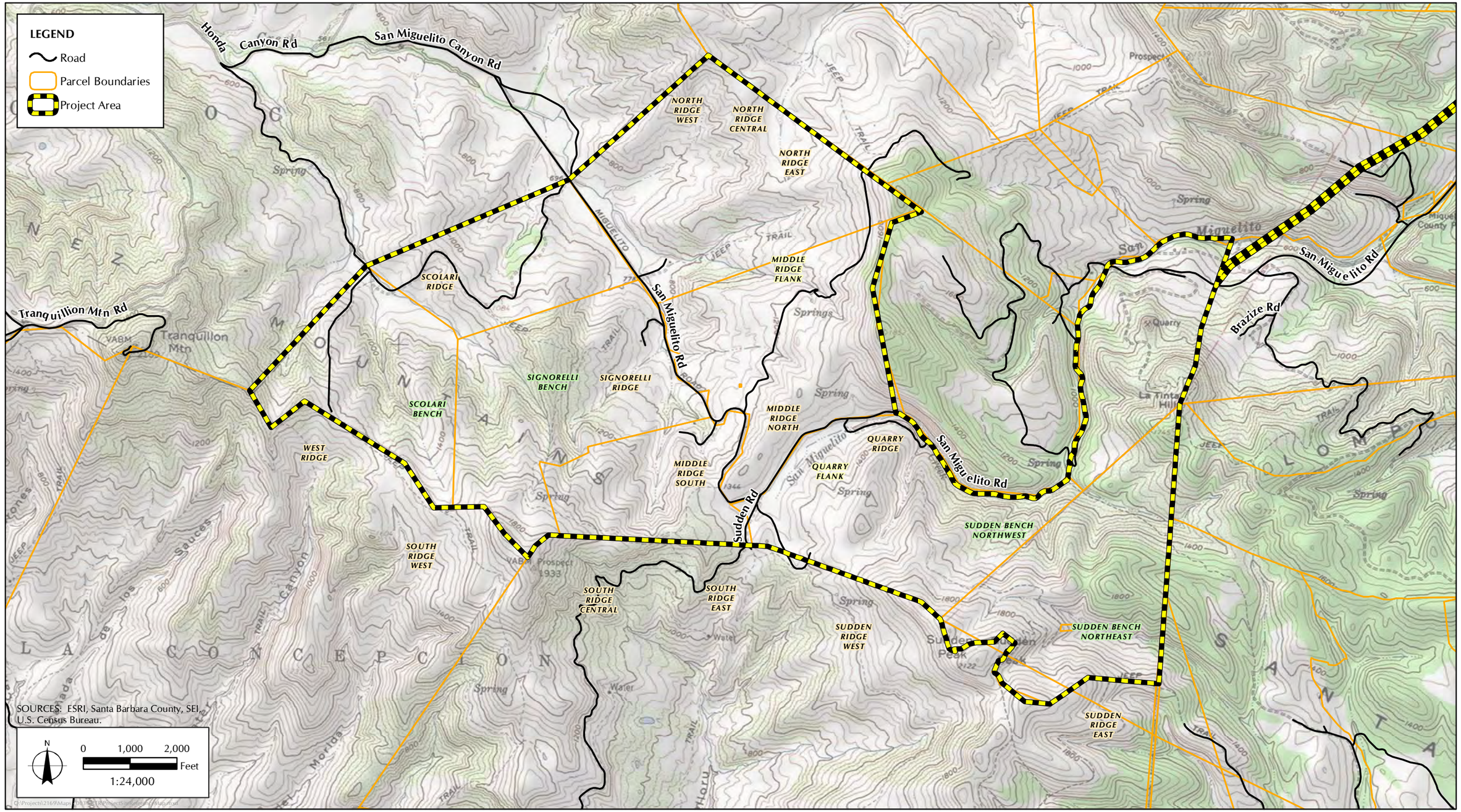
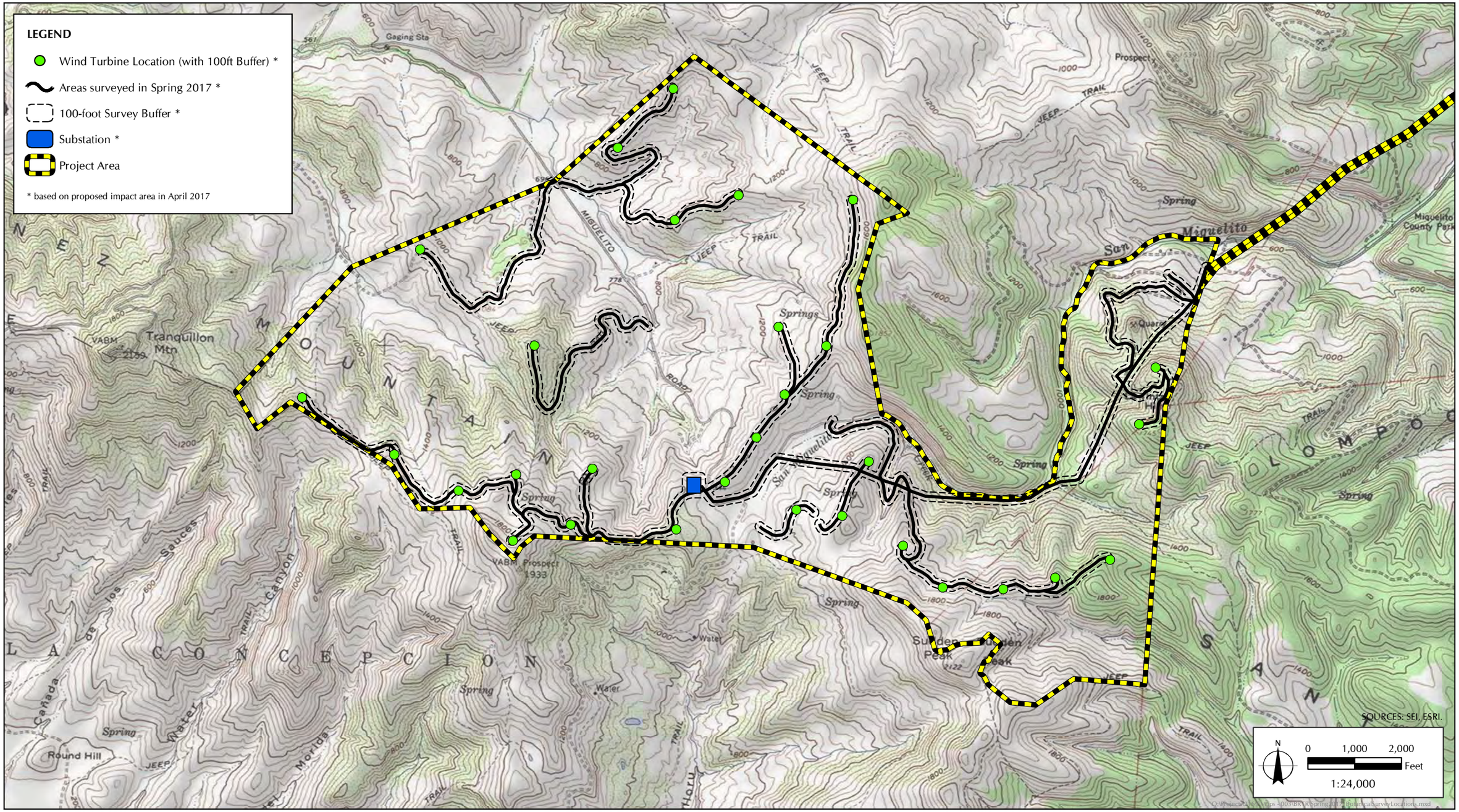


FIGURE 4.0-1

Project Site Reference Map



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 4.2.1-1

Spring 2017 Botanical Survey Locations

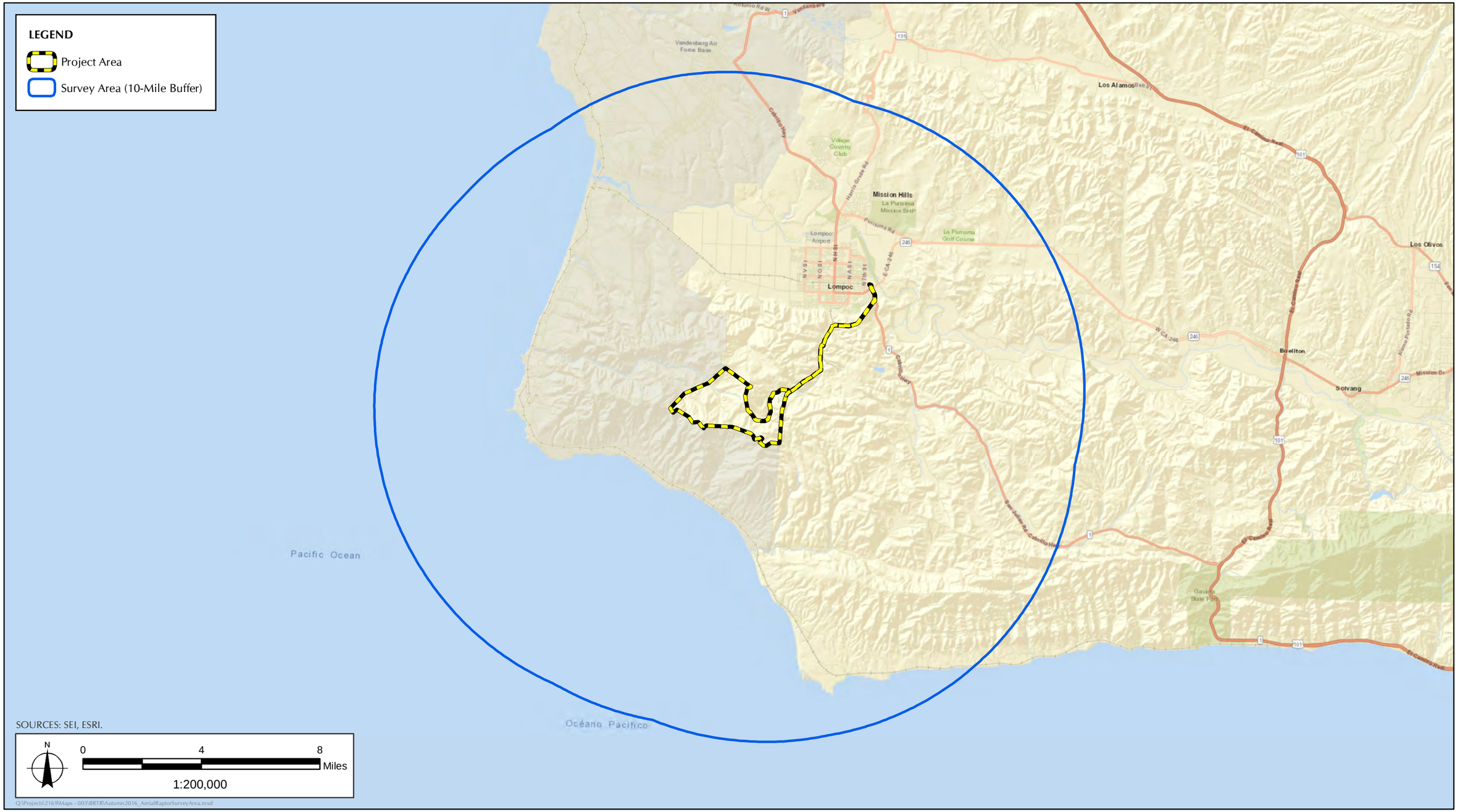
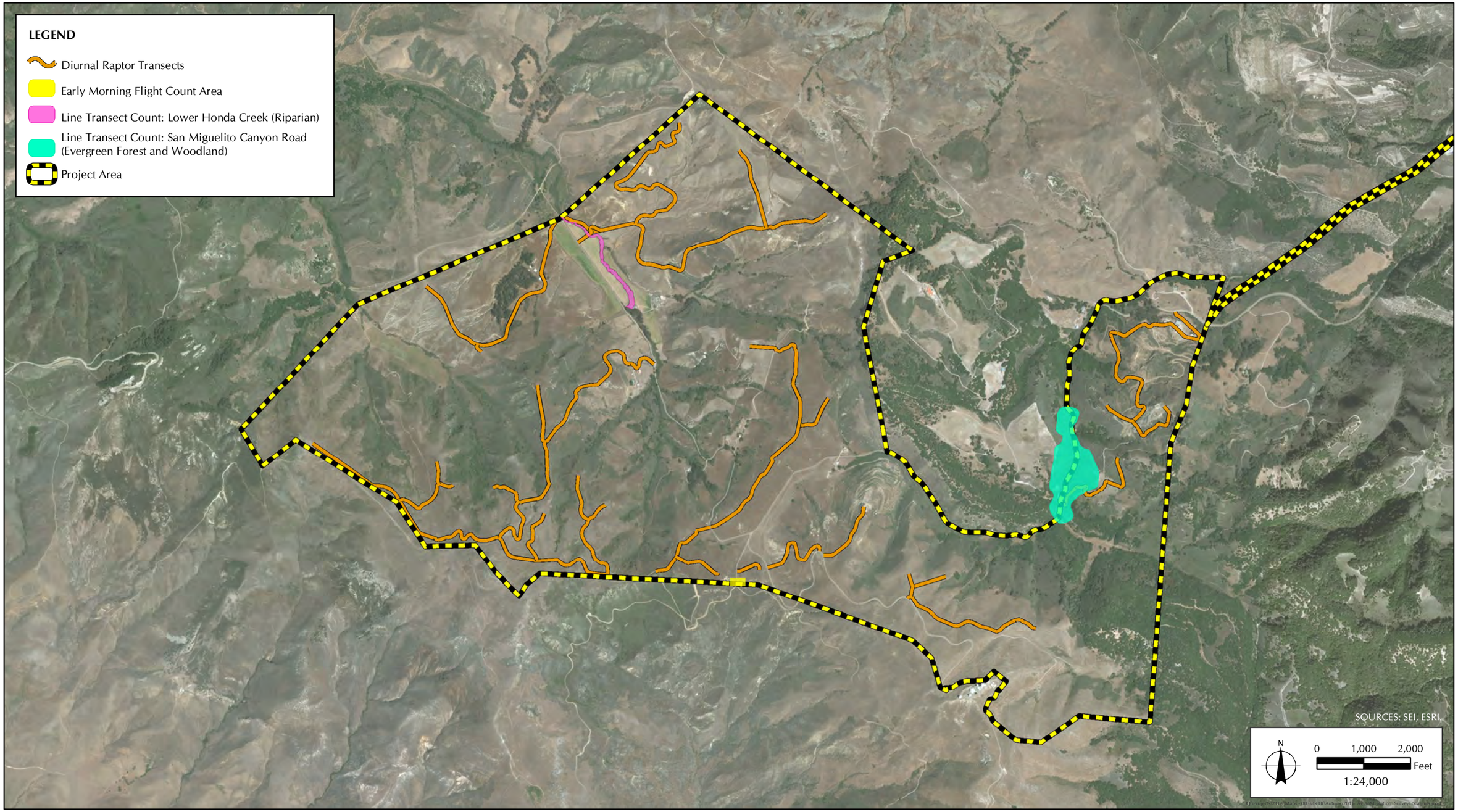


FIGURE 4.2.2-1

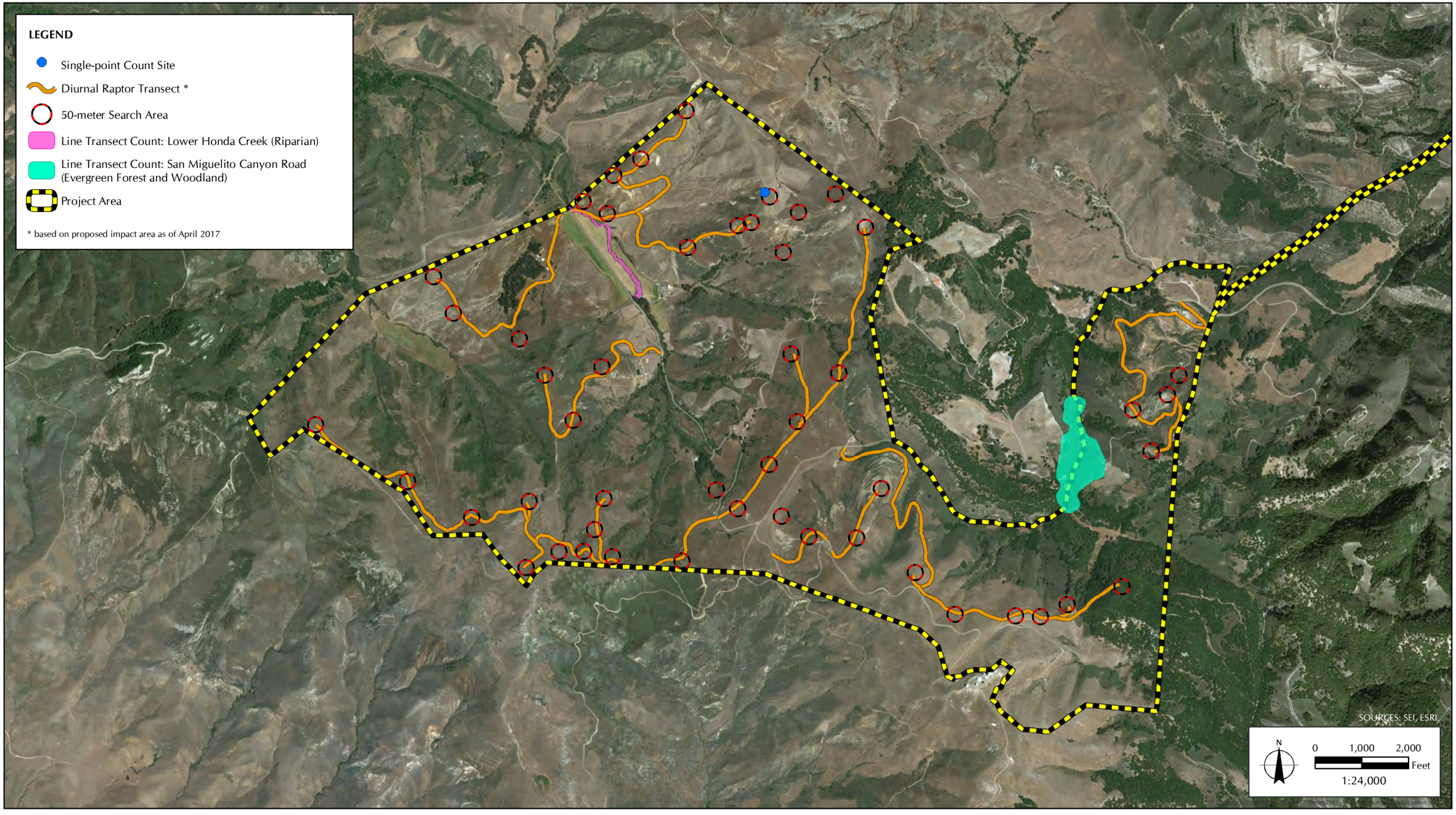
Autumn 2016 Aerial Raptor Survey Area



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 4.2.2-2

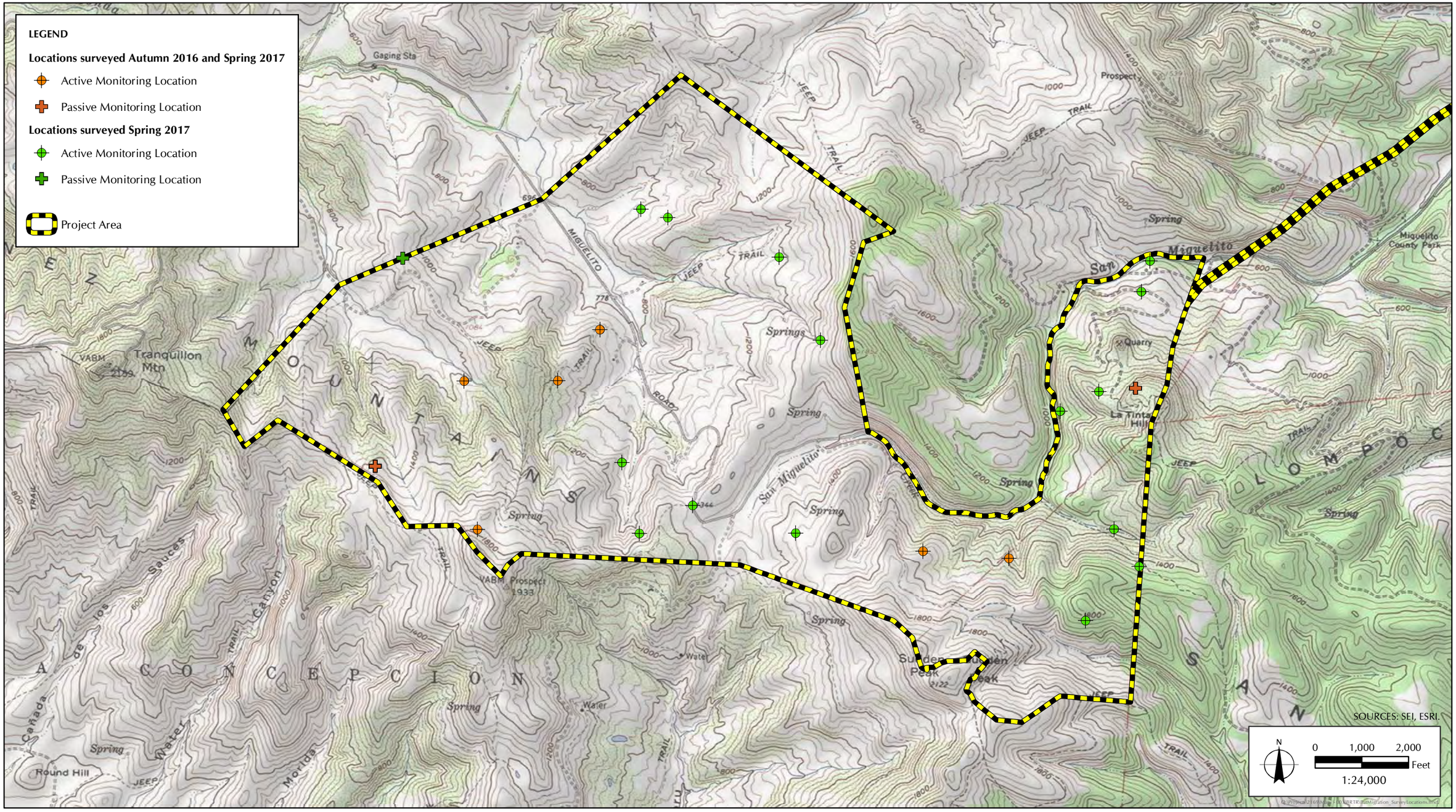
Autumn 2016 Avian Migration Survey Locations



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 4.2.2-3

Spring 2017 Avian Migration Survey Locations



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 4.2.3-1

Bat Migration 2016-2017 Survey Locations

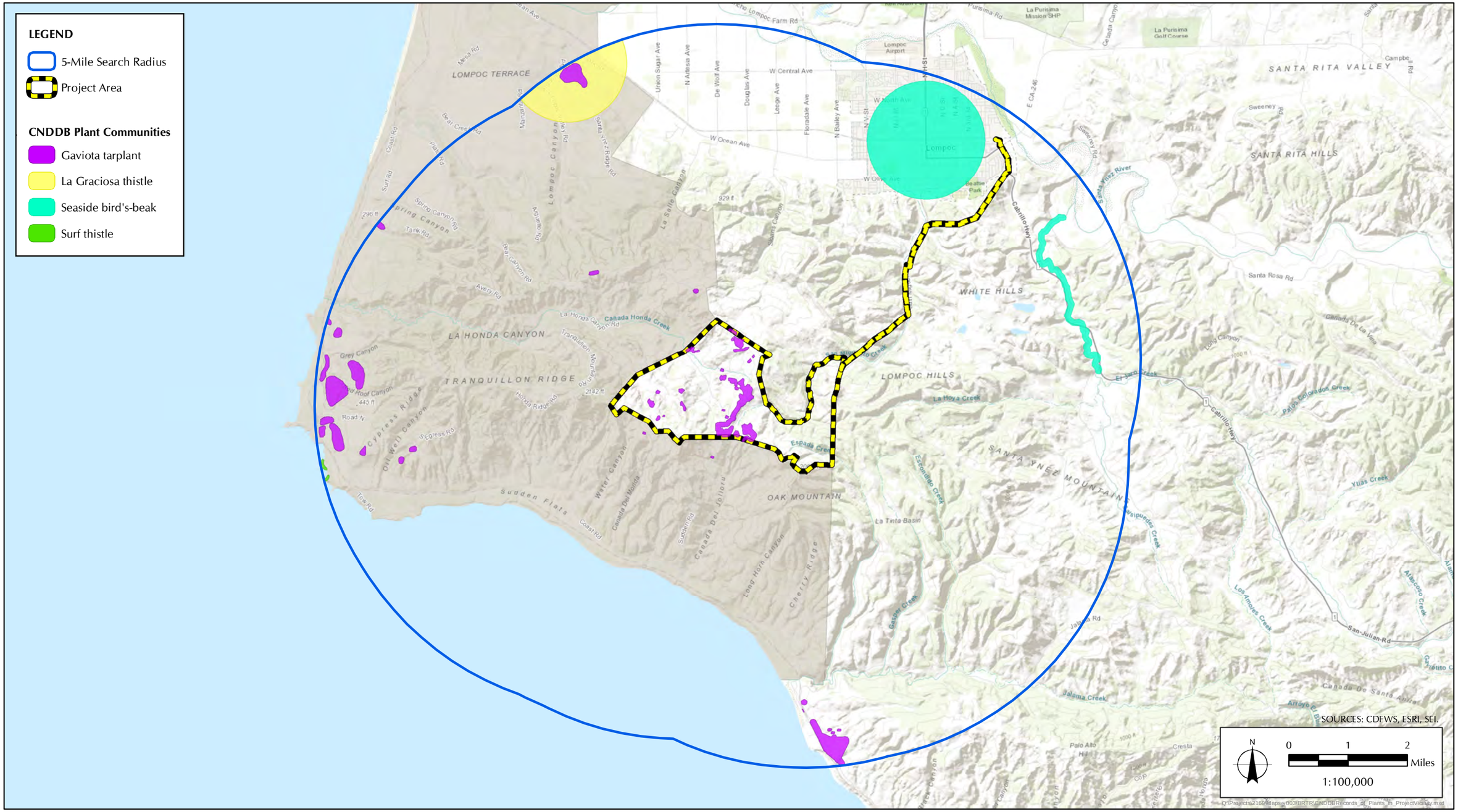


FIGURE 5.1.1-1

CNDDB Records of Listed Plant Species in the Project Vicinity

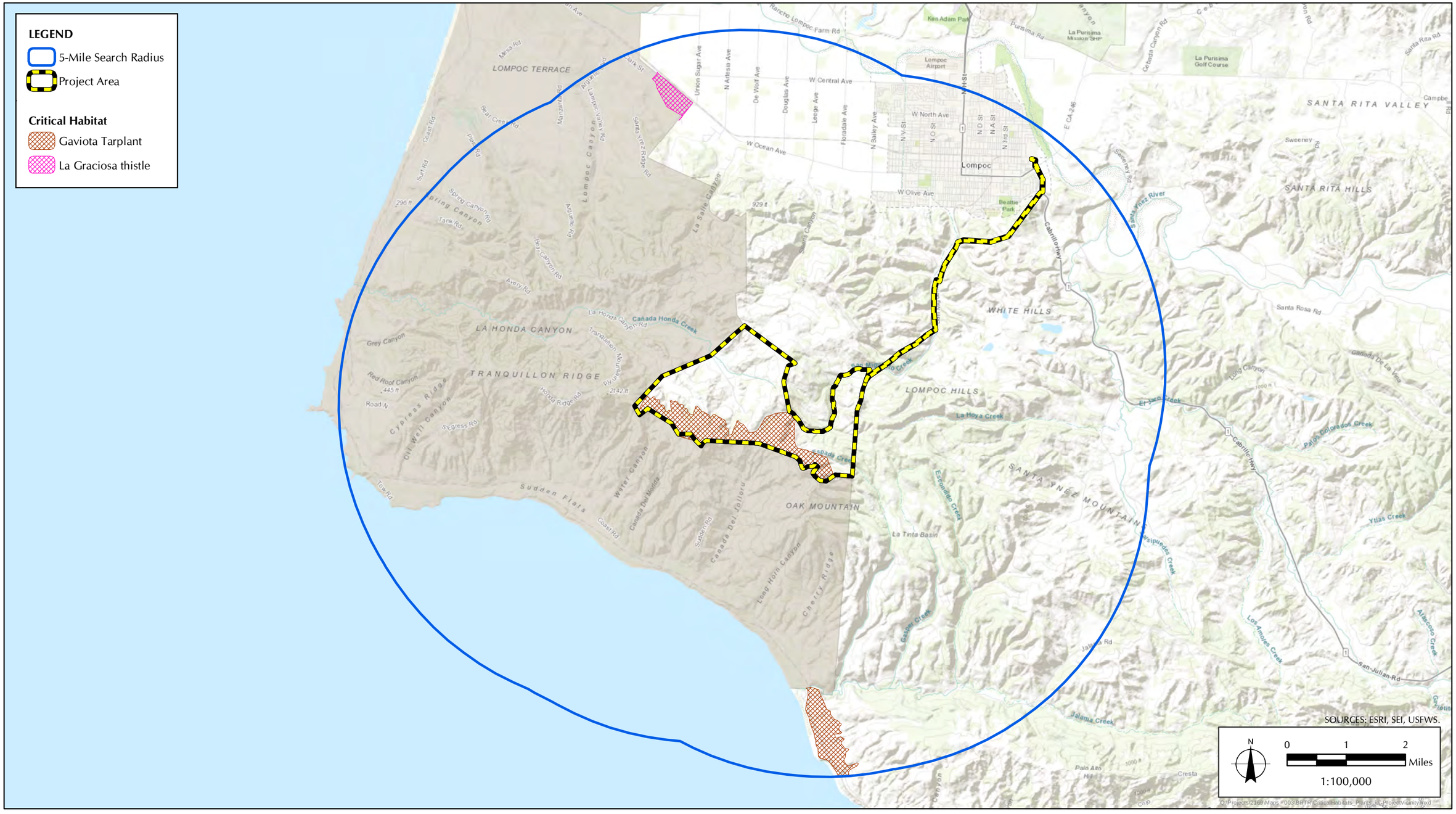
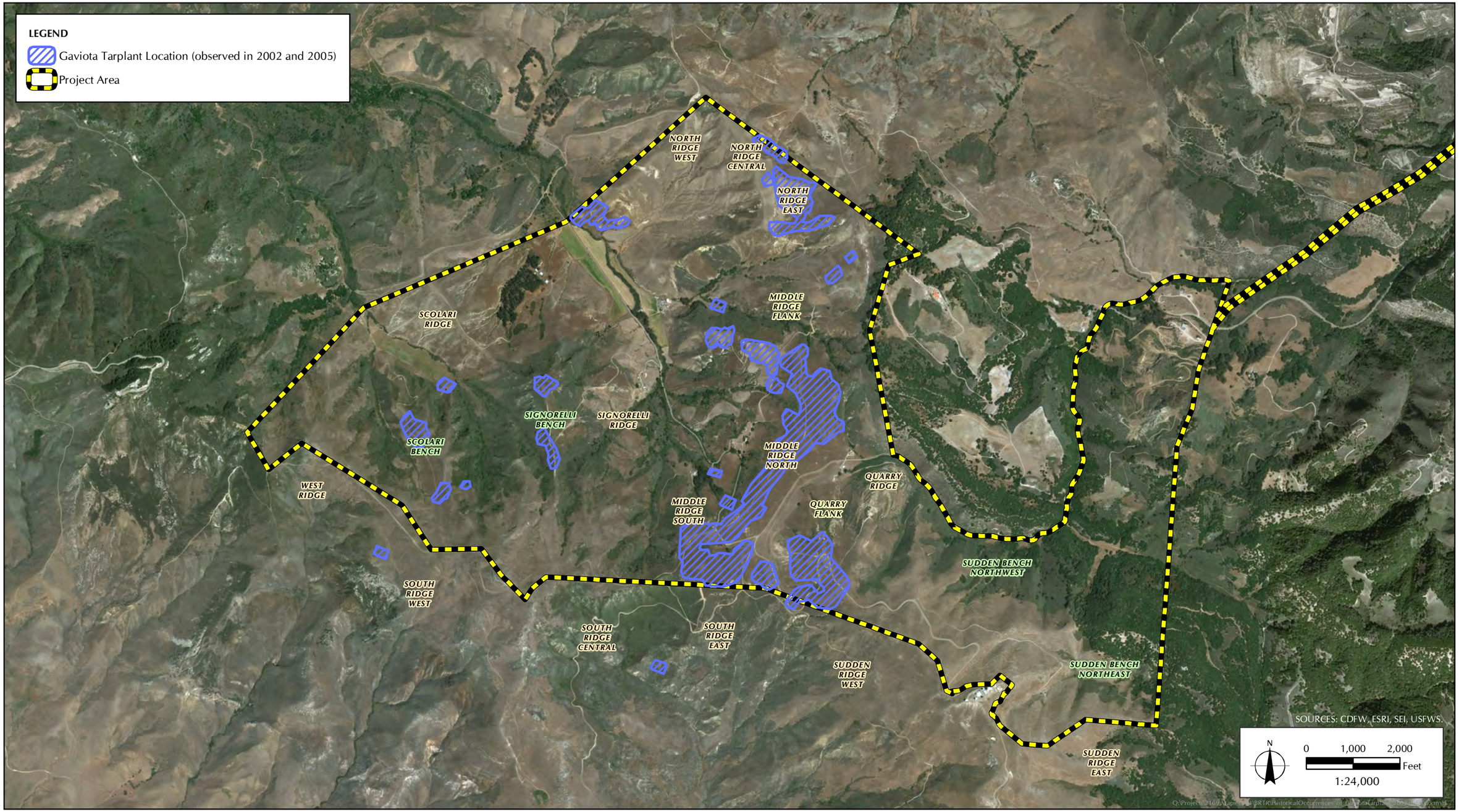


FIGURE 5.1.1-2

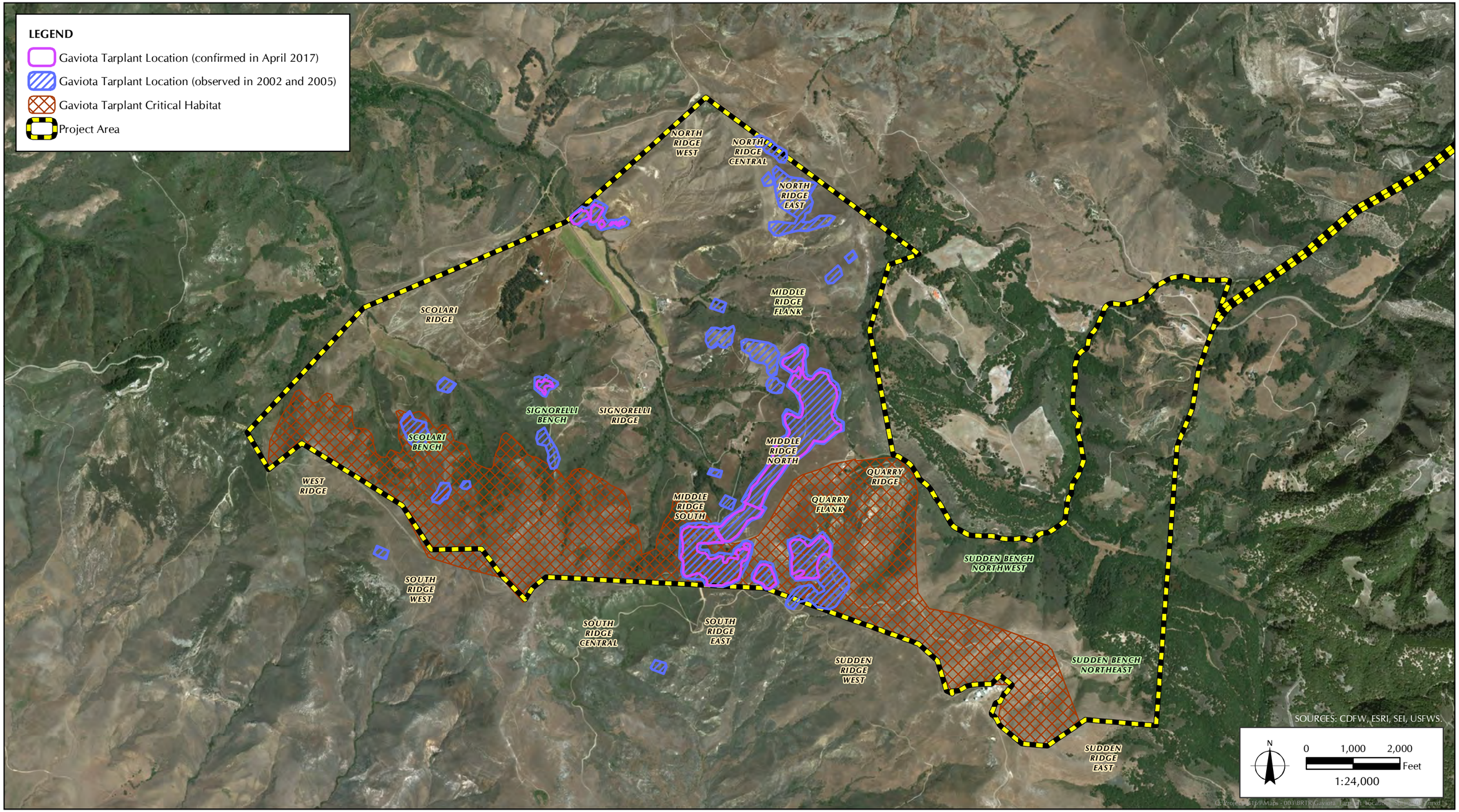
Critical Habitat for Plant Species Designated in the Project Vicinity



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 5.1.1-3

Historical Occurrences of Gaviota Tarplant (2002 and 2005)



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 5.1.1-4

Gaviota Tarplant Locations in Spring 2017

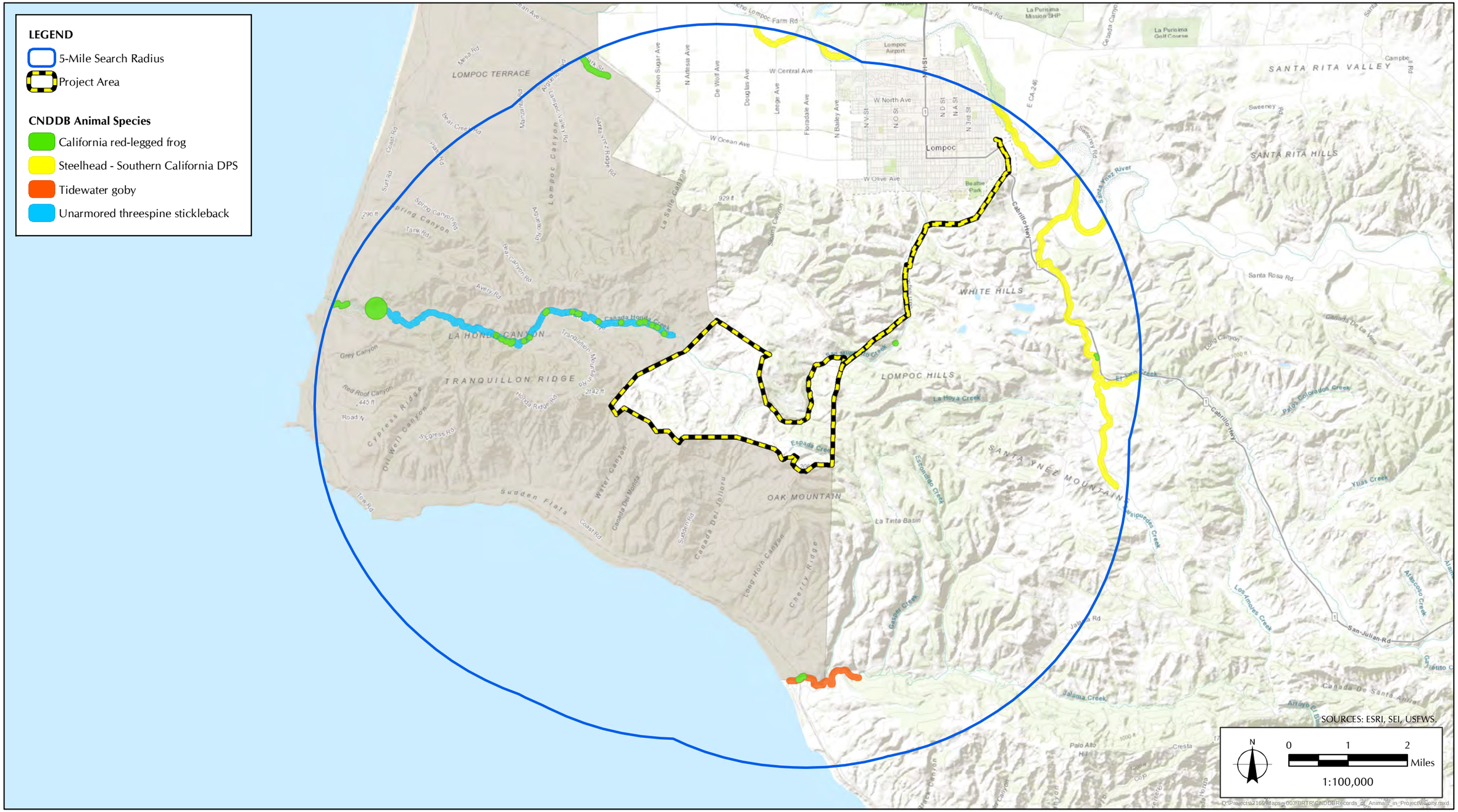


FIGURE 5.1.1-5

CNDDB Records of Listed Animal Species in the Project Vicinity

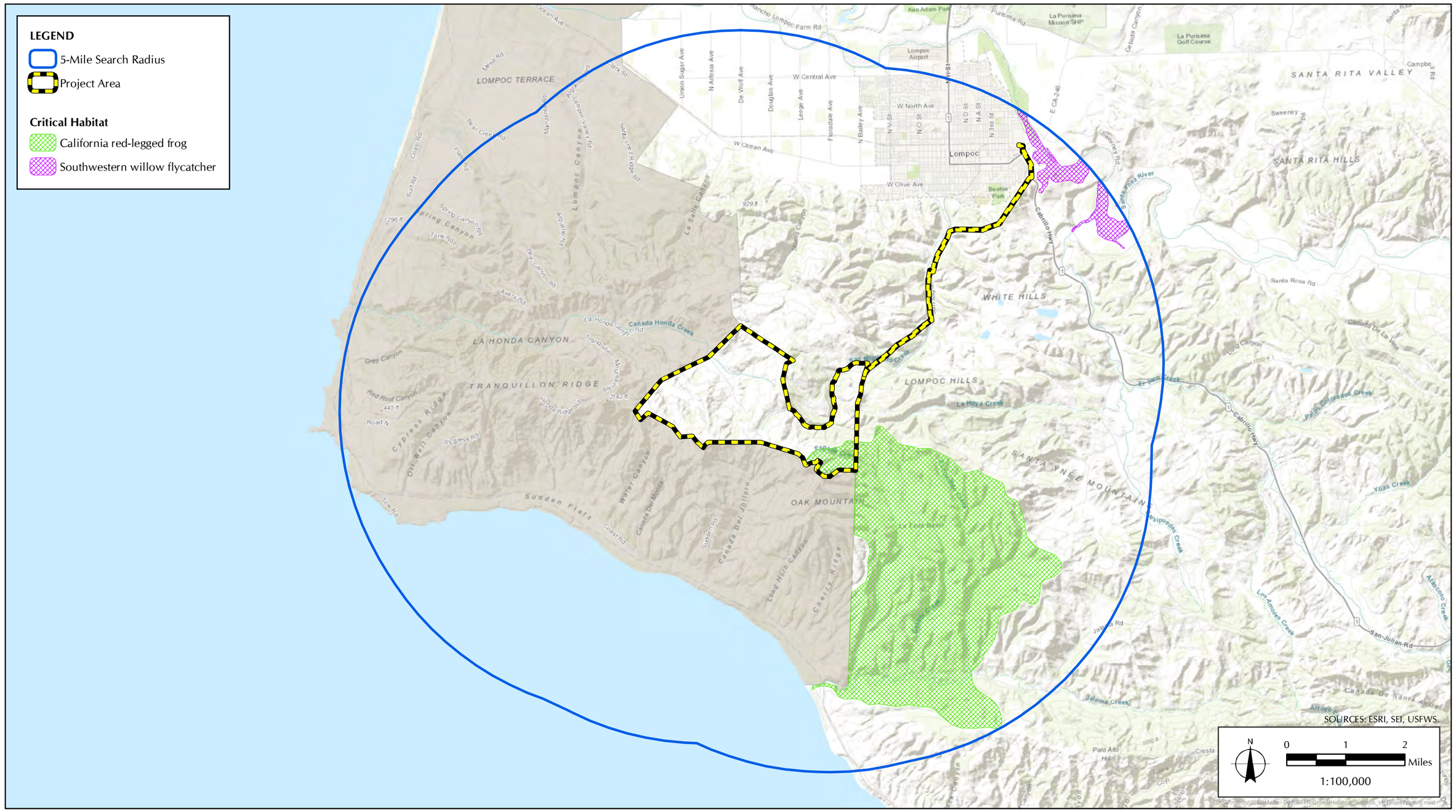
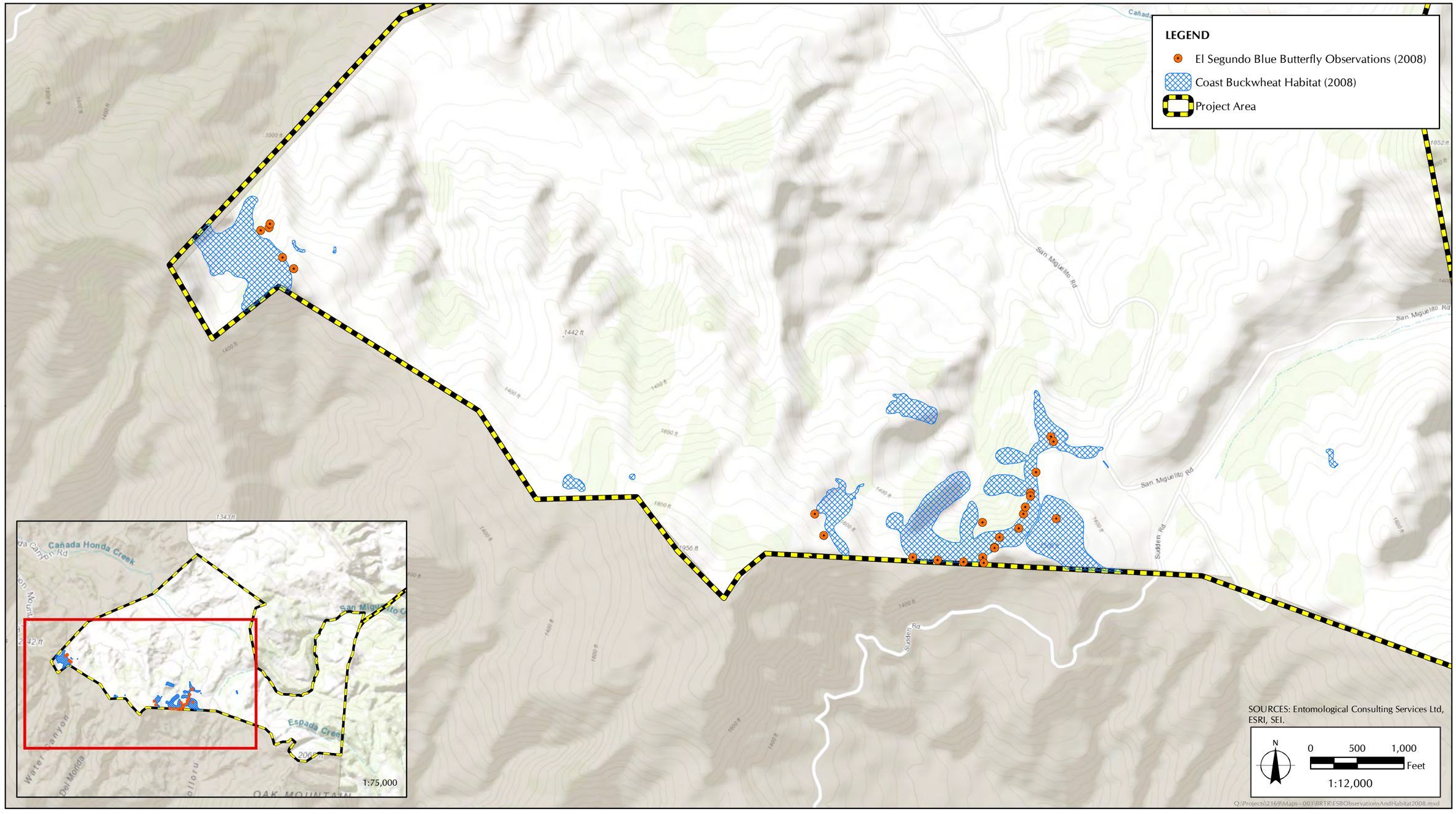


FIGURE 5.1.1-6

Critical Habitat for Animal Species Designated in the Project Vicinity



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 5.1.1-7

El Segundo Blue Butterfly Observations and Suitable Habitat (2008)

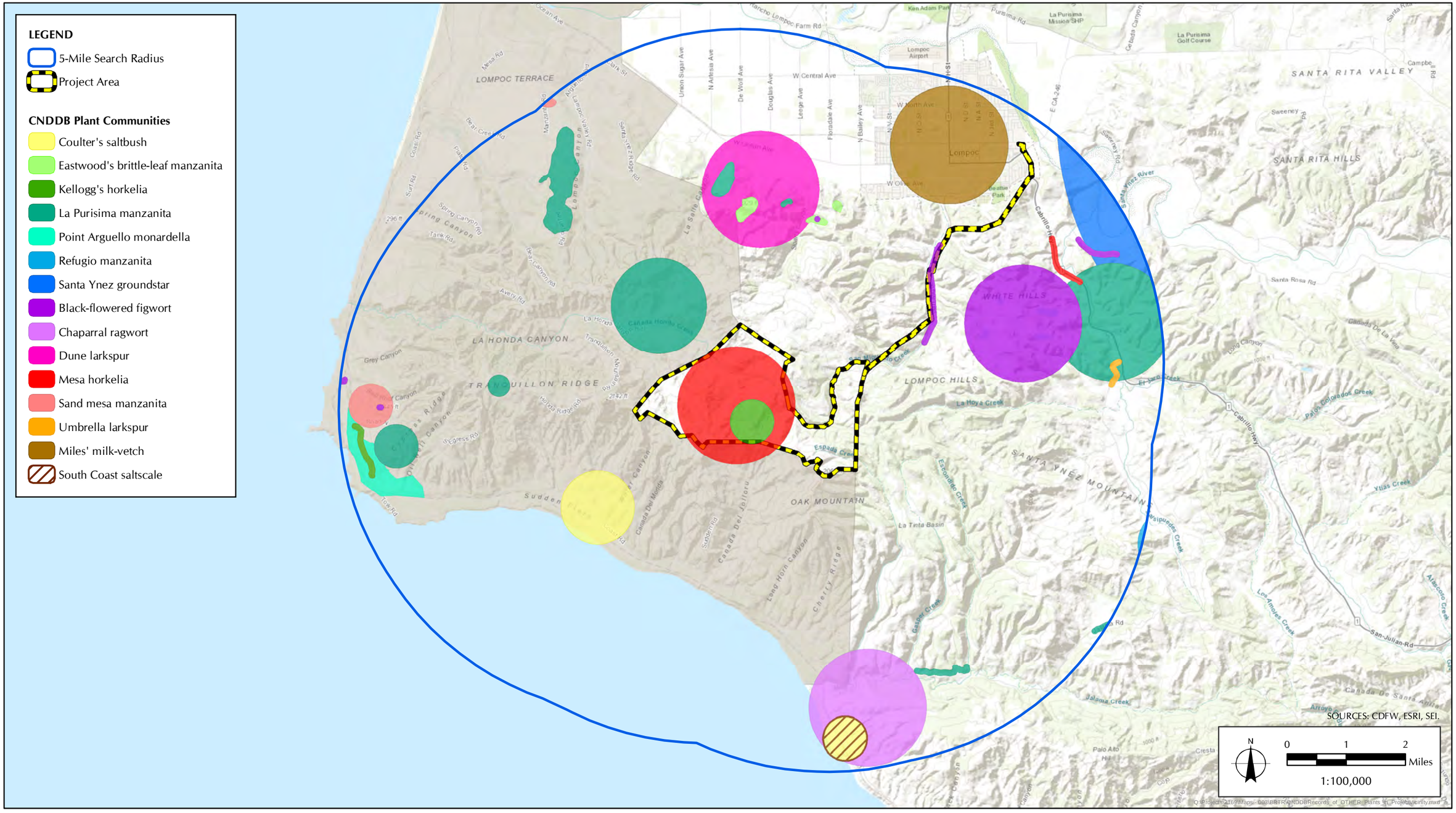


FIGURE 5.1.1-8

CNDDB Records of Other Special Status Plant Species in the Project Vicinity

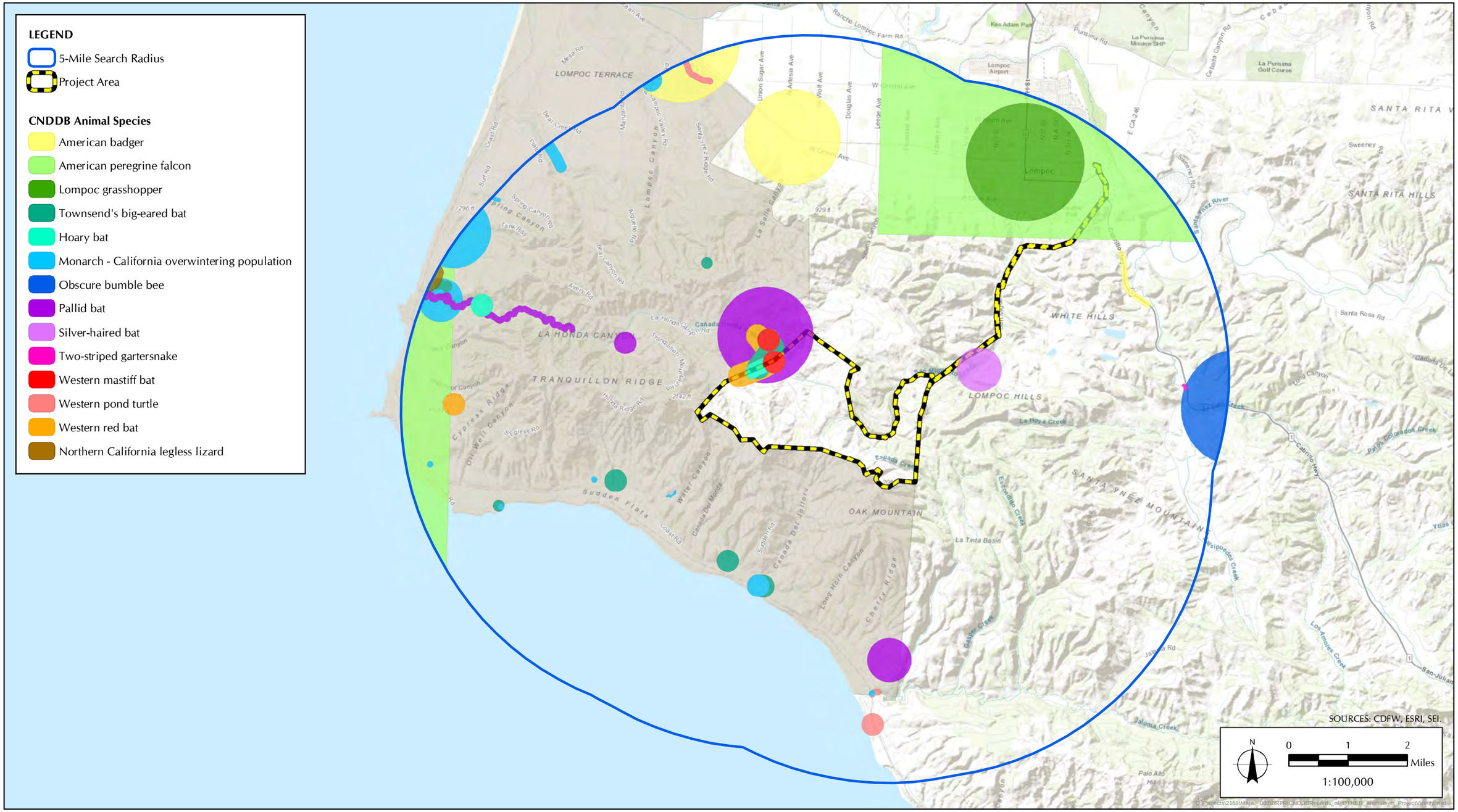


FIGURE 5.1.1-9

CNDDB Records of Other Special Status Animal Species in the Project Vicinity

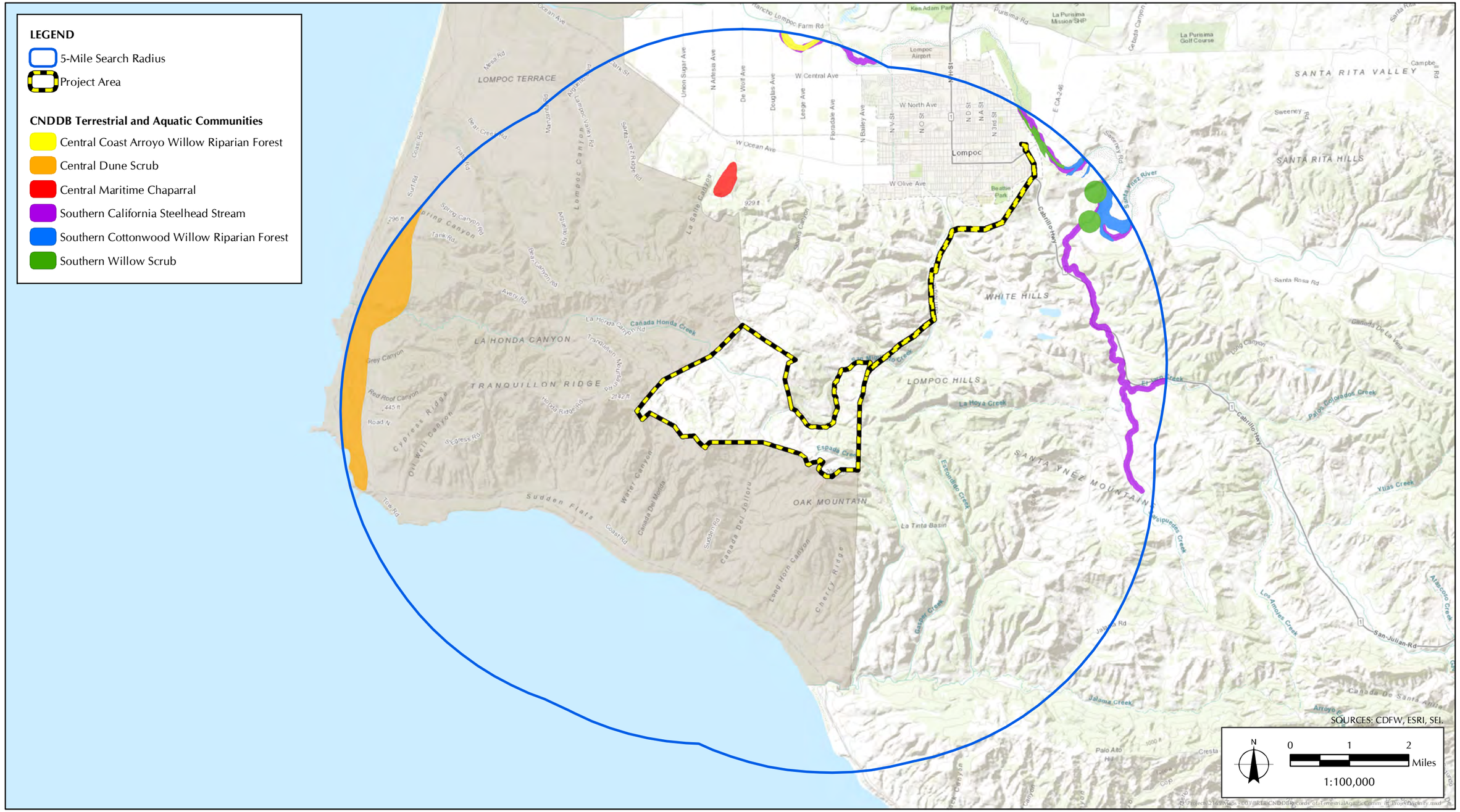


FIGURE 5.1.2-1

CNDDB Records of Terrestrial and Aquatic Communities in the Project Vicinity

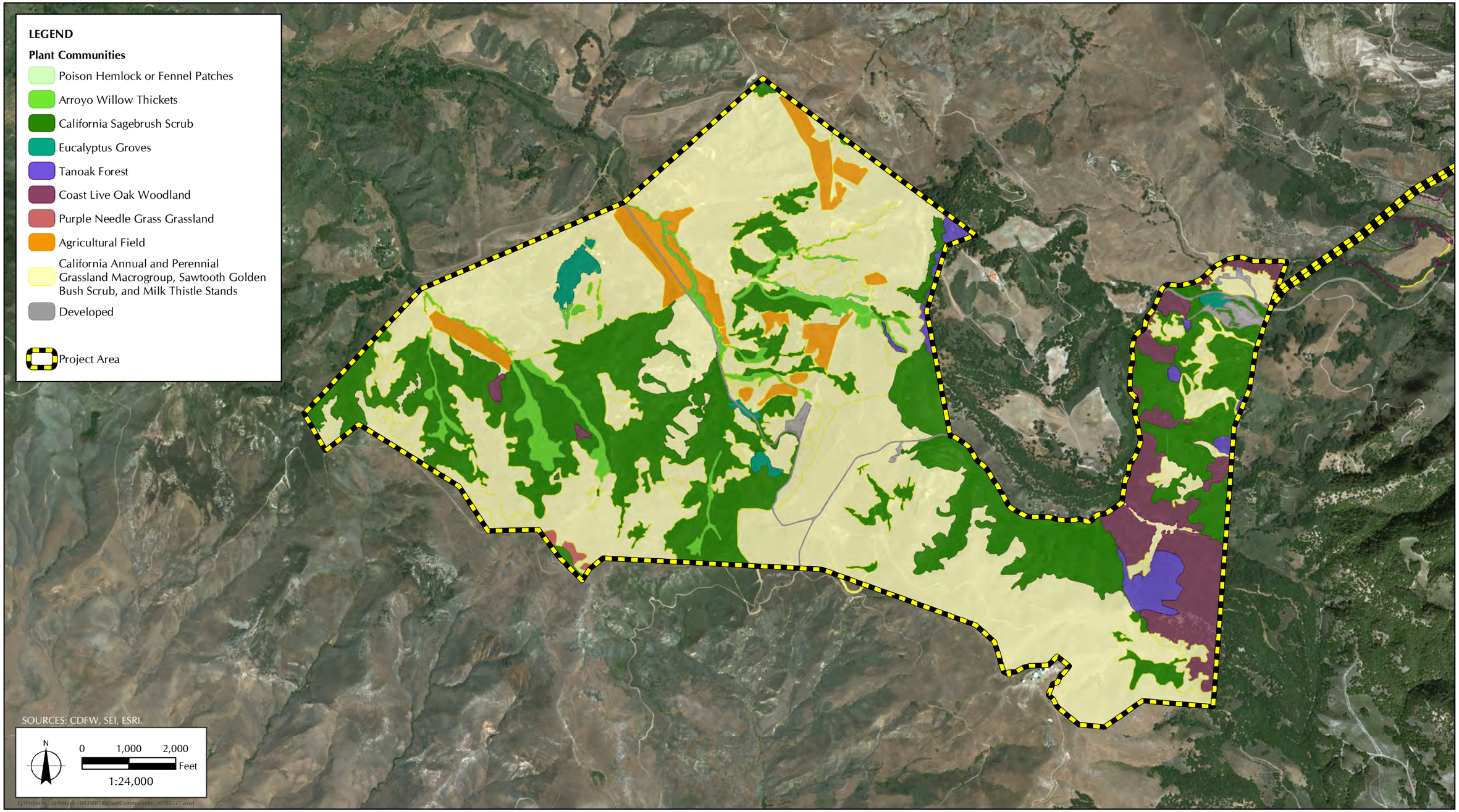


FIGURE 5.1.2-2A
Plant Communities within the Project Site

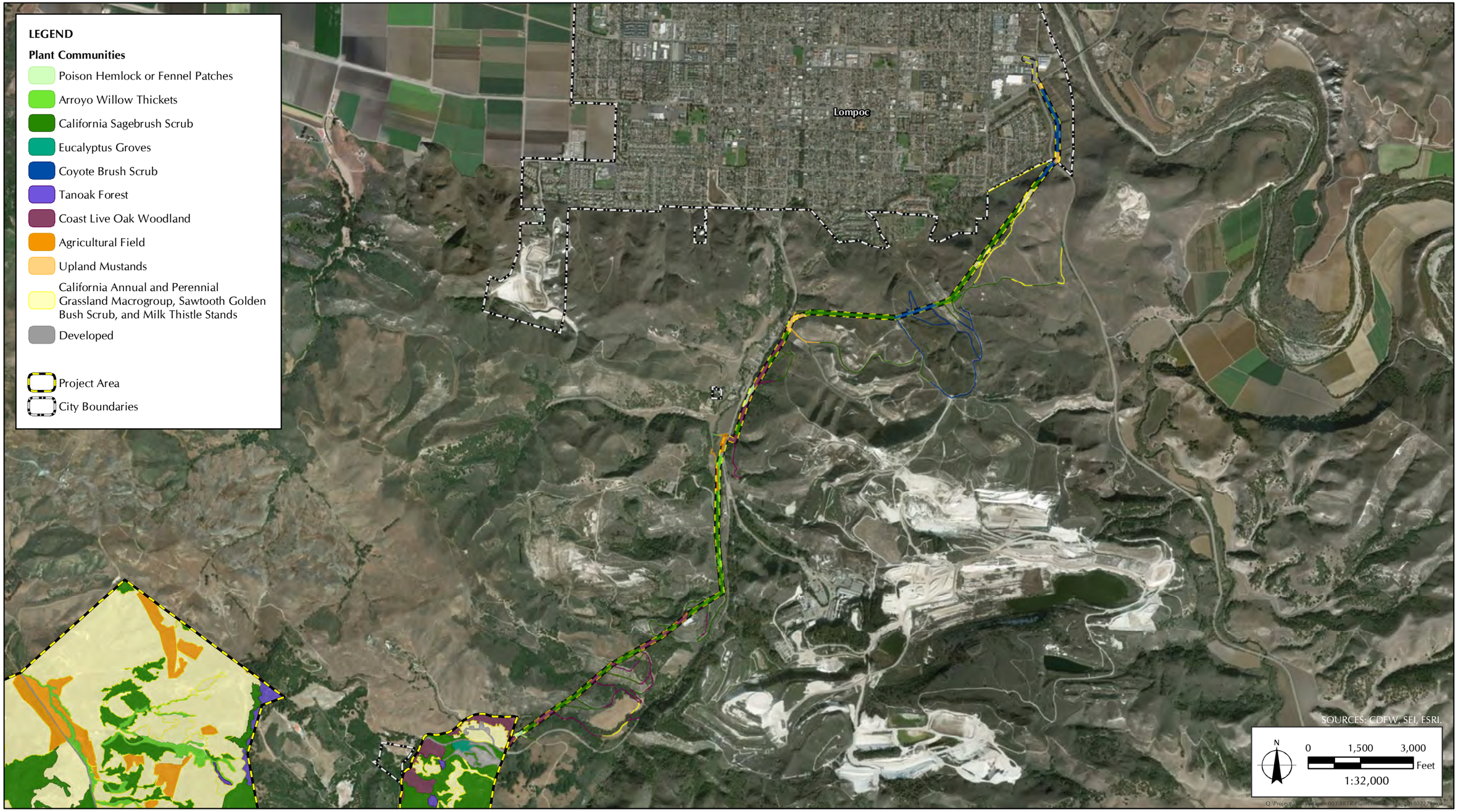


FIGURE 5.1.2-2B

Plant Communities along the Transmission Line Corridor

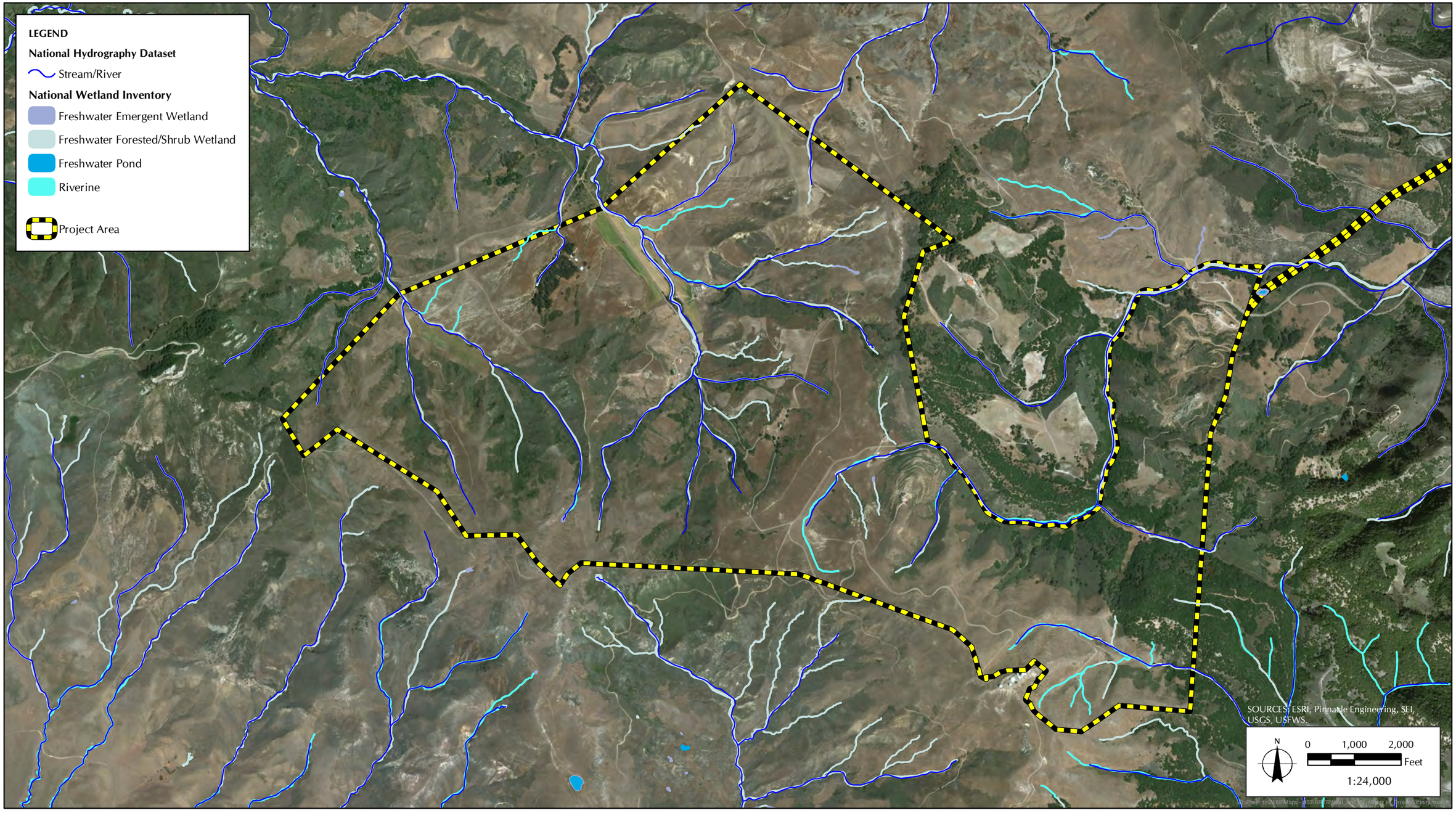


FIGURE 5.1.3-1A

USGS Blueline Drainages and Wetlands in the Project Vicinity

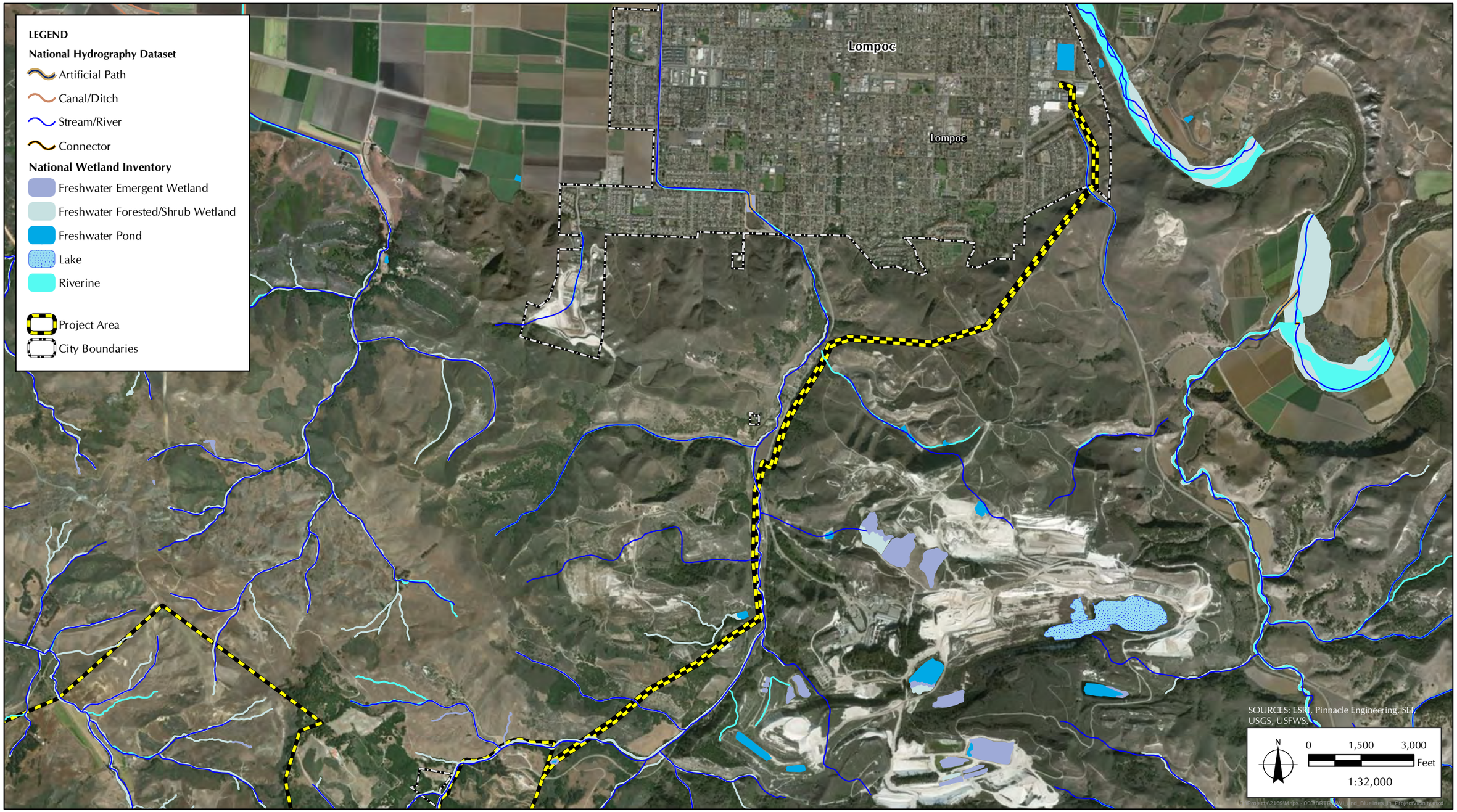


FIGURE 5.1.3-1B

USGS Blueline Drainages and Wetlands along the Transmission Line Corridor

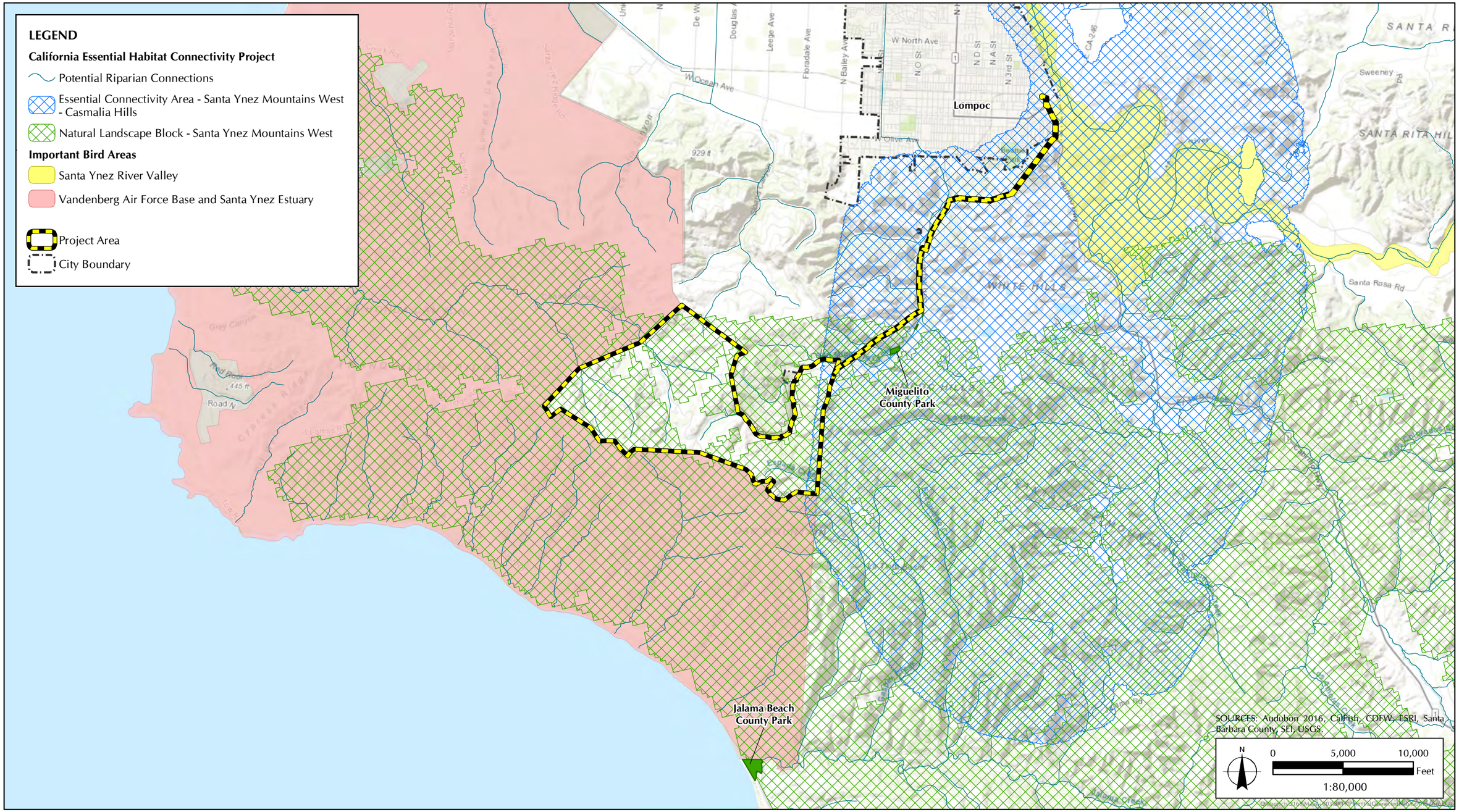
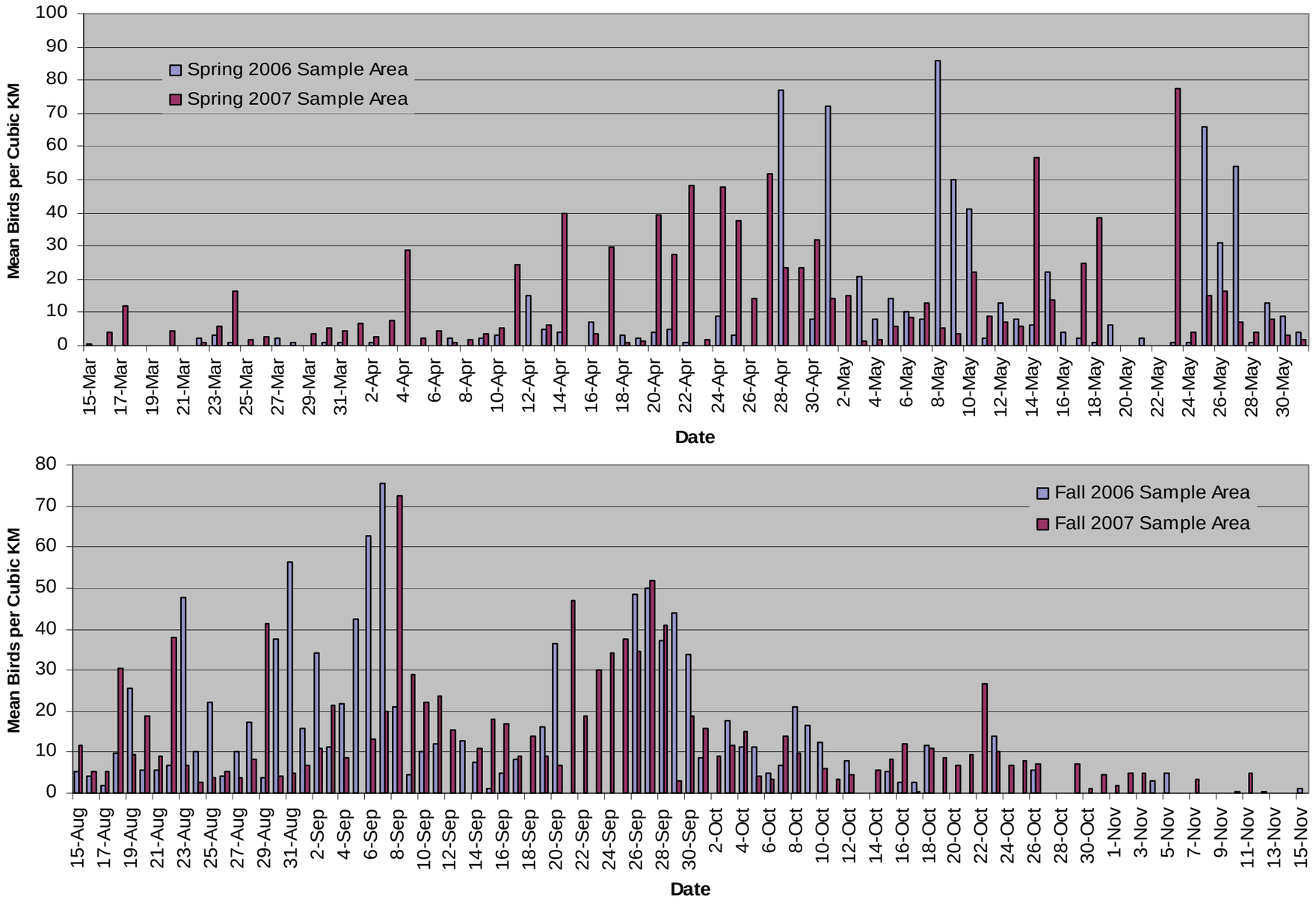


FIGURE 5.1.4-1
Potential Connected Habitat Areas in the Local Vicinity

SOURCE: U.S. Fish & Wildlife Service

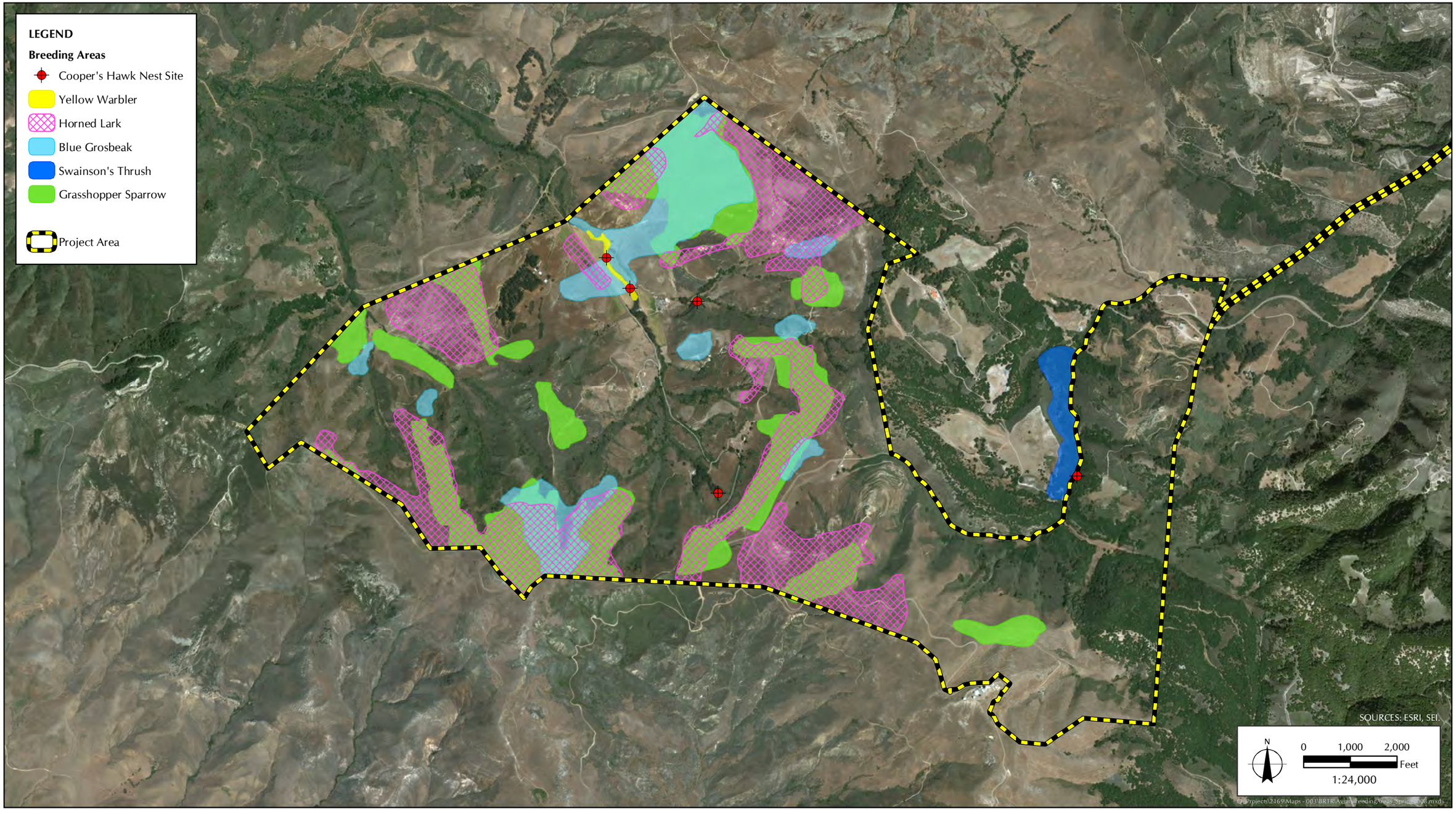
FIGURE 5.1.4-2
Pacific Flyway Overview Map



Year-to-year and night-to-night comparison of mean bird density (birds/km3) based on maximum decibels of reflectivity (dBZ) within the sample area over the wind project site. Upper figure: Spring seasons of 2006 and 2007. Lower figure: Autumn seasons of 2006 and 2007.

SOURCE: Aspen Environmental Group, Agoura Hills, CA. 27 June 2008. Analysis of WSR-88D Data to Assess Nocturnal Bird Migration over the Lompoc Wind Energy Project in California. Prepared by Sidney A. Gauthreaux, Jr., Geo-Marine, Inc., Plano, TX. (Appendix D-8)

FIGURE 5.1.4-3
Nocturnal Bird Migration Patterns Spring and Autumn 2006-2007



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 5.1.4-4

Avian Breeding Areas (Spring 2008)

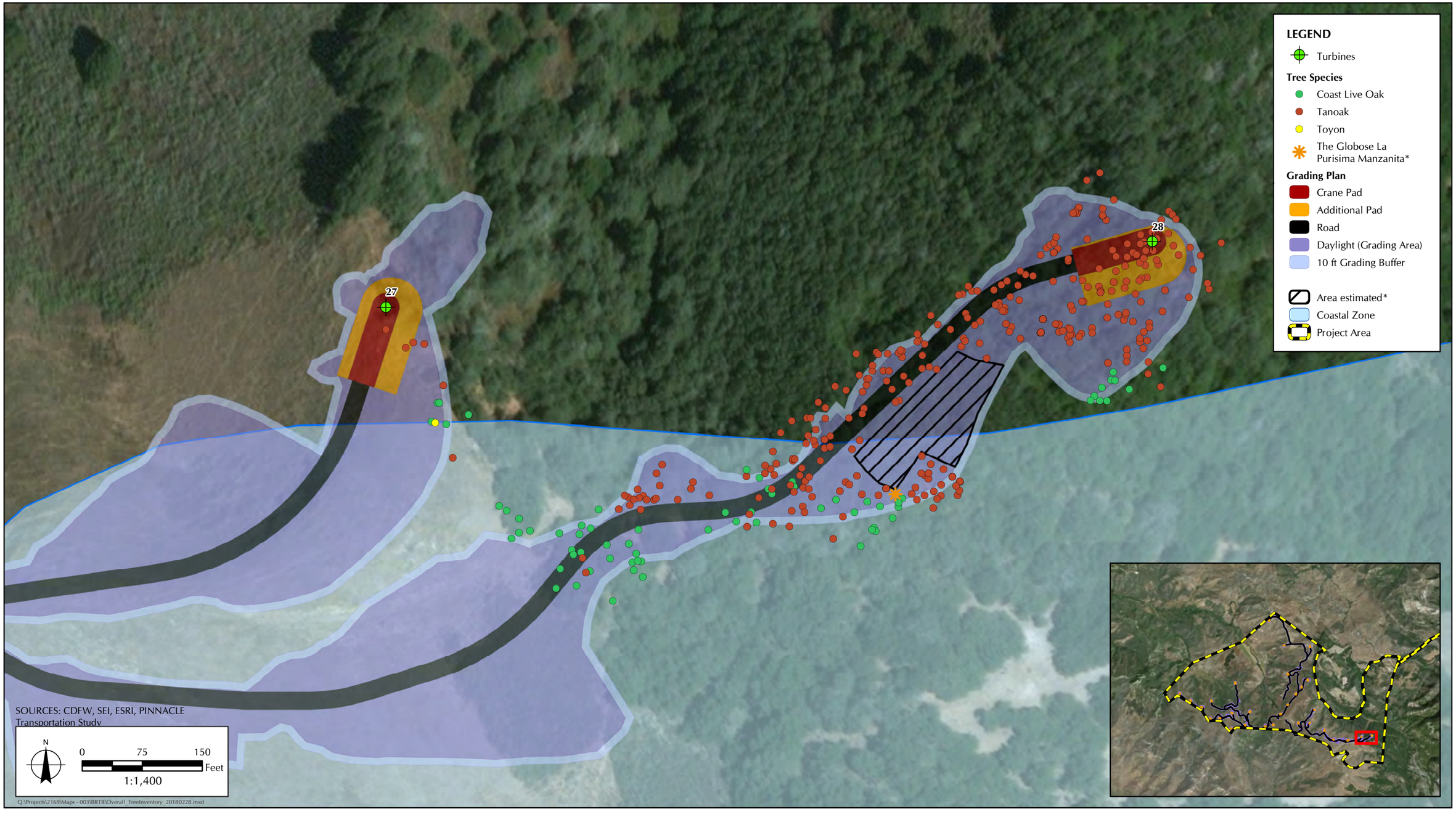


Figure 5.1.5-1A
Native Tree Inventory within Proposed Impact Areas

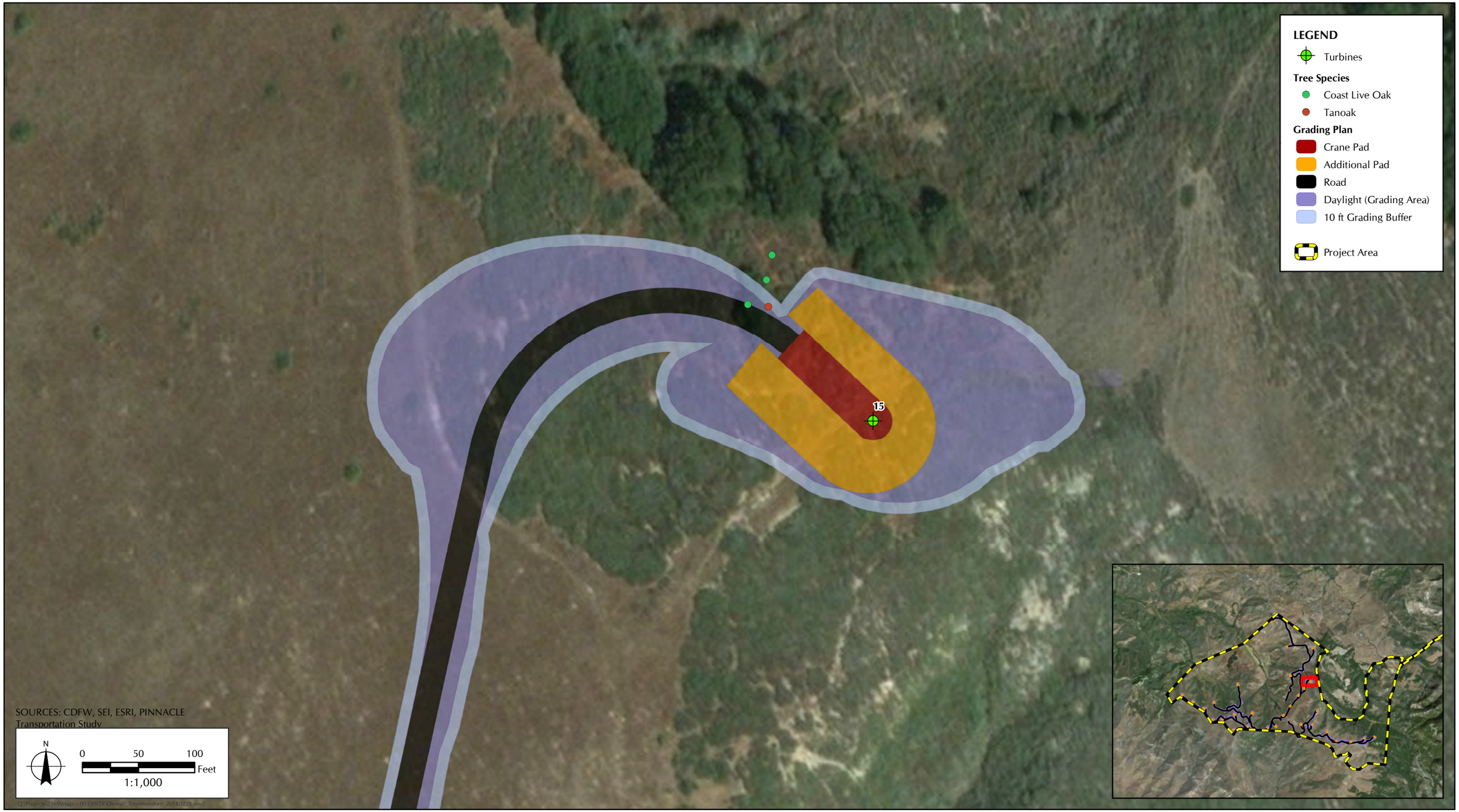


Figure 5.1.5-1B
Native Tree Inventory within Proposed Impact Areas

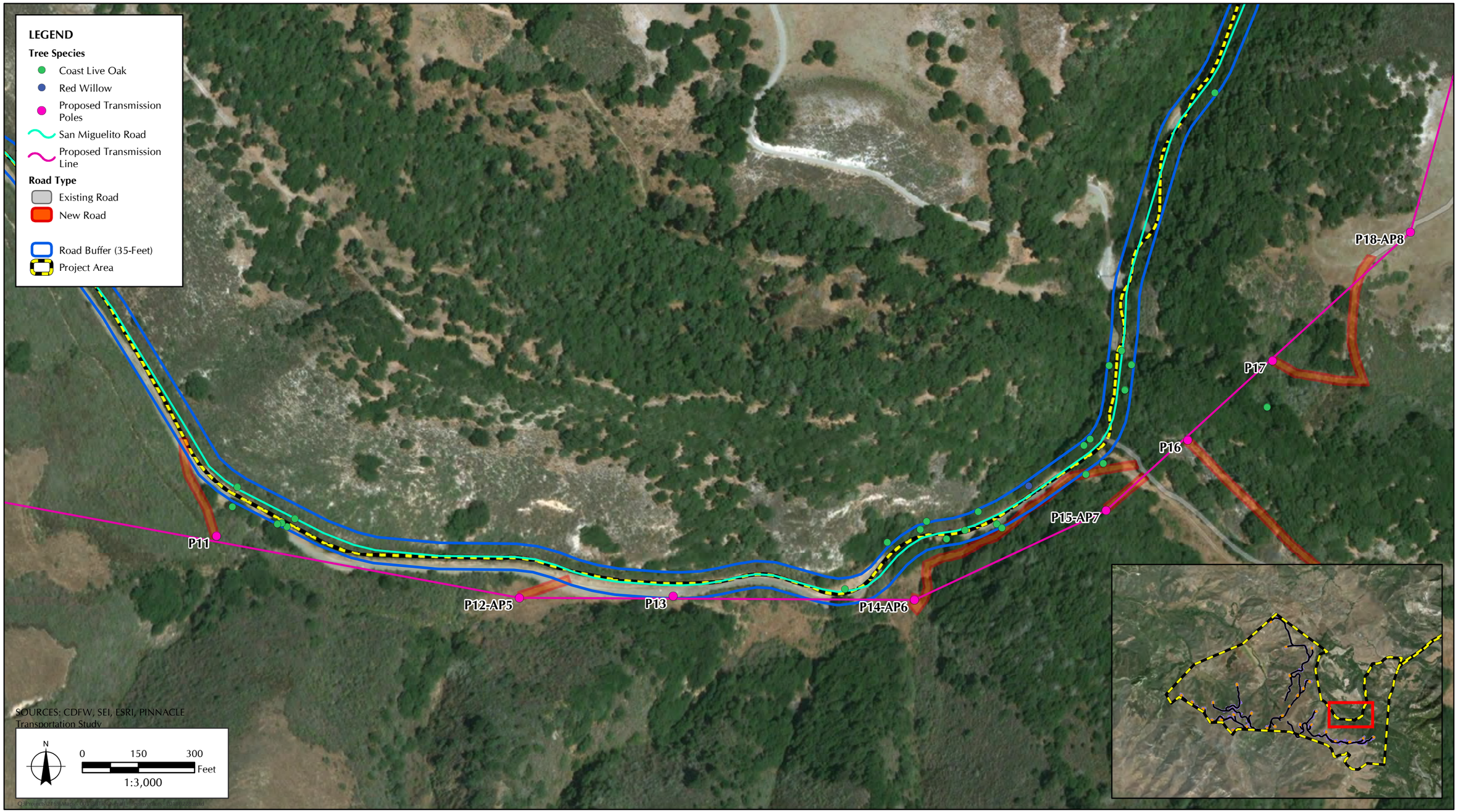
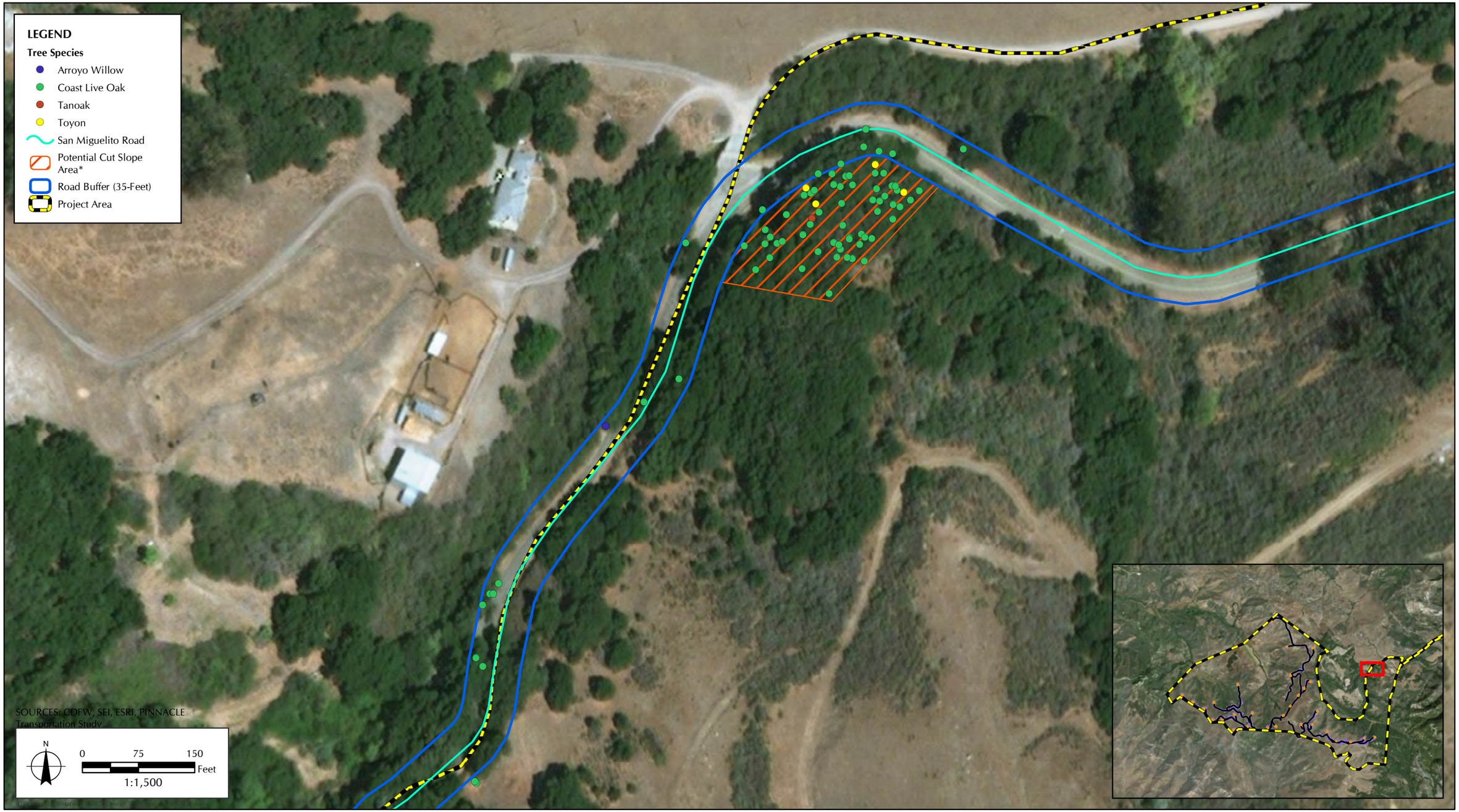


Figure 5.1.5-1C
Native Tree Inventory within Proposed Impact Areas

Figure 5.1.5-1D
Native Tree Inventory within Proposed Impact Areas



This area constitutes a failing slope that may be modified for the Proposed Project. Trees on this slope that may be removed during slope modification were surveyed. Grading plan to be determined*

Figure 5.1.5-1E
Native Tree Inventory within Proposed Impact Areas

Figure 5.1.5-1F
Native Tree Inventory within Proposed Impact Areas

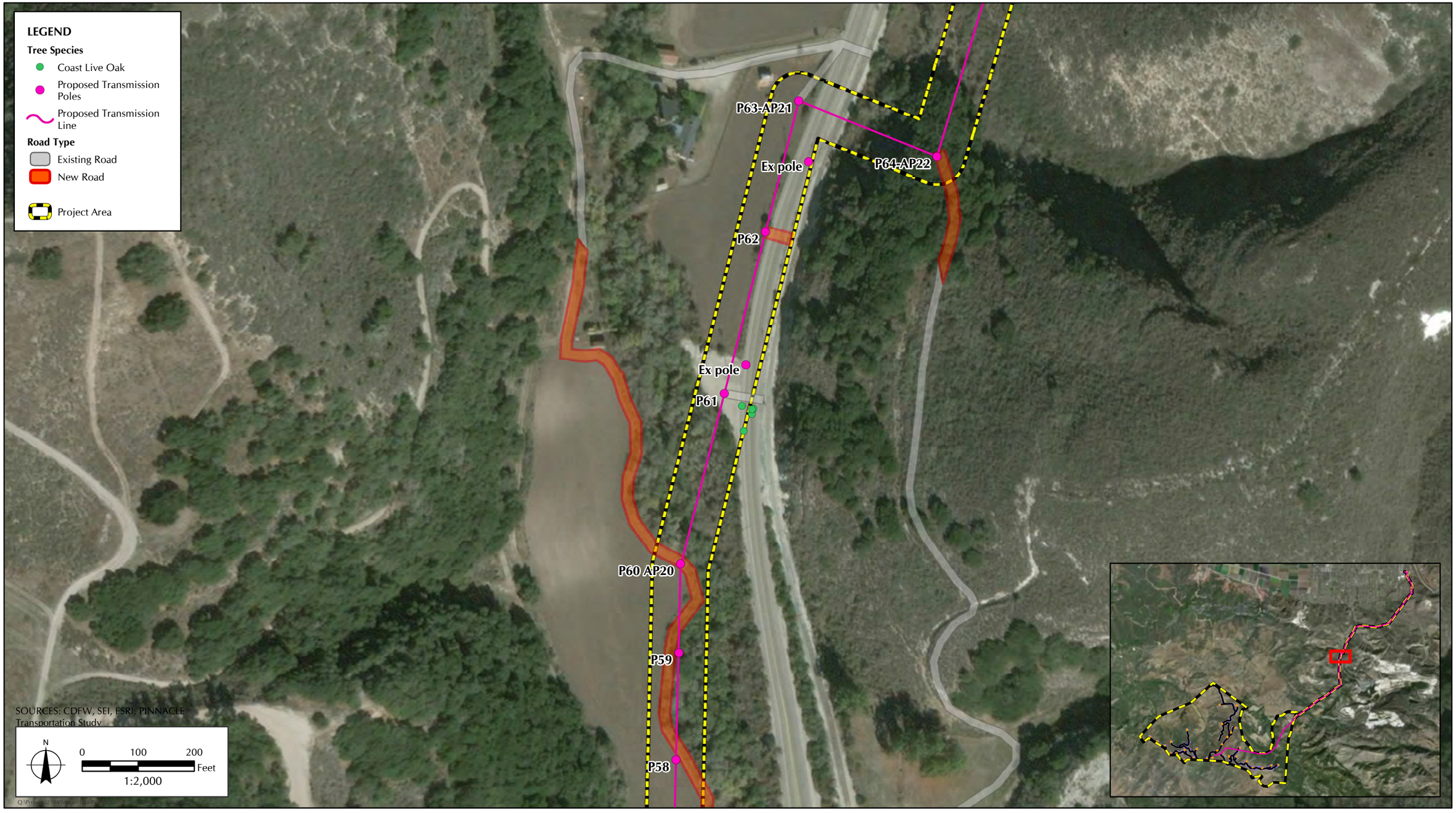


Figure 5.1.5-1G
Native Tree Inventory within Proposed Impact Areas

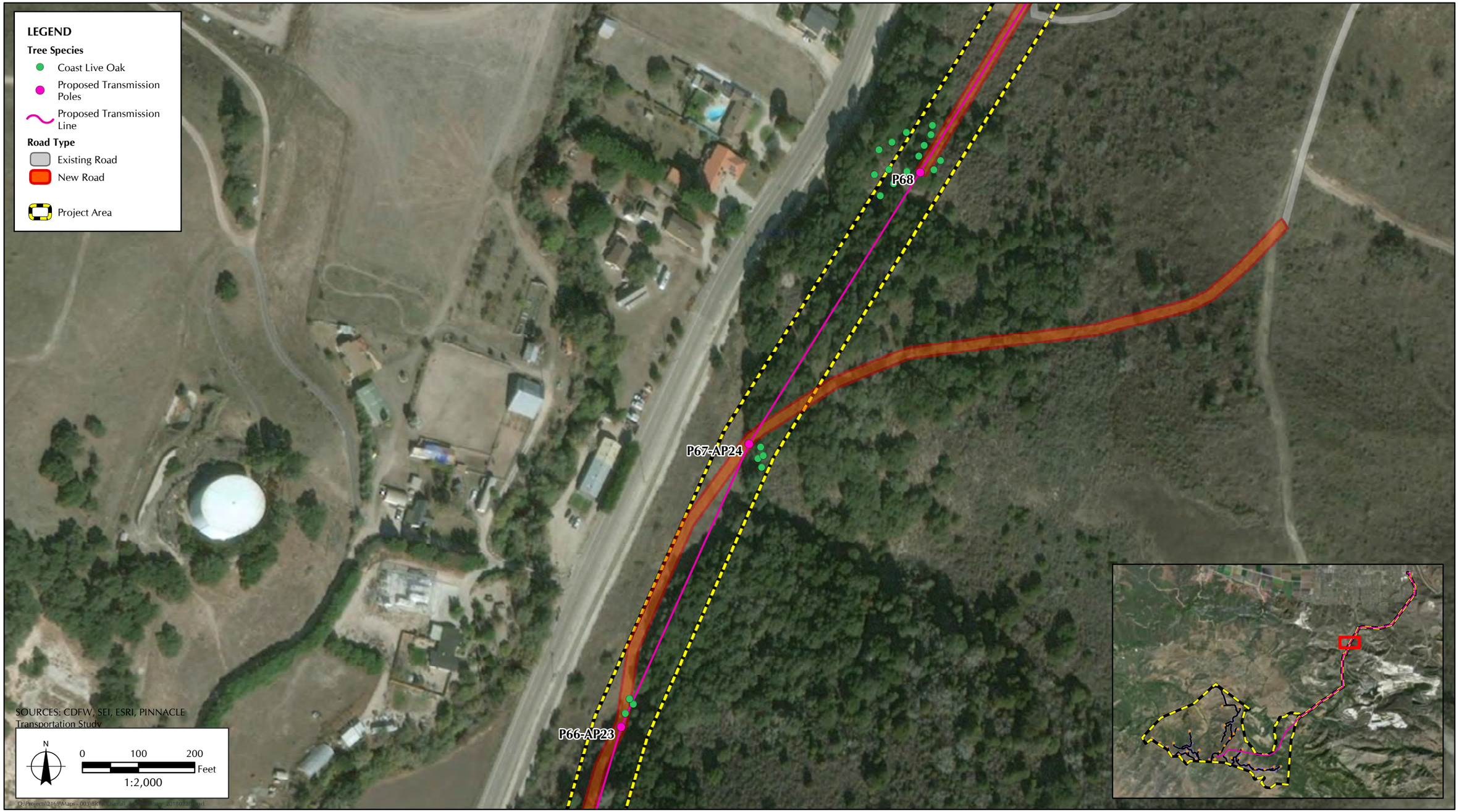


Figure 5.1.5-1H
Native Tree Inventory within Proposed Impact Areas

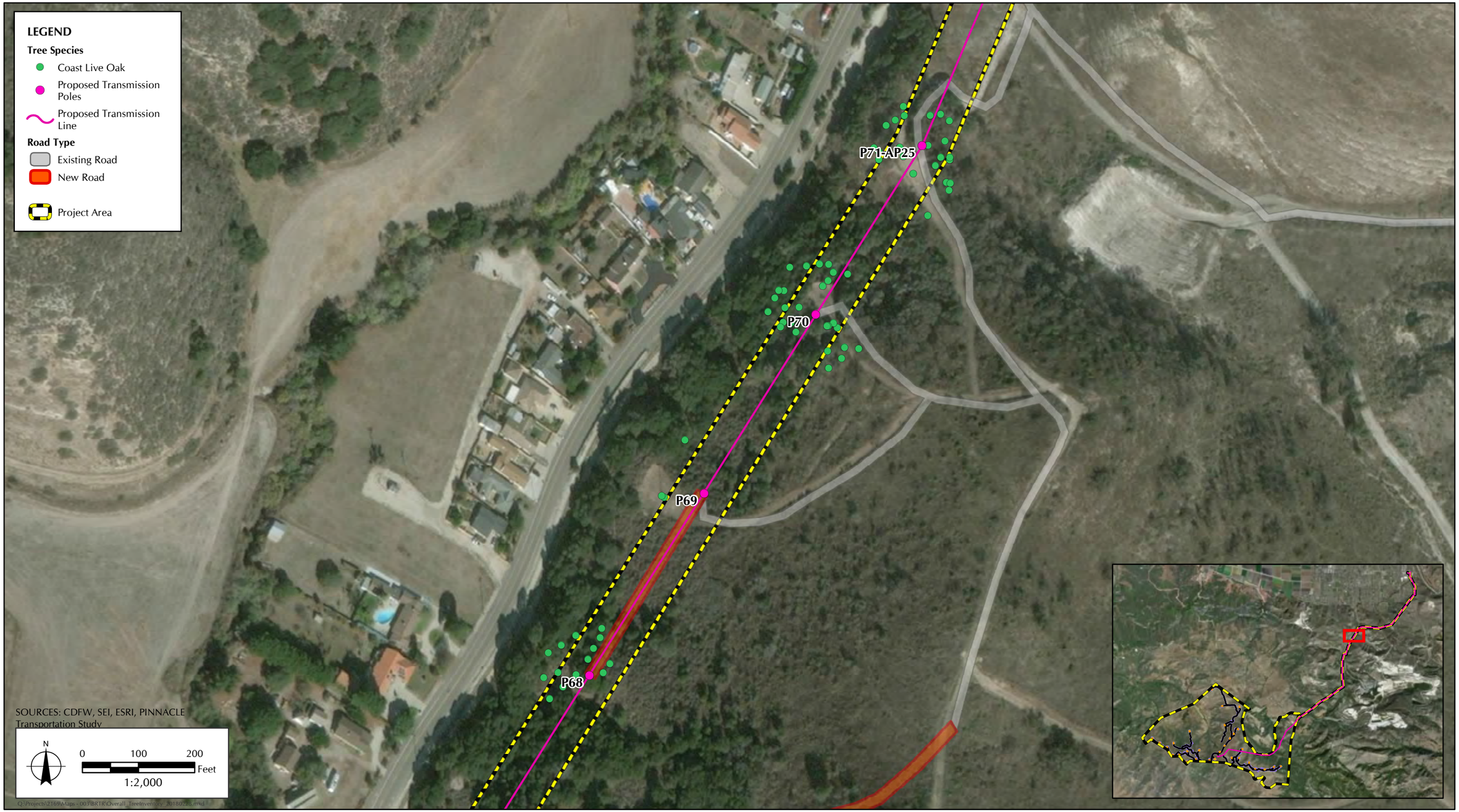


Figure 5.1.5-1I
Native Tree Inventory within Proposed Impact Areas

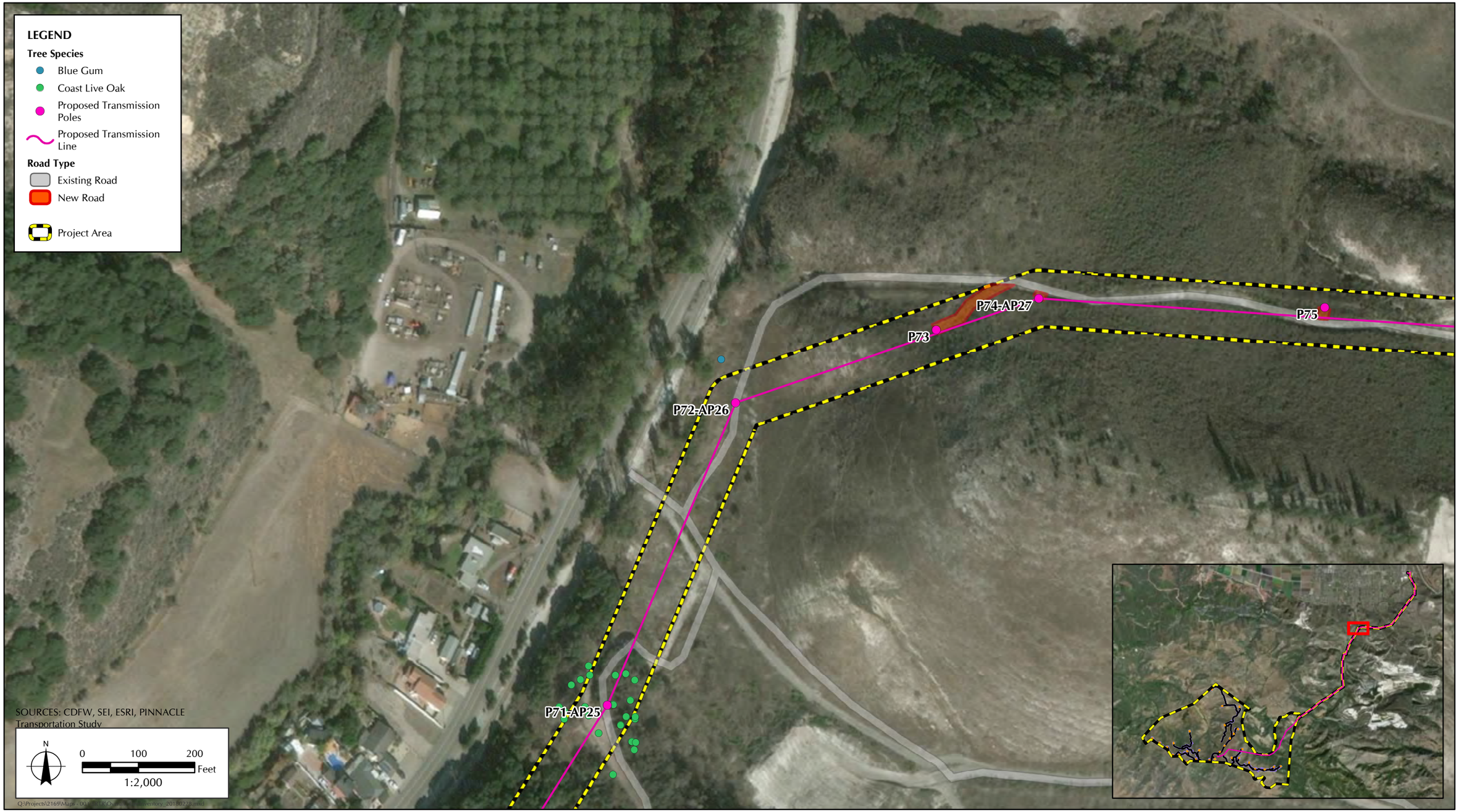


Figure 5.1.5-1J
Native Tree Inventory within Proposed Impact Areas

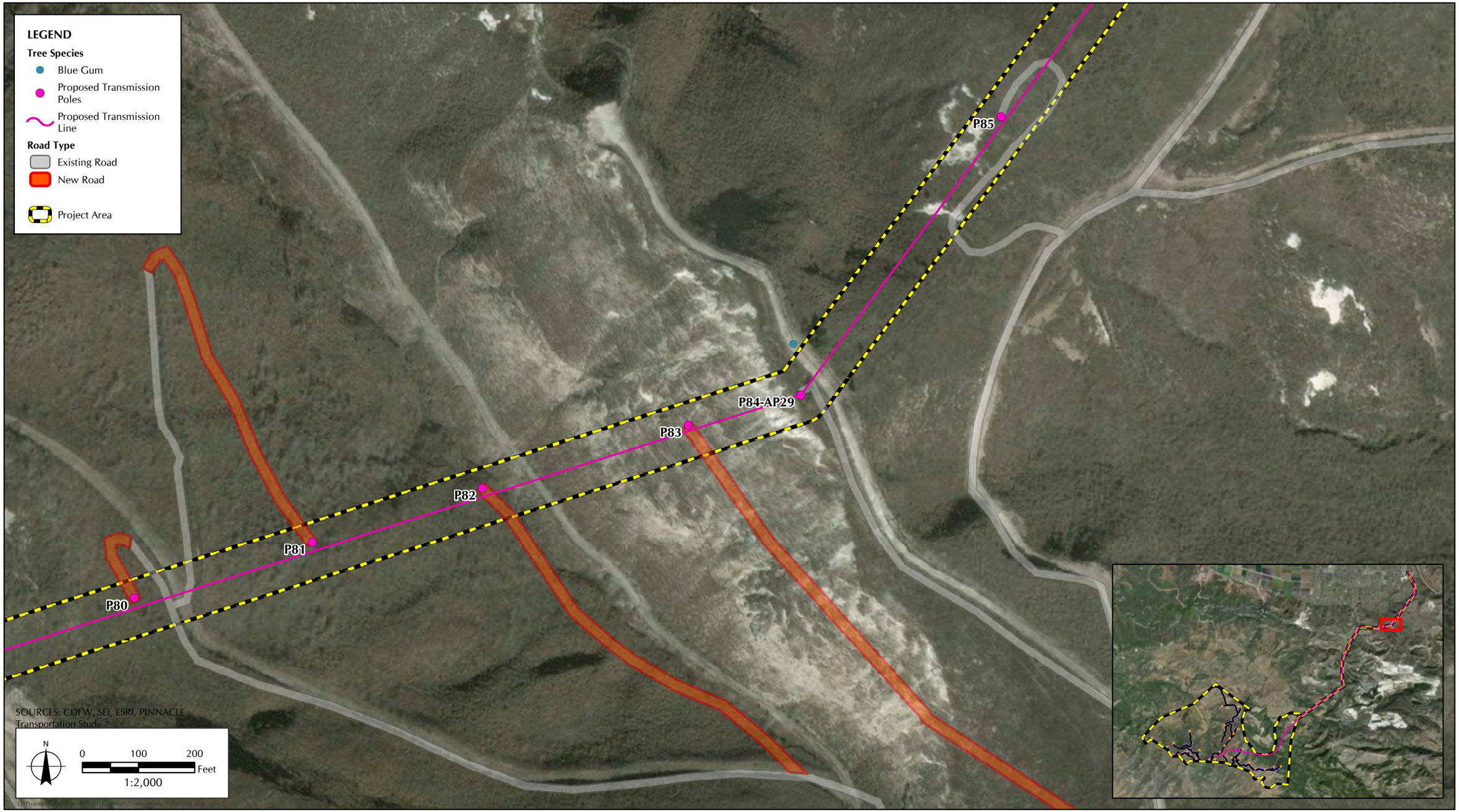


Figure 5.1.5-1K
Native Tree Inventory within Proposed Impact Areas

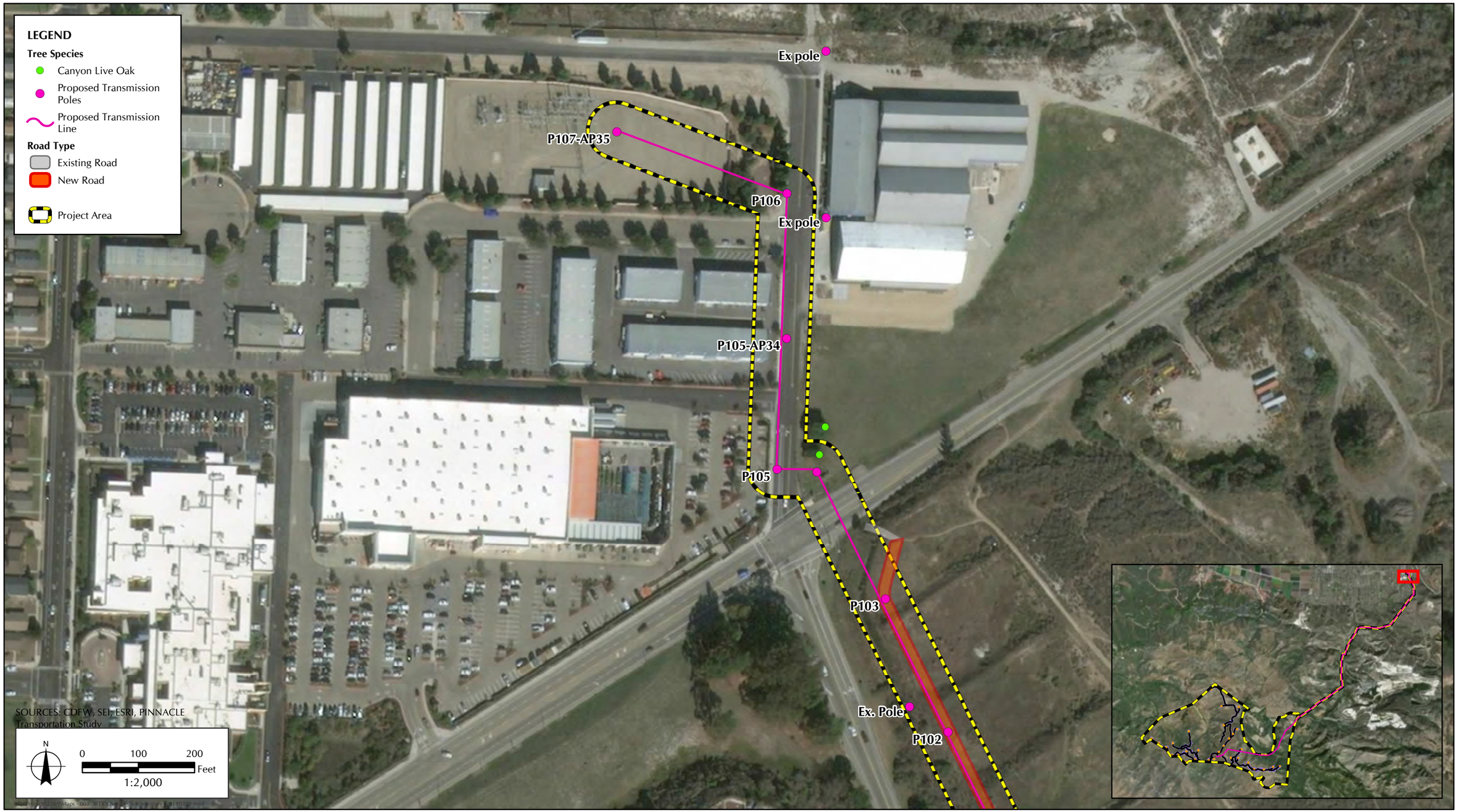
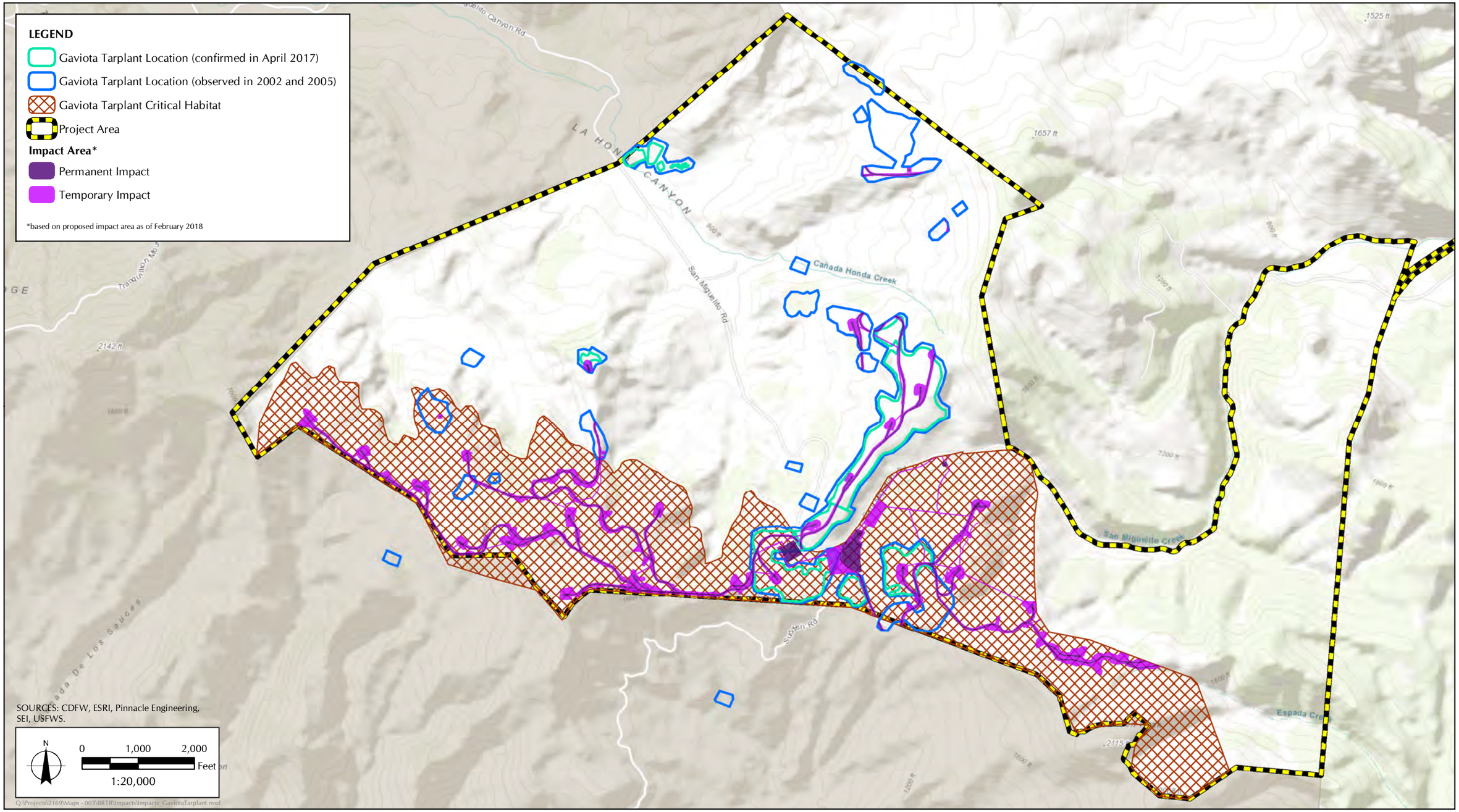


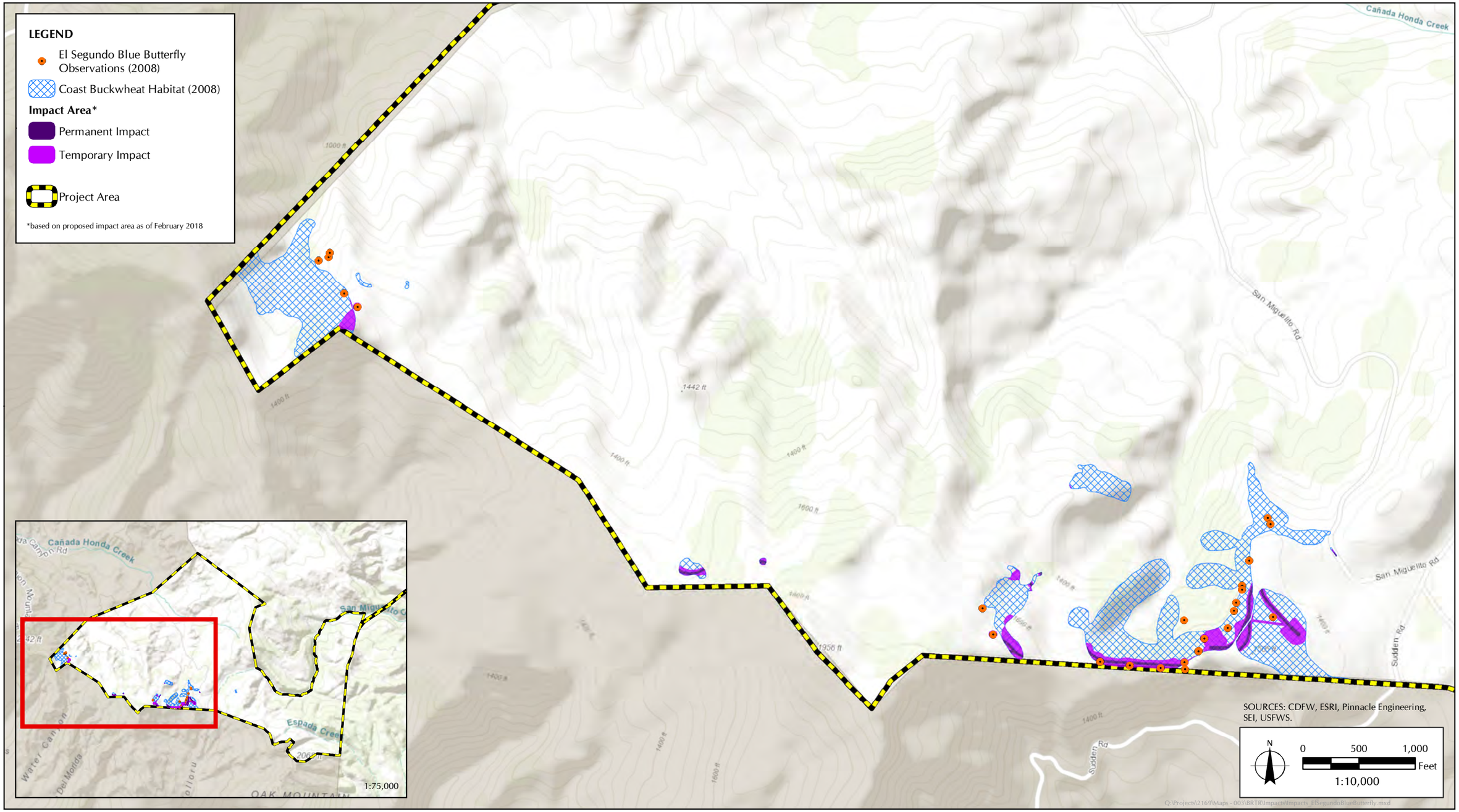
Figure 5.1.5-1L
Native Tree Inventory within Proposed Impact Areas



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 5.2.3.1-1

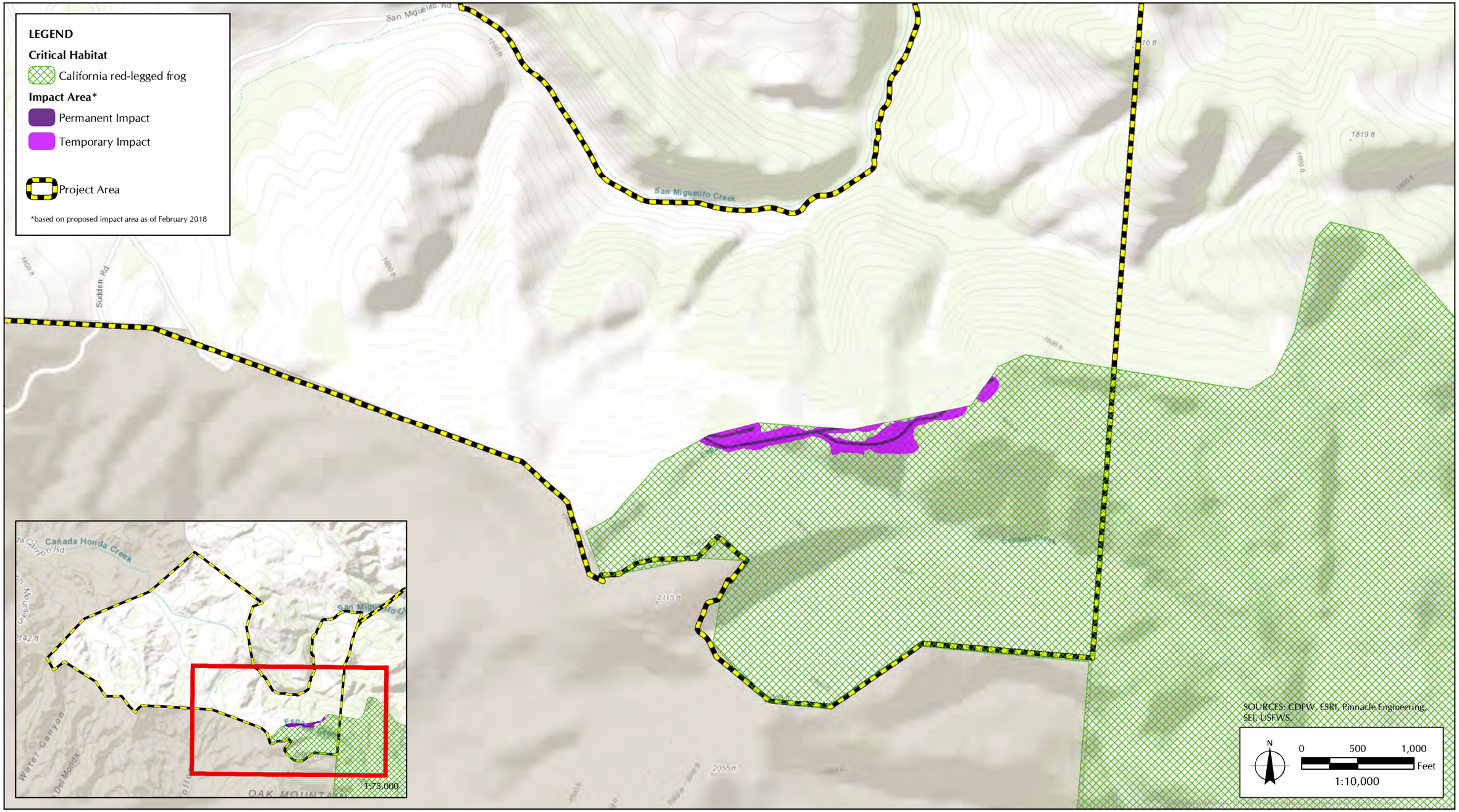
Impacts to Gaviota Tarplants



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 5.2.3.1-2

Impacts to El Segundo Blue Butterfly



NOTE: The depicted survey location does not include the transmission line corridor.

FIGURE 5.2.3.1-3

Impacts to California Red-Legged Frog Critical Habitat

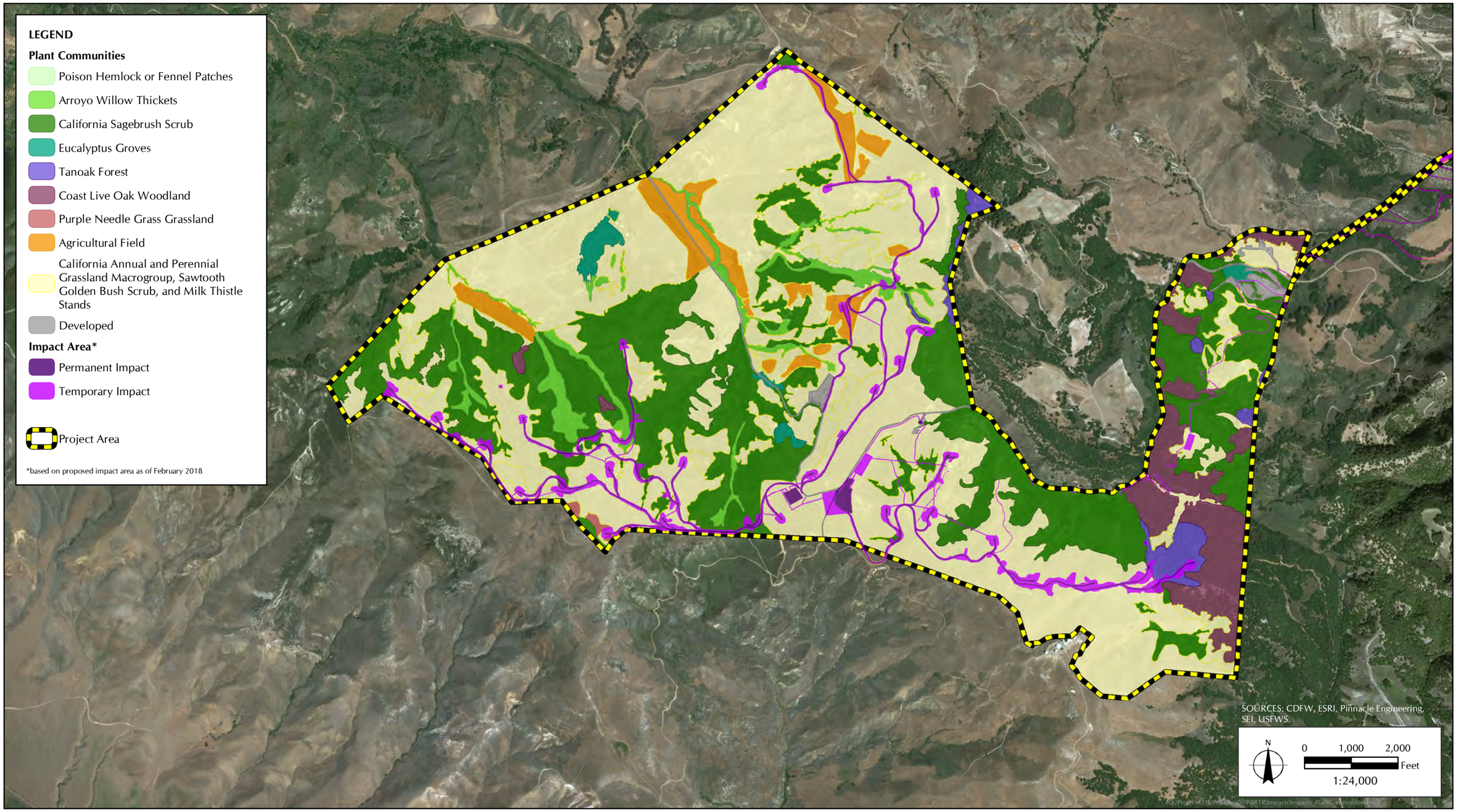


FIGURE 5.2.3.2-1A

Impacts to Plant Communities in the Project Vicinity

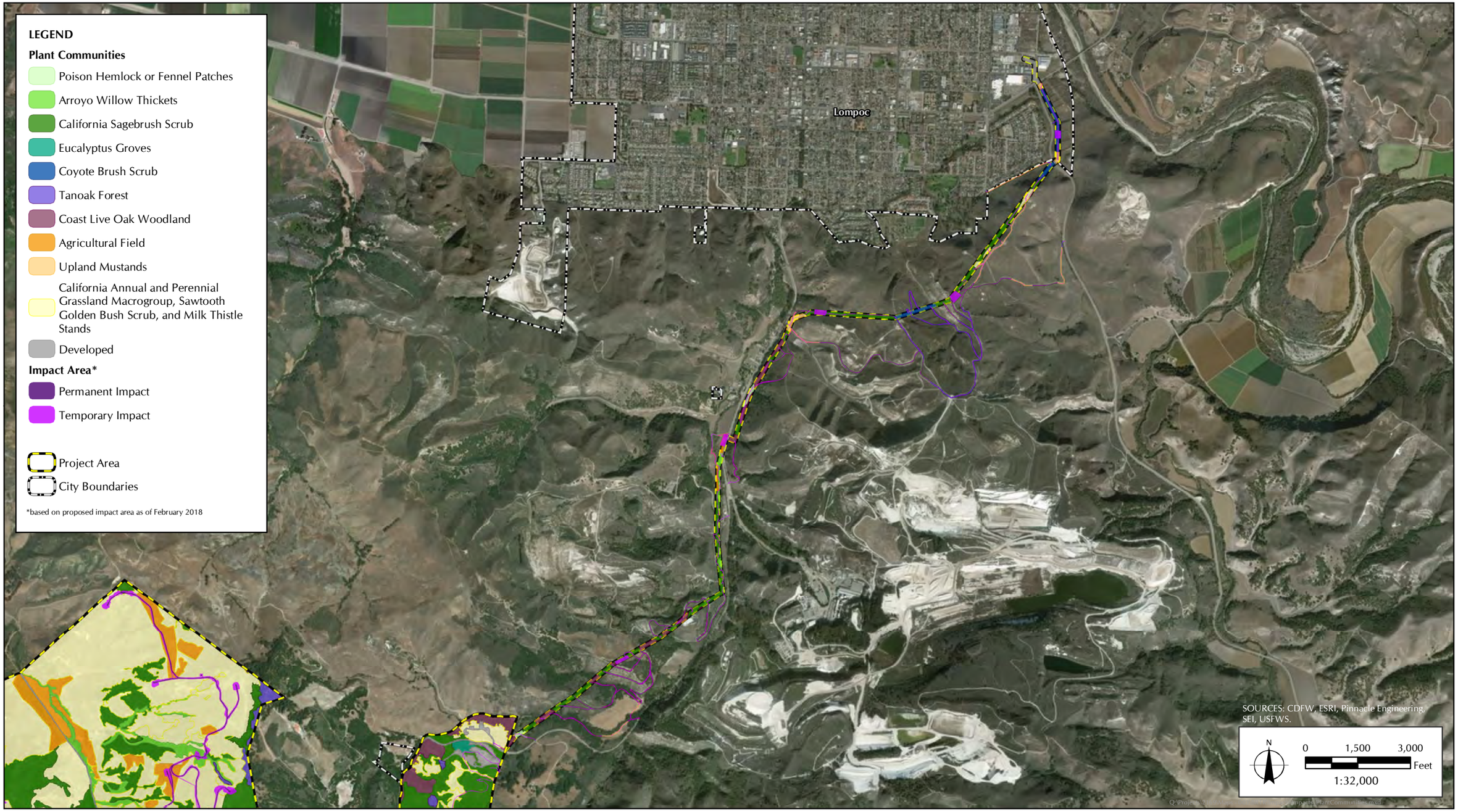


FIGURE 5.2.3.2-1B

Impacts to Plant Communities along the Transmission Line Corridor

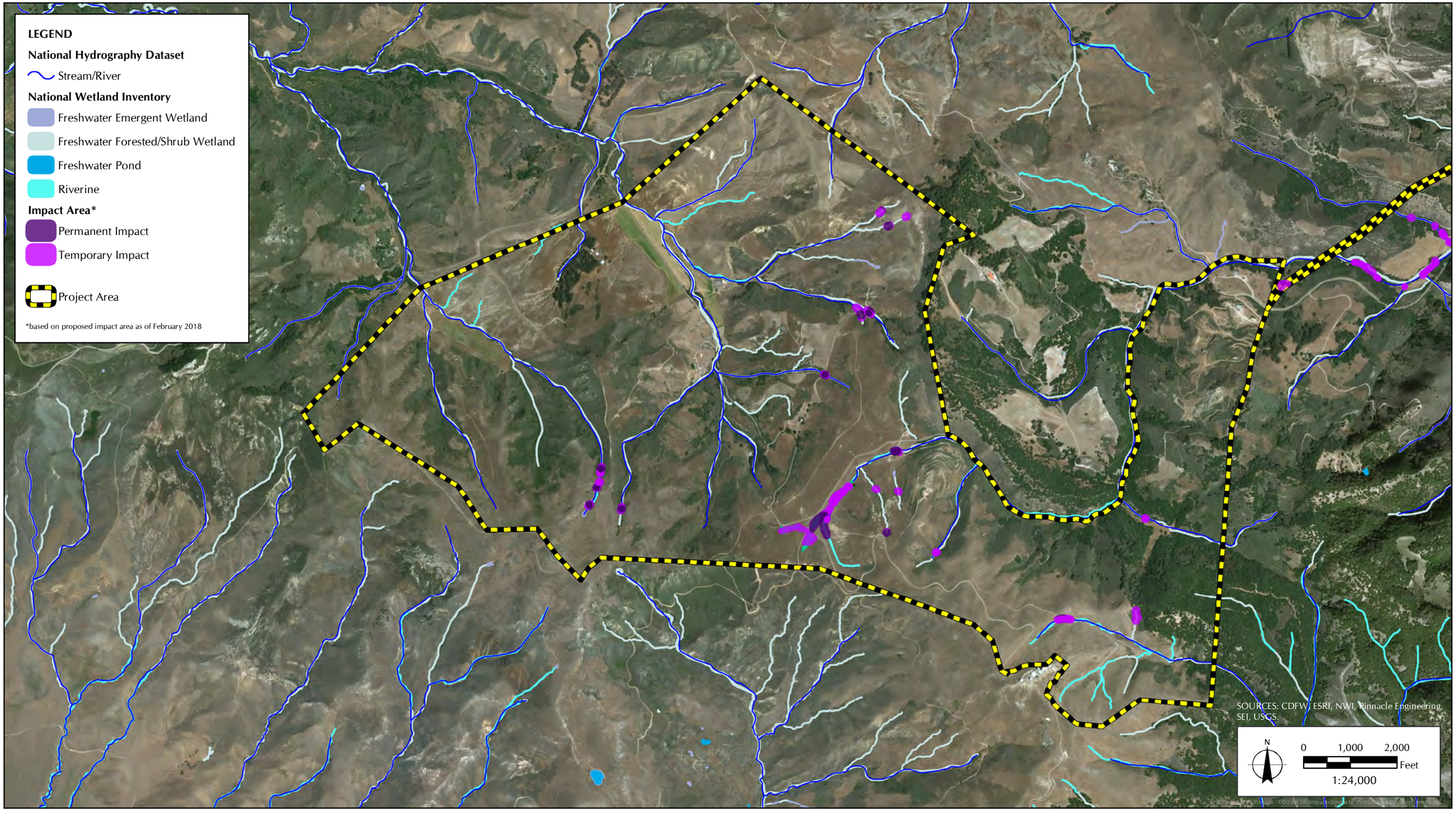


FIGURE 5.2.3.3-1A

Impacts to National Wetlands, Previously Delineated Wetlands, and USGS Blueline Drainages in the Project Vicinity

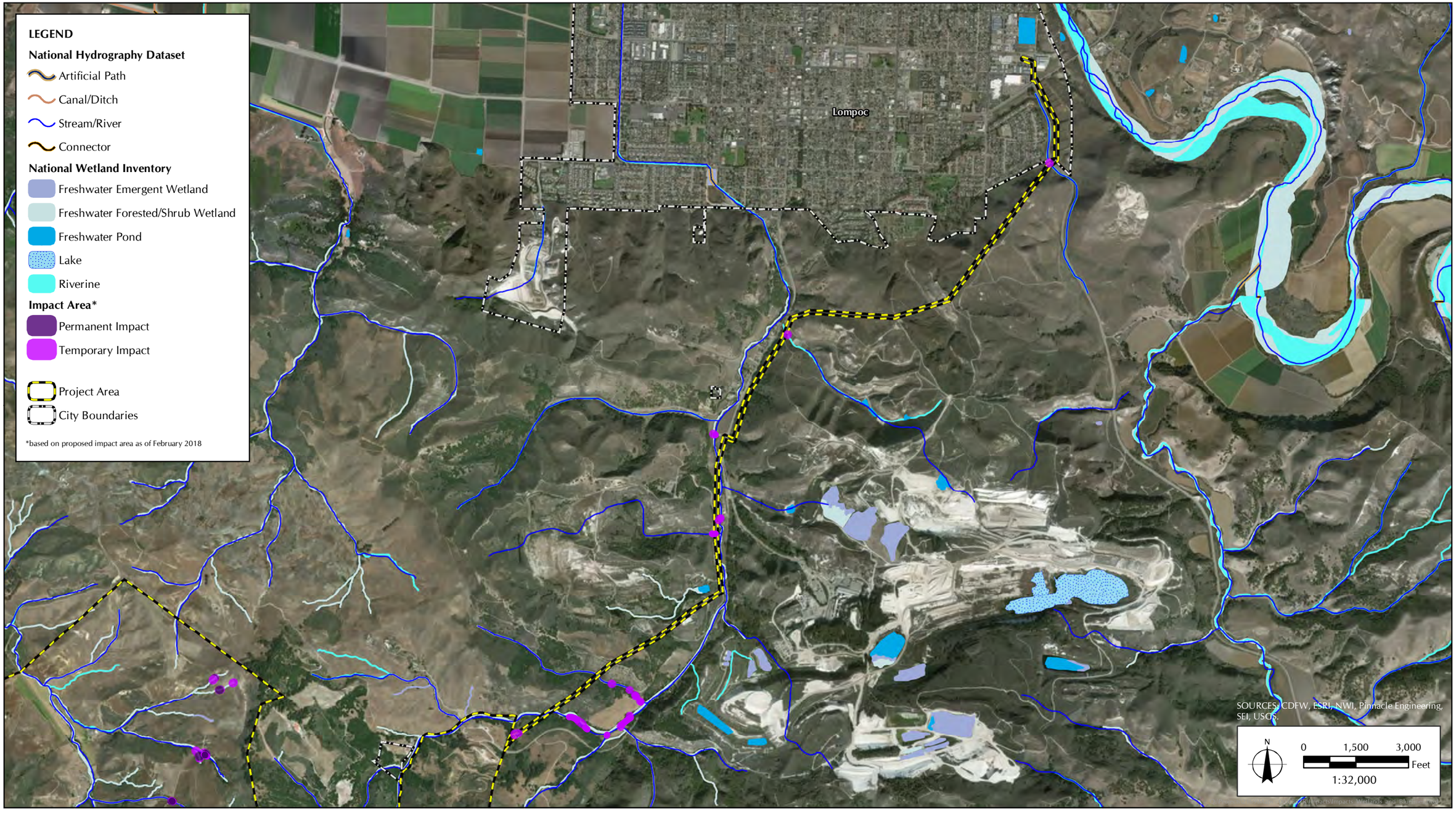


FIGURE 5.2.3.3-1B

Impacts to National Wetlands, Previously Delineated Wetlands, and USGS Blueline Drainages along the Transmission Line Corridor

LEGEND

California Essential Habitat Connectivity Project

- Potential Riparian Connections
- Natural Landscape Block - Santa Ynez Mountains West
- Essential Connectivity Area - Santa Ynez Mountains West - Casmalia Hills

Impact Area*

- Permanent Impact
- Temporary Impact

- Project Area

*based on proposed impact area as of February 2018

SOURCES: Audubon 2016, CalFish, CDFW, ESRI, Pinnacle Engineering, Santa Barbara County, SEI, USGS.

N

0 2,000 4,000 Feet

1:42,000

FIGURE 5.2.3.4-1

Impacts to Regionally Connected Habitat

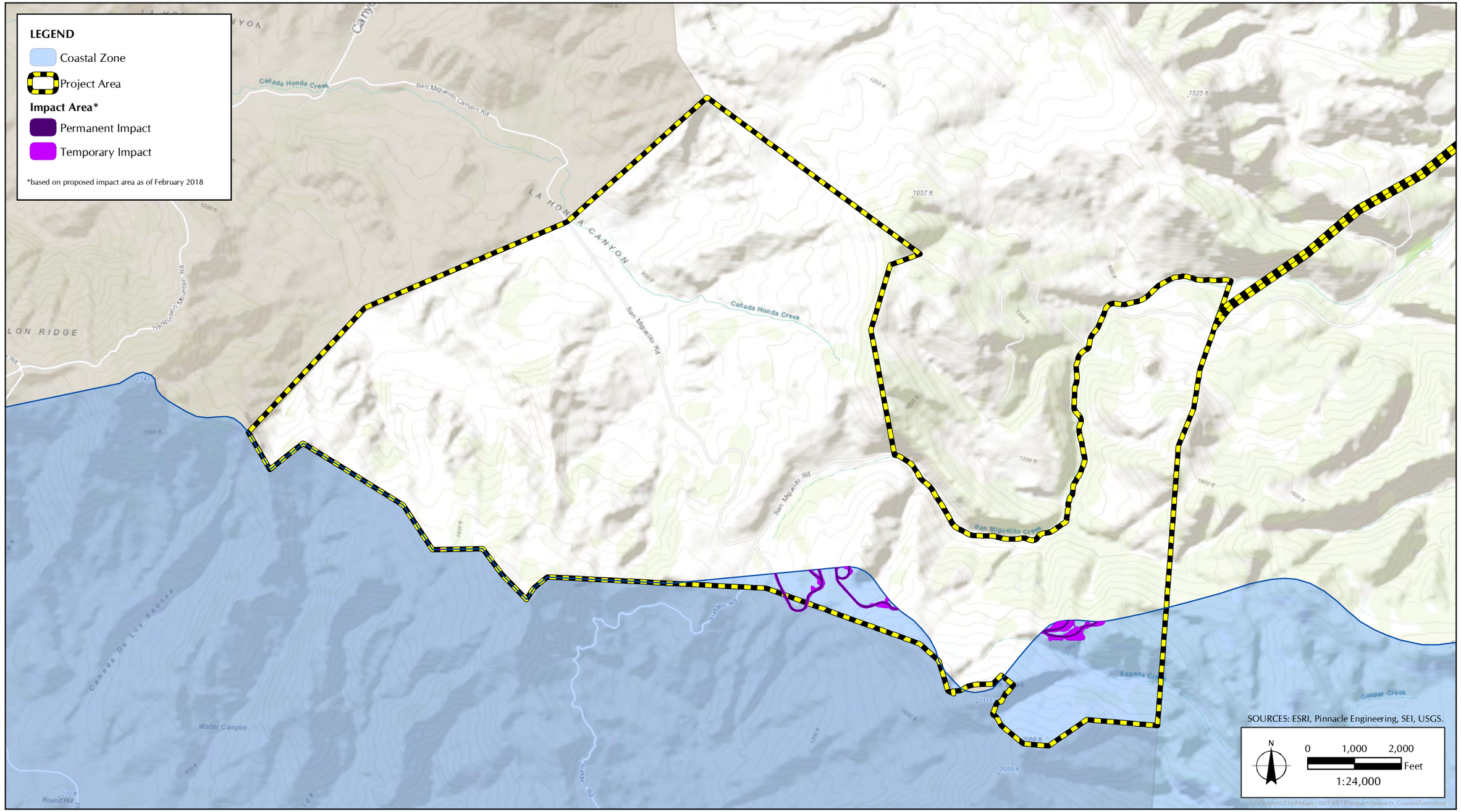


FIGURE 5.2.3.5-1
Impacts in the Coastal Zone

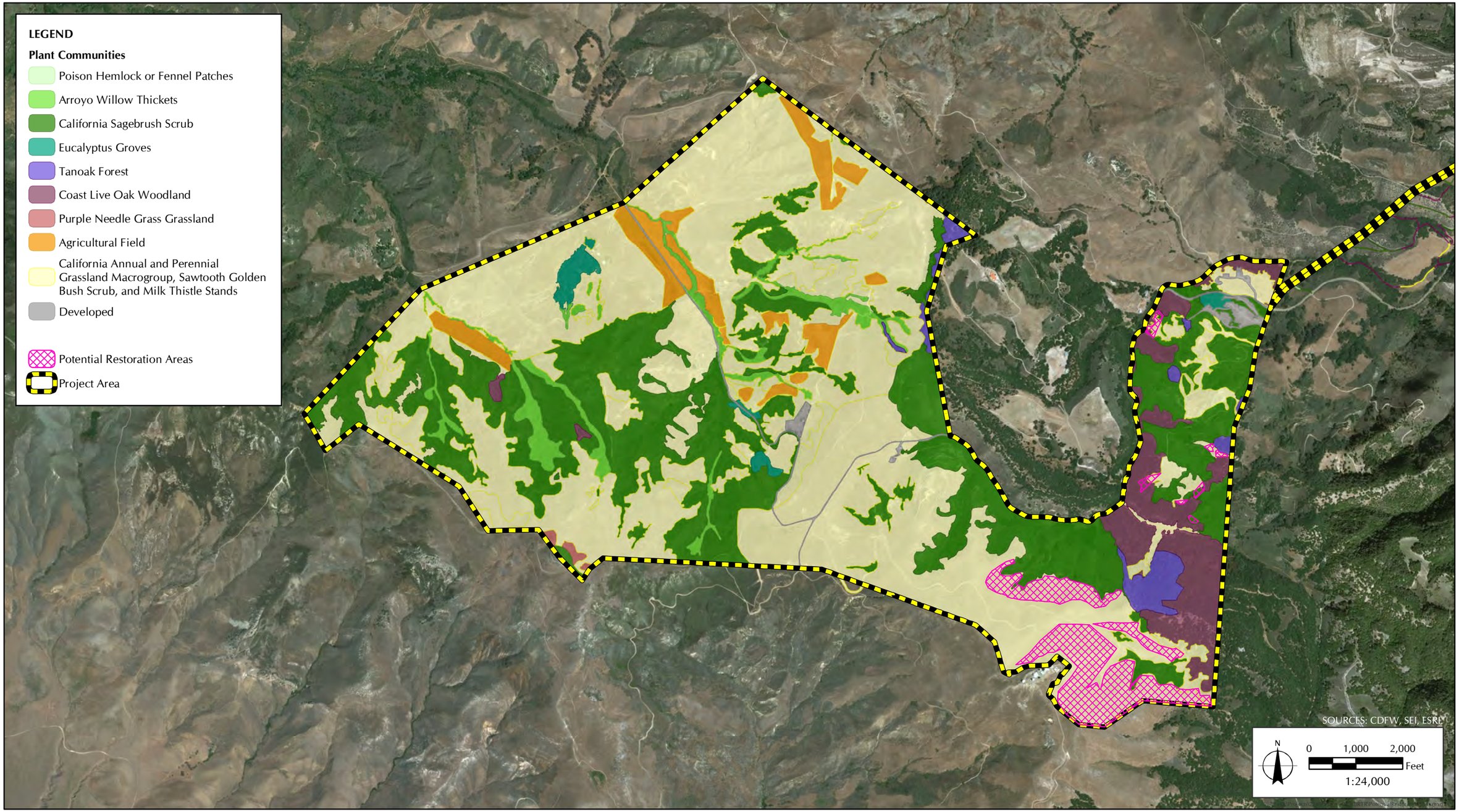


FIGURE 5.3.2-1

Potential Forest Restoration Sites