

BIOLOGICAL RESOURCE EVALUATION

**General Plan Amendment/Zone Change
Assessor's Parcel Map Number
386-050-38
County of Kern
Bakersfield, California**

Prepared for:

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EXECUTIVE SUMMARY

Pruett Biological Resource Consulting, Inc. (PruettBio) has prepared this biological resource evaluation for a proposed General Plan Amendment (GPA) and Zone Change (ZC) of Assessor's Parcel Number (APN) 386-050-38. The project consists of 36.08 gross acres (14.60 hectares)(project) located in Section 10, Township 29 South, Range 29 East, Mount Diablo Base and Meridian; an unincorporated part of Kern County at the eastern edge of the City of Bakersfield, California. The project is located within the geographic range of several federal-, and state-listed, threatened and/or endangered plant and animal taxa. Several non-listed, special-status species also have the potential to occur in the vicinity of the project.

The purpose of this report is to document biological resources identified during a reconnaissance-level field study of the project site and include potential biological resources identified during a literature review of the site and vicinity, identify potential impacts to biological resources resulting from the project, and to recommend avoidance and minimization measures for implementation prior to and during project activities. A literature review was conducted of the site and vicinity, prior to the field study, of the biological resources known to occur based on recorded, direct observation, or potentially occurring in the project impact area based on current or historical habitat conditions. During the field study, existing habitat conditions, direct observations and/or species sign was recorded to assess the potential for occurrence of special-status species. This report includes an evaluation of the potential for those special-status biological resources not observed during the field study, with the potential to occur on the property based on the habitat conditions observed.

The project area has historically been grazed. Urban development has increased along the margins of Metropolitan Bakersfield in the past 50 years and has resulted in the conversion of farmland to residential and commercial properties. The project site consists of about 36.08 gross acres of grazing land. No undisturbed habitat is present on the site or adjacent parcels.

The literature review and database queries yielded 21 special-status plant species and 32 special-status animal species as potentially occurring within the vicinity of the project site. Of these, 5 plant species, and 16 animal species have federal-, and/or state-listed and are afforded protection under federal or state law.

The project will not conflict with existing or adopted Habitat Conservation Plans, Natural Community Conservation Plans, local or regional conservation plans, or local ordinances protecting biological resources. The project is within the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP). The field study was conducted in accordance with the Federal Endangered Species Act section 10(a)(1)(B) permit and California Endangered Species Act incidental take permit (ITP) issued by the California Department of Fish and Wildlife, pursuant to Fish and Game Code section 2081(b)(ITP No. 2081-2013-058-04), for the MBHCP. Evaluation of potential impacts to plant and animal species are required under federal and state regulation during a General Plan Amendment and Zone Change. California Environmental Quality Act (CEQA) Appendix G thresholds have been used to evaluate potential impacts to the biological resources from the proposed project development.

Impacts to covered plant and animal species, other than blunt-nosed leopard lizard or bird species afforded protection under the MBTA, would be fully-mitigated by participation in the MBHCP. Recommendations included in this report when implemented in concert with the MBHCP, would be expected to mitigate any project impacts to biological resources to a less-than-significant level.



Table of Contents

INTRODUCTION	1
PROJECT LEGAL DESCRIPTION	1
PROJECT SETTING AND PHYSICAL DESCRIPTION.....	1
METHODS.....	2
LITERATURE REVIEW	2
FIELD STUDY	2
RESULTS	3
VEGETATION COMMUNITIES AND LAND COVER	3
SOILS	3
BIOLOGICAL RESOURCES	3
<i>Special-Status Plant Species</i>	3
<i>Special-Status Animal Species</i>	4
<i>Designated Critical Habitat</i>	4
<i>Jurisdictional Water Resource Features</i>	4
<i>Special-Status Natural Communities</i>	5
<i>Wildlife Migration Corridors and Nursery Sites</i>	5
<i>Regional and Local Policies</i>	5
IMPACT ANALYSIS AND RECOMMENDED MITIGATION MEASURES	5
REFERENCES	8
APPENDIX A	11
PROJECT VICINITY AND SITE	11
APPENDIX B.....	17
SPECIAL-STATUS PLANT AND ANIMAL EVALUATION	17
APPENDIX C.....	31
PLANTS AND ANIMALS OBSERVED ON THE PROJECT	31



INTRODUCTION

Pruett Biological Resource Consulting, Inc. (PruettBio) has prepared this biological resource evaluation for the proposed development of APN 386-050-38 within the incorporated limits of the City of Bakersfield, County of Kern, California. The report documents biological resources identified during fieldwork conducted on the project site and those identified through a literature search as potentially occurring based on known observations or historic habitat conditions. The report uses the information collected during the field study and literature search to evaluate potential impacts to biological resources, resulting from the project. The report is intended to assist in the analysis of the proposed project for a GPA and ZC.

Listed plant and animal species are protected under the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA). Protection of other non-listed, special-status species is afforded under additional regulation including the Migratory Bird Treaty Act (MBTA). Pursuant to the California Environmental Quality Act (CEQA) impacts to non-listed, special-status species must be evaluated. Where necessary, the report recommends avoidance and minimization measures for implementation prior to and during project activities. The report is intended to provide technical information in support of a CEQA preliminary review. For the purposes of this report, potential impacts to the biological resources of the proposed project were evaluated in accordance with Appendix G of the *CEQA Guidelines* (2021).

PROJECT LEGAL DESCRIPTION

The project consists of 36.08 gross acres (14.60 hectares)(project) of APN 386-050-38. The project site is located east of Alfred Harrell Highway, about 2/3 mile north of State Route 178 at the east edge of the City of Bakersfield, Section 10, Township 29 South, Range 29 East, Mount Diablo Base and Meridian.

PROJECT SETTING AND PHYSICAL DESCRIPTION

The project site is in the southern San Joaquin Valley; a broad, treeless plain in the rain shadow of the Inner Coast Ranges. The region's climate can be characterized as Mediterranean; with hot, dry summers and cool, moist winters. Summer high temperatures typically exceed 100 °Fahrenheit (°F); with an average of 110 days per year over 90 °F. Winter temperatures in the San Joaquin Valley are mild, with an average of only 16 days per year with frost (Twisselmann 1967).

Rainfall varies, increasing from west to east, with the west side of the valley receiving an average of around 4 inches (10 centimeters) per year and the east side averaging about 6 inches (15 centimeters) per year. Winter fog, called Tule fog, sometimes forms during the months of November, December, and January, supplementing the annual precipitation. Approximately 90% of the rainfall in the region occurs between November 1 and April 1. Drought cycles occur periodically, becoming severe enough that plant and animal populations can experience large fluctuations. The vegetation communities in the San Joaquin Valley are distinguishable from the Mojave Desert to the east due to Tule fog, higher humidity, and isolation from continental climatic influences by mountain ranges (Twisselmann 1967).

The general topography of the area slopes north and west from about 820 feet (250 meters) along the south edge. The project and vicinity have been historically grazed for decades. Residential, agricultural, and commercial development with scattered oil production exists in the surrounding vicinity.



METHODS

LITERATURE REVIEW

PruettBio conducted a literature review to identify known observations and potential for listed, or otherwise special-status, species to occur in the vicinity of the project site. A standard, 10-mile (16-kilometer) radius query was performed. Database records reviewed included:

- **United States Fish & Wildlife Service (USFWS) iPac:** The iPac report generates a list of federal-listed species and other resources under the jurisdiction of the USFWS, including designated critical habitat for listed species, National Wildlife Refuge lands, and Wetlands in the National Wetlands Inventory. The list includes resources that are outside of the project site, but that have the potential to be impacted by project activities.
- **USFWS National Wetlands Inventory:** The Wetlands Mapper is an online inventory integrating digital map data and other resources to provide current information regarding the status of national wetlands, riparian, and deepwater habitats.
- **United States Department of Agriculture (USDA) WebSoil Survey:** The report is an online database providing soil data produced by the National Cooperative Soil Survey, a joint effort of the USDA and other federal, state, and local agencies. The information drawn for the Soil Survey of Kern County, California, Northwestern Part was originally drawn from fieldwork completed in 1981 with soil names and descriptions approved in 1982.
- **California Natural Diversity Database (CNDDDB-RareFind 5):** The CNDDDB is a database of listed, or otherwise special-status, plant and animal species and sensitive communities maintained by the California Department of Fish and Wildlife (CDFW). The information queried for this report included a standard 10-mile radius of the project site.
- **California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants:** CNPS is a private, professional organization that maintains a database evaluating the current conservation status of California's rare, threatened, and endangered plant species. The information queried for this report included a standard 10-mile radius of the project site. The list includes resources that are outside of the project site, but that have the potential to be impacted by project activities based on known historic or current habitat features.

FIELD STUDY

A reconnaissance-level, biological field study was conducted by Steven P. Pruett on 02 March 2022. The project was surveyed by walking the perimeter and random transects to evaluate all representative habitat features of the site. The field study conducted, allowed for 100% visual coverage of the project site. Field notes included observations of all plant and wildlife species observed. Direct observations and/or species sign was recorded to assess the potential for occurrence. Land cover types and general habitat conditions were recorded and photographed. Special-status species and habitat features, such as vegetation communities or ephemeral channels, were also recorded and photographed if observed.

Coordinates for important biological resource elements and direct observations of special-status species were recorded using a handheld geographic positioning system unit. If observed, San Joaquin kit fox (SJKF) dens were classified as defined by the *USFWS Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (2011). All plant taxa encountered were identified to the extent possible given the diagnostic features present. Identifications were made using keys contained in *The Jepson Manual: Vascular Plants of California* and online updates containing revisions to taxonomic treatments (Baldwin et al. 2012; Jepson Flora Project 2015).



RESULTS

This section summarizes the results of the field study conducted on the project site and evaluates those results for the known or potential for occurrence of special-status species based on the literature review and database queries and pursuant to statutory regulation. Discussions are provided describing the existing habitat conditions including vegetation communities, land cover and current use; soils; special-status biological resources potentially occurring in the vicinity of the project site; the potential for jurisdictional resources including designated critical habitat and riparian/wetland/water resource features; the potential for wildlife migration corridors and nursery sites; and regional and local policy.

VEGETATION COMMUNITIES AND LAND COVER

The project site is located at the eastern edge of urban development of Metropolitan Bakersfield. The original vegetative communities of the project site were Non-native Grassland (Holland 42200) and Valley Saltbush Scrub (Holland 36220). The project has been grazed for decades. Invasive herbaceous species dominate the vegetative cover.

SOILS

The USGS soil survey map describes the soil of the project site as Unit 132, Chanac clay loam 15 to 30 percent slopes, Unit 248, Xeric Torriorthents, stratified-Cuyama complex, 15 to 50 percent slopes, and Unit 135, Cuyama loam, 9 to 15 percent slopes. Unit 132 is alluvium derived from mixed found on fan remnants. It is comprised of clay loam, and sandy clay loam to a depth of about 60 inches. The depth to the restrictive feature is more than 80 inches and the available water storage in profile is listed as moderate (about 9.5 inches). Unit 248 is alluvium derived from granite also found on fan remnants. It is comprised of loam, gravelly loam, gravelly clay loam, and stratified gravelly loamy sand to sandy clay loam to a depth of about 65 inches. The depth to the restrictive feature is more than 80 inches and the available water storage in profile is listed as moderate (about 7.3 inches). Unit 135 is alluvium derived from granite found on alluvial fans and stream terraces. It is comprised of gravelly loam, gravelly clay loam, stratified cobbly sandy loam to cobbly sandy clay loam and stratified gravelly loamy sand to sandy clay loam to a depth of about 65 inches. The depth to the restrictive feature is more than 80 inches and the available water storage in profile is listed as moderate (about 7.3 inches).

BIOLOGICAL RESOURCES

The literature review and database queries yielded 21 special-status plant species as potentially occurring within the vicinity of the project site. Thirty-two animal species were identified as potentially occurring in the region of the project site. No evidence of any listed animal species was observed during the field study. No evidence of otherwise special-status plant or animal species, or animal species sign was observed during the field study. The evaluation of special-status species that were found during the literature review with a potential to occur in the region are included in Appendix B.

Special-Status Plant Species

Special-status plant species considered in this evaluation include all plant species that meet one or more of the following criteria:

- Listed or proposed for listing as threatened or endangered under ESA or candidates for possible future listing as threatened or endangered under the ESA (50 CFR §17.12).
- Listed or candidates for listing by the State of California as threatened or endangered under CESA (Fish and Game Code §2050 et seq.). A species, subspecies, or variety of plant is endangered when the prospects of its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, disease, or other factors (Fish and Game Code §2062). A plant is



threatened when it is likely to become endangered in the foreseeable future in the absence of special protection and management measures (Fish and Game Code §2067).

- Listed as rare under the California Native Plant Protection Act (Fish and Game Code §1900 et seq.). A plant is rare when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens (Fish and Game Code §1901).
- Meet the definition of rare or endangered under CEQA §15380(b) and (d). Species that may meet the definition of rare or endangered include the following:
 - Species considered by the California Native Plant Society (CNPS) to be “rare, threatened or endangered in California” (Lists 1A, 1B and 2);
 - Species that may warrant consideration on the basis of local significance or recent biological information.
 - Some species included on the California Natural Diversity Database’s (CNDDB) Special Plants, Bryophytes, and Lichens List (California Department of Fish and Game 2008).
- Considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.

Precipitation has been below average to date, resulting in a poor year for annual plant species observations. Of the 21 special-status plant species returned during database queries for the project vicinity, 5 species are either federally- or state-listed as threatened or endangered. Although CEQA requires consideration for impacts to locally significant plant species, no mitigation is legally required to compensate for impacts to non-listed plant species. No listed, or otherwise special-status plant species was observed during the fieldwork conducted for the preparation of this report. No listed, or otherwise special-status plant species, has been recorded as occurring within the project site.

Special-Status Animal Species

Special-status animal species considered in this evaluation include those that may occur in the project vicinity that have statutory protections. This includes federal- and state-listed (rare, threatened, or endangered; fully protected) species and candidates for listing under the respective endangered species acts. Species that are of special concern to the CDFW or the USFWS are included in this evaluation. Special-status bird species that are afforded protection under the MBTA which may nest on or within an approximate 10-mile (16-kilometer) radius of the project site are also evaluated. No evidence of any listed animal species was observed during the field study. No evidence of otherwise special-status animal species, or animal species sign was observed during the field study

Designated Critical Habitat

The USFWS iPac report and USFWS Designated Critical Habitat Mapper lists no Designated Critical Habitat (USFWS 2020). Designated Critical Habitats closest to the project site include California condor (*Gymnogyps californianus*) approximately 22-miles south/southwest and Buena Vista Lake shrew (*Sorex ornatus relictus*) west of the project site. No suitable habitat for either species exists on the project site.

Jurisdictional Water Resource Features

Section 404 of the Federal Clean Water Act (CWA) regulates discharge of dredged and fill material into Waters of the United States. Wetlands are included under this jurisdiction. Proposed activities that may result in discharge of material into Waters of the U.S. require a permit review process by the U.S. Army Corps of Engineers as set forth under CWA section 404(b)(1). Fish and Game Code section 1602



requires any person, state or local governmental agency, or public utility to notify CDFW before beginning any activity that will substantially modify a river, stream, or lake.

A search of the USFWS National Wetlands Inventory resulted in no riparian, wetlands, or other jurisdictional water features mapped on the project site (USFWS 2021). These results are consistent with the observed conditions within the survey area.

Special-Status Natural Communities

No special-status vegetation communities on the project site were identified by the USFWS iPac query, the CNDDB, or the CNPS Inventory (USFWS 2021, CDFW 2021, CNPS 2021). These results are consistent with the observed conditions within the survey area.

Wildlife Migration Corridors and Nursery Sites

Wildlife corridors can be defined as connections between wildlife blocks that meet specific habitat needs for species movement generally during migratory periods but seasonally as well. Wildlife corridors generally contain habitat dissimilar to the surrounding vicinity and include examples such as riparian areas along rivers and streams, washes, canyons, or otherwise undisturbed areas within urbanization. Corridor width requirements can vary based on the needs of the species utilizing them. Development of the project would not impact wildlife migration corridors or nursery sites.

Regional and Local Policies

The proposed, modified project will not conflict with existing or adopted Habitat Conservation Plans, Natural Community Conservation Plans, local or regional conservation plans, or local ordinances protecting biological resources. The project site is located within the MBHCP, CDFW, ITP boundaries. Recommendations included in this report when implemented in concert with the MBHCP, would be expected to mitigate any project impacts to biological resources to a less-than-significant level.

IMPACT ANALYSIS AND RECOMMENDED MITIGATION MEASURES

This section provides an analysis of the impacts of the proposed, modified project following the standards of CEQA and provides recommendations that, when implemented, would reduce impacts to less-than-significant levels. It is important to note that potential take of any federal- or state-listed species from project activities would require contacting the appropriate wildlife agency (the USFWS and/or the CDFW). This contact may result in a requirement to obtain federal and/or state take authority for listed species as necessary.

The project site is located within the MBHCP ITP boundaries. Impacts to covered plant and animal species, other than blunt-nosed leopard lizard or bird species afforded protection under the MBTA, would be fully-mitigated by participation in the MBHCP. Recommendations included in this report when implemented in concert with the MBHCP, would be expected to mitigate any project impacts to biological resources to a less-than-significant level.

CEQA Appendix G thresholds have been used to evaluate potential impacts to the biological resources from the proposed project. The project would create a significant impact to biological resources, based on the specifications in Appendix G of the CEQA Guidelines, if the following were to occur:

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



2. 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 Game or U.S. Fish and Wildlife Service;
3. 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;
4. 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;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The following analysis discusses potential impacts associated with the development of the project and provides recommendations where appropriate to further reduce potential impacts.

1. Would the project 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, by the CDFW, or the USFWS?

Direct and indirect impacts, in the form of “incidental take” of a threatened, endangered, or otherwise protected species, are not expected as a result of the development of the proposed project.

2. Would the project 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 CDFW or the USFWS?

No riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service exists on the project site. No adverse effect will occur as a result of the development of the proposed project and no mitigation measures are recommended.

3. Would the project 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?

No features, identified in wetland categories, appear on the USFWS National Wetlands Inventory mapping (USFWS 2021) on the proposed, modified project site. No federally protected wetlands as defined by Section 404 of the Clean Water Act were identified during the field study conducted for the preparation of this report. No substantial adverse effect will occur as a result of the development of the project. No mitigation measures are recommended.

4. Would the project 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?

No migratory wildlife corridors were identified during the literature search or field study. Impacts to covered wildlife species, other than blunt-nosed leopard lizard or bird species afforded protection under the MBTA, would be fully-mitigated by participation in the MBHCP. The project will not interfere substantially with the movement of any native fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. The following



recommendations are provided for the general protection of bird species that may occur on the project site or vicinity in compliance with the MBTA:

If ground-disturbing activities are planned during the nesting season for migratory birds that may nest on or near the site (generally February 1 through August 31), nesting bird surveys are recommended prior to the commencement of ground disturbance for project activities. If nesting birds are present, no new construction or ground disturbance should occur within an appropriate avoidance area for that species until young have fledged, unless otherwise approved and monitored by a qualified onsite biologist. Appropriate avoidance should be determined by a qualified biologist. In general, minimum avoidance zones for active nests should be implemented as follows: 1) ground or low-shrub nesting non-raptors – 300 feet (91 meters); 2) burrowing owl – as appropriate based on nest location, existing surrounding activity, and evaluation of owl behavior. Coordination with CDFW may be warranted. 3) Sensitive raptors (e.g., prairie falcon, golden eagle) – 0.5 miles (0.8 kilometers); 3) other raptors – 500 feet (152 meters).

5. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

There are no biological resources on the site which are protected by local policies. Impacts from conflicts with local policies will not occur. No additional mitigation measures are recommended.

6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The project does not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No additional mitigation measures are recommended.



REFERENCES

- Baldwin, B. G., Goldman, D. H., Keil, D. J., Patterson, R., Rosatti, T. J., & Wilken, D. H. (Eds.). (2012). *The Jepson manual: Vascular plants of California* (2nd ed.). Berkeley, CA: University of California Press. 1568 pp.
- CDFG. (2009). *Protocols for surveying and evaluating impacts to special status native plant populations and natural communities*. Sacramento, CA: Author. 7 pp.
- CDFG. (2012). *Staff report on burrowing owl mitigation*. Sacramento, CA: Author.
- CNDDDB. (2021). *Occurrence for U.S. Geologic Survey 7.5 minute quadrangles*. Sacramento, CA: CDFW
- California Endangered Species Act of 1970, C.F.G.C § 2050 et seq. (2021).
- California Environmental Quality Act of 1970, 13 P.R.C. § 21000 et seq. (2021).
- California Environmental Quality Act of 1970 Guidelines, 14 C.C.R. § 15000 et seq. (2021).
- California Native Plant Society (CNPS). (2021). Inventory of rare and endangered plants (Online edition, v8-01a) 7.5 minute quadrangles and corresponding plant species accounts. Sacramento, CA: Author.
- California Native Plant Protection Act of 1977, C.F.G.C § 1904 et seq. (2021).
- Clean Water Act of 1972, 33 U.S.C. § 1251 et seq. (2014).
- Dunn, J. L., & Alderfer, J., (Eds.). (2008). *Field guide to the birds of western North America*. Washington, DC: National Geographic Society. 447 pp.
- Ehrlich, P. R., Dobkin, D. S., & Wheye, D. (1988). *The birder's handbook: A field guide to the natural history of North American birds*. New York, NY: Simon and Schuster, Inc. 785 pp.
- Federal Endangered Species Act of 1973, 16 U.S.C. § 1531 et seq. (2021).
- Harris, J. H., & Stearns, D. M. (1991). Population density, census methods, habitat relationships, and home range of the San Joaquin antelope squirrel, 1988–89. *California Department of Fish and Game, Nongame Bird and Mammal Section, Report 91-02*. Oakland, CA: CDFG. Retrieved from <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2953>
- Jennings, M. R., Hayes, M. P., & Metro Washington Park Zoo. (1994). *Amphibian and reptile species of special concern in California* (Final report to the California Department of Fish and Game, Inland Fisheries Division, Contract No. 8023). Rancho Cordova, CA: CDFG. 255 pp.
- Jepson Flora project (Eds.). (2015). Jepson eFlora. Retrieved from <http://ucjeps.berkeley.edu/IJM.html>
- Luce, B. (2005). *Eumops perotis: Western mastiff bat*. In C. Chambers & M. Herder, (Eds.), *Species accounts*. Portland, OR: Western Bat Working Group. 5 pp. Retrieved from http://www.wbwg.org/speciesinfo/species_accounts/molossidae/eupe.pdf
- Migratory Bird Treaty Act of 1918, 16 U.S.C. § 703 et seq. (2021).
- Nafis, G. (2000–2021a). North American legless lizards - *Anniella*. *A Guide to the Amphibians and Reptiles of California*. Retrieved from <http://www.californiaherps.com/lizards/pages/a.pulchra.html>



- Nafis, G. (2000–2021b). San Joaquin coachwhip – *Coluber flagellum ruddocki*. *A Guide to the Amphibians and Reptiles of California*. Retrieved from <http://www.californiaherps.com/snakes/pages/c.f.ruddocki.html>
- Nafis, G. (2000–2021c). Blainville's horned lizard – *Phrynosoma blainvillii*. *A Guide to the Amphibians and Reptiles of California*. Retrieved from <http://www.californiaherps.com/lizards/pages/p.blainvillii.html>
- Native Fish and Wildlife Endangered Species, 32 Fed. Reg. 4001 (Mar. 11, 1967). Retrieved from http://ecos.fws.gov/docs/federal_register/fr18.pdf
- Papenfuss, T. J., Parham, J. F. (2013). Four new species of California legless lizards (*Anniella*). *Breviora* 536, 1–17. Retrieved from http://mczbase.mcz.harvard.edu/specimen_images/publications/Breviora_536.pdf
- Porter-Cologne Water Quality Control Act, C.W.A. § Section 13000 et seq. (2021).
- Reid, F. A. (2006). *Mammals of North America* (Peterson field guide). Boston, MA: Houghton Mifflin Company. 579 pp.
- Sherwin, R. (2005). *Antrozous pallidus*: Pallid bat. In D. A. Rambaldini, (Eds.). *Species accounts*. Portland, OR: Western Bat Working Group. 5 pp. Retrieved from http://www.wbwg.org/speciesinfo/species_accounts/vespertilionidae/anpa.pdf
- Shuford, W. D., Gardali, T., (with Comrack, L.A.). (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*. Sacramento, CA: CDFG.
- Stebbins, R. C. (1985). *A field guide to western reptiles and amphibians* (Peterson field guide), (2nd ed.). Boston, MA: Houghton Mifflin Company. 336 pp.
- Stebbins, R. C. (2003). *A field guide to western reptiles and amphibians* (Peterson field guide), (3rd ed.). Boston, MA: Houghton Mifflin Company. 533 pp.
- Twisselmann, E. C. (1967). A flora of Kern County, California. *The Wasmann Journal of Biology*, 25, 1–395.
- Uptain, C. E. (1989). *Survey for Tipton kangaroo rats (*Dipodomys nitratoides nitratoides*) on the proposed Delano prison site, Kern County, California* (Prepared for the California Department of Corrections). Sacramento, CA: 11 pp.
- U.S. Fish and Wildlife Service (USFWS). (1996). *California condor recovery plan, third revision*. Portland, OR: Author. 62 pp.
- USFWS. (1998). *Recovery plan for upland species of the San Joaquin Valley, California*. Portland, OR: Author. Retrieved from http://ecos.fws.gov/docs/recovery_plan/980930a.pdf
- USFWS. (2011). *U.S. Fish and Wildlife Service standardized recommendations for protection of the endangered San Joaquin kit fox prior to or during ground disturbance*. Sacramento, CA: Author. 9 pp. Retrieved from http://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/kitfox_standard_rec_2011.pdf
- USFWS. (2013). *California condor recovery program population size and distribution, December 31, 2013 overview page*. Retrieved from http://www.fws.gov/uploadedFiles/Region_8/NWRS/Zone_1/Hopper_Mountain_Complex/Hopper_Mountain/Sections/News/News_Items/PDFs/2013-12-31.pdf



USFWS. (2021a). *Federal endangered and threatened species that may occur in or may be affected by project in the counties and/or USGS 7 ½ minute quads you requested: quadrangle* [August]. Author. Retrieved from http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm

USFWS. (2021b). *National Wetlands Inventory Website* [August]. Washington, D.C.: Author. Retrieved from <http://www.fws.gov/wetlands/>

Williams, D. F. (1980). *Distribution and population status of the San Joaquin antelope squirrel and giant kangaroo rat*. (Nongame Wildlife Investigation Final Report E-W-4). Sacramento, CA: CDFG. 48 pp.

Williams, D. F. (1986). *Mammalian species of special concern in California* (Prepared for the State of California, The Resources Agency Department of Fish and Game). Turlock, CA: CSUS. 112 pp. Retrieved from http://esrp.csustan.edu/resources/publications/pdf/mammalian_scc_ca_esrp5.pdf

Zeiner, D. C., Laudenslayer, W. F., Jr., Mayer, K. E., & White, M., (Eds.). (1990a). *California's wildlife volume II birds* (California Statewide Wildlife Habitat Relationships System). Sacramento, CA: CDFG.

Zeiner, D. C., Laudenslayer, W. F., Jr., Mayer, K. E., & White, M., (Eds.). (1990b). *California's wildlife volume III mammals* (California Statewide Wildlife Habitat Relationships System). Sacramento, CA: CDFG.

APPENDIX A

PROJECT VICINTY AND SITE



Figure A-1. Aerial photograph of the project and vicinity (Google Earth Pro 2022).



Figure A-2. Aerial photograph of the project site (Google Earth Pro 2022).



Figure A-3 Soil map of the project site (USDA, Natural Resources Conservation Service 2022).



Figure A-4. Photograph of the project site taken from the southeast corner facing east (02Mar22).



Figure A-5. Photograph of the project site taken from the southwest corner facing north (02Mar22).



Figure A-6. Photograph of the project site taken from along the south edge facing west (02Mar22).



Figure A-7. Photograph of the project site taken from about the middle of the project facing south (02Mar22).

APPENDIX B

SPECIAL-STATUS PLANT AND ANIMAL EVALUATION



Table B-1: Special-status Plants That May Occur in the Vicinity of the Project.

Scientific Name Common Name	Status Fed/State/CNPS	Description	Blooming Period	Field Study Results/Potential for Occurrence
<i>Astragalus hornii</i> var. <i>hornii</i> Horn's milk vetch	S/-/1B.1	Annual herb in the Fabaceae found in meadows and seeps and on playas and lake margins on alkaline soils between 197 and 2,789 feet (60–850 meters) in elevation. Known from occurrences in the Southern San Joaquin Valley, the Tehachapi Mountains and the Western Transverse Ranges in Kern, Los Angeles, and San Bernardino Counties.	May to October	Not Observed/Not Expected. Soils not typical for this species
<i>Atriplex cordulata</i> var. <i>cordulata</i> Heartscale	S/-/1B.2	Herbaceous annual in the Chenopodiaceae found in chenopod scrub, meadows and weeps, and valley and foothill grasslands in sandy, saline or alkaline soils below 1,837 feet (560 meters) in elevation. Known to occur in the Great Central Valley from Kern County north to Southern Butte County.	April to October	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Atriplex coronata</i> var. <i>vallicola</i> Lost Hills crownscale	S/-/1B.2	Herbaceous annual in the Chenopodiaceae found in valley and foothill grasslands, playas, and vernal pools on alkaline soils between 456 and 1,640 feet (139–500 meters) in elevation.	April to August	Not Observed/Not Expected. Soils not typical for this species
<i>Atriplex tularensis</i> Bakersfield smallscale	-E/1A	Annual herb in the Chenopodiaceae found in valley and foothill grasslands, between 131 and 328 feet (40–100 meters) in elevation. Known to occur in the San Joaquin Valley from Northwestern Kern County north to Southern Merced County and in the Sacramento Valley in Southern Butte County.	June to August (occasionally October)	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Calochortus striatus</i> Alkali mariposa lily	S/-/1B.2	Bulbiferous perennial herb in the Liliaceae found in chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grasslands on sandy often granitic, sometimes serpentine soils, between 1,296 and 3,281 feet (395–1,000 meters). Known to occur in the Outer South Coast Ranges in Santa Barbara and San Luis Obispo Counties.	April to May	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Caulanthus californicus</i> California jewelflower	E/E/1B.1	Annual herb in the Brassicaceae family found on serpentinite soils in closed-cone coniferous forest, chaparral, and cismontane woodland between 1,542 and 4,003 feet (470–1,220 meters) in elevation.	May to July	Not Observed/Not Expected. Species believe extirpated from Kern County.
<i>Chloropyron molle</i> ssp. <i>hispidum</i> Hispid bird's-beak	S/-/1B.1	Hemiparasitic annual herb in the Orobanchaceae family found on coastal dunes and coastal saltwater marshes and swamps below 98 feet (30 meters) in elevation.	May to October	Not Observed/Not Expected. Soils not typical for this species



Scientific Name Common Name	Status Fed/State/CNPS	Description	Blooming Period	Field Study Results/Potential for Occurrence
<i>Delphinium recurvatum</i> Recurved larkspur	SI-/1B.2	Perennial herb in the Ranunculaceae family found in chaparral, cismontane woodland, and pinyon and juniper woodland on rocky, carbonate soils between 984 and 4,396 feet (300–1,340 meters) in elevation. Known to occur in Kern and Tulare Counties.	April to May	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Diplacus pictus</i> Calico monkeyflower	-I-/1B.2	Annual herb in the Phrymaceae family found in upland and cismontane woodland on granitic soils between 328 and 4690 feet (100-1430 meters). Known to occur in Kern and Tulare Counties.	March to May	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Eremalche parryi</i> ssp. <i>kernensis</i> Kern mallow	EI-/1B.1	Perennial, stoloniferous herb in the Onagraceae family found in meadows and seeps, and subalpine coniferous forest in mesic soils between 6,562 and 10,236 feet (2,000–3,120 meters) in elevation. Known to occur in Alpine, El Dorado, Fresno, Madera, Mono, Nevada, Sierra, and Tuolumne Counties.	July to August	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Eriastrum hooveri</i> Hoover's eriastrum	DI-/4.2	Annual herb in the Polemoniaceae family that occurs between 164 and 3,002 feet (50–915 meters) in elevation in pinyon-juniper woodland, and valley and foothill grasslands, occasionally on gravelly soils. Known to occur in the Southern San Joaquin Valley in Kern and Fresno Counties and on the Carrizo Plain in San Luis Obispo County.	March to July	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i> Tejon poppy	-I-/1B.1	Annual herb in the Papaveraceae family found in chaparral, cismontane woodland and valley and foothill grassland on serpentinite clay soil between 656 and 4,921 feet (200–1,500 meters) in elevation. Known to occur in Fresno, Imperial, Mendocino, Monterey, San Benito, and San Luis Obispo Counties.	March to June	A poppy was observed on the project. It was keyed to <i>E. lemmonii</i> . The distribution and “key” characteristic splits between result in debate between populations of <i>lemmonii</i> and ssp. <i>kernensis</i> .
<i>Imperata brevifolia</i> <i>California satintail</i>	-I-/2B.1	Perennial herb in the Poaceae family found in chaparral, coastal sage scrub, creosote bush scrub and wetland-riparian communities. Known to occur in Butte, Lake, Fresno, Tulare, Inyo, Kern, Santa Barbara, Ventura, San Bernardino, Orange, Riverside, San Diego and Imperial Counties.	September to May	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Lasthenia glabrata</i> ssp. <i>Coulteri</i> <i>Coulter's goldfields</i>	-I-/1B.1	Annual herb in the Asteraceae family found in vernal pools and saline places at elevations below 1000m. Known to occur in Kern and San Joaquin Counties	February to June	Not Observed/Not Expected. Soils not typical for this species



Scientific Name Common Name	Status Fed/State/CNPS	Description	Blooming Period	Field Study Results/Potential for Occurrence
<i>Layia leucopappa</i> Comanche Point layia	SI-/1B.1	Annual herb in the Asteraceae family found in chenopod scrub, and valley and foothill grassland between 328 and 1,148 feet (100–350 meters) in elevation. Known to occur in Kern County.	March to April	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Monolopia congdonii</i> San Joaquin woolly-threads	E-/1B.2	Perennial, rhizomatous herb in the Ericaceae family found in broadleaved upland forest and North Coast coniferous forest between 328 and 3,609 feet (100–1,100 meters) in elevation. Known to occur in Del Norte, Fresno, Humboldt and Siskiyou Counties.	May to August	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Navarretia setiloba</i> Piute Mountains <i>navarretia</i>	SI-/1B.1	Herbaceous annual in the Polemoniaceae family found on clay or gravelly loam soils in cismontane woodland, pinyon and juniper woodland, and valley and foothill grasslands from 1,001 and 6,890 feet (305–2,100 meters) in elevation. Known from occurrences in the Southern Sierra Nevada in Kern and Tulare Counties.	April to June	Not Observed/Not Expected. Soils not typical for this species. Beyond the published range of the species.
<i>Opuntia basilaris</i> var. <i>treleasei</i> Bakersfield cactus	E/E/1B.1	Perennial stem succulent in the Cactaceae family found in chenopod scrub, cismontane woodland, and valley and foothill grasslands between 394 and 1,804 feet (120–550 meters) in elevation. Known to occur in the Southeast San Joaquin Valley and Southern Sierra Nevada Foothills in Kern County.	April to May	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Puccinellia simplex</i> California alkali grass	-/1B.1	Annual herb in the Poaceae family found in meadows and seeps between 2,297 and 3,281 feet (700–1,000 meters) in elevation. Known to occur in Kern and San Bernardino Counties.	April to May	Not Observed/Not Expected. Soils not typical for this species. Beyond the published range of the species.
<i>Stylocline citroleum</i> Oil neststraw	SI-/1B.1	Annual herb in the Asteraceae family found in chenopod scrub, coastal scrub, and valley and foothill grasslands on clay soils between 164 and 1,312 feet (50–400 meters) in elevation. Known from locations in Kern and San Diego Counties.	March to April	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.
<i>Stylocline masonii</i> Mason's neststraw	SI-/1B.1	Annual herb in the Asteraceae family found in chenopod scrub, coastal scrub, and valley and foothill grasslands on clay soils between 164 and 1,312 feet (50–400 meters) in elevation. Known from locations in Kern and San Diego Counties.	March to April	Not Observed/Low Potential of Occurrence. Suitable soils are present. No stratified, focused surveys for rare plant species were conducted.



STATUS: Federal and State Listing Code

- D Delisted
- E Federally or State-listed Endangered
- T Federally or State-listed Threatened

CNPS

- 1A Plants presumed extirpated in California, and either rare or extinct elsewhere
- 1B.1 Plants considered rare, threatened, or endangered in California and elsewhere; seriously threatened in California
- 1B.2 Plants considered rare, threatened, or endangered in California and elsewhere; fairly threatened in California
- 2B.1 Plants considered rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California
- 4.2 Plants of limited distribution in California; fairly threatened in California



Table B-2: Special-status Animals That May Occur in the Vicinity of the Project.

Scientific Name Common Name	Status Federal/State	General Habitat	Survey Results/Regional or Nearest Occurrence*
Invertebrates			
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	T/-	Central Valley riparian forest; nearly always found on or close to its host plant, elderberry (<i>Sambucus</i> species).	Not Present. No suitable habitat for the species. No host plants present on the project or vicinity.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	T/-	Found in vernal pools throughout California. Exist as cysts during the dry season and reproduce when pools are filled with water again.	Not Present. No suitable habitat present.
Fishes			
<i>Hypomesus transpacificus</i> Delta smelt	T/-	Found only in the low-salinity and freshwater habitats of the Sacramento-San Joaquin Estuary. Historically, it was one of the most common pelagic fish in the estuary	Not Present. No suitable habitat present.
Amphibians			
<i>Rana draytonii</i> California red-legged frog	T/-	Found in habitat characterized by dense, shrubby, riparian vegetation and associated still, or slow-moving water that is at least 2.3 feet deep. The arroyo willow (<i>Salix lasiolepis</i>) cattails (<i>Typha</i> sp.) and bulrushes (<i>Scirpus</i> sp.) provide good habitat.	Not Present. No suitable habitat present.
<i>Spea hammondii</i> Western spadefoot toad	-/ CSC	Central valley and adjacent foothills, Coast Ranges from Point Conception south to the Mexico border; valley-foothill grasslands and valley-foothill hardwood, shallow temporary pools used for breeding, below 4,472 feet (1,363 meters).	Not Observed/Not Expected. No known records in the vicinity of the project. No suitable habitat present on the project. Marginal habitat is present in the project vicinity.
Reptiles			
<i>Anniella spp.</i> California legless lizard	-/CSC	Found in coastal dunes, chaparral, pine-oak woodlands, desert scrub, and sandy washes in warm moist loose soils, below 5,085 feet (1550 meters).	Not Observed/Not Expected. Suitable habitat absent from the site. Potential habitat in the project vicinity.
<i>Arizona elegans occidentalis</i> California glossy snake	-/CSC	Found in low elevation scrub, grasslands and chaparral habitats.	Not Present. No suitable habitat present.
<i>Emys marmorata</i> Western pond turtle	-/CSC	Completely aquatic requiring calm waters such as pools or streams with vegetation banks or logs for basking. Will utilize upland habitat up to about 0.5 km from water.	Not Present. No suitable habitat present.
<i>Gambelia sila</i> Blunt-nosed leopard lizard (BNLL)	E/E,SFP	Found only in the San Joaquin Valley, adjacent Carrizo Plain, Elkhorn Plain, Cuyama Valley, and Panoche Valley; inhabits sparsely vegetated plains, lower canyon slopes, on valley floors, and washes; open grassland, saltbush scrub, and alkali sink are more common habitat types.	Not Present. No suitable habitat present.



Scientific Name Common Name	Status Federal/State	General Habitat	Survey Results/Regional or Nearest Occurrence*
<i>Masticophis flagellum ruddocki</i> San Joaquin coachwhip	-/CSC	Found in the San Joaquin Valley in open, dry habitats. Associated with valley grassland and saltbush scrub habitats containing small mammal burrows which are used for refugia and oviposition sites.	Not Present. No suitable habitat present.
<i>Phrynosoma blainvillii</i> Coast horned lizard	-/CSC	Inhabits valley-foothill hardwood, coniferous and riparian, as well as pine-cypress, juniper, and annual grasslands, in Sierra Nevada below 3,937 feet (1,200 meters) and in mountains of Southern California and into the adjacent valleys.	Not Present. No suitable habitat present.
<i>Thamnophis gigas</i> Giant gartersnake	T/T	Found in areas of freshwater marshes or low-gradient streams. Can also be found in human-made habitats, such as drainage canals and irrigation ditches, especially those associated with rice farming.	Not Present. No suitable habitat present. Species believed to be extirpated from Kern County.
Birds			
<i>Agelaius tricolor</i> Tricolored blackbird	S/CSC	Forages in grasslands, wetlands, rice fields, croplands, and weedy uplands dominated by mustards and thistles, etc.; breeds in marshes containing heavy growth of bulrushes, cattails, and blackberries; found throughout the Central Valley.	Not Present/Low Probability of Occurrence in the Project Vicinity. No suitable nesting or habitat on the site. Potential for marginal foraging habitat in farmlands in the vicinity of the project.
<i>Athene cunicularia</i> Burrowing owl	-/CSC	Inhabits dry, open grasslands, rolling hills, desert floors, prairies, savannas, agricultural land, and other areas of open, bare ground. These owls will also inhabit open areas near human habitation, such as airports, golf courses, shoulders of roads, railroad embankments, and the banks of irrigation ditches and reservoirs.	Not Observed/Moderate Probability of Occurrence in the Project Vicinity. Suitable habitat for nesting and foraging in the vicinity of the project. No burrowing owls or owl burrows observed.
<i>Buteo swainsoni</i> Swainson's hawk	-/T	Riparian and sometimes large isolated trees used for nesting; grasslands and agricultural lands used for foraging; in California, breeds primarily in the Sacramento Valley, with occasional nesting to the south through Kern County; migrate through the Central and San Joaquin Valleys to their wintering grounds in South America.	Not Observed/Low Probability of Occurrence in the Project Vicinity. No suitable nesting sites on the project. Low suitable foraging habitat exists across the row-crop farmland south of metropolitan Bakersfield. Swainson's hawk are uncommon in Kern County.
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	T/-	Nests, feeds, and takes cover on sandy or gravelly beaches along the coast, on estuarine salt ponds, alkali lakes, and at the Salton Sea. On the Pacific coast, it nests on barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat, levees and flats at salt-evaporation ponds, and river bars.	Not Present. No suitable wintering habitat or foraging habitat exists on the project.
<i>Circus cyaneus</i> Northern harrier	-/CSC	Widespread breeding resident, other than in the Central Valley, most lowland birds are winter migrants; ground nester that forages and nests in a wide variety of open	Not Observed/Low Probability of Occurrence in the Project Vicinity. No suitable nesting sites on the project.



Scientific Name Common Name	Status Federal/State	General Habitat	Survey Results/Regional or Nearest Occurrence*
		habitats with low perches such as marshes, fields, and other treeless areas.	Suitable foraging habitat exists across the row-crop farmland south of metropolitan Bakersfield.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	T/E	Nests in walnut and almond orchards in California, natural nesting habitat is in cottonwood-tree willow riparian forest. Known populations of breeding western yellow-billed cuckoo are several disjunct locations in California, Arizona, and western New Mexico.	Not Present. No suitable nesting habitat exists on the project for this species. The site represents poor foraging habitat.
<i>Elanus leucurus</i> White tailed kite	-/SFP	Associated habitats include open grasslands, savannahs, agriculture, wetlands, oak woodland and riparian areas with associated open space.	Not Observed/Low Probability of Occurrence in the Project Vicinity. No suitable nesting sites on the project. Suitable foraging habitat exists across the row-crop farmland south of metropolitan Bakersfield. Swainson's hawk are frequently observed moving through Kern County during the migratory period. Swainson's hawk are uncommon nesters in Kern County.
<i>Empidonax traillii</i> Willow Flycatcher	-/E	Nests and forages in riparian habitats with dense vegetation characterized by willows, buttonbush and coyote brush, with a scattered overstory of cottonwood. Have also been known to nest in thickets dominated by tamarisk.	Not Present. No suitable nesting or foraging habitat present.
<i>Lanius ludovicianus</i> Loggerhead shrike	-/CSC	Common resident and winter visitor in lowlands and foothills throughout California; species prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches; nests on stable branches in densely-foliaged shrubs or trees, usually well-concealed.	Not Observed/Moderate Probability of Occurrence in the Project Vicinity. No suitable nesting habitat present. Loggerhead shrike occur throughout the southern San Joaquin Valley and undoubtedly forage in the project vicinity.
Mammals			
<i>Ammospermophilus nelsoni</i> San Joaquin antelope squirrel	-/T	Found in grasslands or open shrublands; formerly more extensive, current range includes southwestern portion of the San Joaquin Valley and in adjacent valleys to the west.	Not Present. Beyond the current published range of the species.
<i>Dipodomys ingens</i> Giant kangaroo rat	E/E	Western side of the San Joaquin Valley, including the Carrizo Plain and the Panoche Valley; grassland and shrub-land habitats with sparse vegetative cover and soils that are well-drained, fine sandy loams with gentle slopes.	Not Present. Beyond the current published range of the species.
<i>Dipodomys nitratoideus brevinasus</i> Short-nosed kangaroo rat	E/E	Found in arid communities on the valley floor portions of Kern, Tulare, and Kings counties in scrub and grassland communities in level to near-level terrain with	Not Present. Beyond the published range of the species.



Scientific Name Common Name	Status Federal/State	General Habitat	Survey Results/Regional or Nearest Occurrence*
		alluvial fan-floodplain soil (fine sands and sandy loams) with sparse grasses and woody vegetation such as iodine bush, saltbush, seep weed, and mesquite.	
<i>Dipodomys nitratoides nitratoides</i> Tipton kangaroo rat	E/E	Found in arid communities on the valley floor portions of Kern, Tulare, and Kings counties in scrub and grassland communities in level to near-level terrain with alluvial fan-floodplain soil (fine sands and sandy loams) with sparse grasses and woody vegetation such as iodine bush, saltbush, seep weed, and mesquite.	Not Present. No suitable habitat present. Not within the southwest focus area of the MBHCP.
<i>Eumops perotis californicus</i> Greater western mastiff bat	-/CSC	Open, semi-arid to arid habitats, including conifer and deciduous woodlands, annual and perennial grasslands, chaparral, desert scrub, and urban areas; roosts in cliff faces, as well as high buildings, trees, and tunnels; uncommon resident in southwestern San Joaquin Valley.	No Roosting Sites Present. No known occurrences in the vicinity of the project. Information on some bat species indicates foraging may occur over 10's of miles from roosting sites. Impacts not expected.
<i>Lasiurus cinereus</i> Hoary bat	-/CSC	Open, semi-arid to arid habitats, including conifer and deciduous woodlands, annual and perennial grasslands, chaparral, desert scrub, and urban areas; roosts in cliff faces, as well as high buildings, trees, and tunnels; uncommon resident in southwestern San Joaquin Valley.	No Roosting Sites Present. No known occurrences in the vicinity of the project. Information on some bat species indicates foraging may occur over 10's of miles from roosting sites. Impacts not expected.
<i>Onychomys torridus tularensis</i> Tulare grasshopper mouse	-/CSC	Found in valley grasslands habitats, blue oak savanna, desert associations dominated by annual grasses and California ephedra, alkali sink scrub, saltbush scrub, and upper Sonoran shrub associations, dominated by ephedra.	Not Observed/Not Expected. Beyond the current published range of the species.
<i>Perognathus inornatus inornatus</i> San Joaquin pocket mouse	S/-	Found in west-central California in the Upper Sacramento Valley, Tehama County, southward through the San Joaquin and Salinas valleys and contiguous areas to the Mojave Desert in Los Angeles, Kern and extreme western San Bernardino counties. Inhabits dry, open, grassy or weedy areas and annual grasslands, savannas, and desert-scrub associations with sandy washes or finely textured soils.	Not Observed/Not Expected. Beyond the current published range of the species.
<i>Sorex ornatus relictus</i> Buena Vista Lake shrew	E/CSC	Formerly occupied marshlands of the San Joaquin Valley and the Tulare Basin. Its range has become much restricted due to the loss of lakes and sloughs in the area. It has been recorded from the Kern Lake Preserve area and the Kern National Wildlife Refuge. Current distribution is unknown but likely to be very restricted due to the loss of habitat.	Not Present. No suitable habitat present.



Scientific Name Common Name	Status Federal/State	General Habitat	Survey Results/Regional or Nearest Occurrence*
<i>Taxidea taxus</i> American badger	-/CSC	Uncommon resident found through California; in less disturbed grassland and shrubland habitats in San Joaquin Valley.	Low Probability of Occurrence. Suitable habitat. No observed badger burrows.
<i>Vulpes macrotis mutica</i> San Joaquin kit fox (SJKF)	E/T	Found in valley saltbush scrub, valley sink scrub, Interior Coast Range saltbush scrub, upper Sonoran sub-shrub scrub, non-native grassland, and valley sacaton grassland in the Central Valley and adjacent foothills and valleys, infrequently to the outer Coast Ranges; generally not found in densely wooded areas, wetland areas, or areas subject to frequent periodic flooding.	Low Probability of Occurrence. No potential, known, or natal dens were observed. SJKF occurrence high in the vicinity of the project.

STATUS:

Federal

- S Listed as a BLM Sensitive Species
- D Delisted
- E Listed as Endangered
- PT Proposed as Threatened
- T Listed as Threatened
- C Candidate for Endangered Status

State

- CSC California Department of Fish and Wildlife Designated Species of Special Concern
- D Delisted
- E Listed as Endangered
- SFP California Department of Fish and Wildlife Designated Fully Protected
- T Listed as Threatened

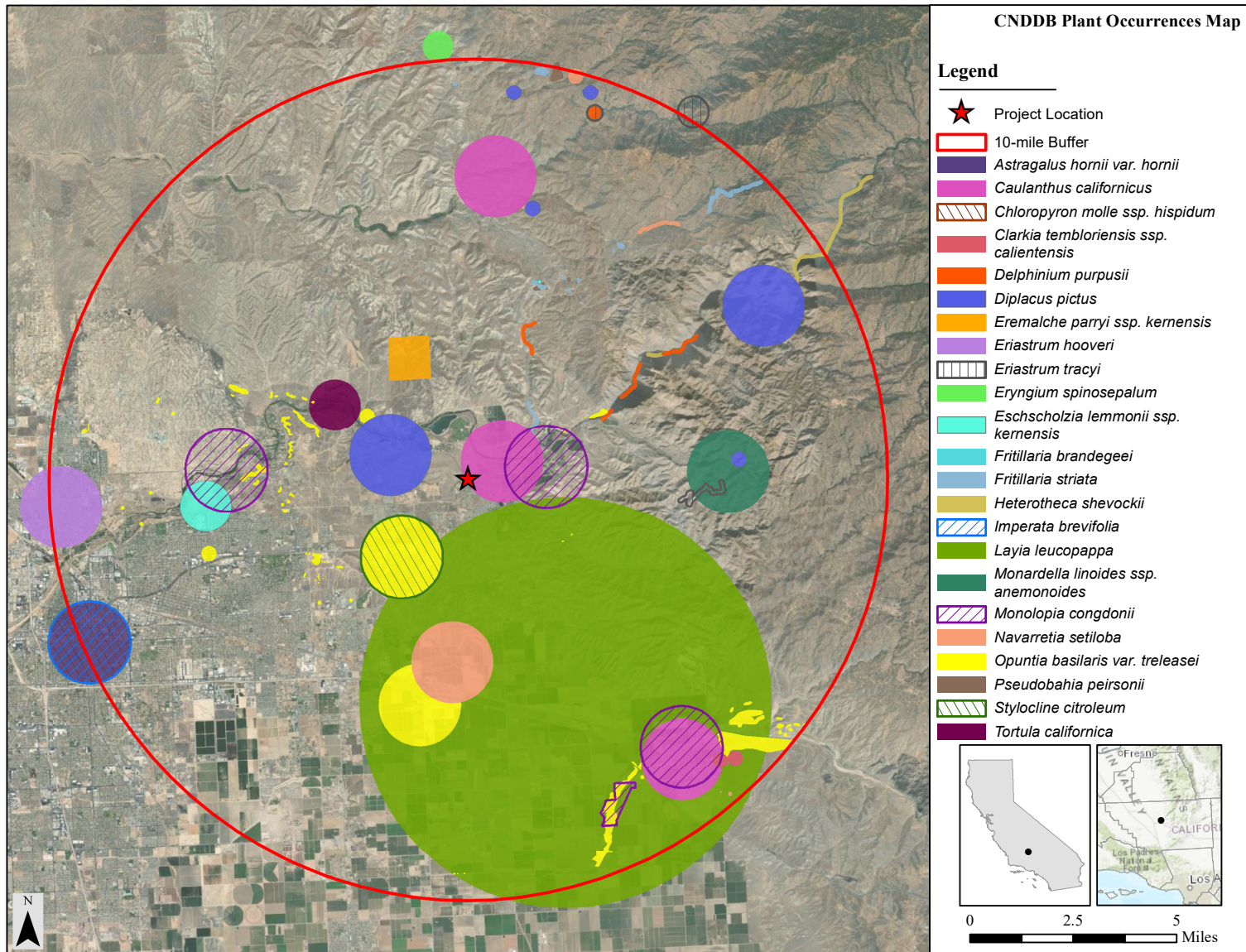


Figure B-1. CNDDDB special-status plant species occurrences within a 10-mile radius of the project (CDFW 2022).

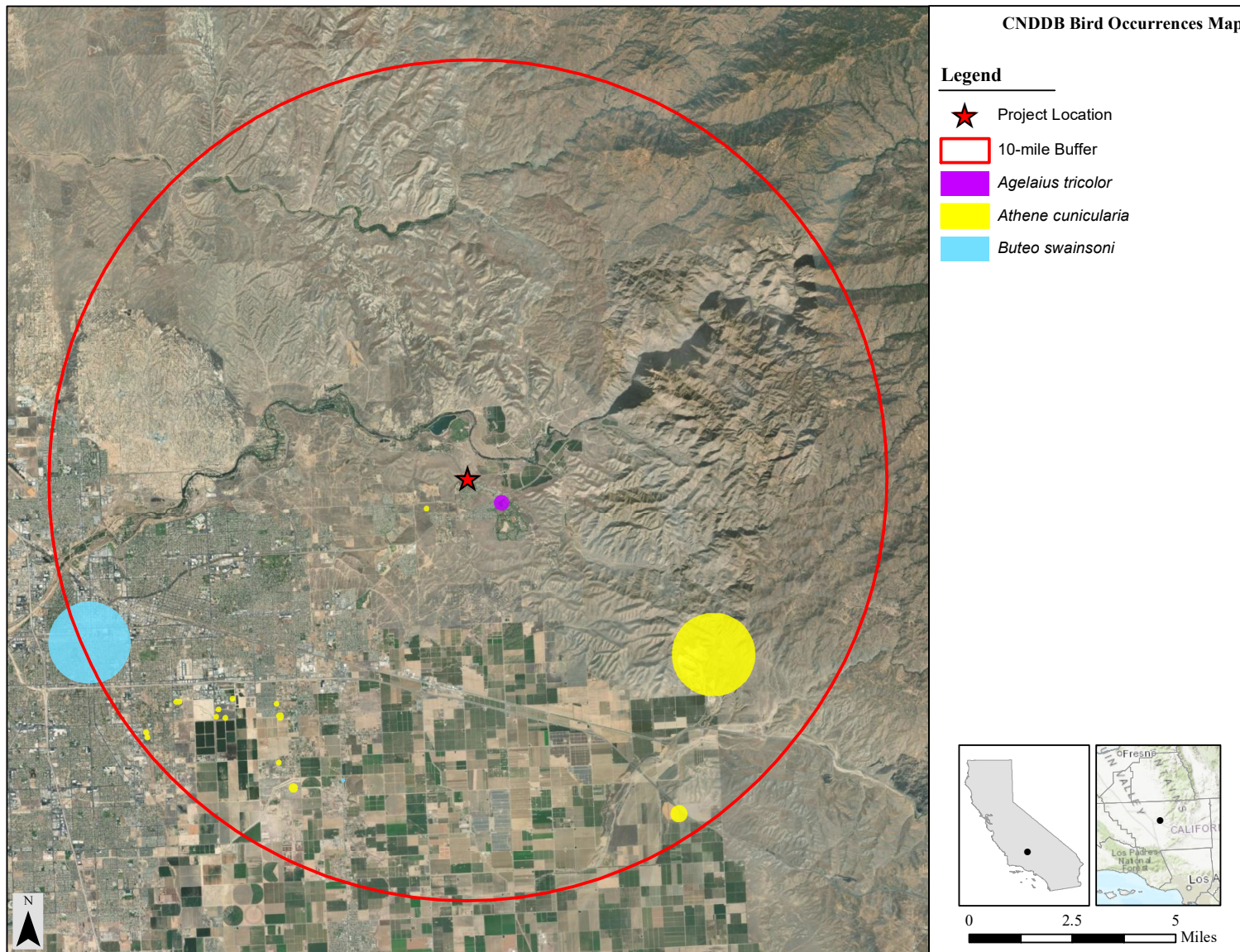


Figure B-2. CNDDDB special-status bird species occurrences within a 10-mile radius of the project (CDFW 2022).

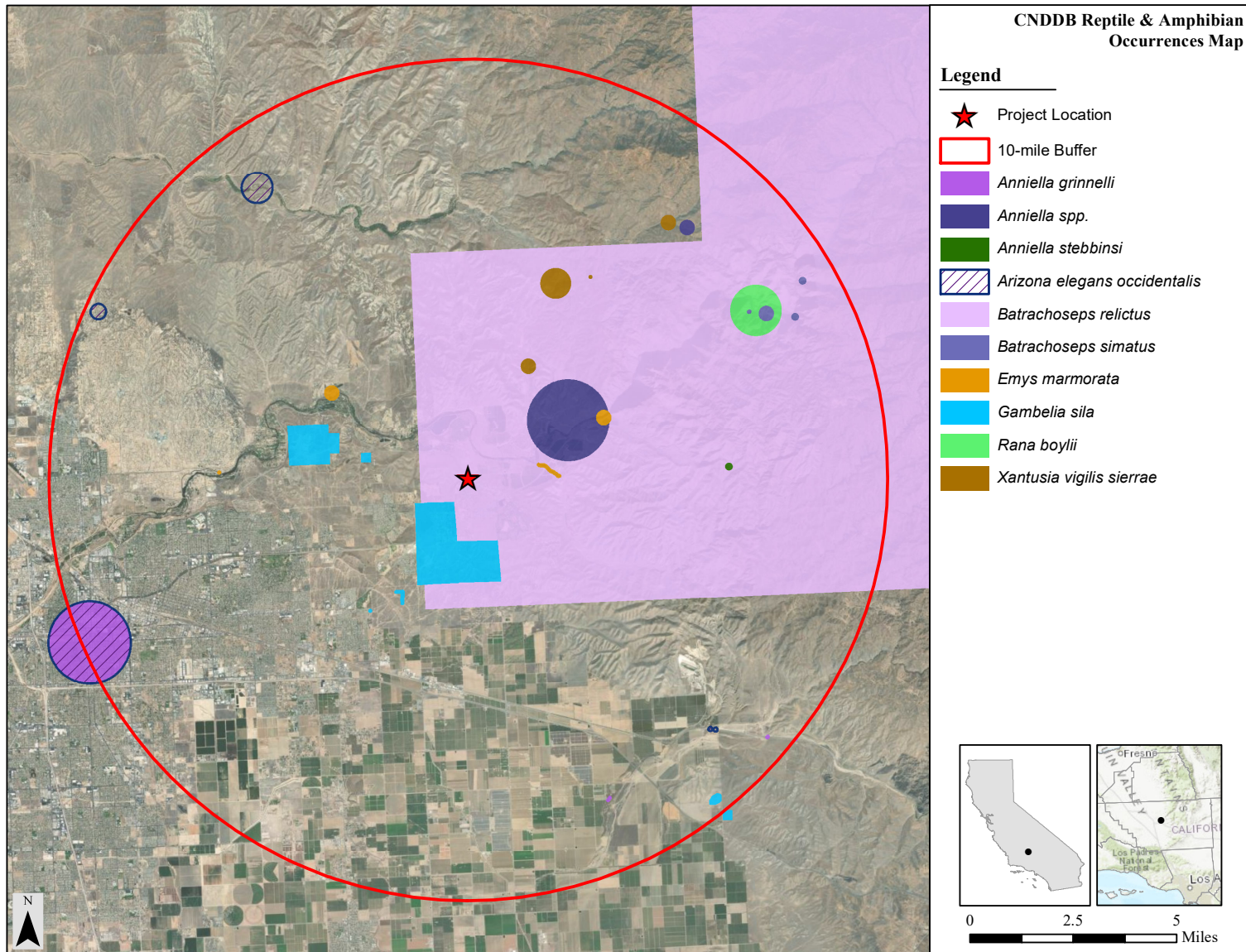


Figure B-3. CNDDDB special-status amphibian and reptile species occurrences within a 10-mile radius of the project (CDFW 2022).

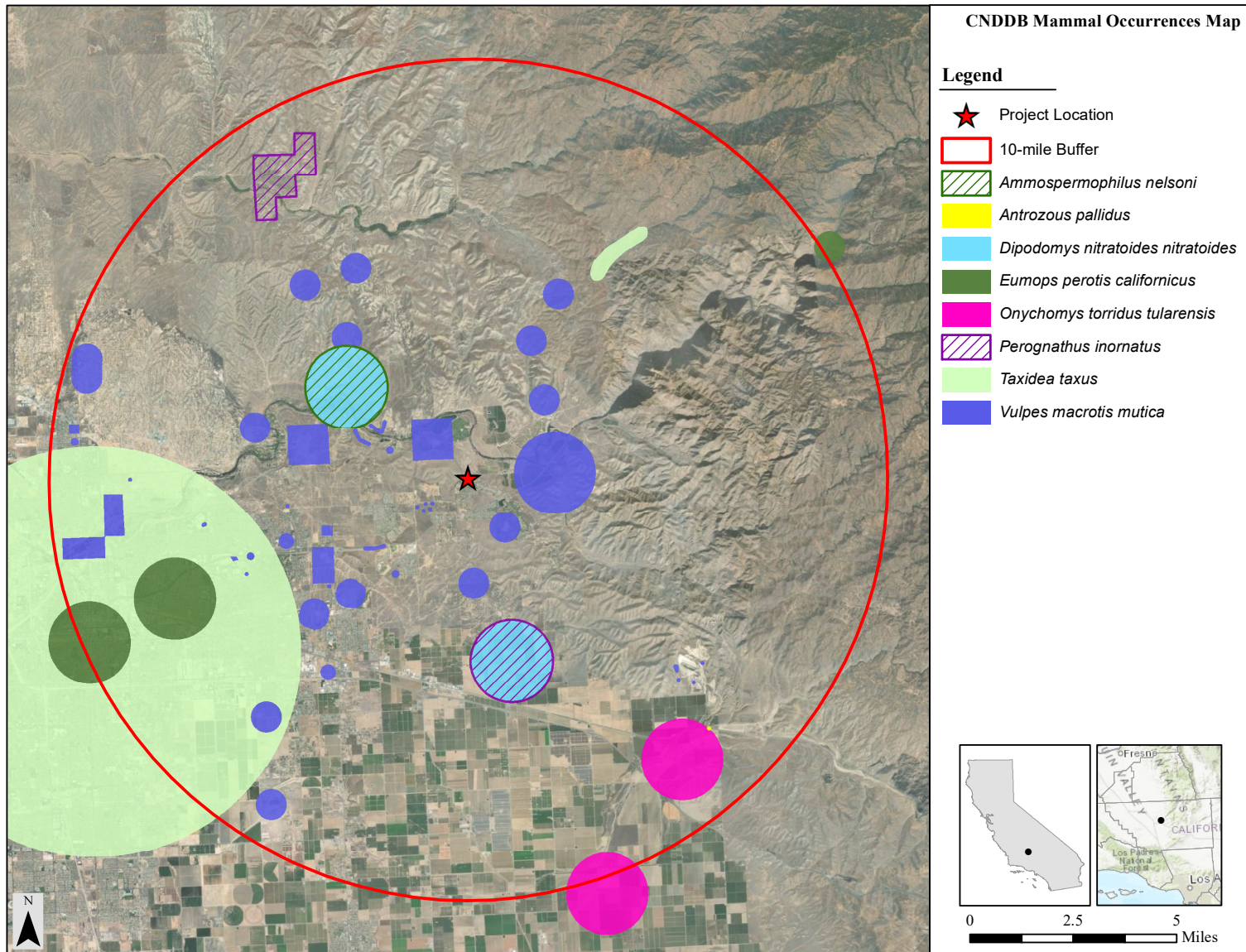


Figure B-4. CNDDDB special-status mammal species occurrences within a 10-mile radius of the project (CDFW 2022).

APPENDIX C

PLANTS AND ANIMALS OBSERVED ON THE PROJECT

FIELD STUDY CONDUCTED
02 March 2022



Table C-1. Vascular plant species observed during the field study conducted on the project site.

Scientific Name	Common Name
Asparagaceae	
<i>Dipterostemon capitatus</i>	Blue dicks
Asteraceae	
<i>Helianthus annuus</i>	Common sunflower
<i>Isocoma</i> sp.	Goldenbush
Boraginaceae	
<i>Plagiobothrys</i> sp	Plagiobothrys
<i>Amsinkia menziesii</i>	Fiddleneck
Brassicaceae	
<i>Brassica tournefortii</i>	Asian mustard
<i>Capsella bursa-pastoris</i>	Sheperd's purse
<i>Hirschfeldia incana</i>	Shortpod mustard
<i>Lepidium nitidum</i>	Peppergrass
<i>Sisymbrium irio</i>	London rocket
Chenopodiaceae	
<i>Salsola tragus</i>	Russian thistle
Fabaceae	
<i>Lupinus</i> sp.	Lupine
<i>Medicago polymorpha</i>	Bur clover
Geraniaceae	
<i>Erodium cicutarium</i>	Redstem filaree
Malvaceae	
<i>Malva parviflora</i>	Cheeseweed
Nyctaginaceae	
<i>Mirabilis laevis</i>	Desert wishbone bush
Orobanchaceae	
<i>Castilleja exsertsa</i>	Owl's clover
Poaceae	
<i>Avena barbata</i>	Slender wild oat
<i>Bromus diandrus</i>	Ripgut brome

Scientific Name	Common Name
<i>Bromus madritensis ssp. rubens</i>	Red brome
<i>Cynodon dactylon</i>	Bermudagrass
<i>Cyperus rotundus</i>	Nut sedge
<i>Hordeum vulgare</i>	Farmer's foxtail
<i>Schismis arabicus</i>	Mediterranean grass
Urticaceae	
<i>Urtica dioica</i>	Stinging nettle

Table C-2. Vertebrate animal species observed during the field study conducted on the project site.

Scientific Name	Common Name
Birds	
<i>Corvus corax</i>	Common raven
<i>Sturnella neglecta</i>	Western meadowlark
<i>Zenaida macroura</i>	Mourning dove
Mammals	
<i>Otospermophilus beecheyi</i>	California ground squirrel
<i>Sylvilagus audubonii</i>	Audubon's cottontail