

## **APPENDIX F**

# **BIOLOGICAL RESOURCES EVALUATION**

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# BIOLOGICAL RESOURCES EVALUATION

## VILLAGE D DEVELOPMENT PROJECT MADERA, CALIFORNIA



**LSA**

November 2018

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# **BIOLOGICAL RESOURCES EVALUATION**

## **VILLAGE D DEVELOPMENT PROJECT MADERA, CALIFORNIA**

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Project No. CMD1801



November 2018

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## 1.0 INTRODUCTION

LSA was retained by the City of Madera (City) to prepare a Biological Resources Evaluation (BRE) for the Village D Development Project (hereafter referred to as the "proposed Project") located just outside the current city limits of Madera, Madera County, California.

This BRE discusses vegetative communities, associated wildlife, and special status species occurring or potentially occurring on the proposed Project site and evaluates program level impacts to these resources from the proposed Project.

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## 2.0 PROJECT DESCRIPTION

### 2.1 PROJECT LOCATION

The proposed Project is located immediately west of and adjacent to the City within Madera County. It is located in Sections 8, 16, 17, and 21 of Township 11 South, Range 17 East on the Bonita Ranch and Madera USGS 7.5 minute quadrangle maps. Figures 1 and 2 show the project location and regional vicinity, respectively.

The proposed Project is approximately 1,934.74 acres (ac) and is located entirely within the City's planned urban growth General Plan Village D. The proposed Project site is not currently within the sphere of influence of the City. However, the City is currently in the process of amending the sphere of influence to include the proposed Project. Village D is within the City's planning area, generally west and south of Madera Municipal Airport and north of the Fresno River.

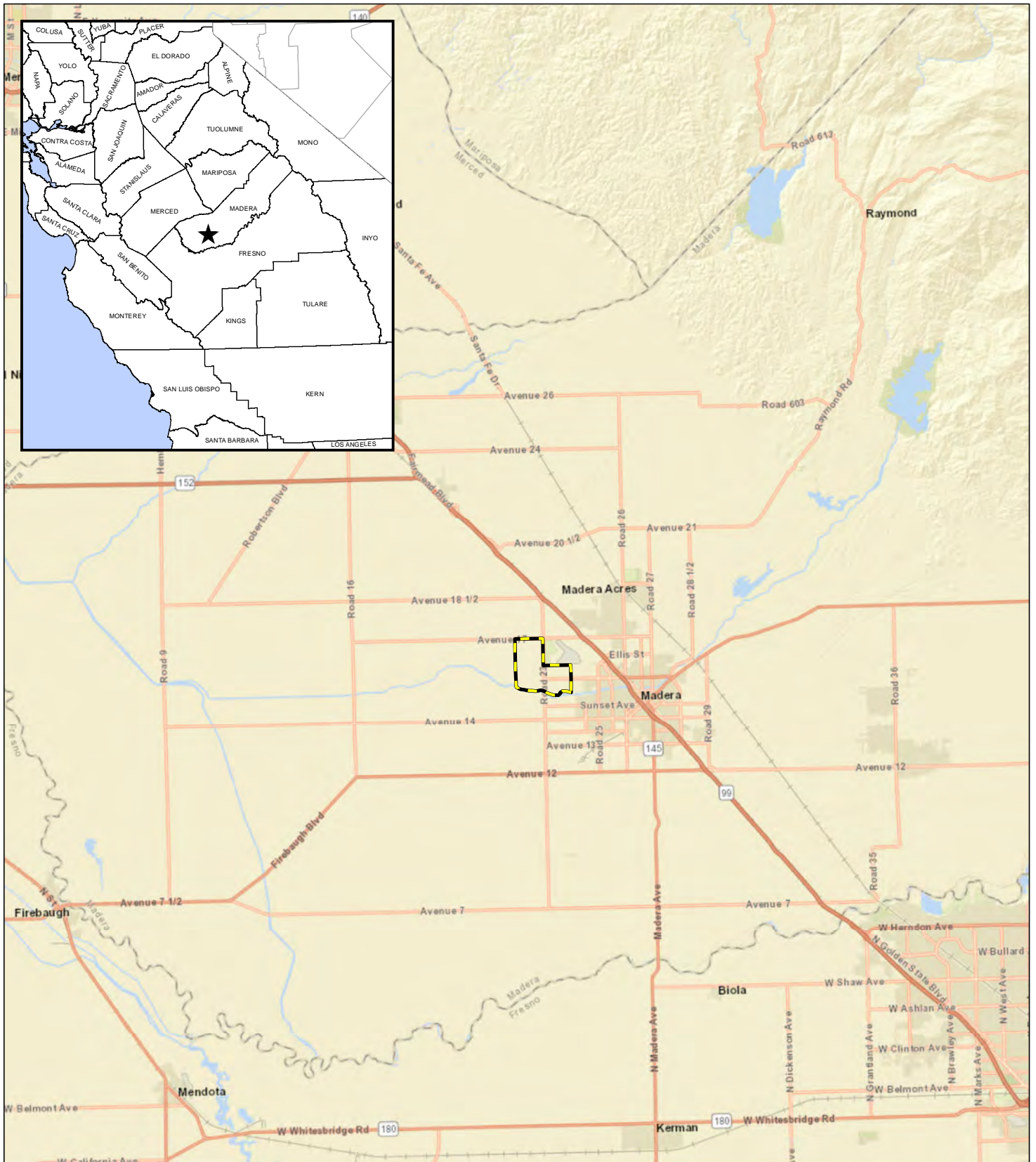
### 2.2 PROJECT DESCRIPTION

The overall proposed Project is referred to as the Village D Specific Plan, or simply the Specific Plan. The Specific Plan envisions the development of a new compact mixed-use community that creates walkable and bikeable streets, and integrates open space throughout the area west of the City limits. The Specific Plan proposes to implement a village concept that would create opportunities for commercial development to be integrated with park and open space amenities, and to accomplish the following objectives:

- Address the City's current and projected housing needs
- Create mixed-use development to attract businesses and employment opportunities
- Achieve the goals related to community character and pedestrian-friendly design of the General Plan's Community Design Element and Land Use Element
- Facilitate annexation of areas in the Specific Plan Area that are outside of the City limits of Madera
- Create a transportation network to meet the objectives of the General Plan's Circulation Element
- Promote opportunities for water efficiency and incorporate sustainable building and operating practices

At buildout, the Specific Plan would provide approximately 8,976 residential units, approximately 1,393,920 square feet of commercial and office space, approximately 104 ac of parks and recreational area, and approximately 75 ac of public facilities, including schools. In addition, the proposed Specific Plan would include infrastructure improvements including roadways and utilities. Additional details for all proposed Specific Plan components, including the location of land uses within the Specific Plan Area will be developed and refined as part of the preparation of the Specific

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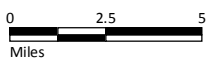


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 Project Location

FIGURE 1



SOURCE: ESRI World Street Map (10/2018)

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*Madera Village D Development Project  
City of Madera, Madera County, California  
LSA Project No. CMD1801*

Regional Location

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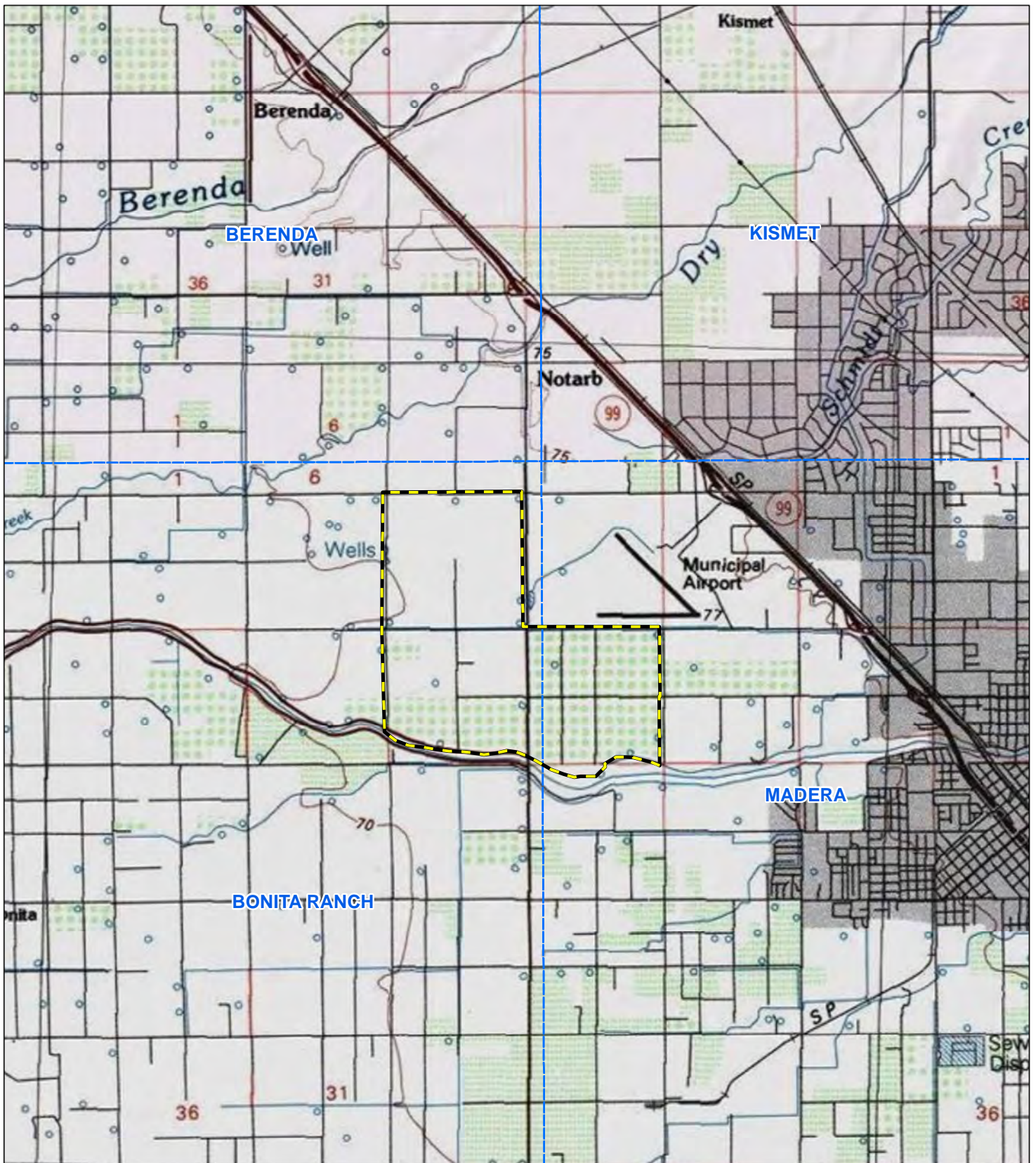


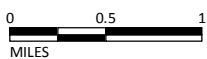


FIGURE 2

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-  Biological Study Area - (1,934.74 ac)
-  USGS 7.5' Quad Boundaries



SOURCE: USGS 1:100000 scale topographic map; Mendota, Ca (1982, ed. 1983) and Merced, Ca (1983, ed. 1983)

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Madera Village D Development Project  
 City of Madera, Madera County, California  
 LSA Project No. CMD1801  
 Project Vicinity on Topographic Base

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Plan, during the application review, and during the evaluation process that will occur simultaneously with preparation of the Draft EIR. It is expected that the proposed project would require a General Plan Amendment, pre-zoning, and annexation of the Specific Plan Area into the City. Additionally, future development proposals within the Specific Plan Area would be required to be consistent with the Airport Land Use Compatibility Plan for Madera Municipal Airport, and some parcels would require removal of active Williamson Act contracts prior to development.

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## 3.0 REGULATORY BACKGROUND

### 3.1 SPECIAL STATUS SPECIES

Special status species include plants and animals that are: 1) listed as rare, threatened, or endangered by United States Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW) under state or federal endangered species acts; 2) on formal lists as candidates for listing as threatened or endangered; 3) on formal lists as species of concern; or 4) otherwise recognized at the state, federal, or local level as sensitive.

#### 3.1.1 Federal and California Endangered Species Acts

Under the Federal Endangered Species Act (FESA), it is unlawful to "take any species listed as threatened or endangered". "Take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." An activity is defined as "take" even if it is unintentional or accidental. "Take" provisions under FESA apply only to listed fish and wildlife species under the jurisdiction of the USFWS and/or the National Oceanic & Atmospheric Administration, National Marine Fisheries Service (NMFS). Consultation with USFWS or NMFS is required if a project "may affect" a listed species.

When a species is listed, the USFWS and/or the NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or the NMFS is required for projects that include a federal action or federal funding if the project may affect designated critical habitat.

Under the California Endangered Species Act (CESA), it is unlawful to "take" any species listed as rare, threatened, or endangered. Under CESA, "take" means to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill". CESA take provisions apply to fish, wildlife, and plant species. "Take" may result whenever activities occur in areas that support a listed species. Consultation with CDFW is required if a project will result in "take" of a listed species.

#### 3.1.2 Magnuson-Stevens Fishery Conservation and Management Act

Under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), essential fish habitat (EFH) must be designated in every fishery management plan. EFH includes "...those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The MSA requires consultation with NMFS for projects that include a federal action or federal funding and may adversely modify EFH.

### 3.2 WATERS OF THE UNITED STATES AND OTHER JURISDICTIONAL WATERS

#### 3.2.1 Army Corps of Engineers

##### 3.2.1.1 Section 404 of the Clean Water Act

Under Section 404 of the Clean Water Act (CWA), the Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the United States (U.S.). Waters of the U.S. are those waters that have a connection to interstate commerce, either directly via a tributary system

or indirectly through a nexus identified in the ACOE regulations. In non-tidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high water mark (OHWM) of a waterbody or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tide line or, where adjacent wetlands are present, to the limit of the wetlands.

### **Wetlands**

Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions".

### **Non-Wetland Waters**

Non-wetland waters essentially include any body of water, not otherwise exempted, that displays an OHWM.

### **3.2.2 Regional Water Quality Control Board**

Under Section 401 of the CWA, the State Water Resources Control Board must certify all activities requiring a 404 permit. The Regional Water Quality Control Board (RWQCB) regulates these activities and issues water quality certifications for those activities requiring a 404 permit. In addition, the RWQCB has authority to regulate the discharge of "waste" into waters of the State pursuant to the Porter-Cologne Water Quality Control Act.

### **3.2.3 California Department of Fish and Wildlife**

CDFW, through provisions of Section 1602 of the California Fish and Game Code, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an ephemeral or intermittent flow of water. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, cottonwoods, and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas. Riparian communities may not fall under ACOE jurisdiction unless they are below the OHWM or classified as wetlands.

### **3.3 MIGRATORY BIRD TREATY ACT**

The Migratory Bird Treaty Act (MBTA) prohibits actions that will result in "take" of migratory birds, their eggs, feathers, or nests. "Take" is defined in the MBTA as any means or any manner to hunt, pursue, wound, kill, possess, or transport, any migratory bird, nest, egg, or part thereof.

Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the California Fish and Game Code (CFGC).

### **3.4 CALIFORNIA FISH AND GAME CODE (BREEDING BIRDS)**

Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird, except as otherwise provided by the California Fish and Game Code or other regulation.

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## 4.0 METHODS

Prior to conducting any field studies, the limits of the Biological Study Area (BSA) were established, as shown in Figure 3. The BSA, totaling 1,934.74 ac, consists of the limits of the proposed Project as described in Section 2.2.

### 4.1 LITERATURE REVIEW

A list of sensitive wildlife and plant species potentially occurring within the BSA was compiled to evaluate potential impacts resulting from construction of the proposed Project. Sources used to compile the list include: the California Natural Diversity Data Base (CNDDDB 2018), the California Native Plant Society Online Edition (CNPS 2018), and the U.S. Fish and Wildlife Service, Information for Planning and Conservation (IPaC) tool (USFWS 2018). The list was generated by referencing the Berenda, Kismet, Madera, and Bonita Ranch 7.5-Minute United States Geologic Survey (USGS) quadrangles (the quadrangles within a 5-mile radius from the proposed Project area). The individual lists are included in Appendix A.

The special status species lists obtained from the CNDDDB, CNPS, and USFWS were reviewed to determine which species could potentially occur within the BSA. The determination of whether a species could potentially occur within the BSA was based on the availability of suitable habitat, whether the BSA is within the species' known range, as well as known occurrences of the species in or adjacent to the BSA according to the CNDDDB. Species requiring specific habitat not present in the vicinity of the proposed Project were eliminated as potentially occurring and are not discussed further. Those species that could potentially occur in the BSA based on habitat suitability or known occurrences in or within the vicinity of the BSA are discussed in Section 6.

### 4.2 FIELD SURVEY

A general biological windshield survey of the BSA was conducted on October 30, 2018 by LSA biologist Dan Williams. Since the vast majority of the BSA is comprised of private orchards, the survey was conducted by driving all the accessible roads of the BSA, and stopping intermittently to scan with binoculars for wildlife and note the vegetation along the roadsides. Vegetation in the BSA was classified according to A Manual of California Vegetation, Second Edition (Sawyer, Keeler-Wolf, and Evans 2009) as appropriate. Managed or developed areas were classified according to their dominant plant species. Species names follow the standard nomenclature presented in The Jepson Manual: Vascular Plants of California (Baldwin, B. G., et. al., editors 2012) and the Jepson Online Interchange for California Floristics (Jepson eFlora 2018).


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FIGURE 3

LSA

LEGEND

 Biological Study Area - (1,934.74 ac)



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FEET

SOURCE: ESRI World Imagery (07/2017)

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Madera Village D Development Project  
City of Madera, Madera County, California  
LSA Project No. CMD1801  
Biological Study Area

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## 5.0 ENVIRONMENTAL SETTING

The BSA, totaling approximately 1,934.74 ac, is predominately composed of almond orchards, though there is a section near the center (between Avenues 15½ and 16 and Roads 22½ and 23) which has been cleared of orchard trees leaving approximately 132.04 ac of disked/plowed fallow field (characterized as barren). There is also approximately 29.94 ac of vineyard in this section of the BSA. The Fresno River abuts the southern portion of the BSA and multiple Merced Irrigation District canals traverse through the BSA.

Historic aerial photos (the earliest of which is from 1946) indicate that the land use in the BSA has remained largely unchanged over the last 70 years, with the hydrology of the area controlled to facilitate various agricultural operations. Subsequent photos (1958, 1962, and 1998) show continued agricultural land uses throughout the BSA and, with the only recent change being the construction of the retention basins in late 2009.

### 5.1 PHYSICAL CONDITIONS

#### 5.1.1 Climate

The climate in the BSA is characterized as Mediterranean with cool, wet winters and hot, dry summers. The average total annual precipitation is approximately 11 inches (Western Regional Climate Center 2018), most of which falls between November and April. There is normally less than 0.5 inch of rain between June and September. The average winter temperature is 46.9 Fahrenheit (°F) and the average winter low temperature is 36.9 °F. The average summer temperature is 77.4 °F and the average summer high temperature is 95.4 °F.

#### 5.1.2 Topography

The BSA lies at an elevation between about 225 and 250 feet above mean sea level. The terrain is relatively flat, sloping gently from east to west with few inclines aside from the drop-off to the south of the proposed Project boundary at the Fresno River, and those associated with the irrigation canal levees.

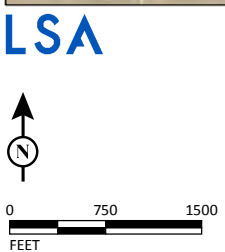
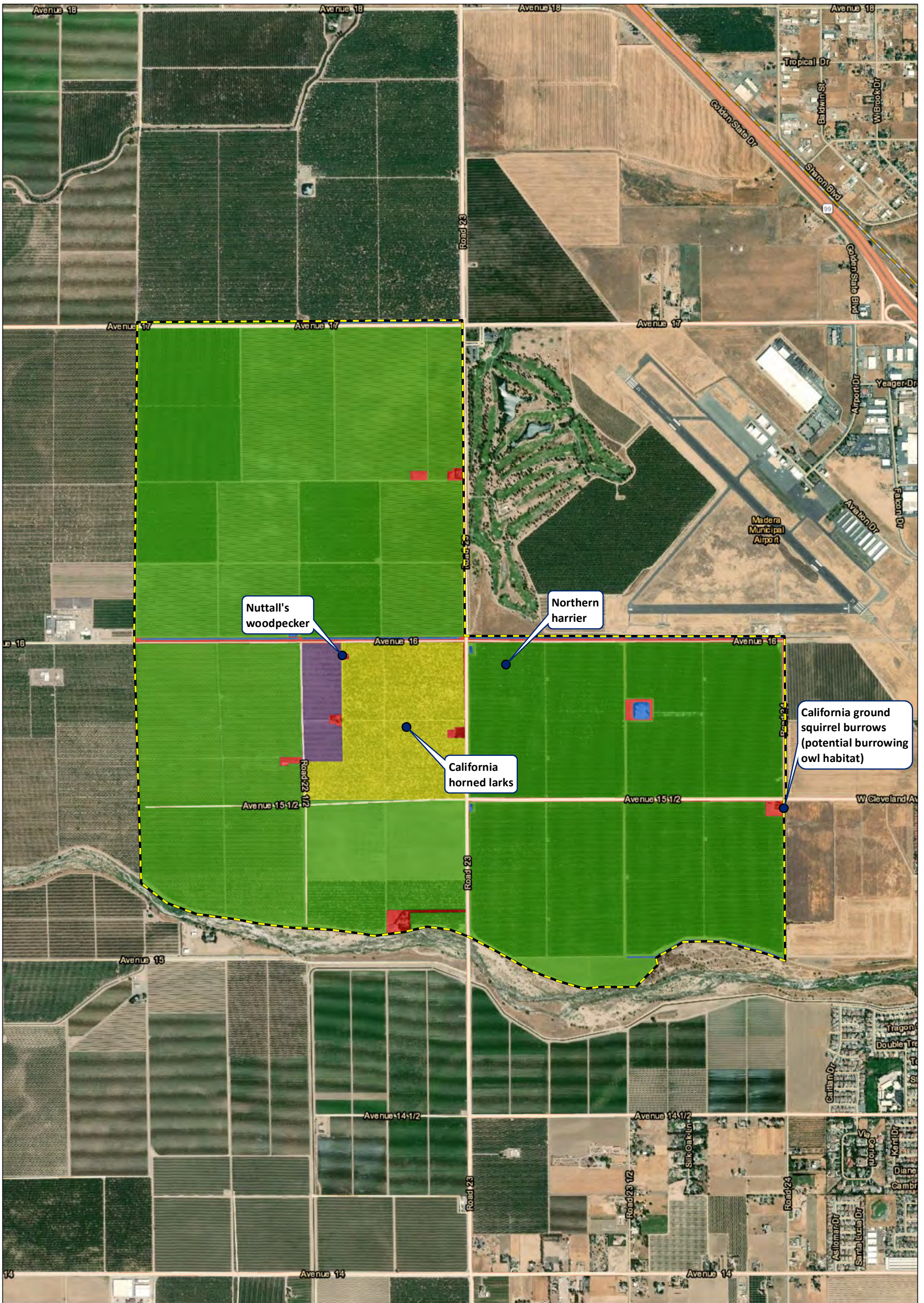
### 5.2 BIOLOGICAL CONDITIONS

#### 5.2.1 Plant Communities and Land Uses

There are no natural habitats in the BSA. The overwhelming majority of the BSA (approximately 1,875.71 ac) is comprised of agricultural land, with 1,703.84 ac of almond orchard, 132.04 ac of disked/plowed fallow field (barren), 29.94 ac of vineyard, and the basin and ditch aquatic features of the irrigation system making up 9.89 ac. The remaining 59.03 ac are developed lands such as the farmhouses and other built structures and roadways. This information is summarized below in Table A and shown in Figure 4.

**Table A: Summary of Land Uses in the BSA (ac)**

<b>Type</b>	<b>Total</b>
Almond Orchard	1703.84
Disked/Plowed Fallow Field (Barren)	132.04
Developed	59.03
Vineyard	29.94
Basins and Ditches	9.89
<b>Total</b>	<b>1934.74</b>



LEGEND

- Biological Study Area - (1,934.74 ac)
- Special-Status Species or Potential Habitat Observed
- Plant Communities / Land Uses - (1,934.74 ac)**
- + Basins and Ditches - (9.89 ac)
- Barren - (132.04 ac)
- Orchard - (1,703.84 ac)
- Vineyard - (29.94 ac)
- Developed - (59.03 ac)

FIGURE 4

Madera Village D Development Project  
 City of Madera, Madera County, California  
 LSA Project No. CMD1801

Plant Communities / Land Uses and Sensitive Species Observed

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### 5.2.2 Wildlife Use

Wildlife use of the BSA is relatively low due to the lack of natural habitats and the dominance of monotypic orchard trees across most of the landscape. However, varieties of species are known to occur in agricultural areas. Common wildlife species observed or that could occur in the BSA include, but are not limited to, California ground squirrels (*Otospermophilus beecheyi*), coyote (*Canis latrans*), American crow (*Corvus brachyrhynchos*), western meadowlark (*Sturnella neglecta*), Brewers blackbird (*Euphagus cyanocephalus*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), and red-tailed hawk (*Buteo jamaicensis*).

A comprehensive list of plant and wildlife species observed during the survey is provided in Appendix B.

### 5.2.3 Wildlife Movements

Wildlife movement corridors are linear habitats that function to connect two or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat.

There are no significant migration corridors that exist within the BSA. The Fresno River, which flows along the southern boundary of the BSA, is the best example of a migration corridor in the vicinity of the proposed Project.

### 5.2.4 Aquatic Resources

Aquatic features within the BSA consist exclusively of those associated with the agricultural water conveyance systems and are comprised of several irrigation ditches and retention basins scattered across the BSA, totaling 9.89 ac. A formal delineation of the proposed Project has not been conducted and therefore acreages are preliminary. This information is summarized below in Table B and shown in Figure 5.

**Table B: Summary of Aquatic Resources in the BSA (ac)**

Type	Total
Ephemeral Drainage	7.70
Retention Basin	2.19
<b>Total</b>	<b>9.89</b>



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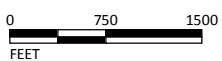


FIGURE 5

LSA

LEGEND

-  Biological Study Area - (1,934.74 ac)
-  Aquatic Features - (9.89 ac)



SOURCE: Basemap - ESRI World Imagery (07/2017); Mapping - LSA (11/2018)  
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Madera Village D Development Project  
 City of Madera, Madera County, California  
 LSA Project No. CMD1801

Aquatic Features within the Biological Study Area

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#### 5.2.4.1 Irrigation Ditches

There are three irrigation ditches within the BSA, which are part of the water conveyance system for the agricultural operations in the area. All three of these irrigation ditches have earthen banks with weedy vegetation growing throughout and measure approximately 15 feet wide at top of bank.

#### 5.2.4.2 Retention Basins

There are four retention basins in the BSA. The basins appear to be isolated aquatic features that are likely not connected to other waters within or adjacent to the BSA. Three of the basins are located along roads at the far corner of orchards, are rectangular in shape, and measure approximately 50 feet by 125 feet. The other basin in the BSA is square shaped, located in the middle of one of the orchard properties, and measures approximately 2 ac.

#### 5.2.5 Invasive Species

Many non-native plant species have been part of the California landscape for the past 150 years and are considered naturalized in the wild. Some examples of these introduced species observed during the survey include tumbleweed (*Amaranthus albus*), Shepherd's purse (*Capsella bursa-pastoris*), spotted spurge (*Euphorbia maculata*), cheeseweed mallow (*Malva parviflora*), annual blue grass (*Poa annua*), and common groundsel (*Senecio vulgaris*), among others. These species are primarily annual or biennial and are not considered invasive. Non-native plant species considered invasive by the California Invasive Plant Council are those, which threaten to dominate California's natural areas. Five invasive plant species of concern were observed in the BSA during surveys: black mustard (*Brassica nigra*), Bermuda grass (*Cynodon dactylon*), red-stemmed filaree (*Erodium cicutarium*), bur clover (*Medicago polymorpha*), and Russian thistle (*Salsola tragus*). These species have an invasive rating of 'Limited' or 'Moderate' per the California Invasive Plant Council Invasive Plant Inventory Online Database (<https://www.cal-ipc.org/plants/inventory/>).

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## 6.0 SPECIAL STATUS SPECIES AND SENSITIVE HABITATS

A review was conducted of the specific habitat required by each species identified by the special status species searches (see Appendix A for individual lists) and specific habitats and habitat conditions present in the BSA. Based on this evaluation, it was determined whether the special status species identified by the searches had potential to occur in the BSA. Special status species that were observed or determined to potentially occur in the BSA based on availability of suitable habitat of other factors such as scat, nests, dens, etc. are discussed more fully below. Species determined unlikely to occur in the BSA based on these same factors are not discussed any further.

A review was also conducted of sensitive habitats included on the lists in Appendix A to determine if these habitats could potentially occur in the BSA.

### 6.1 SPECIAL STATUS PLANT SPECIES

Fourteen special status plant species were returned by the record searches. Only one of these species (Madera leptosiphon [*Leptosiphon serrulatus*]) has a CNDDDB occurrence from within 5 miles of the BSA, and that occurrence is from the 19<sup>th</sup> Century, and likely misplaced as that species is not found below 900 feet in elevation. There is no suitable habitat in the BSA for any of these species. As a result, special status plant species are considered absent from the BSA.

The BSA is not located within critical habitat for any special status plant species.

### 6.2 SPECIAL STATUS WILDLIFE SPECIES

Species that require specific habitat not present in the BSA were eliminated as potentially occurring, and are not discussed further. Special status species that were determined to have the potential to occur in the BSA, or otherwise warrant further discussion, are discussed below.

The BSA is not located within critical habitat for any special status wildlife species.

#### 6.2.1 Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a State species of special concern, which ranges across western North America as far east as the Great Plains and Texas, with a separate subspecies residing in Florida. It occurs in warm valleys, open grasslands, deserts, and scrublands associated with agriculture and urban areas that support populations of California ground squirrels (*Otospermophilus beecheyi*). Burrowing owls nest below ground, utilizing abandoned burrows of other species, most commonly ground squirrel burrows, and feed on insects and small mammals.

While full visual coverage was not achieved during the windshield survey, areas visually inspected resulted in negative findings for burrowing owls or signs of burrowing owl presence (feathers, pellets, whitewash, etc.).

While some marginal foraging habitat for burrowing owl is present in the BSA (fallow field/barren), there were very few California ground squirrel burrows observed which would provide suitable nesting sites. Furthermore, the remaining areas not visually inspected for fossorial burrows are

predominantly managed orchards, which typically implement active deterrents for fossorial species that could damage crop yields. It is not expected that many burrows or prey base would be available for burrowing owls in these areas. Additionally none of the squirrel burrows in the fallow barren field exhibited signs of burrowing owl occupancy when examined during the field survey.

The nearest CNDDDB occurrence of burrowing owl is from an area near Merced Municipal Airport approximately 0.6 miles (mi) northeast of the BSA. Burrowing owls are migratory and despite the limited burrow habitat present in the BSA, this species could potentially move into the BSA prior to the start of construction.

Burrowing owl is considered to have a low potential to occur in the BSA.

### 6.2.2 Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a State threatened species which breeds as far north as Alaska and Arctic Canada, across the Great Basin, Rocky Mountains, and Great Plains, and in an isolated breeding population in California from Shasta County south through much of the Central Valley. They are long distance migrants, wintering primarily in South America, returning north to the Central Valley in mid-March to breed, and migrating south again in August and September. Nests are built in the tops of large trees, primarily those associated with riparian corridors, and isolated trees in savanna habitats and agricultural areas. Home ranges maintained by Swainson's hawks average about 6,800 ac, and they are known to forage up to 10 mi from their nest sites.

No Swainson's hawks were observed in the BSA during the survey. However, the survey took place in late October when most Swainson's hawks have left the region for the winter.

The almond orchards covering most of the BSA are not suitable nesting or foraging habitat for Swainson's hawks since this species prefers larger trees for nesting and more open grasslands or row crop agricultural fields for foraging. However, there are a few tall ornamental trees near the farmhouses within the BSA that are suitable for nesting, and the fields near the center of the BSA which had been cleared prior to the survey provide suitable foraging habitat for the species.

The nearest CNDDDB occurrence of Swainson's hawk is from near the intersection of Road 24 and Avenue 14 in Madera approximately 1 mi south of the BSA.

Swainson's hawk is considered to have a low potential to occur in the BSA.

### 6.2.3 Northern Harrier

Northern harrier (*Circus hudsonius*) is a State species of special concern. It ranges across most of North America, nesting in fresh marshes with dense stands of emergent vegetation, as well as on the ground in grasslands with a shrub component.

One northern harrier was observed foraging low over the edge of an almond orchard in the eastern portion of the BSA. While this confirms the presence of the species in the BSA, there is no suitable nesting habitat for the species in the BSA.



There are no CNDDDB occurrences of northern harrier in Madera County. The nearest CNDDDB occurrence of the species is from Merced County approximately 15 mi northwest of the BSA.

Northern harrier is confirmed to forage in the BSA, but is not likely to nest in the BSA.

#### **6.2.4 California Horned Lark**

California horned lark (*Eremophila alpestris actia*) is a State watch list species. Horned larks range nearly throughout North America (with the exception of Florida), residing in open grasslands, grassy hills, row crop fields and pastures. The California horned lark subspecies can be found from Humboldt County south through the Coast Range into Baja California, and in the San Joaquin Valley from Stockton to Bakersfield.

California horned larks were observed foraging in the cleared open fields near the center of the BSA during the survey.

The nearest CNDDDB occurrence of California horned lark is from near the town of Rolling Hills approximately 18 mi east southeast of the BSA.

California horned larks are confirmed to forage in the BSA, and may also nest in the BSA.

### **6.3 SENSITIVE HABITATS**

There are no habitats in the BSA that would be considered sensitive under CEQA.

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## 7.0 IMPACTS AND MITIGATION

This section provides a discussion of the potential impacts of the proposed Project to biological resources that are known to occur or may occur in the BSA. The determination of impacts is based on the biological resources present, or reasonably likely to be present, in the BSA as described herein.

### 7.1 SPECIAL STATUS SPECIES AND SENSITIVE HABITATS

#### 7.1.1 Special Status Plants

Based on the lack of natural habitat communities within the BSA, special status plant species are considered absent from the BSA. Therefore, the proposed Project would not result in impacts to special status plant species; no mitigation is proposed.

#### 7.1.2 Special Status Wildlife

The proposed Project could result in impacts to special status wildlife species which were observed in the BSA during the survey, or could potentially occur in the BSA, based on habitat suitability and/or known occurrences within the vicinity of the BSA.

##### 7.1.1.1 Burrowing Owl

#### Impact Evaluation

Though there is a low potential for burrowing owl to occur in the BSA, the proposed Project could directly affect burrowing owl if this species is present in the BSA when construction begins.

While the field near the center of the BSA, which has been cleared of orchard trees and was mapped as fallow field (barren) provides marginal foraging habitat for burrowing owl, it is considered to be in continued agricultural use. Therefore, no compensatory mitigation for Project affects is proposed for burrowing owl habitat.

#### Mitigation

The measures listed below are recommended to mitigate potential impacts to burrowing owl.

1. Preconstruction surveys for burrowing owl shall be conducted by a qualified biologist in accordance with CDFW's 2012 Staff Report on Burrowing Owl Mitigation.
2. If burrowing owls are identified during the preconstruction survey, passive exclusion shall be implemented per CDFW's 2012 Staff Report on Burrowing Owl Mitigation (including avoidance of occupied burrows during the breeding season).
3. Following construction, all areas temporarily impacted during project construction shall be restored to pre-construction contours (if necessary) and revegetated with native species as specified in Table C.

**Table C: Native Species Mix**

Scientific Name	Common Name	Rate (Lbs./Acre)	Minimum Percent Germination
<i>Artemisia douglasiana</i>	Mugwort	2.0	50
<i>Bromus carinatuscarinatus</i>	California brome	5.0	85
<i>Elymus trachycaulus</i>	Slender wheatgrass	2.0	60
<i>Elymus X triticum</i>	Regreen	10.0	80
<i>Eschscholzia californica</i>	California poppy	2.0	70
<i>Hordeum brachyantherum</i>	California barley	2.0	80
<i>Lupinus bicolor</i>	Bicolored lupine	4.0	80

#### 7.1.1.2 Swainson’s Hawk

##### Impact Evaluation

Though there is a low potential for Swainson’s hawk to nest in the BSA, the proposed Project could directly affect Swainson’s hawk if this species is nesting in the BSA when construction begins.

While the field near the center of the BSA, which has been cleared of orchard trees and was mapped as fallow field (barren) provides marginal foraging habitat for Swainson’s hawk, it is considered to be in continued agricultural use. Therefore, no compensatory mitigation for Project affects is proposed for Swainson’s hawk habitat.

##### Mitigation

The measures listed below are guided by *Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley* (SHTAC 2000) and are recommended to mitigate potential impacts to Swainson’s hawk.

1. If work begins between February 1 and August 31, an early season preconstruction survey for nesting Swainson’s hawks shall be conducted between January and March in the BSA and immediate vicinity (an approximately 0.25 mi radius) by a qualified biologist when tree foliage is relatively sparse and nests are easy to identify. A second preconstruction survey for nesting Swainson’s hawks shall be conducted in the BSA and immediate vicinity (an approximately 0.25 mi radius) by a qualified biologist no more than 14 days prior to initiation of earthmoving activities.
2. If nesting Swainson’s hawks are found within the survey area, a qualified biologist shall evaluate the potential for the project to disturb nesting activities. CDFW shall be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities. CDFW shall also be consulted to establish protection measures such as buffers.

3. Disturbance of active nests shall be avoided until it is determined by a qualified biologist that nesting is complete and the young have fledged, or that the nest has failed. If work is allowed to proceed, at a minimum, a qualified biologist shall be on-site during the start of construction activities during the nesting season to monitor nesting activity. The monitor shall have the authority to stop work if it is determined the project is adversely affecting nesting activities.
4. Following construction, all fill slopes, temporary impact and/or otherwise disturbed areas shall be restored to preconstruction contours (if necessary) and revegetated with the native seed mix specified in Table C.

### 7.1.1.3 Other Nesting Birds

#### Impact Evaluation

Two other special status bird species (northern harrier and California horned lark) were observed in the BSA during the survey. Several other bird species, which are not listed as special status species but are protected by the MBTA and CFGC, were observed in the BSA during the survey. The proposed Project could directly affect northern harrier, California horned lark, or other nesting birds if present in the BSA when construction begins.

While the BSA provides foraging habitat for northern harrier as well as foraging and marginal nesting habitat for California horned lark and several MBTA and CFGC protected bird species, it is considered to be in continued agricultural use. Therefore, no compensatory mitigation for Project affects is proposed for California horned lark or other nesting birds.

#### Mitigation

The measures listed below are recommended to mitigate potential impacts to nesting birds.

1. If work must begin during the nesting season (February 1 through August 31), a qualified biologist shall survey all suitable nesting habitat in the BSA for presence of nesting birds. This survey shall occur no more than 10 days prior to the start of construction. If no nesting activity is observed, work may proceed as planned. If an active nest is discovered, a qualified biologist shall evaluate the potential for the proposed project to disturb nesting activities. The evaluation criteria shall include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the BSA, the line of sight between the nest and the BSA, and the feasibility of establishing no-disturbance buffers.
2. If work is allowed to proceed, a qualified biologist shall be on-site weekly during construction activities to monitor nesting activity. The biologist shall have the authority to stop work if it is determined the project is adversely affecting nesting activities.

### 7.1.3 Sensitive Habitats

There are no sensitive habitats present in the BSA. The proposed Project would not result in impacts to sensitive habitats; therefore, no mitigation is proposed.

## **7.2 AQUATIC RESOURCES**

### **7.2.1 Impact Evaluation**

Aquatic features within the BSA consist exclusively of irrigation ditches and retention basins associated with the agricultural water conveyance systems in the proposed Project. Until a wetland delineation is performed, it is not known if any or all of these aquatic features would be considered wetland or non-wetland waters of the U.S. under the jurisdiction of the ACOE and/or waters of the State under the jurisdiction of the RWQCB.

### **7.2.2 Mitigation**

The measures listed below shall be implemented to mitigate impacts to aquatic resources.

1. A jurisdictional delineation shall be performed to determine if any or all of the aquatic features in the BSA should be considered jurisdictional by the ACOE. The jurisdictional delineation shall be submitted to ACOE for verification or concurrence.
2. If the results of the jurisdictional delineation determine that any of the aquatic features in the BSA are jurisdictional waters, and the proposed Project would result in permanent or temporary impacts to jurisdictional waters, the project proponent shall obtain any necessary regulatory permits prior to the start of ground disturbing activities.
3. If the project would result in the loss of wetlands and/or non-wetland waters, mitigation shall be accomplished via purchasing credits at an approved mitigation bank, payment of in-lieu fees, or a combination of these methods. Mitigation ratios shall be at least 1:1.

## **7.3 INVASIVE SPECIES**

### **7.3.1 Impact Evaluation**

The proposed Project could introduce or spread invasive species potentially present in the BSA to off-site locations.

### **7.3.2 Mitigation**

The measures listed below shall be implemented to mitigate impacts from invasive species.

1. To avoid spreading any non-native invasive species already existing on-site, to off-site areas, all equipment shall be thoroughly cleaned before leaving the site.

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## **8.0 REGULATORY DETERMINATIONS**

### **8.1 FEDERAL ENDANGERED SPECIES ACT**

The BSA does not support suitable habitat for any federally listed species; as a result, federally listed species are considered absent from the BSA and would not be affected by project implementation.

Therefore, take authorization pursuant to the FESA would not be required.

### **8.2 CALIFORNIA ENDANGERED SPECIES ACT**

There is a low potential for the State listed as threatened Swainson's hawk to occur in the BSA. However, with implementation of avoidance and minimization measures outlined in Section 7 of this document, the proposed Project is not expected to result in take of any species listed under CESA.

### **8.3 SECTION 401 AND 404 OF THE CLEAN WATER ACT CONSULTATION SUMMARY**

Until a wetland delineation is performed, it is not known if any or all of the aquatic features in the BSA would be considered wetland or non-wetland Waters of the U.S., under the jurisdiction of the ACOE and/or Waters of the State under the jurisdiction of the RWQCB. Therefore, it is not known if the proposed Project will require a Nationwide Permit under Section 404 or a Water Quality Certification under Section 401 of the Clean Water Act.

### **8.4 SECTION 1602 OF THE CALIFORNIA FISH AND GAME CODE**

No riparian resources are present in the BSA. Therefore, the proposed Project would not require a Section 1602 Streambed Alteration Agreement.

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## 9.0 REFERENCES

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- United States Fish and Wildlife Service (USFWS). 2018. Information for Planning and Consultation (IPaC) resource list. Website: <https://ecos.fws.gov/ipac/> [accessed 26 October 2018].
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## **APPENDIX A**

### **CNDDDB, USFWS, & CNPS LISTS**

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**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



**Query Criteria:** Quad IS (Berenda (3712012) OR Kismet (3712011) OR Madera (3612081) OR Bonita Ranch (3612082))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Ambystoma californiense</i></b> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
<b><i>Athene cunicularia</i></b> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<b><i>Atriplex cordulata var. cordulata</i></b> heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
<b><i>Atriplex minuscula</i></b> lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
<b><i>Atriplex persistens</i></b> vernal pool smallscale	PDCHE042P0	None	None	G2	S2	1B.2
<b><i>Atriplex subtilis</i></b> subtle orache	PDCHE042T0	None	None	G1	S1	1B.2
<b><i>Branchinecta lynchi</i></b> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<b><i>Branchinecta mesovallensis</i></b> midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
<b><i>Buteo swainsoni</i></b> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<b><i>Castilleja campestris var. succulenta</i></b> succulent owl's-clover	PDSCR0D3Z1	Threatened	Endangered	G4?T2T3	S2S3	1B.2
<b><i>Delphinium recurvatum</i></b> recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
<b><i>Dipodomys nitratooides exilis</i></b> Fresno kangaroo rat	AMAFD03151	Endangered	Endangered	G3TH	SH	
<b><i>Eryngium spinosepalum</i></b> spiny-sepaled button-celery	PDAP10Z0Y0	None	None	G2	S2	1B.2
<b><i>Gambelia sila</i></b> blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	G1	S1	FP
<b><i>Lasiurus cinereus</i></b> hoary bat	AMACC05030	None	None	G5	S4	
<b><i>Leptosiphon serrulatus</i></b> Madera leptosiphon	PDPLM09130	None	None	G3	S3	1B.2
<b><i>Linderiella occidentalis</i></b> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<b><i>Lytta moesta</i></b> moestan blister beetle	IICOL4C020	None	None	G2	S2	
<b><i>Lytta molesta</i></b> molestan blister beetle	IICOL4C030	None	None	G2	S2	



Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Navarretia nigelliformis ssp. radians</i></b> shining navarretia	PDPLM0C0J2	None	None	G4T2	S2	1B.2
<b>Northern Hardpan Vernal Pool</b> Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
<b><i>Orcuttia inaequalis</i></b> San Joaquin Valley Orcutt grass	PMPOA4G060	Threatened	Endangered	G1	S1	1B.1
<b><i>Orcuttia pilosa</i></b> hairy Orcutt grass	PMPOA4G040	Endangered	Endangered	G1	S1	1B.1
<b><i>Phrynosoma blainvillii</i></b> coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
<b><i>Puccinellia simplex</i></b> California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
<b><i>Spea hammondi</i></b> western spadefoot	AAABF02020	None	None	G3	S3	SSC
<b><i>Tuctoria greenei</i></b> Greene's tuctoria	PMPOA6N010	Endangered	Rare	G1	S1	1B.1
<b>Valley Sacaton Grassland</b> Valley Sacaton Grassland	CTT42120CA	None	None	G1	S1.1	

Record Count: 28

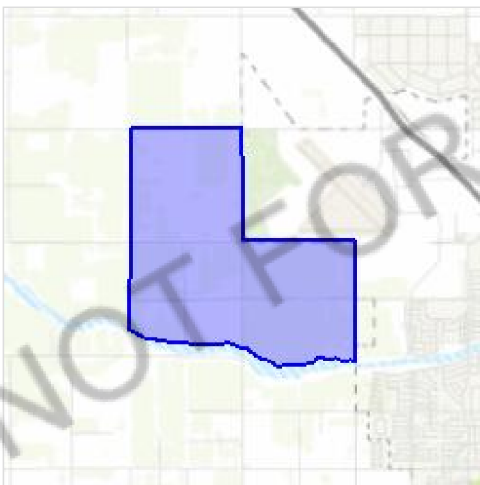
# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Madera County, California



## Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Mammals

NAME

STATUS



Fresno Kangaroo Rat *Dipodomys nitratoides exilis* Endangered  
 There is **final** critical habitat for this species. Your location is outside the critical habitat.  
<https://ecos.fws.gov/ecp/species/5150>

San Joaquin Kit Fox *Vulpes macrotis mutica* Endangered  
 No critical habitat has been designated for this species.  
<https://ecos.fws.gov/ecp/species/2873>

## Reptiles

NAME	STATUS
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Blunt-nosed Leopard Lizard <i>Gambelia silus</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/625">https://ecos.fws.gov/ecp/species/625</a>	Endangered
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Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4482">https://ecos.fws.gov/ecp/species/4482</a>	Threatened
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## Amphibians

NAME	STATUS
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California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened
--	------------

California Tiger Salamander <i>Ambystoma californiense</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2076">https://ecos.fws.gov/ecp/species/2076</a>	Threatened
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## Fishes

NAME	STATUS
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Delta Smelt <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened
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## Crustaceans

NAME	STATUS
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Vernal Pool Fairy Shrimp *Branchinecta lynchi*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/498>

## Flowering Plants

NAME

STATUS

Hairy Orcutt Grass *Orcuttia pilosa*

Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/2262>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ

[below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
<p><b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i>            This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.  <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a></p>	Breeds Jan 1 to Aug 31
<p><b>Long-billed Curlew</b> <i>Numenius americanus</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/5511">https://ecos.fws.gov/ecp/species/5511</a></p>	Breeds elsewhere
<p><b>Marbled Godwit</b> <i>Limosa fedoa</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a></p>	Breeds elsewhere
<p><b>Nuttall's Woodpecker</b> <i>Picoides nuttallii</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/9410">https://ecos.fws.gov/ecp/species/9410</a></p>	Breeds Apr 1 to Jul 20

<p>Oak Titmouse <i>Baeolophus inornatus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a></p>	Breeds Mar 15 to Jul 15
<p>Rufous Hummingbird <i>selasphorus rufus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/8002">https://ecos.fws.gov/ecp/species/8002</a></p>	Breeds elsewhere
<p>Short-billed Dowitcher <i>Limnodromus griseus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a></p>	Breeds elsewhere
<p>Song Sparrow <i>Melospiza melodia</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Feb 20 to Sep 5
<p>Whimbrel <i>Numenius phaeopus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9483">https://ecos.fws.gov/ecp/species/9483</a></p>	Breeds elsewhere
<p>Willet <i>Tringa semipalmata</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p>Yellow-billed Magpie <i>Pica nuttalli</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9726">https://ecos.fws.gov/ecp/species/9726</a></p>	Breeds Apr 1 to Jul 31

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season (■)**

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort (|)**

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

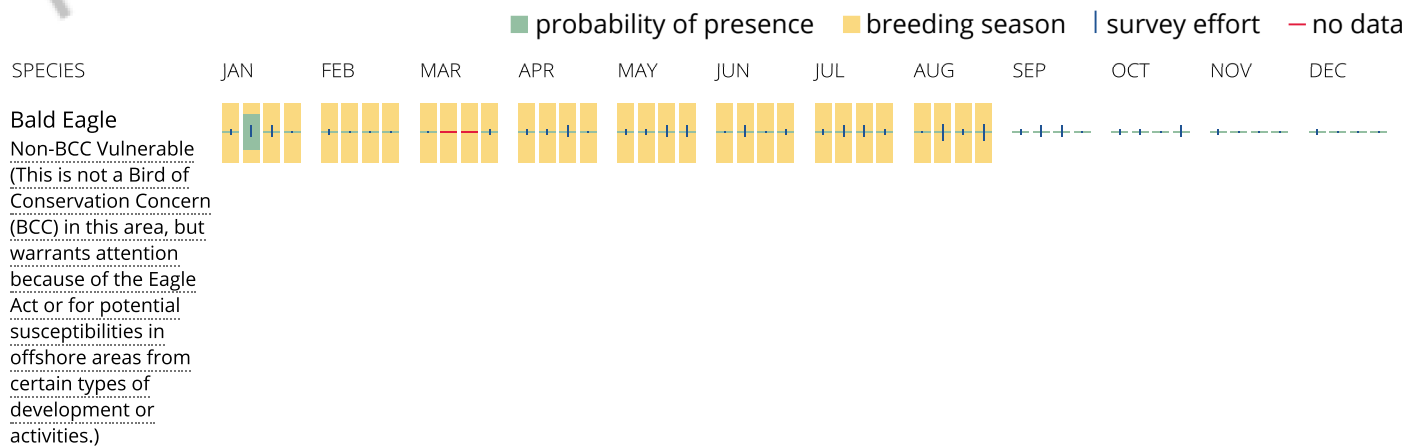
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data (—)**

A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Long-billed Curlew  
 BCC Rangewide (CON)  
 (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Marbled Godwit  
 BCC Rangewide (CON)  
 (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Nuttall's Woodpecker  
 BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Oak Titmouse  
 BCC Rangewide (CON)  
 (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Rufous Hummingbird  
 BCC Rangewide (CON)  
 (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



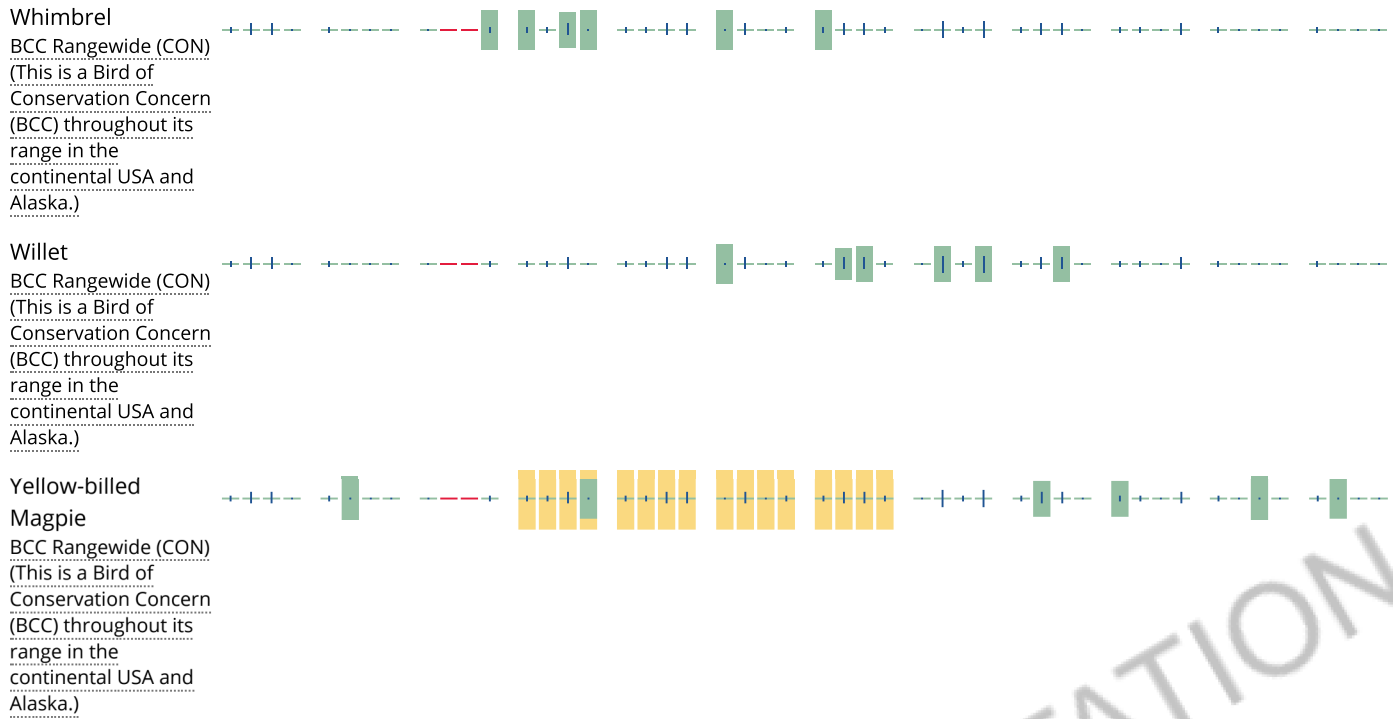
Short-billed Dowitcher  
 BCC Rangewide (CON)  
 (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Song Sparrow  
 BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



NOT FOR CONSULTATION



**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look



carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

### Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

### Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER POND

[PUBFx](#)

RIVERINE

[R4SBJ](#)[R5UBFx](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

#### **Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

## Plant List

### Inventory of Rare and Endangered Plants

13 matches found. *Click on scientific name for details*

#### Search Criteria

Found in Quads 3612081, 3712012 3612082 and 3712011;

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Atriplex cordulata var. cordulata</a>	heartscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G3T2
<a href="#">Atriplex minuscula</a>	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	1B.1	S2	G2
<a href="#">Atriplex persistens</a>	vernal pool smallscale	Chenopodiaceae	annual herb	Jun, Aug, Sep, Oct	1B.2	S2	G2
<a href="#">Atriplex subtilis</a>	subtle orache	Chenopodiaceae	annual herb	Jun, Aug, Sep (Oct)	1B.2	S1	G1
<a href="#">Castilleja campestris var. succulenta</a>	succulent owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	(Mar)Apr-May	1B.2	S2S3	G4? T2T3
<a href="#">Delphinium hansenii ssp. ewanianum</a>	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	4.2	S3	G4T3
<a href="#">Delphinium recurvatum</a>	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
<a href="#">Leptosiphon serrulatus</a>	Madera leptosiphon	Polemoniaceae	annual herb	Apr-May	1B.2	S3	G3
<a href="#">Navarretia nigelliformis ssp. radians</a>	shining navarretia	Polemoniaceae	annual herb	(Mar)Apr-Jul	1B.2	S2	G4T2
<a href="#">Orcuttia inaequalis</a>	San Joaquin Valley Orcutt grass	Poaceae	annual herb	Apr-Sep	1B.1	S1	G1
<a href="#">Orcuttia pilosa</a>	hairy Orcutt grass	Poaceae	annual herb	May-Sep	1B.1	S1	G1
<a href="#">Puccinellia simplex</a>	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3
<a href="#">Tuctoria greenei</a>	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	1B.1	S1	G1

#### Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 26 October 2018].

#### Search the Inventory

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#### Information

[About the Inventory](#)  
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#### Contributors

[The Calflora Database](#)  
[The California Lichen Society](#)  
[California Natural Diversity Database](#)  
[The Jepson Flora Project](#)  
[The Consortium of California Herbaria](#)  
[CalPhotos](#)

#### Questions and Comments



**APPENDIX B**

**PLANT AND WILDLIFE SPECIES OBSERVED IN THE BIOLOGICAL  
STUDY AREA**

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## Madera Village D Species List – 10/30/18

### PLANTS

Tumbleweed (*Amaranthus albus*)  
Black mustard (*Brassica nigra*) INVASIVE: moderate  
Shepherd's purse (*Capsella bursa-pastoris*)  
Turkey-mullein (*Croton setiger*)  
Bermuda grass (*Cynodon dactylon*) INVASIVE: moderate  
Jimsonweed (*Datura wrightii*)  
Canada horseweed (*Erigeron canadensis*)  
Red-stemmed filaree (*Erodium cicutarium*) INVASIVE: limited  
Spotted spurge (*Euphorbia maculata*)  
Sprangletop (*Leptochloa fusca*)  
Cheeseweed mallow (*Malva parviflora*)  
Bur clover (*Medicago polymorpha*) INVASIVE: limited  
Annual blue grass (*Poa annua*)  
Domestic almond (*Prunus dulcis*)  
Russian thistle (*Salsola tragus*) INVASIVE: limited  
Common groundsel (*Senecio vulgaris*)  
Common sow thistle (*Sonchus oleraceus*)  
Chickweed (*Stellaria media*)  
Cultivated grape (*Vitis vinifera*)

### BIRDS

Turkey vulture (*Cathartes aura*) flyover  
**Northern harrier** (*Circus cyaneus*) one foraging over orchard S of Ave 16, E of Rd 23  
Red-tailed hawk (*Buteo jamaicensis*)  
American kestrel (*Falco sparverius*)  
Killdeer (*Charadrius vociferus*)  
Rock pigeon (*Columba livia*)  
Eurasian collared-dove (*Streptopelia decaocto*)  
Mourning dove (*Zenaida macroura*)  
Northern flicker (*Colaptes auratus*)  
**Nuttall's woodpecker** (*Dryobates nuttallii*) trees near residence S of Ave 16, E of Rd 22½  
Black phoebe (*Sayornis nigricans*)  
Say's phoebe (*Sayornis saya*)  
California scrub- jay (*Aphelocoma californica*)

Common raven (*Corvus corax*)  
American crow (*Corvus brachyrhynchos*)  
**Horned lark** (*Eremophila alpestris*) fallow fields S of Ave 16, W of Rd 23  
Ruby-crowned kinglet (*Regulus calendula*)  
Mountain bluebird (*Sialia currucoides*)  
American robin (*Turdus migratorius*)  
Northern mockingbird (*Mimus polyglottos*)  
European starling (*Sturnus vulgaris*)  
American pipit (*Anthus rubescens*)  
Cedar waxwing (*Bombycilla cedrorum*)  
Yellow-rumped warbler (*Setophaga coronata*)  
Savannah sparrow (*Passerculus sandwichensis*)  
White-crowned sparrow (*Zonotrichia leucophrys*)  
Brewer's blackbird (*Euphagus cyanocephalus*)  
Red-winged blackbird (*Agelaius phoeniceus*)  
Western meadowlark (*Sturnella neglecta*)  
House finch (*Haemorhous mexicanus*)  
American goldfinch (*Spinus tristis*)  
House sparrow (*Passer domesticus*)

## **MAMMALS**

California ground squirrel (*Otospermophilus beecheyi*)