# APPENDIX C – BIOLOGICAL RESOURCES


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Denise Duffy & Associates. *Protocol California Tiger Salamander Survey Results for the Ferrini Ranch Development Area*. September 2008.

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# Biological Assessment

## FERRINI PROPERTY, MONTEREY COUNTY CALIFORNIA

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# 1.0 INTRODUCTION

In October 2006, WRA, Inc. performed an assessment of biological resources for the 895-acre Ferrini Property (Project Area) outside the City of Salinas, Monterey County, California (Figure 1). The purpose of the assessment was to gather information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA) for the Ferrini Property. The Project Area is located south of the town of Salinas to the east of Highway 68, or Monterey Road. This report describes the results of the site visit, which assessed the Project Area for the (1) presence of special status species; (2) potential to support special status species; and (3) presence of other sensitive biological resources protected by local, state, and federal laws and regulations.

A biological assessment provides general information on the potential presence of sensitive species and habitats. The biological assessment is not an official protocol level survey for listed species that may be required for project approval by local, state, or federal agencies. However, specific findings on the occurrence of any species or the presence of sensitive habitats may require that protocol surveys be conducted. This assessment is based on information available at the time of the study and on site conditions that were observed on the date of the site visit.

# 2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that were applied to the field investigations.

## 2.1 Special Status Species

Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These Acts afford protection to both listed and proposed species. In addition, California Department of Fish and Game (CDFG) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, sensitive species included in USFWS Recovery Plans, and CDFG special status invertebrates are all considered special status species. Although CDFG Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal. Plant species on California Native Plant Society (CNPS) Lists 1 and 2 are also considered special status plant species. Impacts to these species are considered significant according to CEQA. CNPS List 3 plants have little or no protection under CEQA, but are included in this analysis for completeness.

<u>Critical Habitat</u>

Critical habitat is a term defined and used in the Federal Endangered Species Act as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The FESA

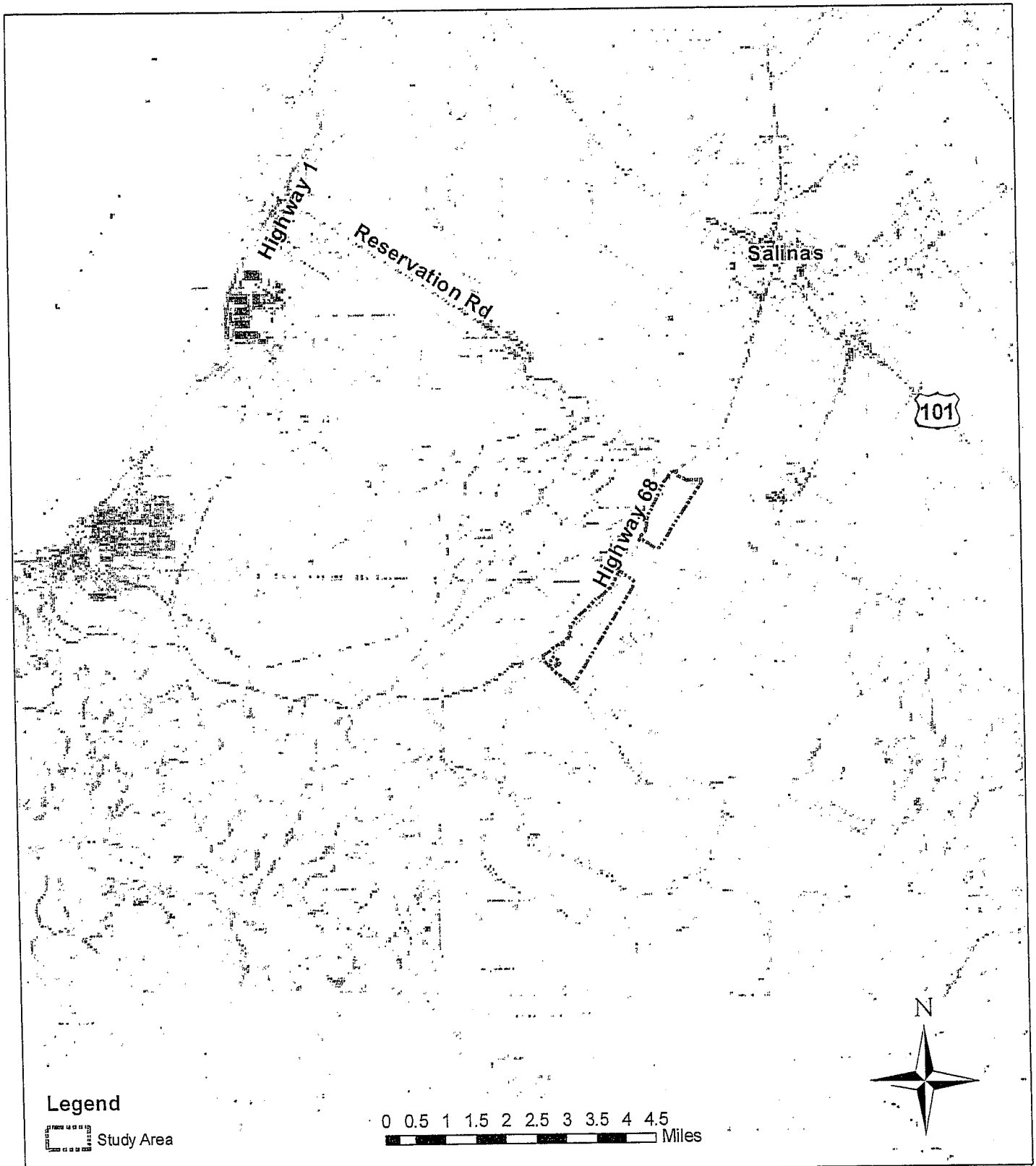


Figure 1. Location Map

Ferrini Property
Monterey County, California

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Date: October 2006
Basemap: USGS Topo Quad
Map By: Sundaran Gillespie
Filepath: I:\ACAD2000\16138\GIS\ArcMap\CNDDB_Wildlife.mxd

requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the FESA "jeopardy standard." However, areas that are currently unoccupied by the species but which are needed for the species' recovery, are protected by the prohibition against adverse modification of critical habitat.

## 2.2 Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, and riparian habitat. These habitats are regulated under federal regulations (such as the Clean Water Act), state regulations (such as the Porter-Cologne Act, the CDFG Streambed Alteration Program, and CEQA), or local ordinances or policies (City or County Tree Ordinances, Special Habitat Management Areas, and General Plan Elements).

### Waters of the United States

The U.S. Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act. "Waters of the U.S." are defined broadly as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands stated in the *Corps of Engineers Wetlands Delineation Manual* (1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated for sufficient duration and depth to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water line (OHW). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into "Waters of the U.S." (including wetlands) generally requires an individual or nationwide permit from the Corps under Section 404 of the Clean Water Act.

### Waters of the State

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope, but has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters that may not be regulated by the Corps under Section 404. "Waters of the State" are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact "Waters of the State," are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to "Waters of the State," the RWQCB has the option to regulate the dredge and fill activities under its state authority in the

form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

Streams, Lakes, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFG under Sections 1600-1616 of the State Fish and Game Code. Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term stream, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG ESD 1994). Riparian is defined as, "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG ESD 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFG.

Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game (CDFG). CDFG ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its Natural Diversity Database. Sensitive plant communities are also identified by CDFG on their *List of California Natural Communities Recognized by the CNDDB*. Impacts to sensitive natural communities identified in local or regional plans, policies, regulations or by the CDFG or USFWS must be considered and evaluated under CEQA (California Code of Regulations: Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in City or County General Plans or ordinances.

Oaks and Other Protected Trees

Pursuant to Monterey County Zoning Ordinance - Title 21, under Section 21.64.260 Preservation of Oak and Other Protected Trees, a permit is required for removal of oak trees that are six inches or more in diameter at two feet above ground in areas designated as Agricultural. The applicant would be required to relocate or replace each removed protected tree at a one-to-one ratio. However, removal of oak trees shall be allowed without a permit only if the following purposes and standards are satisfied:

1. Rangeland improvement;
2. Promotion of wildlife habitat;
3. Enhancement of watershed area;
4. Elimination of trees hazardous to life or property; or
5. Firewood for the use of the owners and other persons residing on site.

## 3.0 METHODS

In October 2006, the Project Area was traversed on foot to determine (1) plant communities present within the Project Area, (2) if existing conditions provided suitable habitat for any special status plant or wildlife species, and (3) if sensitive habitats are present. All plant and wildlife species encountered were recorded, and are summarized in Appendix A.

### 3.1 Biological Communities

Prior to the site visit, the Soil Survey of Monterey County, California [U.S. Department of Agriculture (USDA) 1978] was examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the Project Area. Biological communities present in the Project Area were classified based on existing plant community descriptions described in the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). However, in some cases it was necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities present in the Project Area were previously mapped in a letter report prepared by Denise Duffy and Associates, Inc. (2006). Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

#### *3.1.1 Non-sensitive Biological Communities*

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other state, federal, and local laws, regulations and ordinances. These communities may, however, provide suitable habitat for some special status plant or wildlife species and are identified or described in Section 4.2 below.

#### *3.1.2 Sensitive Biological Communities*

Sensitive biological communities are defined as those communities that are given special protection under CEQA and other applicable federal, state, and local laws, regulations and ordinances. Applicable laws and ordinances are discussed above in Section 2.0. Special methods used to identify sensitive biological communities are discussed below.

<u>Wetlands and Waters</u>

On October 17-19, 2006, a jurisdictional wetland delineation was performed in the Project Area to determine if any wetlands and "waters" potentially subject to jurisdiction by the Corps, RWQCB, or CDFG were present. The delineation was based on methods contained in the Corps Manual (Environmental Laboratory, 1987). The Project Area was evaluated for the presence of wetland indicators including dominance by hydrophytic plant species, presence of hydric soils, and presence of wetland hydrology. A complete description of methods used and results obtained during the delineation can be found in *Preliminary Determination of Wetlands and Waters of the U.S. for the Ferrini Property* (WRA, 2006). Potential wetland and waters in the Project Area are included in the descriptions of sensitive biological communities in Section 4.1.2 below.

Other Sensitive Biological Communities

The Project Area was evaluated for the presence of other sensitive biological communities, including riparian areas, sensitive plant communities recognized by CDFG, and protected trees under Monterey County Zoning Ordinance - Title 21, under Section 21.64.260. If present in the Project Area, these sensitive biological communities are described in Section 4.1.2 below.

## 3.2 Special Status Species

### *3.2.1 Literature Review*

Potential occurrence of special status species in the Project Area was evaluated by first determining which special status species occur in the vicinity of the Project Area through a literature and database search. Database searches for known occurrences of special status species focused on the Spreckels 7.5 minute USGS quadrangle and the eight surrounding USGS quadrangles. The following sources were reviewed to determine which special status plant and wildlife species have been documented to occur in the vicinity of the Project Area:

- California Natural Diversity Database records (CNDDB) (CDFG 2006)
- USFWS quadrangle species lists (USFWS 2006)
- CNPS Electronic Inventory records (CNPS 2006)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication "Amphibians and Reptile Species of Special Concern in California" (Jennings 1994)
- A Field Guide to Western Reptiles and Amphibians (Stebbins, R.C. 2003)
- Fairy Shrimps of California's Puddles, Pools and Playas (Eriksen and Belk 1999)
- University of California at Davis Information Center for the Environment Distribution Maps for Fishes in California (2006)
- National Marine Fisheries Service Distribution Maps for California Salmonid Species (2006)

### *3.2.2 Site Assessment*

A site visit was made to the Project Area to search for suitable habitats for species identified in the literature review as occurring in the vicinity. The potential for each special status species to occur in the Project Area was then evaluated according to the following criteria:

1) No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

2) Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

3) Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

4) High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

5) Present. Species is observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

The site assessment is intended to identify the presence or absence of suitable habitat for each special status species known to occur in the vicinity in order to determine its potential to occur in the Project Area. The site visit does not constitute a protocol-level survey and is not intended to determine the actual presence or absence of a species; however, if a special status species is observed during the site visit, its presence will be recorded and discussed. Appendix B presents the evaluation of potential for occurrence of each special status plant and wildlife species known to occur in the vicinity of the Project Area with their habitat requirements, potential for occurrence, and rationale for the classification based on criteria listed above.

## 4.0 RESULTS

The Project Area is located to the east of Highway 68, in between the Cities of Salinas and Monterey. The site is approximately 895 acres and is bisected into a north and south area by Toro Regional Park. Both areas are historically and currently grazed by livestock. The majority of the site is characterized by oak woodland and annual grassland with some areas of scrub present in upper slopes of drainages and south facing slopes. Many of the species detected or expected to occur in the Project Area are typically associated with these habitats. The following sections present the results and discussion of the biological assessment within the Project Area.

### 4.1 Biological Communities

Non-sensitive biological communities in the Project Area include annual grassland and coastal scrub. Three sensitive biological communities are found in the Project Area; coast live oak woodland / savanna, riparian, and wetlands. Acreages and descriptions of each vegetation type were derived from a previous vegetation map of the Project Area (Duffy, 2006) and observations during the October site visits by WRA. Descriptions for each biological community are contained in the following sections.

Table 1. Biological Communities within the Project Area.

| Community Type | Area (acres) |
|---|---|
| Coast live oak woodland / savanna | 436 |
| Annual grassland | 400 |
| Coastal scrub | 40 |
| Riparian | 14 |
| Wetlands and waters | 4.96 3.46 |
| **Total Study Area Size** | **895** |

*4.1.1 Non-sensitive biological communities*

Annual Grassland

Annual grassland typically occurs in open areas of valleys and foothills throughout California, usually on fine textured clay or loam soils that are somewhat poorly drained (Holland 1986). Annual grassland is typically dominated by non-native annual grasses and forbs along with scattered native grasses and wildflowers. The Project Area is contains approximately 400 acres of annual grassland. Plant species observed in this area included wild oat (*Avena sativa*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian rye-grass (*Lolium multiflorum*), and rattail fescue (*Vulpia myuros*). Present at very low percent cover are native perennial grasses including needlegrass (*Nasella* sp.). Annual grassland in the Project Area has a long history of intensive disturbance from farming and grazing, and grazing still occurs today.

Coastal Scrub

Approximately 40 acres of coastal scrub were observed in the Project Area. Coastal scrub communities are characterized by moderate to low-growing evergreen and drought-tolerant shrubs adapted to shallow soils. In the Project Area, this community type is dominated by California black sage (*Salvia melifera*) or coyote brush (*Baccharis pilularis*). Sub-dominant species include sticky monkey flower (*Mimulus aurantiacus*) and California sagebrush (*Artemisia californica*). This community occurs mostly on drier, steep south-facing slopes.

*4.1.2 Sensitive Biological Communities*

Coast Live Oak Woodland / Savanna

Approximately 436 acres of coast live oak woodland and savanna are present in the Project Area. Oak woodland communities in the Project Area are dominated by open to nearly closed canopies of coast live oak (*Quercus agrifolia*) with grass or shrub under stories. Savannas are transitional between woodlands and grassland with trees more widely spaced and a grassland dominated understory. In the Project Area the denser oak woodlands are found on the more mesic, north-facing slopes and canyon bottoms. The densest oak woodlands have an understory dominated by oak leaf duff and sparse herbaceous vegetation. The oak savannas are found on the drier, east-facing slopes and ridge tops.

Although not classified as a sensitive community under CEQA, individual trees within the Project Area may be protected under provisions of the Monterey County Zoning Ordinance. Two oak species present in the Project Area (valley and coast live oaks) may be considered protected trees under the zoning ordinance.

Riparian Habitat

Approximately 14 acres of riparian habitat are present in the Project Area. A riparian corridor exists within the northwest corner of the project site adjacent to San Benancio Road at the confluence of El Toro and Harper Creeks. The riparian habitat in this area is dominated by riparian tree species such as California buckeye (*Aesculus californica*) and willow (*Salix* spp.). Dominant understory species include California blackberry (*Rubus ursinus*), mugwort (*Artemisia douglasiana*), and poison oak (*Toxicodendron diversilobum*). Additional riparian features exist

along a number of the ephemeral drainages going across the Project Area from south to north. These features are marginal and support a fringe of mostly buckeye trees lacking a significant riparian species understory in most cases.

Wetlands and Waters

Approximately 3.46 acres of wetlands are present in the Project Area (WRA, 2006). Wetlands in the Project Area consist of seasonal wetlands and seep wetlands. Seasonal wetlands are situated within depressions or flat areas that are inundated for a duration sufficient to sustain a community of wetland-adapted plant species and induce hydric soil conditions, although the water source is ephemeral. In the Project Area, seasonal wetlands generally occur in depressions and flat areas at the mouths of ephemeral drainages. Seep wetlands occur on foot slope and toe slopes in the Project Area where groundwater intersects the soil surface. Seep wetlands in the Project area range from ephemeral to perennial with some seeps showing soil saturation during the October site visit. All wetlands in the Project Area were dominated by wetland adapted plant species including various rushes particularly iris-leaved rush (*Juncus xiphioides*) and Mexican rush (*Juncus mexicanus*), cut-leaf plantain (*Plantago coronopus*), bermudagrass (*Cynodon dactylon*), and Hyssop's loosestrife (*Lythrum hyssopifolia*).

Approximately 15,386 linear feet (0.82 acres) of ephemeral drainages are present in the Project Area. Ephemeral drainages occur in swales where water flow is restricted to peak rainfall events, and has created a defined drainage channel with a clearly defined ordinary high water mark. Ephemeral drainages occur throughout the Project Area generally flowing from east to west.

Approximately 2,230 linear feet (0.181 acres) of perennial waters occur at the confluence of El Toro Creek and Harper Creek in the most south-western portion of the Project Area. This portion of El Toro Creek is perennial in all but the driest of years. As a result, a riparian corridor can be found in this area of the Project Area. No other perennial or permanent hydrologic feature can be found on the Project Area, however there are two stock ponds. The stock ponds were created by installing a berm in an existing drainage to impound water for livestock. The larger stock pond is located directly adjacent to Toro Regional Park adjacent to Highway 68. It is likely that this pond has sufficient hydrology to support amphibian breeding. Another significant wetland feature is a pond in the easternmost portion of the Project Area on a mesa overlooking Highway 68 and River Road. This pool appears to be a natural depression with no significant inlet or outfall that is filled in the wet season as a result of sheet flow.

## 4.2 Special Status Species

### *4.2.1 Plants*

Based upon a review of the resources and databases given in Section 2.3.1, 38 special status plant species have been documented in the vicinity of the Project Area. A map of CNDDB plant occurrences in the vicinity of the Project Area is presented in Figure 2. The Project Area has a moderate potential to support 26 of these species. Appendix B summarizes the potential for occurrence and specific habitat requirements for each special status plant species in the vicinity of the Project Area. The remaining species documented to occur in the vicinity of the Project Area are unlikely to occur based on the site's lack of specific habitat requirements for the species. No special status plant species were observed in the Project Area during the assessment site visits.

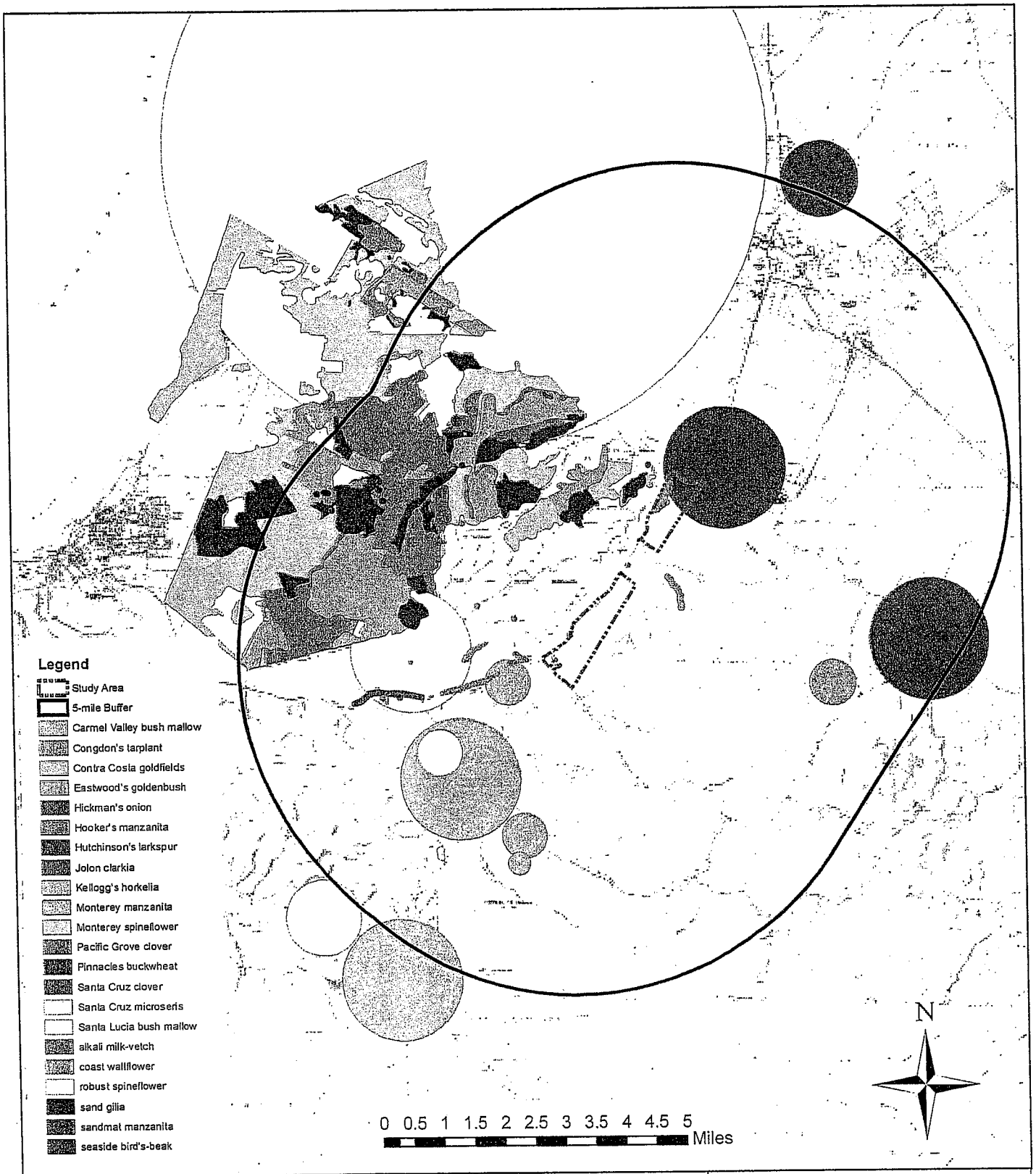


Figure 2. Special Status Plant Species within 5 miles of Project Area.

Ferrini Property
Monterey County, California

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Date: October 2006
Basemap: USGS Topo Quad
Map By: Sundaran Gillespie
Filepath: I:\ACAD2000\16138\GIS\ArcMap\CNDDB_Plant.mxd

*4.2.2 Wildlife*

Seventy-five special status species of wildlife have been recorded in the vicinity of the Project Area. Appendix B summarizes the potential for each of these species to occur in the Project Area. Figure 3 identifies special status wildlife species located within 5 miles of the Project Area. Thirty special status wildlife species have a high or moderate potential to occur in the Project Area. Special status wildlife species that were observed, or have a moderate or high potential to occur in the Project Area are discussed below.

Invertebrates

**Smith's blue butterfly (*Euphilotes enoptes smithi*), Federal Endangered.** This species is most commonly associated with coastal dunes and coastal sage scrub plant communities. The host plants, *Eriogonum latifolium* and *Eriogonum parviflorum*, are utilized as both larval and adult food plants. *Eriogonum latifolium* has been detected in the Project Area.

Herpetofauna

**California tiger salamander (*Ambystoma californiense*), Federal Threatened, CDFG Species of Concern.** The California tiger salamander is restricted to grasslands and low-elevation foothill regions in California (generally under 1500 feet) where it uses seasonal aquatic habitats for breeding. The salamanders breed in natural ephemeral pools, or ponds that mimic ephemeral pools (stock ponds that go dry), and occupy substantial areas surrounding the breeding pool as adults. California tiger salamanders spend most of their time in the grasslands surrounding breeding pools. They survive hot, dry summers by estivating (going through a dormant period) in refugia (such as burrows created by ground squirrels and other mammals and deep cracks or holes in the ground) where the soil atmosphere remains near the water saturation point. During wet periods, the salamanders may emerge from refugia and feed in the surrounding grasslands. Suitable upland and aquatic habitat exists in the Project Area.

**Coast Range newt (*Taricha torosa torosa*), CDFG Species of Concern.** This amphibian lives in terrestrial habitats and will migrate over 1 kilometer to breed in ponds, reservoirs and slow moving streams. This species is listed as a state species of concern from Monterey County south. The seasonal aquatic features in the Project Area most likely provide suitable breeding habitat.

**Western Spadefoot Toad (*Spea hammondii*), CDFG Species of Special Concern.** The western spadefoot toad ranges throughout the Central Valley and adjacent foothills and can be quite common where it occurs. Western spadefoot toads spend most of the year in underground burrows they construct themselves. Breeding and egg laying occurs in shallow, temporary pools formed by heavy winter rains. Grasslands with shallow temporary pools are optimal habitat for this species. The seasonal aquatic features in the Project Area may provide suitable breeding habitat.

**California horned lizard (*Phrynosoma coronatum frontale*), CDFG Species of Special Concern.** The California horned lizard seems to occur in several habitat types, ranging from areas with an exposed sandy-gravelly substrate containing scattered shrubs, to clearings in riparian woodlands, to dry uniform chamise chaparral to annual grassland (Jennings and Hayes 1994). Suitable habitat for this species is available in the Project Area.

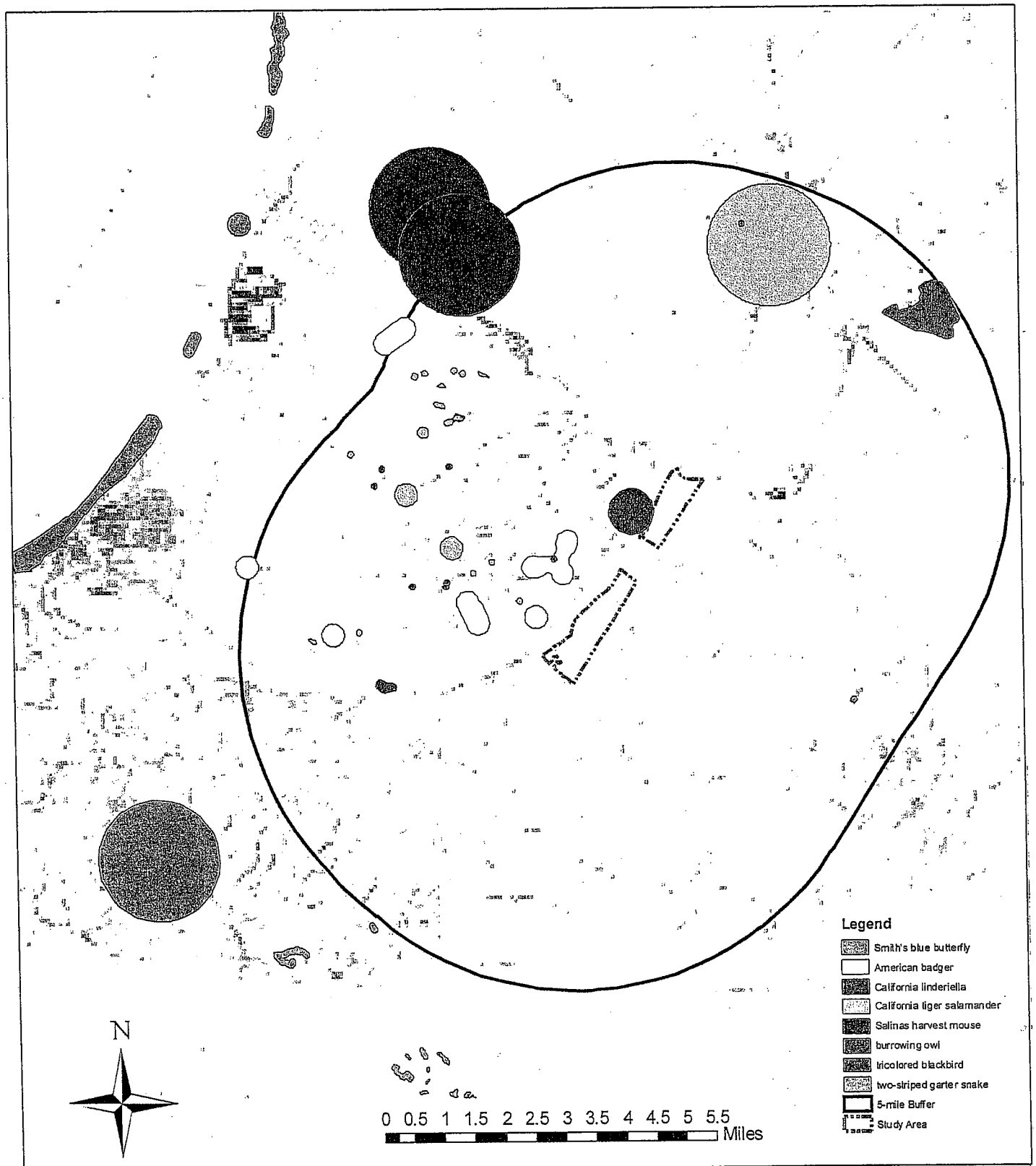


Figure 3. Special Status Wildlife Species within 5 miles of Project Area.

Ferrini Property
Monterey County, California

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Date: October 2006
Basemap: USGS Topo Quad
Map By: Sundaran Gillespie
Filepath: I:\ACAD2000\16138\GIS\ArcMap\CNDDB_Wildlife.mxd

**Silvery legless lizard (*Anniella pulchra pulchra*), CDFG Species of Special Concern.** This reptile occurs primarily in areas with sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, or pine-oak woodland; or sycamores, cottonwoods, or oaks that grow on stream terraces (Jennings and Hayes 1994). Suitable habitat for this species is available in the Project Area.

**Two-striped Gartersnake (*Thamnophis hammondii*), CDFG Species of Special Concern.** *Thamnophis hammondii* commonly inhabits perennial and intermittent streams having rocky beds bordered by willow thickets or other dense vegetation. Two-striped garter snakes also inhabit large sandy riverbeds, such as the Santa Clara River (Ventura County), if a strip of riparian vegetation is present along the stream course. This taxon also utilizes stock ponds and other artificially-created aquatic habitats (e.g., Lake Hemet [Riverside County]) if a dense riparian border of emergent vegetation and amphibian and fish prey are present (CDFG 1994). Toro Creek may provide suitable habitat for this species.

**Southwestern pond turtle (*Clemmys marmorata pallida*), CDFG Species of Concern.** The southwestern pond turtle is an aquatic turtle that leaves aquatic habitat to reproduce, aestivate, and overwinter. Aquatic sites require basking sites such as mats of submergent vegetation, logs, or banks. Western pond turtles also require an upland nesting site in the vicinity of an aquatic site. Nests are typically dug in a substrate with a high clay or silt fraction since the female moistens the site where she will excavate the nest prior to nesting. Toro Creek may provide suitable habitat for this species.

**Birds**

**White-tailed Kite (*Elanus leucurus*), CDFG Fully Protected Species.** White-tailed Kites are associated with annual grasslands, agricultural areas, scrub habitats, wet meadows, and emergent wetlands throughout the lower elevations of California. Nesting generally occurs in shrubs or small trees. Individuals are likely to forage over open areas of the site throughout the year. The Project Area contains suitable nesting and foraging habitat.

**Northern Harrier (*Circus cyaneus*). CDFG Species of Special Concern.** Northern Harrier populations have decreased in recent decades but can be locally abundant where suitable habitat exists free of disturbance. Northern Harriers frequent meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands. Open areas of tall, dense grasses, moist or dry shrubs, and edges are used for nesting, cover, and feeding. The grassland in the Project Area may provide nesting habitat for this species.

**Cooper's Hawk (*Accipiter cooperi*), CDFG Species of Special Concern.** This hawk is associated with woodland and forest habitats throughout California. Although nest sites are usually found in isolated areas, this species frequently occurs in urban habitats in winter and during migration. The Project Area contains suitable nesting and foraging habitat.

**Sharp-shinned Hawk (*Accipiter striatus*), CDFG Species of Special Concern.** This species is a fairly common migrant and winter visitor throughout California and is found in a variety of habitats, especially woodlands. It usually nests in dense small-tree stands of conifers near water. Preferred roost sites are within intermediate to high-canopy forest areas. This species is not expected to nest in the Project Area but may forage in the area during the non-breeding season.

**Ferruginous Hawk (*Buteo regalis*), CDFG Species of Special Concern.** The Ferruginous Hawk is a winter visitor to open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats. This species may forage in the Project Area during the non-breeding season.

**Golden Eagle (*Aquila chrysaetos*), CDFG Fully Protected Species.** Golden Eagles occur in a variety of habitats throughout California. This large raptor typically nests in large isolated trees or cliffs. Golden Eagles forage over a large areas, feeding primarily on ground squirrels, rabbits, large birds, and carrion. This species is not expected to nest in the Project Area but may forage in the area.

**Prairie Falcon (*Falco mexicanus*), CDFG Species of Special Concern.** This is an uncommon resident and migrant that ranges from southeastern deserts northwest along the Coast Ranges and Sierra Nevada. It occurs in many habitats, but typically is associated with grasslands, savannahs, rangeland, agricultural areas, and desert scrub. This falcon typically nests on cliffs. This species is not expected to nest in the Project Area but may forage in the area.

**American Peregrine Falcon (*Falco peregrinus anatum*), CDFG Fully Protected Species.** The American Peregrine Falcon is a Federal Delisted, State Endangered, and California Fully Protected Species. Historical DDT contamination is the primary source of decline for this species. It winters throughout the Central Valley and occurs as a vagrant in a wide variety of habitats. This species is not expected to nest in the Project Area but may forage in the area.

**Burrowing Owl (*Athene cunicularia*), CDFG Species of Special Concern.** These owls prefer annual or perennial grasslands, typically with sparse or nonexistent tree or shrub canopies; however, they also colonize debris piles and old pipes. In California, Burrowing Owls are found in close association with California ground squirrels. Burrowing Owls exhibit high site fidelity and usually use the abandoned burrows of ground squirrels for shelter and nesting. Suitable burrow habitat exists in the Project Area, though no sign of owls was detected during the site visit.

**Long-eared Owl (*Asio otus*), CDFG Species of Special Concern.** Nesting Long-eared Owls range from coastal lowlands to interior deserts and seem to prefer riparian groves, planted woodlots, and belts of live oaks paralleling streams (Shuford, 1993). Generally, this owl frequents dense, riparian and live oak thickets near meadow edges, and nearby woodland and forest habitats (Zeiner, et al., 1990). Suitable nesting and foraging habitat are available in the Project Area.

**Lewis's Woodpecker (*Melanerpes lewis*), USFWS:BCC.** Lewis's Woodpecker is a resident or winter migrant in California, more commonly found in mountain ranchlands. Preferred habitats include open pine-oak woodlands, ponderosa pine woodland, and oak woodlands. Cavity nester in loose colonies, often in a dead tree stump or limb. Suitable nesting and foraging habitat are available in the Project Area.

**Olive-sided Flycatcher (*Contopus cooperi*), UFWS:BCC-nesting.** Within the coniferous forest biome, most often associated with forest openings, forest edges near natural openings (e.g., meadows, canyons, rivers) or human-made openings (e.g., harvest units), or open to semiopen forest stands (Altman, 2000). Suitable nesting and foraging habitat available in the Project Area.

**Loggerhead Shrike (*Lanius ludovicianus*), CDFG Species of Special Concern.** The Loggerhead Shrike is a common resident and winter visitor in lowlands and foothills throughout

California. It prefers open habitats with scattered trees, shrubs, posts, fences, utility lines or other perches. Nests are usually built on a stable branch in a densely-foliaged shrub or small tree and are usually well-concealed. This species was seen during the site visit.

**California Horned Lark (*Eremophila alpestris actia*), CDFG Species of Special Concern.** In nonagricultural lands, typically inhabits areas of short vegetation or bare ground, including shortgrass prairie, deserts, brushy flats, and alpine habitat. Suitable breeding and foraging habitat is available in the Project Area.

**Bell's Sage Sparrow *(Amphispiza belli belli*), CDFG Species of Special Concern.** Bell's Sage Sparrow is an uncommon to fairly common but localized resident breeder in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains. Suitable scrub breeding habitat is available in the Project Area.

**Yellow Warbler (*Dendroica petechia*), CDFG Species of Special Concern.** Yellow Warblers prefer dense riparian vegetation for breeding. Yellow Warbler populations have declined due to brood parasitism by brown-headed cowbirds (*Molothrus ater*) and habitat destruction. Diet is primarily insects supplemented with berries. Toro Creek may provide suitable breeding habitat.
**Lawrence's goldfinch (*Carduelis lawrencei*), FWS:BCC.** Lawrence's goldfinch is endemic to the arid woodlands of California and northern Baja. It inhabits oak woodlands, chaparral, riparian woodlands, pinyon-juniper associates, and weedy water during the breeding season.

<u>Mammals</u>

**Salinas ornate shrew (*Sorex ornatus salarius*), CDFG Species of Special Concern.** Little is known about this shrew, however, ornate shrews are typically found in brackish water marshes, along streams, in brushy areas of valleys and foothills and in forests. Suitable habitat is available for this species in the oak woodland and riparian habitat in the Project Area.

**Monterey dusky-footed woodrat (Neotoma fuscipes luciana), CDFG Species of Special Concern.** This species inhabits hardwood forests of moderate canopy with a moderate to dense understory. Nests are constructed out of leaves, shredded grass, and other material. Suitable habitat for this species exists in the Toro Creek riparian area.

**Townsend's Western big-eared bat (*Corynorhinus townsendii townsendii*), CDFG Species of Special Concern.** This species is primarily found in rural settings in a wide variety of habitats including oak woodlands and mixed coniferous-deciduous forest. Day roosts are highly associated with caves and mines and they are sensitive to human disturbance. There is suitable roosting and foraging habitat in the Project Area.

**Pallid bat (*Antrozous pallidus*), CDFG Species of Special Concern.** The pallid bat is found in a variety of low elevation habitats throughout California. It selects a variety of day roosts including rock outcrops, mines, caves, hollow trees, buildings, and bridges. Night roosts are usually found under bridges, but also in caves, mines, and buildings. Pallid bats are sensitive to roost disturbance. Hollow trees in the oak woodland provide potential roost habitat for this species.

**American badger (*Taxidea taxus*), CDFG Species of Special Concern.** Badgers occur in drier open stages of most scrub, forest, and herbaceous habitats where friable soils and prey populations are present. Suitable habitat and prey are available in the Project Area.

Many of the wildlife observed in the Project Area are commonly found species, and many are adapted to occupying disturbed or urban areas. A list of species observed during the site visit is contained in Appendix A. One special status wildlife species was observed: Loggerhead Shrike (*Lanius ludovicianus*).

## 5.0 SUMMARY

Three sensitive plant communities were identified within the Project Area. 26 special status plant species and thirty special status wildlife species have a moderate or high potential to occur within the Project Area.

### 5.1 Biological Communities

Most of the Project Area is comprised of coast live oak woodland / savanna and annual grassland which are not sensitive habitats. However, the Project Area does contain 3.46 acres of potential seasonal and seep wetlands, over 15,000 linear feet of ephemeral drainages, and a 2,230 linear foot segment of the perennial El Toro Creek potentially within the jurisdiction of the Corps under Section 404/401 of the Clean Water Act. In addition, the Project Area contains 14 acres of riparian areas which may fall under the jurisdiction of CDFG, and numerous oak trees which may be protected under the Monterey County Zoning Ordinance.

A jurisdictional wetland delineation has been performed in the Project Area and will be recommended for submitting to the Corps for verification of their jurisdiction.

### 5.2 Sensitive Wildlife Species

Thirty special status wildlife species have a moderate or high potential to occur within the Project Area. A summary of the habitats each species may utilize in the Project Area is discussed below.

The foodplant of the Smith's blue butterfly, coast buckwheat *(Eriogonum latifolium)*, was listed as an observed plant species in *Vegetation Mapping of the Ferrini Ranch* (Denise Duffy and Associates, 2006). This species was given a moderate potential to occur in the Project Area because of the presence of this foodplant and that this species has been documented in the three USGS quadrangles directly west of the project Area.

The seasonal aquatic features in the Project Area may provide suitable habitat for a number of protected species including: California tiger salamander, Coast Range newt and Western spadefoot toad. The extent of ponding in these seasonal ponds and wetlands may limit the number of species that may utilize them for breeding habitat. For example, the Western spadefoot toad may only require ponding of less than a week to develop from egg to subadult whereas the California tiger salamander may require approximately three months. Suitable upland estivation habitat was also available for the tiger salamander near the seasonal aquatic features in the form of gopher holes and ground squirrel burrows.

Other herpetofaunal species such as the two-striped garter snake and the Southwestern pond turtle may use these aquatic features for foraging or dispersal, but are more likely to be found in Toro Creek as it is perennial in nature. In addition, the residential housing and high school located in the southwest corner of the Project Area may effectively cut off terrestrial riparian species such as these from dispersing from Toro Creek into the majority of the Project Area. Areas of sand or sandy soils are located throughout the Project Area. Additional herpetofaunal

species such as the Coast horned lizard and silvery legless lizard are usually associated with soils of this nature.

This assessment determined that eighteen bird species may use the Project Area for breeding and foraging. Trees, shrubs, burrows and grassland may all be potential nesting habitat for some avian species. In addition, the large trees in the Project Area may provide roosting or hibernating habitat for a number of bat species.

Other mammalian species associated with the habitats found in the Project Area or with nearby occurrences include: American badger, Salinas ornate shrew and Monterey dusky-footed woodrat. The shrew and woodrat are more likely to be found in riparian areas such as Toro Creek whereas the badger could be found in any part of the Project Area that has suitable soil for burrowing.

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# APPENDIX A

## LIST OF OBSERVED PLANT AND ANIMAL SPECIES

| Appendix A: List of Observed Plant and Animal Species | |
|---|---|
| **Plants** - derived from Duffy (2006) and WRA site observations | |
| *Achillea millefolium* | California yarrow |
| *Achnatherum sp.* | |
| *Adiantum jordanii* | California maidenhair |
| *Aesculus californica* | California buckeye |
| *Aira caryophyllea* | tufted hairgrass |
| *Amisinckia menziesii* | fiddleneck |
| *Anagallis arvensis* | scarlet pimpernel |
| *Artemisia douglasiana* | coastal sagebrush |
| *Avena fatua* | wild oats |
| *Baccharis pilularis* | coyote brush |
| *Brassica nigra* | black mustard |
| *Brassica rapa* | field mustard |
| *Briza maxima* | big quaking grass |
| *Bromus arizonicus* | Arizona brome |
| *Bromus diandrus* | ripgut brome |
| *Bromus hordeaceous* | soft chess |
| *Bromus madritensis* | foxtail chess |
| *Caenothus integerrimus* | deerbrush |
| *Camissonia ovata* | sun-cup |
| *Camissonia sp.* | |
| *Cardionema ramosissimum* | sandcarpet |
| *Carduus pycnocephalus* | Italian thistle |
| *Carex sp.* | sedge |
| *Castilleja attenuata* | valley tassels |
| *Castilleja minor* | lesser Indian paintbrush |
| *Chamomilla suaveolens* | pineapple weed |
| *Chenopodium macrospemum var. halophilum* | coast goosefoot |

| | |
|---|---|
| *Clarkia sp.* | clarkia |
| *Claytonia perfoliata* | miner's lettuce |
| *Collinsia heterophylla* | purple Chinese houses |
| *Conium maculatum* | poison hemlock |
| *Crassula connata* | pygmy weed |
| *Dichelostemma capitatum* | blue dicks |
| *Distichlis spicata* | salt grass |
| *Eleocharis macrostachya* | spikerush |
| *Eriogonum latifolium* | coast eriogonum |
| *Eriogonum nudum* | nude buckwheat |
| *Erodium botrys* | broad-leaf filaree |
| *Erodium cicutarium* | red stem filaree |
| *Erodium moschatum* | white-stemmed filaree |
| *Eschscholzia californica* | California poppy |
| *Euphorbia oblongata* | eggleaf spurge |
| *Filago gallica* | filago |
| *Gallium sp.* | galium |
| *Geranium molle* | dovefoot geranium |
| *Heterotheca grandiflora* | telegraph weed |
| *Holodiscus microphyllus* | small-leaved cream bush |
| *Hordeum murinum ssp. leporinum* | hare barley |
| *Hypocharis glabra* | smooth cat's ear |
| *Hypocharis sp.* | |
| *Juncus balticus* | baltic rush |
| *Juncus bufonius* | toad rush |
| *Juncus patens* | spreading rush |
| *Juncus phaeocephalus* | brown-headed rush |
| *Juncus mexicanus* | Mexican rush |
| *Juncus xiphioides* | iris-leaved rush |
| *Layia platyglossa* | common tidytips |

| | |
|---|---|
| *Lessingia sp.* | lessingia |
| *Lolium multiflorum* | Italian rye-grass |
| *Lotus sp.* | trefoil |
| *Lupinus arboreus* | coastal bush lupine |
| *Lupinus nanus* | sky lupine |
| *Lupinus sp.* | lupine |
| *Lythrum hyssopifolium* | Hyssop's loosestrife |
| *Marah fabaceus* | wild cucumber |
| *Marrubium vulgare* | horehound |
| *Medicago sp.* | |
| *Melica sp.* | oniongrass |
| *Mimulus aurantiacus* | sticky monkey flower |
| *Navarretia sp.* | navarretia |
| *Nemoophila menziesii* | baby blue eyes |
| *Pentagramma triangularis* | goldenback fern |
| *Pholistoma auritum var. auritum* | Arizona fiestaflower |
| *Plagiobothrys sp.* | popcorn flower |
| *Plantago coronopus* | cut-leaf plantain |
| *Plantago lanceolata* | narrowleaf plantain |
| *Platystemon californicus* | creamcups |
| *Poa annua* | annual bluegrass |
| *Polygonum arenastrum* | common knotweed |
| *Polystichum californicum* | California swordfern |
| *Psilocarphus tenellus* | slender woolly marbles |
| *Quercus agrifolia* | coast live oak |
| *Quercus lobata* | valley oak |
| *Ranunculus californicus* | California buttercup |
| *Raphanus sativus* | wild radish |
| *Ribes menziesii* | canyon gooseberry |
| *Rosa pisocarpa* | cluster rose |

| | |
|---|---|
| *Rubus ursinus* | California blackberry |
| *Rumex acetosella* | common sheep sorrel |
| *Rumex crispus* | curly dock |
| *Rumex pulcher* | fiddle dock |
| *Salix sp.* | willow |
| *Salvia mellifera* | California black sage |
| *Sambucus mexicana* | blue elderberry |
| *Sanicula crassicaulis* | Pacific sanicle |
| *Sidalcea malvaeflora ssp. laciniata* | dwarf checkerbloom |
| *Silene gallica* | common catchfly |
| *Silybum marianum* | milkthistle |
| *Sisymbrium officinale* | hedgemustard |
| *Sisyrinchium bellum* | blue-eyed grass |
| *Spergula arvensis* | corn spurry |
| *Stachys bullata* | California hedge-nettle |
| *Stellaria media* | common chickweed |
| *Symphoricarpos albus* | snowberry |
| *Toxicodendron diversilobum* | poison oak |
| *Trifolium willdenovii* | tomcat clover |
| *Trifolium campestre* | hop clover |
| *Trifolium depauperatum var. amplectens* | pale bladder clover |
| *Trifolium hirtum* | rose cover |
| *Trifolium hybridum* | alsike clover |
| *Trifolium sp.* | clover |
| *Triteleia ixioides* | golden brodeia |
| *Umbellularia californica* | California bay |
| *Uritica urens* | dwarf nettle |
| *Urtica dioicas holosericea* | giant creek nettle |
| *Vicia sp.* | vetch |
| *Viola adunca* | dog violet |

| | |
|---|---|
| *Vulpia myuros* | rattail fescue |
| **Mammals** | |
| *Odocoileus hemionus columbianus* | Coyote |
| *Felis rufus* | Bobcat (tracks) |
| *Mephitis sp.* | Skunk (tracks) |
| *Spermophilus beecheyi* | California ground squirrel |
| **Birds** | |
| *Branta canadensis* | Canada Goose |
| *Cathartes aura* | Turkey Vulture |
| *Buteo lineatus* | Red-shouldered Hawk |
| *Buteo jamaicensis* | Red-tailed Hawk |
| *Falco sparverius* | American Kestrel |
| *Zenaida macroura* | Mourning Dove |
| *Calypte anna* | Anna's Hummingbird |
| *Melanerpes formicivorus* | Acorn Woodpecker |
| *Colaptes auratus* | Northern Flicker |
| *Sayornis nigricans* | Black Phoebe |
| *Sayornis saya* | Says Phoebe |
| *Aphelocoma californica* | Western Scrub Jay |
| *Corvus brachyrhynchos* | American Crow |
| *Psaltriparus minimus* | Bushtit |
| *Thryomanes bewickii* | Bewick's Wren |
| *Regulus calendula* | Ruby-crowned Kinglet |
| *Chamaea fasciata* | Wrentit |
| *Lanius ludovicianus* | Loggerhead Shrike |
| *Sturnus vulgaris* | European Starling |
| *Dendroica coronata* | Yellow-rumped Warbler |
| *Pipilo crissalis* | California Towhee |
| *Chondestes grammacus* | Lark Sparrow |
| *Passerculus sandwichensis* | Savannah Sparrow |

| | |
|---|---|
| *Zonotrichia leucophrys* | White-crowned Sparrow |
| *Junco hyemalis* | Dark-eyed Junco |
| *Sturnella neglecta* | Western Meadowlark |
| *Carpodacus mexicanus* | House finch |
| **Herpetofauna** | |
| *Pseudacris regilla* | Pacific treefrog |
| *Sceloporus occidentalis* | Western fence lizard |

# APPENDIX B

## POTENTIAL FOR SPECIAL STATUS PLANT AND WILDLIFE SPECIES TO OCCUR IN THE PROJECT AREA

Special status plant and animal species that may occur, or are known to occur in habitats similar to those found on the Study Area. List compiled from USFWS Species lists (USFWS 10/06), and CNDDB Monterey County lists (October 2006)

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| **Plants** | | | |
| *Allium hickmanii*<br>Hickman's onion | 1B | Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland, coastal prairie. 20-200 m. Blooms April-May. | **Moderate.** Potentially suitable habitat consisting of grassland, chaparral, and coastal scrub found onsite. |
| *Amorpha californica* var. *napensis*<br>Napa false indigo | 1B | Broadleaved upland forest (openings), chaparral, cismontane woodland. 150-2000 m. Blooms April-July. | **Moderate.** Potentially suitable woodland habitat present. |
| *Arctostaphylos hookeri* ssp. *hookeri*<br>Hooker's manzanita | 1B | Chaparral, coastal scrub/sandy, closed cone coniferous forest, cismontane woodland. 85-300 m. Blooms February-June. | **Moderate.** Potentially suitable habitat on sandy substrate present on-site. |
| *Arctostaphylos montereyensis*<br>Monterey manzanita | 1B | Chaparral, cismontane woodland, coastal scrub/sandy. 30-730 m. Blooms February-March. | **Moderate.** Potentially suitable habitat on sandy substrate present on-site. |
| *Arctostaphylos pajaroensis*<br>Pajaro manzanita | 1B | Chaparral (sandy). 30-760 m. Blooms December-March. | **Unlikely.** Potentially suitable habitat on sandy substrate present on-site, however the species is known from only one occurrence in the vicinity of the Project Area. |
| *Arctostaphylos pumila*<br>sandmat manzanita | 1B | Closed-cone coniferous forest, chaparral, cismontane woodland, coastal dunes, coastal scrub/sandy, openings. 3-205 m. Blooms February-May. | **Moderate.** Potentially suitable habitat on sandy substrate present on-site. |
| *Astragalus tener* var. *tener*<br>alkali milk-vetch | 1B | Alkali playa, valley and foothill grassland, vernal pools. 1-170 m. Blooms April-May. | **Moderate.** Potentially suitable habitat consisting of grassland and seasonal wetlands found on-site. |
| *Chorizanthe pungens* var. *pungens*<br>Monterey spineflower | FT, 1B | Coastal dunes, chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/sandy. 3-450 m. Blooms April-June. | **Moderate.** Potentially suitable habitat consisting of grassland, coastal scrub, and cismontane woodland found on-site. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| *Chorizanthe robusta* var. *robusta*<br>robust spineflower | FE, 1B | Cismontane woodland, coastal dunes, coastal scrub/sandy or gravelly. 3-120 m. Blooms April-September. | **Moderate.** Potentially suitable habitat consisting of sandy soils, grassland, coastal scrub, and cismontane woodland found on-site. |
| *Clarkia jolonensis*<br>Jolon clarkia | 1B | Chaparral, cismontane woodland, coastal scrub. 20-660 m. Blooms April-June. | **Moderate.** Potentially suitable habitat consisting of coastal scrub and cismontane woodland found on-site. |
| *Cordylanthus rigidus* ssp. *littoralis*<br>seaside bird's-beak | SE, 1B | Closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub/sandy, coastal dunes, often disturbed sites. 0-215 m. Blooms May-October. | **Unlikely.** Suitable habitat with direct coastal influence (e.g., coastal dunes) not found on-site. |
| *Corethrogyne leucophylla*<br>branching beach aster | 3 | Closed-cone coniferous forest, coastal dunes. 3-60 m. Blooms May-December. | **Unlikely**. Coastal dune or closed cone coniferous forest not found on-site. |
| *Delphinium hutchinsoniae*<br>Hutchinson's larkspur | 1B | Broadleaved upland forest, chaparral, coastal prairie, coastal scrub. 0-400m. Blooms March-June. | **Moderate.** Potentially suitable habitat consisting of oak woodland and coastal scrub found on-site. |
| *Ericameria fasciculata*<br>Eastwood's goldenbush | 1B | Closed-cone coniferous forest, chaparral (maritime), coastal dunes, coastal scrub/ sandy, openings. 30-275 m. Blooms July-October. | **Moderate.** Potentially suitable coastal scrub associated with sandy soils found on-site. |
| *Eriogonum nortonii*<br>*Pinnacles buckwheat* | 1B | Chaparral, valley and foothill grassland/sandy, often on recent burns. 300-975 m. Blooms May-June. | **Moderate.** Potentially suitable grassland habitat on sandy soils found on-site. |
| *Erysimum ammophilum*<br>coast wallflower | 1B | Chaparral (maritime), coastal dunes, coastal scrub (sandy), openings. 0-60 m. Blooms February-June. | **Unlikely**. Suitable coastal strand habitat not found onsite. |
| *Erysimum menziesii* ssp. *yadonii*<br>Yadon's wallflower | FE, SE, 1B | Coastal dunes; 0-10 m. Blooms May-September. | **Unlikely**. Suitable coastal dune habitat not found onsite. |
| *Fritillaria liliacea*<br>fragrant fritillary | 1B | Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland/often serpentinite. 3-410 m. Blooms February-April. | **Moderate.** Potentially suitable habitat consisting of cismontane woodland and grassland found on-site. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| *Galium clementis*<br>Santa Lucia bedstraw | 1B | Lower montane coniferous forest, upper montane coniferous forest, rocky. 1130-1780 m. Blooms May-July. | **Unlikely**. Suitable coniferous forest not present. |
| *Gilia tenuiflora* ssp. *arenaria*<br>sand gilia | FE, ST, 1B | Chaparral (maritime), cismontane woodland, coastal dunes, coastal scrub/sandy; openings. 0-45 m. Blooms April-June. | **Moderate.** Potentially suitable sandy coastal scrub habitat found on site. |
| *Grindelia hirsutula* var. *maritima*<br>San Francisco gumplant | 1B | Coastal bluff scrub, coastal scrub, valley and foothill grassland/sandy or serpentinite. 15-400 m. Blooms August-September. | **Unlikely**. Potentially suitable grassland and coastal scrub habitat found on-site. |
| *Hemizonia parryi* ssp. *congdonii*<br>Congdon's tarplant | 1B | Valley and foothill grassland (alkaline). 1-230 m. Blooms June-November. | **Moderate**. Potentially suitable grassland habitat found on-site. |
| *Horkelia cuneata* ssp. *sericea*<br>Kellogg's horkelia | 1B | Closed -cone coniferous forest, chaparral (maritime), coastal scrub/sandy or gravelly, openings. 10-200 m. Blooms April-September. | **Moderate.** Potentially suitable sandy coastal scrub habitat found on site.. |
| *Lasthenia conjugens*<br>Contra Costa goldfields | FE, 1B | Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools/mesic. 0-470 m. Blooms March-June. | **Unlikely.** This species is known from only 12 occurrences in the vicinity of the Project Area. The Project Area does not support suitable alkaline habitat. |
| *Lessingia hololeuca*<br>wooly-headed lessingia | 3 | Broadleaved upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland/clay, serpentinite. 15-305 m. Blooms June-October. | **Moderate.** Potentially suitable grassland and coastal scrub habitat found on site. |
| *Lupinus tidestromii*<br>Tidestrom's lupine | 1B | Coastal dunes. 0-100 m. Blooms April-June. | **Unlikely**. Suitable coastal dune habitat not found onsite. |
| *Malacothamnus aboriginum*<br>Indian Valley bush mallow | 1B | Chaparral, cismontane woodland/rocky, often in burned areas. 150-1700 m. Blooms April-October. | **Moderate.** Potentially suitable coastal scrub habitat found on site. |
| *Malacothamnus palmeri* var. *involucratus*<br>Carmel Valley bush mallow | 1B | Cismontane woodland, chaparral, coastal scrub. 30-1100 m. Blooms May-October. | **Moderate.** Potentially woodland and coastal scrub habitat found on-site. |
| *Malacothamnus palmeri* var. *palmeri*<br>Santa Lucia bush mallow | 1B | Chaparral (rocky). 60-360 m. Blooms May-July. | **Not present.** Suitable habitat not found on site, and species not observed during plant surveys. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| *Malacothrix saxatalis* var. *arachnoidea*<br>Carmel Valley malacothrix | 1B | Chaparral (rocky). 25-335 m. Blooms March-December. | **Moderate.** Potentially suitable coastal scrub habitat found on site. |
| *Microseris paludosa*<br>marsh microseris | 1B | Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 5-300 m. Blooms April-June. | **Moderate.** Potentially suitable oak woodland, coastal scrub, and grassland habitat found on site. |
| *Micropus amphibolus*<br>Mt. Diablo cottonweed | 3 | Broadleaved upland forest, chaparral, cismontane woodland, valley and foothill grassland/rocky. 45-825 m. Blooms March-May. | **Moderate.** Potentially suitable woodland, coastal scrub and grassland habitat found on site. |
| *Pinus radiata*<br>Monterey pine | 1B | Closed-cone coniferous forest, cismontane woodland. 25-185 m. | **Moderate.** Native, intact Monterey pine forest not found on-site. However, intentionally planted individuals may be present. These trees would not be afforded protection as a special status species under CEQA, but removal may be regulated by local tree ordinance. |
| *Piperia yadonii*<br>Yadon's rein orchid | FE, 1B | Coastal bluff scrub, closed-cone coniferous forest, chaparral (maritime)/sandy. 10-415 m. Blooms May-August. | **Unlikely.** Suitable coastal bluff scrub or maritime chaparral habitat not found on-site. |
| *Plagiobothrys uncinatus*<br>hooked popcorn flower | 1B | Chaparral (sandy), cismontane woodland, valley and foothill grassland. 300-730 m. Blooms April-May. | **Moderate.** Potentially suitable chaparral, woodland, and grassland habitat found on-site. |
| *Stebbinsoseris decipiens*<br>Santa Cruz microseris | 1B | Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. 10-500 m. Blooms April-May. | **Moderate.** Potentially suitable chaparral, coastal scrub, woodland, and grassland habitat found on-site. |
| *Trifolium buckwestiorum*<br>Santa Cruz clover | 1B | Coastal prairie, broadleaved upland forest, cismontane woodland. 105-610 m. Blooms April-October. | **Moderate.** Potentially suitable woodland and grassland habitat found on-site. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| *Trifolium polydon*<br>Pacific Grove clover | 1B | Closed-cone coniferous forest, coastal prairie, meadows and seeps, valley and foothill grassland/mesic. 5-120 m. Blooms April-June. | **Unlikely.** Potentially suitable grassland, seep, and seasonal wetland habitat found on-site, however this species is only known from 7 occurrences in the vicinity of the Project Area on the Monterey and Point Lobos peninsulas. |
| **Mammals** | | | |
| Pallid Bat<br>*Antrozous pallidus* | CSC | Selects a variety of day roosts including rock outcrops, mines, caves, hollow trees, buildings, and bridges. Night roosts are usually found under bridges, but also in caves, mines, and buildings. | **Moderate.** Large oak and sycamore trees may provide roosting habitat. |
| Townsend's big-eared bat<br>*Corynorhinus townsendii townsendii* | CSC | Primarily found in rural settings in a wide variety of habitats including oak woodlands and mixed coniferous-deciduous forest. Day roosts highly associated with caves and mines. Very sensitive to human disturbance. | **Moderate.** Large oak and sycamore trees may provide roosting habitat. |
| Western mastiff bat<br>*Eumops perotis* | CSC | Found in a wide variety of habitat. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders. | **Unlikely.** Project Area at northern limit of its range. |
| Monterey dusky-footed woodrat<br>*Neotoma fuscipes luciana* | CSC | Occurs in forest habitats of moderate canopy and moderate to dense understory. Also found in chaparral habitats. Feeds mainly on woody plants: live oak, maple, coffeeberry, alder, and elderberry. | **High.** Suitable habitat found in Project Area. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| big-eared kangaroo rat *Dipodomys elephantinus* | CSC | Yearlong resident of chaparral-covered slopes of the southern part of the Gabilan Range, in the vicinity of the Pinnacles, in San Benito and Monterey cos. Distribution restricted to a very small area. | **Unlikely.** Project Area is not in Gabilan Range. |
| Salinas pocket mouse *Perognathus inornatus psammophilus* | CSC | The known distribution of *P.i.psammophilus* extends from near Soledad southward to Hog Canyon in the Salinas Valley, Monterey Co. | **Unlikely.** Project Area north of its known range. |
| Monterey Bay harvest mouse *Reithrodontomys megalotis distichlis* | SLC | Occurs in fresh and brackish water wetlands and probably in the adjacent uplands around the mouth of the Salinas River. | **Unlikely.** Project Area is west and south of known range. |
| Salinas ornate shrew *Sorex ornatus salarius* | CSC | Little is known about this shrew, however, ornate shrews are typically found in brackish water marshes, along streams, in brushy areas of valleys and foothills and in forests. | **High.** Known occurrence near Project Area. |
| American Badger *Taxidea taxus* | CSC | Badgers occur in drier open stages of most scrub, forest, and herbaceous habitats where friable soils and prey populations are present. | **High.** Suitable habitat available in Study Area. |
| San Joaquin kit fox *Vulpes macrotis mutica* | FE, ST | Found in annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing and suitable prey base. | **Unlikely.** Outside of known range. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| **Birds** | | | |
| Common Loon (nesting)<br>*Gavia immer* | CSC | Winter in estuarine and subtidal marine habitats along coast, San Francisco Bay. | **Not Present.** No marine habitat in Project Area. |
| California Brown Pelican (nesting colony and roosts)<br>*Pelecanus occidentalis californicus* | FE, SE, CFP | Found in estuarine, marine subtidal, and marine pelagic waters along the coast. Nest on rocky or low brushy slopes of undisturbed islands. | **Not Present.** No marine habitat in Project Area. |
| Double-crested Cormorant (rookery)<br>*Phalacrocorax auritus* | CSC | A yearlong resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. Requires undisturbed nest-sites beside water, on islands or mainland. Uses wide rock ledges on cliffs; rugged slopes; and live or dead trees, especially tall ones. | **Not Present.** No lakes in Project Area. |
| California Condor<br>*Gymnogyps californianus* | FE, SE, CFP | Requires vast expanses of open savannah, grasslands, and foothill chaparral, with cliffs, large trees, and snags for roosting and nesting. Forages over wide areas of open rangelands. | **Unlikely.** Occurrences for this species are to the southeast. |
| Cooper's Hawk<br>*Accipter cooperi* | CSC | Inhabits areas with dense tree stands or patchy woodlands. Usually nests in deciduous riparian areas or second-growth conifer stands near streams. | **High.** Suitable nesting and foraging habitat available. |
| Sharp-shinned Hawk<br>*Accipiter striatus* | CSC | Generally associated with woodland habitats. Typically nests in isolated areas away from human disturbance. | **Moderate.** Typical coniferous forest not present, may occur during migration. |
| Golden Eagle<br>*Aquila chrysaetos* | CSC, CFP | Found in rolling foothill and mountain areas, sage-juniper flats, dessert. Cliff-walled canyons provide nesting habitat in most parts of range. | **High.** Suitable foraging habitat available for this species. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Ferruginous Hawk<br>*Buteo regalis* | CSC | Frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys and fringes of pinyon-juniper habitats. | **Moderate.** May winter in Study Area. |
| Northern Harrier<br>*Circus cyaneus* | CSC | Found in open grasslands, prairies, and marshes. Tend to nest near water. | **Moderate.** Suitable foraging and nesting habitat available. |
| White-tailed Kite<br>*Elanus leucurus* | CFP | Year-long resident of coastal and valley lowlands; rarely found away from agricultural areas. Preys on small diurnal mammals and occasional birds, insects, reptiles, and amphibians. | **High.** Suitable foraging and nesting habitat available. |
| Bald Eagle<br>*Haliaeetus leucocephalus* | FT, SE, CFP | Requires large bodies of water, or free-flowing rivers with abundant fish adjacent snags or other perches. Nests in large, old-growth, or dominant live tree with open branchwork. | **Unlikely.** No large bodies of water present. |
| Osprey<br>*Pandion haliaetus* | CSC | (Nesting) Frequents ocean shores, bays, fresh-water lakes, and larger streams. Prefers large trees, snags and dead-topped trees near large water bodies for cover and nesting. May travel 5-6 miles from nest to fishing areas. | **Unlikely.** No large bodies of water present. |
| Prairie Falcon<br>*Falco mexicanus* | CSC | Inhabits dry, open terrain. Breeding sites located on cliffs. Forages widely. | **Moderate.** Suitable foraging habitat available. |
| American Peregrine Falcon<br>*Falco peregrinus anatum* | FD, SE, CFP | Winters throughout Central Valley. Requires protected cliffs and ledges for cover. Feeds on a variety of birds, and some mammals, insects, and fish. | **Moderate.** Suitable foraging habitat available. |
| California Clapper Rail<br>*Rallus longirostris obsoletus* | FE, SE | Found in tidal salt marshes of the San Francisco Bay. Require mudlfats for foraging and dense vegetation on higher ground for nesting. | **Not Present.** No salt marsh habitat available. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Western Snowy Plover *Charadrius alexandrinus nivosus* | FT, CSC | Found on sandy beaches, salt pond levees and shores of large alkali lakes. Need sandy gravelly or friable soils for nesting. | **Not Present.** Suitable nesting habitat not available. |
| Mountain Plover *Charadrius montanus* | FPT, CSC | Winters in the central valley in short grasslands and plowed fields below 1000m. | **Unlikely.** May rarely occur in winter. |
| Long-billed Curlew *Numenius americanus* | CSC | Winters in large coastal estuaries, upland herbaceous areas, and croplands. Breeds in northeastern California in wet meadow habitat. | **Unlikely.** May rarely occur in winter. |
| California Least Tern *Sterna antillarum browni* | FE, SE | Breeding colonies in San Francisco Bay found in abandoned salt ponds and along estuarine shores. Nests on barren to sparsely vegetated site near water. | **Not Present.** Suitable aquatic habitat not present. |
| Marbled Murrelet *Brachyramphus marmoratus* | FT, SE | Breed in old-growth redwood stands containing platform-like branches along coastal | **Not Present.** No old growth forest present. |
| Western Yellow-billed Cuckoo *Coccyzus americanus occidentalis* | FC, SE | Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. | **Not Present.** Known occurrences are further south. |
| Long-eared Owl *Asio otus* | CSC | Inhabit open woodlands, forest edges, riparian stripsalong rivers, hedgerows, juniper thickets, woodlots, and wooded ravines and gullies. Breeding habitat must include thickly wooded areas for nesting and roosting with nearby open spaces for hunting. | **Moderate.** Typically utilizes denser woods than in Project Area. |
| Short-eared Owl *Asio flammeus* | CSC | Found in open, treeless areas with elevated sites for perches and dense vegetation for roosting and nesting. Tule patches/tall grass needed for nesting and daytime seclusion. | **Unlikely.** Typical tule patches and dense ground cover minimal in Project Area. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Western Burrowing Owl<br>*Athene cunicularia hypugea* | CSC | Frequents open grasslands and shrublands with perches and burrows. Preys upon insects, small mammals, reptiles, birds, and carrion. Nests and roosts in old burrows of small mammals. | **High.** Suitable breeding and foraging habitat available. |
| Vaux's Swift<br>*Chaetura vauxi* | CSC | Forages high in the air over most terrain and habitats but prefers rivers/lakes. Requires large hollow trees for nesting. | **Unlikely.** No nearby occurrences. |
| Black Swift<br>*Cypseloides niger* | CSC | Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above surf. Forages widely. | **Unlikely.** No suitable breeding habitat available. |
| Lewis' Woodpecker<br>*Melanerpes lewis* | FWS:BCC | Found in riparian areas, nests in cavities excavated by other woodpeckers. | **Moderate.** Suitable breeding and foraging habitat in Project Area. |
| Olive-sided Flycatcher (nesting)<br>*Contopus cooperi* | FWS:BCC | May occur at any elevation from sea level to timberline, but usually at mid- to high-elevation forest (920–2,130 m). | **Moderate.** Typical breeding habitat not present but may migrate through Project Area. |
| Willow Flycatcher (nesting)<br>*Empidonax traillii* | SE | Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters. Winter migrant. | **Unlikely.** No known occurrences near Project Area. |
| Least Bell's Vireo<br>*Vireo bellii pusillus* | FE, SE | Summer resident of southern California. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis, mesquite. Found in low riparian in vicinity of water. | **Unlikely.** Known from Salinas River however, surveys were conducted in 1999-2000 with negative results. |
| Bank Swallow<br>*Riparia riparia* | ST | Migrant in riparian and other lowland habitats in western California. Nests in riparian areas with vertical cliffs and bands with fine-textured or sandy soils in which to nest. | **Unlikely.** Suitable breeding habitat minimal in Project Area. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Loggerhead Shrike<br>*Lanius ludovicianus* | CSC | Prefers open habitats with scattered shrubs, trees, pots, utility lines from which to forage for large insects. Nest well concealed above ground in densely-foliaged shrub or tree. | **Present.** This species seen perched in the north parcel. |
| California Horned Lark<br>*Eremophila alpestris actia* | CSC | In nonagricultural lands, typically inhabits areas of short vegetation or bare ground, including shortgrass prairie, deserts, brushy flats, and alpine habitat (Cannings and Threlfall 1981). | **High.** Suitable nesting and foraging habitat is available in the Project Area. |
| Yellow Warbler<br>*Dendroica petechia brewsteri* | CSC | Nests in riparian stands of willows, cottonwoods, aspens, sycamores, and alders. Also nests in montane shrubbery in open conifer forests. | **Moderate.** Suitable breeding and foraging habitat in Project Area. Known occurrence on Salinas River. |
| Bell's Sage Sparrow<br>*Amphispiza belli* | CSC | Prefers dense chaparral and scrub habitats in breeding season. Found in more open habitats in winter. | **Moderate.** Suitable breeding and foraging habitat in Project Area. |
| Tricolored Blackbird<br>*Agelaius tricolor* | CSC | Usually nests over or near freshwater in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall herbs. | **Unlikely.** Typical freshwater habitat not available. |
| Lawrence's Goldfinch<br>*Carduelis lawrencei* | FWS:BCC | Inhabits oak woodlands, chaparral, riparian woodlands, pinyon-juniper associations, and weedy areas near water during the breeding season. | **Moderate.** Suitable breeding and foraging habitat in Project Area. |
| **Reptiles and Amphibians** | | | |
| California tiger salamander<br>*Ambystoma californiense* | ST | Inhabits annual grass habitat and mammal burrows. Seasonal ponds and vernal pools crucial to breeding | **High.** Suitable upland and breeding habitat available. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Santa Cruz long-toed salamander *Ambystoma macrodactylum croceum* | SE, FE, CFP | Wet meadows near sea level in a few restricted locales in Santa Cruz and Monterey Counties. Aquatic larvae prefer shallow (<12 inches) water, using clumps of veg or debris for cover. Adults use mammal burrows. | **Unlikely.** Suitable habitat not present. |
| Coast Range newt *Taricha torosa torosa* | CSC | Coast Range newts frequent terrestrial habitats, but breed in ponds, reservoirs, and slow-moving streams | **High.** Suitable aquatic habitat present. |
| California red-legged frog *Rana aurora draytonii* | FT, CSC | Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Documented to disperse through upland habitats after rains. | **Unlikely.** There are no nearby occurrences and no suitable year-round aquatic habitat through most of the Project Area. Toro Creek may provide suitable habitat, however, protocol level surveys were conducted in 2002 with negative results (DDA 2002). |
| Foothill yellow-legged frog *Rana boylii* | CSC | Found in or near rocky streams in a variety of habitats. Feed on both aquatic and terrestrial invertebrates. | **Unlikely.** No nearby occurrences. Toro Creek does not appear to have the preferred cobly substrate in Project Area. |
| Western spadefoot toad *Spea hammondii* | CSC | It prefers areas of open vegetation and short grasses where the soil is sandy or gravelly in grassland, scrub, chaparral and woodland. Require temporary rainpools that last 3 weeks. | **Moderate.** Suitable habitat available in Study Area. |
| Arroyo toad *Bufo californicus* | FE, CSC | Adults require overflow pools adjacent to the inflow channel of 3rd- to greater-order streams that are free of predatory fishes in which to breed . Exposed pools that are shallow, sand- or gravel-based and have a low current velocity are strongly favored | **Unlikely.** Only known occurrences in county in San Antonio River. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Southwestern pond turtle *Clemmys marmorata pallida* | CSC | Occurs in perennial ponds, lakes, rivers and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and submerged shelter. | **Moderate.** There are no nearby occurrences and no suitable year-round aquatic habitat through most of the Project Area, however, Toro Creek may provide suitable habitat. |
| Black legless lizard *Anniella pulchra nigra* | CSC | Inhabits sandy soil/dune areas with bush lupine and mock heather as dominant plants. | **Unlikely.** Associated plants not detected in Project Area. |
| Silvery legless lizard *Anniella pulchra pulchra* | CSC | Burrowing species found in loose, friable soils or sand. | **Moderate.** Suitable habitat found in Project Area. |
| Coast (California) horned lizard *Phrynosoma coronatum frontale* | CSC | Occurs in valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress juniper and annual grass habitats. Prefers sand areas, washes, flood plains and wind-blown deposits. | **High.** Suitable habitat available in Project Area. |
| Blunt-nosed leopard lizard *Gambelia silus* | FE, SE | Occupy alkali flats and sparsely vegetated plains of the San Joaquin Valley. Utilize small mammal burrows and rocks for shelter. | **Not Present.** Not known to occur in Monterey County. |
| San Joaquin whipsnake *Masticophis flagellum ruddocki* | CSC | Lives in dry grassy/saltbush habitats. Uses mammal burrows for refuge and breeding. | **Unlikely.** Occurs east of Project Area. |
| Two-striped garter snake *Thamnophis hammondii* | CSC | Commonly inhabits perennial and intermittent rocky streams and large sandy river beds bordered by willow thickets or other dense vegetation. Utilizes stock ponds and other artificially-created aquatic habitats if a dense riparian border of emergent vegetation and amphibian and fish prey are present. | **Moderate.** Toro Creek may provide habitat for this species. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| **Fishes** | | | |
| Green sturgeon<br>*Acipenser medirostris* | FT, CSC | Anadromous fish that spawns in Sacramento river. Feeds in estuaries and bays, including San Francisco Bay. | **Not Present.** Toro Creek does not provide suitable habitat. |
| South/central coast ESU steelhead<br>*Oncorhynchus mykiss irideus* | FT, CSC | Fed listing refers to runs in coastal basins from the Pajaro River south to, but not including the Santa Maria River. | **Unlikely.** No known occurrences in Toro Creek. |
| Tidewater goby<br>*Eucyclogobius newberryi* | FE, CSC | Found in the brackish waters of coastal lagoons, marshes, creeks, and estuaries. Unique among fishes of the Pacific coast, gobies are restricted to waters of low salinity in coastal wetlands. They feed along the bottom, preferring clean, shallow, slow-moving waters. | **Not Present.** Toro Creek does not provide suitable habitat. |
| **Invertebrates** | | | |
| redwood shoulderband (snail)<br>*Helminthoglypta sequoicola consors* | none | Known only from south slope of San Juan Grade, near foot, 8 miles northwest of Salinas. | **Unlikely.** No nearby occurrences. |
| mimic tryonia (California brackish water snail)<br>*Tryonia imitator* | none | Inhabits coastal lagoons, estuaries and salt marshes from Sonoma Co. south to San Diego Co. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities. | **Unlikely.** No suitable habitat in Study Area. |
| Conservancy fairy shrimp<br>*Branchinecta conservatio* | FE | Live in ephemeral or temporary pools of fresh water (vernal pools) that form in the cool, wet months of the year. Inhabit highly turbid water in vernal pools. | **Unlikely.** No documented occurrences in Monterey County. |
| Longhorn fairy shrimp<br>*Branchinecta longiantenna* | FE | Inhabit small, clear-water depressions in sandstone and clear-to-turbid clay-grass-bottomed pools in shallow swales. | **Unlikely.** No documented occurrences in Monterey County. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Vernal pool fairy shrimp *Branchinecta lynchi* | FT | Inhabit small, clear-water sandstone-depression pools, grassy swales, slumps, or basalt-flow depression pools. | **Unlikely.** No documented occurrences in Monterey County. |
| Vernal pool tadpole shrimp *Lepidurus packardi* | FE | Pools commonly found in grass bottomed swales of unplowed grasslands. Som pools are mud-bottomed and highly turbid. | **Unlikely.** No documented occurrences in Monterey County. |
| Globose dune beetle *Coelus globosus* | none | The Globose dune beetle is an inhabitant of California's coastal dune system. These beetles are primarily subterranean, tunneling through sand underneath dune vegetation. | **Unlikely.** No coastal dune habitat in Project Area. |
| Dolloff Cave spider *Meta dolloff* | SSI | Known from caves in the Santa Cruz area. This species is an orb-weaver and occurs from the cave mouth into deep twilight. | **Unlikely.** No caves known in Project Area. |
| Bay Checkerspot Butterfly *Euphydryas editha bayensis* | FT, SSI, RP | Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants. | **Unlikely.** No nearby occurrences to Project Area. |
| Smith's blue butterfly *Euphilotes enoptes smithi* | FE | Occurring in scattered populations in association with coastal dune, coastal scrub, chaparral, and grassland habitats. They spend their entire lives in association with two buckwheat plants in the genus *Eriogonum*. | **Moderate.** Host plant detected on site. |

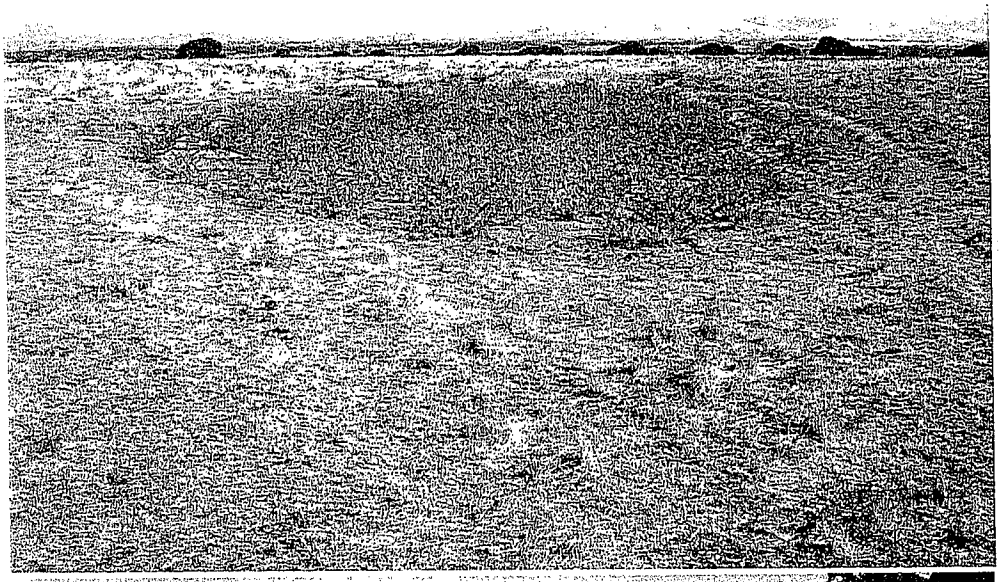
| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Monarch butterfly<br>*Danaus plexippus* | SSI | Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby. | **Unlikely**. No known occurrences near Project Area. |

*** Key to status codes:**

| | |
|---|---|
| FE | Federal Endangered |
| FT | Federal Threatened |
| FC | Federal Candidate |
| FD | Federal De-listed |
| FPD | Federal Proposed for De-listing |
| NMFS | Species under the Jurisdiction of the National Marine Fisheries Service |
| BCC | USFWS Birds of Conservation Concern |
| RP | Sensitive species included in a USFWS Recovery Plan or Draft Recovery Plan |
| SE | State Endangered |
| ST | State Threatened |
| SR | State Rare |
| CSC | CDFG Species of Special Concern |
| Draft CSC | 4 April 2000 Draft CDFG Species of Special Concern |
| CFP | CDFG Fully Protected Animal |
| SSI | CDFG Special Status Invertebrates |
| WBWG | Western Bat Working Group High Priority species |
| SLC | Species of Local Concern |
| List 1A | CNPS List 1A: Plants presumed extinct in California |
| List 1B | CNPS List 1B: Plants rare, threatened or endangered in California and elsewhere |
| List 2 | CNPS List 2: Plants rare, threatened, or endangered in California, but more common elsewhere |
| List 3 | CNPS List 3: Plants about which CNPS needs more information (a review list) |

# APPENDIX C

# REPRESENTATIVE PROJECT AREA PHOTOGRAPHS



Two of the seasonal aquatic habitat features that may provide suitable breeding habitat for the California Linderiella, California tiger salamander, Coast range newt and Western spadefoot toad.

Photos taken October 31, 2006

wra

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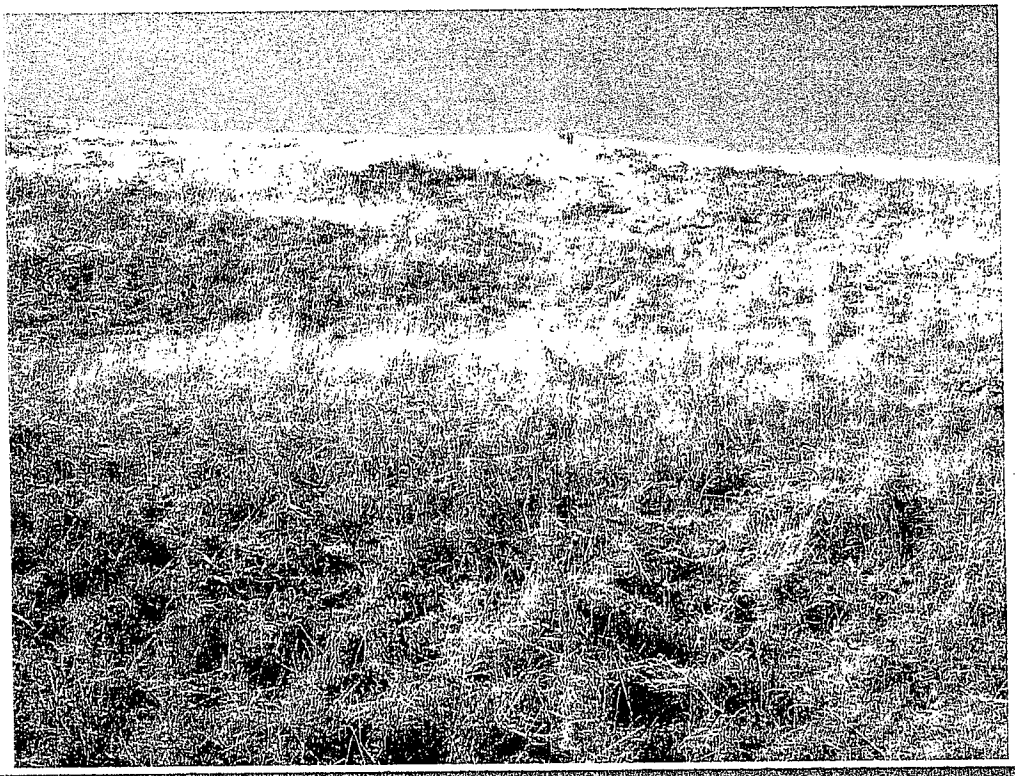

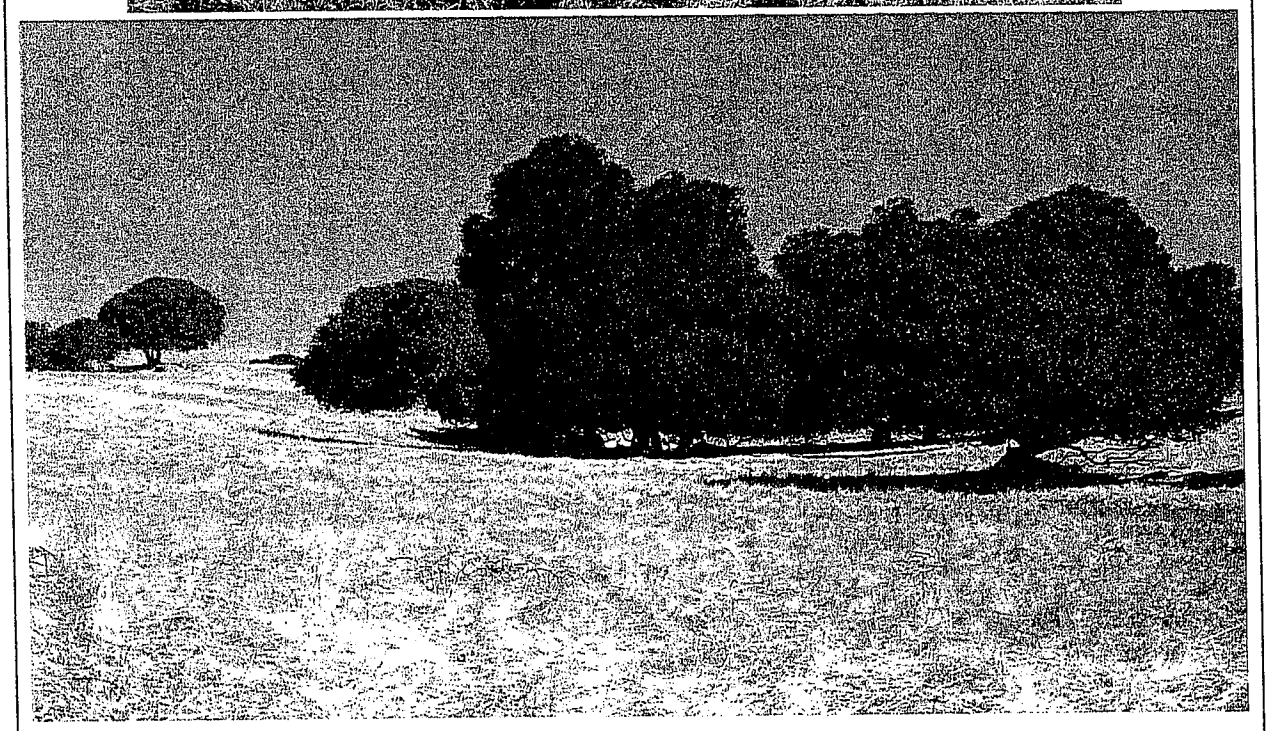

**Top**: Annual grassland community
**Bottom**: Coast live oak woodland / savanna

Photos taken October 18, 2006

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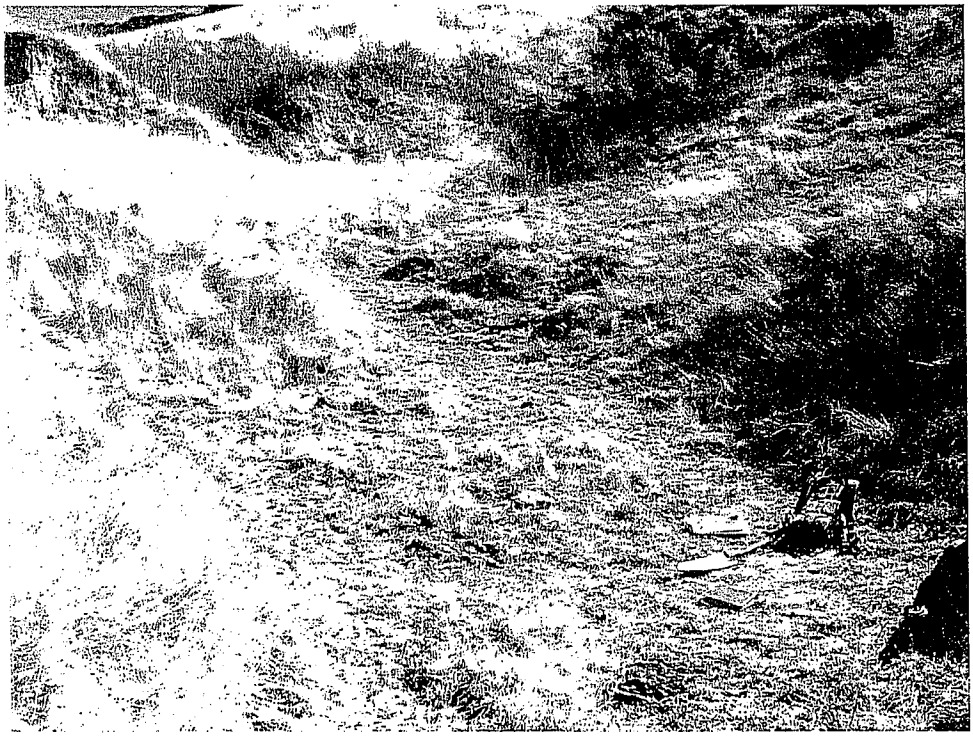

**Top**: Seep wetland feature
**Bottom**: Seasonal wetland feature at mouth of an ephemeral drainage

Photos taken October 18, 2006

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**Top**: Riparian habitat near El Toro Creek in south western portion of Project Area
**Bottom**: Ephemeral drainage in western portion of the Project Area

Photos taken October 19, 2006

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February 21, 2007

Luis Osorio, Senior Planner
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**RE: Ferrini Ranch Subdivision – Peer Review of the Biological Assessment Prepared by WRA Environmental Consultants-December 15, 2006**

Dear Mr. Osorio:

Per our scope of work, PMC biologists have reviewed the Biological Assessment of the Ferrini Ranch project prepared by WRA in December 2006. Overall, the Biological Assessment provides an adequate overview of the known and potential biological resources associated with the project site. However, the Biological Assessment does not discuss the impacts associated with implementation of the proposed project nor provides maps identifying the locations of known or potential or suspected biological resources on the project site. Without this information, project specific analyses of the project impacts on biological resources will not be possible. PMC requests that the Biological Assessment be revised to reflect project specific impacts associated with the project and discuss the mitigation value of the open space set-asides. In addition, rare plant surveys were not conducted for the project site. I recommend that the project applicant conduct rare plant surveys this spring. The information received from these surveys can be incorporated into the Draft EIR.

Specific comments on the existing content of the Biological Assessment are as follows:

- Coast live oak woodland is discussed as a "sensitive biological community" in Section 4.1 of the Biological Assessment. In Section 4.1.2, the report states that this habitat is "not classified as a sensitive community under the California Environmental Quality Act (CEQA)." Finally, Section 5.1 states that coast live oak woodland is "not (a) sensitive habitat." Please clarify these discrepancies.
- Removal of individual oak trees as potentially being in conflict with the *Monterey County Zoning Code* is discussed briefly in the coast live oak woodland/savanna portion of the text (Section 4.1.2). The Biological Assessment should incorporate the findings of the Forest Management Plan (FMP) prepared by Staub Forestry and Environmental Consulting in September 2006 and as revised per the peer review prepared by PMC in December 2006.

- There are some discrepancies in the text related to the acreage of "wetlands and waters" delineated at the site. The acreage discussed in the actual text equates to a total of 4.46 acres. The acreage shown in Table 1 for wetlands and waters is 4.96 acres. The summary states that the site "contains 3.46 acres of potential seasonal and seep wetlands," then describes the linear feet of ephemeral drainages and El Toro Creek. Please ensure the size and descriptions of potential wetlands are consistent throughout the report based on the wetland delineation conducted by WRA. The wetland delineation is currently being peer reviewed by PMC.
- In Section 4.2.1, the report states that the Ferrini Ranch Property has a moderate potential to support 26 of the 38 total plant species considered during the assessment. However, the 26 plants with moderate potential are not identified or discussed further in the text. A short species account for each plant should be added, similar to what is provided in the wildlife discussion (Section 4.2.2). The account should highlight each species' blooming period. In addition, the last sentence of the plant discussion states, "No special status plant species were observed in the Project Area during the assessment site visits." Since the field reconnaissance was performed in October, it should also be noted in the text that the site visits were made outside the normal blooming period for most potential special status species.
- Section 4.2.2 includes species accounts for the 30 special status species identified as having a high or moderate potential to occur at the project site. Many of the species accounts conclude with a statement such as, "Suitable habitat for this species is available in the Project Area." Please identify how the habitat is suitable for each species. For example, the concluding statements should be more specific in defining whether the project site provides suitable foraging habitat, suitable breeding habitat, suitable areas for cover, a migratory pathway, or various modes of suitability. Additionally, a habitat suitability statement should be added to the species account for Lawrence's goldfinch (*Carduelis lawrencei*).
- Section 5.0 provides summary subsections for both biological communities and sensitive wildlife species. Sensitive plant species, currently excluded, should also be discussed with equal importance.
- The 'sensitive wildlife' section of the summary (Section 5.2) provides additional habitat suitability data for species. This information should be moved to Section 4.2.2 and included as part of the individual species accounts. The summary should present a concise account of the habitat and species data in relation to the regulatory information presented in Section 2.0. If appropriate, possible mitigation should also be discussed in this section.
- California linderiella (*Linderiella occidentalis*) are shown on "Figure 3 – Special Status Wildlife Species within 5 miles of the Project Area" as occurring within the boundaries of the project site. This species is also listed on the CNDDB nine quad search performed for the assessment. However, California linderiella are not discussed in the text or Appendix B. For clarity, this species should either be removed from Figure 3 or discussed in the text as having no legal status as a species of concern.
- Salinas harvest mice (*Reithrodontomys megalotis distichlis*) are shown on Figure 3 as occurring within 5 miles of the project site. This species is also listed on the CNDDB nine quad search performed for the assessment. However, Salinas harvest mice are not discussed in the text or Appendix B. For clarity, this species should either be removed from Figure 3 or discussed in the text as having no regulatory status.

- Hutchinson's larkspur (*Delphinium hutchinsoniae*) and Kellogg's horkelia (*Horkelia cuneata ssp. sericea*) were shown to have a moderate potential of occurring at the project site. However, "Figure 2 – Special Status Plant Species within 5 miles of the Project Area" illustrates both of these plant species as occurring within project site boundaries. Therefore, due to the relative undeveloped condition of the site, both Hutchinson's larkspur and Kellogg's horkelia should either be upgraded to having a high potential of occurrence onsite (using the evaluation criteria presented in the assessment) or reasons for the moderate ranking need to be outlined in the text.
- In Appendix B, the Salinas ornate shrew (*Sorex ornatus salarius*) is stated to have a high potential for occurrence at the project site, because there are "known occurrences near the Project Area." However, this species is not shown on Figure 3 as occurring within the 5 mile search range from the Ferrini Property. The "known occurrences" are also not discussed in the species account. Please provide a reference for this statement and discuss the occurrences (i.e., how recent or how many) in the text.
- Section 4.2.1 refers to Section 2.3.1 but there is no such section in the Biological Assessment.
- The last paragraph of Section 4.21 should refer to the north-western portion of the project site as opposed to the south-western portion of the project site when referring to the location of El Toro Creek.

If you have any questions regarding the information contained in this letter, please contact Erika Spencer at 831.644.9174, Extension #209.

Sincerely,

**PMC**

Joyce Hunting
Senior Biologist

Cc: Erika Spencer, PMC

# Biological Assessment

## FERRINI PROPERTY, MONTEREY COUNTY CALIFORNIA

**Prepared For:**

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**Date:**
December 2007

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Appendix D- 2007 Special-Status Plant Focused Surveys report

# 1.0 INTRODUCTION

WRA, Inc. performed an assessment of biological resources for the 895-acre Ferrini Property (Project Area) outside the City of Salinas, Monterey County, California (Figure 1). The purpose of the assessment was to gather information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA) for the Ferrini Property. The Project Area is located south of the town of Salinas to the east of Highway 68, or Monterey Road. This report describes the results of the site visit, which assessed the Project Area for the (1) presence of special status species; (2) potential to support special status species; and (3) presence of other sensitive biological resources protected by local, state, and federal laws and regulations.

A biological assessment provides general information on the potential presence of sensitive species and habitats. The biological assessment is not an official protocol level survey for listed species that may be required for project approval by local, state, or federal agencies. However, specific findings on the occurrence of any species or the presence of sensitive habitats may require that protocol surveys be conducted. This assessment is based on information available at the time of the study and on site conditions that were observed on the date of the site visit.

# 2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that were applied to the field investigations.

## 2.1 Special Status Species

Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These Acts afford protection to both listed and proposed species.

In addition, California Department of Fish and Game (CDFG) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, sensitive species included in USFWS Recovery Plans, CDFG special status invertebrates and state fully protected species are all considered special status species. Although CDFG Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

In addition to regulations for special status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal.

Plant species on California Native Plant Society (CNPS) Lists 1 and 2 are also considered special status plant species. Impacts to these species are considered significant according to CEQA.

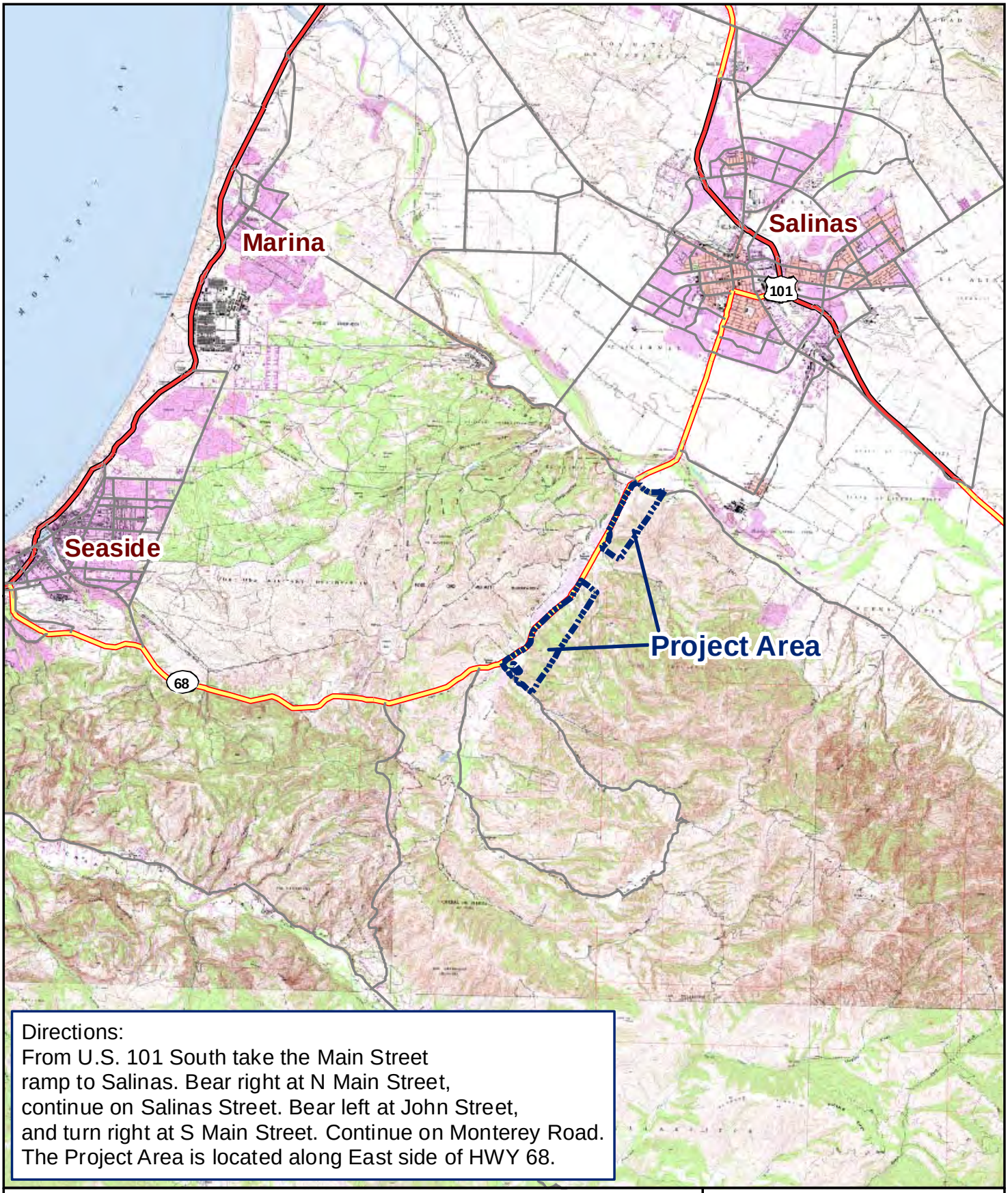


Figure 1. Location Map

N

0 1.25 2.5 5
Miles

Ferrini Property Delineation
Monterey County, CA

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Date: November 2006
Basemap: USGS Topo Quad
Map By: Michael Rochelle
Filepath: I:/Acad2000/16000/16138/gis/Arcmap/Location.mxd

CNPS List 3 plants have little or no protection under CEQA, but are included in this analysis for completeness.

Critical Habitat

Critical habitat is a term defined and used in the Federal Endangered Species Act as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The FESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the FESA "jeopardy standard." However, areas that are currently unoccupied by the species but which are needed for the species' recovery, are protected by the prohibition against adverse modification of critical habitat.

## 2.2 Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, and riparian habitat. These habitats are regulated under federal regulations (such as the Clean Water Act), state regulations (such as the Porter-Cologne Act, the CDFG Streambed Alteration Program, and CEQA), or local ordinances or policies (City or County Tree Ordinances, Special Habitat Management Areas, and General Plan Elements).

Waters of the United States

The U.S. Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act. "Waters of the U.S." are defined broadly as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands stated in the *Corps of Engineers Wetlands Delineation Manual* (1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated for sufficient duration and depth to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water line (OHW). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into "Waters of the U.S." (including wetlands) generally requires an individual or nationwide permit from the Corps under Section 404 of the Clean Water Act.

Waters of the State

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope, but has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters that may not be regulated by the Corps under Section 404. "Waters of the State" are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of

the Clean Water Act and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact "Waters of the State," are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to "Waters of the State," the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

Streams, Lakes, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFG under Sections 1600-1616 of the State Fish and Game Code. Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term stream, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG ESD 1994). Riparian is defined as, "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG ESD 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFG.

Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game (CDFG). CDFG ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its Natural Diversity Database. Sensitive plant communities are also identified by CDFG on their *List of California Natural Communities Recognized by the CNDDB*. Impacts to sensitive natural communities identified in local or regional plans, policies, regulations or by the CDFG or USFWS must be considered and evaluated under CEQA (California Code of Regulations: Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in City or County General Plans or ordinances.

Oak Woodlands

Although not considered a sensitive biological community under CEQA, woodlands containing greater than 10% canopy cover of native non-commercial oak species are subject to jurisdiction by the local county under California Public Resources Code 21083.4. This regulation requires counties to determine if an oak woodland conversion within their jurisdiction will result in a significant effect on the environment, and requires mitigation for impacts determined to be significant.

Exemptions to this regulation include projects undertaken pursuant to an approved Natural Community Conservation Plan, affordable housing projects for lower income households,

conversion of oak woodlands on agricultural land that includes land that is used to produce or process plant and animal products for commercial purposes, and certified state regulatory programs (PRC section 21080.5).

Pursuant to Monterey County Zoning Ordinance - Title 21, under Section 21.64.260 Preservation of Oak and Other Protected Trees, a permit is required for removal of oak trees that are six inches or more in diameter at two feet above ground in areas designated as Agricultural. However, removal of oak trees shall be allowed without a permit only if the following purposes and standards are satisfied:

1. Rangeland improvement;
2. Promotion of wildlife habitat;
3. Enhancement of watershed area;
4. Elimination of trees hazardous to life or property; or
5. Firewood for the use of the owners and other persons residing on site.

## 3.0 METHODS

The Project Area was traversed on foot to determine (1) plant communities present within the Project Area, (2) if existing conditions provided suitable habitat for any special status plant or wildlife species, and (3) if sensitive habitats are present. All wildlife species encountered were recorded, and are summarized in Appendix A. All plant species encountered during this and all other biological investigations of the Project Area are summarized in Appendix D.

### 3.1 Biological Communities

Prior to the site visit, the Soil Survey of Monterey County, California [U.S. Department of Agriculture (USDA) 1978] was examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the Project Area. Biological communities present in the Project Area were classified based on existing plant community descriptions described in the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). However, in some cases it was necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

#### *3.1.1 Non-sensitive Biological Communities*

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other state, federal, and local laws, regulations and ordinances. These communities may, however, provide suitable habitat for some special status plant or wildlife species which are identified and described in Section 4.2 below.

### *3.1.2 Sensitive Biological Communities*

Sensitive biological communities are defined as those communities that are given special protection under CEQA and other applicable federal, state, and local laws, regulations and ordinances. Applicable laws and ordinances are discussed above in Section 2.0. Special methods used to identify sensitive biological communities are discussed below.

Wetlands and Waters

On October 17-19, 2006, a jurisdictional wetland delineation was conducted in the Project Area to determine if any wetlands and "waters" potentially subject to jurisdiction by the Corps, RWQCB, or CDFG were present. The delineation was based on methods contained in the Corps Manual (Environmental Laboratory 1987). The Project Area was evaluated for the presence of wetland indicators including dominance by hydrophytic plant species, presence of hydric soils, and presence of wetland hydrology. A complete description of methods used and results obtained during the delineation can be found in *Preliminary Determination of Wetlands and Waters of the U.S. for the Ferrini Property* (WRA 2006). A verification field visit with the Corps occurred on May 23, 2007, and revised delineation maps were submitted to the Corps in July 2007. The revised areas are shown in Figures 2.0 and 2.1. The Corps issued its verification on December 18, 2007 including a determination of those areas within its jurisdiction under Section 404 of the Clean Water Act. While the Corps found that only El Toro Creek and its tributary were under its jurisdiction, the other wetland features may be subject to jurisdiction as "waters of the State" by the Regional Water Quality Control Board. Wetland and streams in the Project Area are included in the descriptions of sensitive biological communities in Section 4.1.2 below.

Other Sensitive Biological Communities

The Project Area was evaluated for the presence of other sensitive biological communities, including riparian areas and sensitive plant communities recognized by CDFG. If present in the Project Area, these sensitive biological communities are described in Section 4.1.2 below.

## 3.2 Special Status Species

### *3.2.1 Literature Review*

Potential occurrence of special status species in the Project Area was evaluated by first determining which special status species occur in the vicinity of the Project Area through a literature and database search. Database searches for known occurrences of special status species focused on the Spreckels 7.5 minute USGS quadrangle and the eight surrounding USGS quadrangles. The following sources were reviewed to determine which special status plant and wildlife species have been documented to occur in the vicinity of the Project Area:

- California Natural Diversity Database records (CNDDB) (CDFG 2007)
- USFWS quadrangle species lists (USFWS 2007)
- CNPS Electronic Inventory records (CNPS 2007)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication "Amphibians and Reptile Species of Special Concern in California" (Jennings 1994)
- A Field Guide to Western Reptiles and Amphibians (Stebbins, R.C. 2003)

- Fairy Shrimps of California's Puddles, Pools and Playas (Eriksen and Belk 1999)
- University of California at Davis Information Center for the Environment Distribution Maps for Fishes in California (2007)
- National Marine Fisheries Service Distribution Maps for California Salmonid Species (2007)
- Vegetation Mapping of the Ferrini Ranch (Denise Duffy and Associates 2006)
- 2007 Special-Status Plant Focused Surveys, Ferrini Ranch, Monterey County, CA (Denise Duffy and Associates 2007)
- Forest Management Plan Ferrini Ranch Proposed Subdivision in Monterey County, California (Staub Forestry and Consulting 2006)

*3.2.2 Site Assessment*

A site visit was made to the Project Area to search for suitable habitats for species identified in the literature review as occurring in the vicinity. The potential for each special status species to occur in the Project Area was then evaluated according to the following criteria:

1) Not Present. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) and/or protocol level surveys have determined no presence.

2) Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

3) Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

4) High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

5) Present. Species is observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

The site assessment is intended to identify the presence or absence of suitable habitat for each special status species known to occur in the vicinity in order to determine its potential to occur in the Project Area. The site visit does not constitute a protocol-level survey and is not intended to determine the actual presence or absence of a species; however, if a special status species is observed during the site visit, its presence will be recorded and discussed. Appendix B presents the evaluation of potential for occurrence of each special status plant and wildlife species known to occur in the vicinity of the Project Area with their habitat requirements and rationale for the classification based on criteria listed above.

## 4.0 RESULTS

The Project Area is located to the east of Highway 68, in between the Cities of Salinas and Monterey. The site is approximately 895 acres and is bisected into a north and south area by Toro Regional Park. Both areas are historically and currently grazed by livestock. The majority of the site is characterized by oak woodland and annual grassland with some areas of scrub present in upper slopes of drainages and south facing slopes. Many of the species detected in the Project Area are typically associated with these habitats. The following sections present the results and discussion of the biological assessment within the Project Area.

### 4.1 Biological Communities

Non-sensitive biological communities in the Project Area include coast live oak woodland / savannah, annual grassland, and coastal scrub. Two sensitive biological communities were found in the Project Area: riparian woodland, and wetlands and waters. Acreages and descriptions of each vegetation type were derived from a previous vegetation map of the Project Area (Denise Duffy and Associates 2006) and observations during the October 2006 site visits by WRA. Descriptions for each biological community are contained in the following sections. Biological communities within the Project Area are shown in Figure 2.

Table 1. Biological Communities within the Project Area.

| Community Type | Area (acres) |
|---|---|
| Coast live oak woodland / savannah | 437 |
| Annual grassland | 402 |
| Coastal scrub | 30 |
| Riparian woodland | 12 |
| Wetlands and waters (incl streams and ponds) | 5 |
| Developed | 9 |
| **Total Project Area Size** | 895 |

#### *4.1.1 Non-sensitive Biological Communities*

<u>Coast Live Oak Woodland / Savannah</u>

Approximately 437 acres of coast live oak woodland and savannah are present in the Project Area. Oak woodland communities in the Project Area are dominated by open to nearly closed canopies of coast live oak (*Quercus agrifolia*) with grass or shrub under stories. Savannahs are transitional between woodlands and grassland with trees more widely spaced and a grassland dominated understory. In the Project Area the denser oak woodlands are found on the more mesic, north-facing slopes and canyon bottoms. The densest oak woodlands have an understory dominated by oak leaf duff and sparse herbaceous vegetation. The oak savannahs are found on the drier, east-facing slopes and ridge tops. In their assessment of the oak woodlands in the Project Area, Staub (2006) found that the proposed project would impact only a small percentage of the oak trees on site (3.2%).

Annual Grassland

Approximately 402 acres of annual grassland were observed in the Project Area. Annual grassland typically occurs in open areas of valleys and foothills throughout California, usually on fine textured clay or loam soils that are somewhat poorly drained (Holland 1986). Annual grassland is typically dominated by non-native annual grasses and forbs along with scattered native grasses and wildflowers. Plant species observed in this area included wild oat (*Avena sativa*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian rye-grass (*Lolium multiflorum*), and rattail fescue (*Vulpia myuros*). Present at very low percent cover are native perennial grasses including needlegrass (*Nasella* sp.). Annual grassland in the Project Area has a long history of intensive disturbance from farming and grazing, and grazing still occurs today.

Coastal Scrub

Approximately 30 acres of coastal scrub were observed in the Project Area. Coastal scrub communities are characterized by moderate to low-growing evergreen and drought-tolerant shrubs adapted to shallow soils. In the Project Area, this community type is dominated by California black sage (*Salvia melifera*) or coyote brush (*Baccharis pilularis*). Sub-dominant species include sticky monkey flower (*Mimulus aurantiacus*) and California sagebrush (*Artemisia californica*). This community occurs mostly on drier, steep south-facing slopes.

*4.1.2 Sensitive Biological Communities*

Riparian Habitat

Approximately 12 acres of riparian habitat are present in the Project Area. A riparian corridor exists within the west corner of the project site adjacent to San Benancio Road at the confluence of El Toro and Harper Creeks. The riparian habitat in this area is dominated by willows (*Salix* spp.) and California bay laurel (*Umbellularia californica*). Dominant understory species include California blackberry (*Rubus ursinus*), California buckeye (*Aesculus californica*), mugwort (*Artemisia douglasiana*), and poison oak (*Toxicodendron diversilobum*).

Wetlands and Waters

Approximately 3.61 acres of wetlands are present in the Project Area (WRA, 2006). Wetlands in the Project Area consist of seasonal wetlands and seep wetlands. Seasonal wetlands are situated within depressions or flat areas that are inundated for a duration sufficient to sustain a community of wetland-adapted plant species and induce hydric soil conditions, although the water source is ephemeral. In the Project Area, seasonal wetlands generally occur in depressions and flat areas at the mouths of ephemeral drainages. Seep wetlands occur on foot slopes and toe slopes in the Project Area where groundwater intersects the soil surface. Seep wetlands in the Project Area range from ephemeral to perennial with some seeps showing soil saturation during the October site visit. All wetlands in the Project Area were dominated by wetland adapted plant species including various rushes particularly iris-leaved rush (*Juncus xiphioides*) and Mexican rush (*Juncus mexicanus*), cut-leaf plantain (*Plantago coronopus*), bermudagrass (*Cynodon dactylon*), and Hyssop's loosestrife (*Lythrum hyssopifolia*). None of the wetlands were determined to be jurisdictional under Section 404 of the Clean Water Act as determined by the Corps of Engineers (December 18, 2007, Corps of Engineers, San Francisco District); however, they may still be considered "waters of the State" by the Regional Water Quality Control Board.

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nnual Grassland (402 acres)
ak (437 acres)
parian (12 acres)
crub (30 acres)
etland/Waters (5 acres)
eveloped (9 acres)
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nnual Grassland (402 acres)
ak (437 acres)
iparian (12 acres)
crub (30 acres)
etland/Waters (5 acres)
eveloped (9 acres)
orted as total over entire Project Area)

Approximately 12,249 linear feet (0.77 acres) of ephemeral drainages are present in the Project Area. Ephemeral drainages occur in swales where water flow is restricted to peak rainfall events, and has created a defined drainage channel with a clearly defined ordinary high water mark. Ephemeral drainages occur throughout the Project Area generally flowing from east to west. No ephemeral drainages within the Project Area were determined to be jurisdictional under Section 404 of the Clean Water Act following a site visit by Corps personnel in May 2007. A final determination letter was issued by the Corps on December 18, 2007.

Approximately 2,099 linear feet (0.17 acres) of perennial waters occur at the confluence of El Toro Creek and Harper Creek in the western-most portion of the Project Area. This portion of El Toro Creek is perennial in all but the driest of years. As a result, a riparian corridor can be found in this area of the Project Area. These perennial waters were determined to be Waters of the U.S. under Section 404 of the Clean Water Act in its verification letter of December 18, 2007.

## 4.2 Special Status Species

### *4.2.1 Plants*

Based upon a review of the resources and databases given in Section 3.2.1, 38 special status plant species have been documented in the vicinity of the Project Area. A map of CNDDB plant occurrences in the vicinity of the Project Area is presented in Figure 3.

Rare plant surveys were conducted in April, May, and September of 2007 by Denise Duffy and Associates (Denise Duffy and Associates, 2007) to verify the presence or absence of these species. The results of the rare plant surveys are summarized in Appendix D. Based on this rare plant survey, the Project Area hosts three special-status species: Pacific Grove clover (*Trifolium polyodon*, List 1B), Mt. Diablo cottonweed (*Micropus amphibolus*, List 3), and Congdon's tarplant (*Hemizonia = Centromadia parryi ssp. congdonii*, List 1B). Descriptions of their habitats and distribution in the Project Area can be found in Appendix D. A brief description of each is provided below.

**Pacific Grove clover (*Trifolium tridentatum* var. *polyodon*, syn. *Trifolium polyodon*). CNPS List 1B Species.** Pacific Grove clover is a variety of annual clover that occurs in closed-cone coniferous forests, coastal prairies, meadows and seeps, and mesic grasslands at elevations from 5 to 120 meters. It is only known from Monterey County, and blooms between April and June. The species is found primarily in wetlands, seasonally mesic grasslands, or woodland habitats. Wetlands and mesic oak woodlands in the southern portion of the Project Area support a number of populations of this species. A description and preliminary mapping of this species within the Project Area is presented in Appendix D.

**Mt. Diablo cottonweed (*Micropus amphibolus*). CNPS List 3 Species.** Mount Diablo cottonweed is an annual herb that occurs in broadleaved upland forests, chaparral, cismontane woodlands, and rocky grasslands at elevations from 45 to 825 meters. It blooms between March and May. Mt. Diablo cottonweed is found in grassy areas of the oak savannah habitats in the Project Area (Denise Duffy and Associates 2007).

**Congdon's tarplant (*Hemizonia = Centromadia parryi* ssp. *congdonii*). CNPS List 1B Species.** Congdon's tarplant is an annual herb that occurs in grasslands at elevations from 1 to 230 meters. It blooms between June and November. The lower elevation grasslands in the Project Area host several populations of this species (Denise Duffy and Associates 2007).

Appendix B summarizes the occurrence, blooming period, and specific habitat requirements for each special status plant species in the vicinity of the Project Area.

*4.2.2 Wildlife*

Seventy-five special status species of wildlife have been recorded in the vicinity of the Project Area. Appendix B summarizes the potential for each of these species to occur in the Project Area. Figure 4 identifies six special status wildlife species located within 5 miles of the Project Area. Twenty-seven special status wildlife species have a moderate or high potential to occur in the Project Area based on either proximity to the site or availability of suitable habitat. Only one special status species was observed during the biological visit site visit, Loggerhead Shrike (*Lanius ludovicianus*).

USFWS protocol level surveys were completed in 2007 by Denise Duffy and Associates for the California red-legged frog (*Rana aurora draytonii*) for those portions of the site where potential habitat occurs. These surveys were conducted in Toro Creek within and adjacent to the Project Area. The protocol requires eight surveys, six during the breeding season (January through June) and two during the nonbreeding season (July through September). No red-legged frogs were observed and the species is not likely to be found in this area as other surveys in the vicinity have also been negative (Denise Duffy and Associates, 2002).

Protocol level surveys are being completed by Denise Duffy and Associates for the Western Burrowing Owl (*Athene cunicularia hypugea*). CDFG protocol requires four nesting season surveys (April 15-July 15) and four winter surveys (December through January). No Burrowing Owl or Burrowing Owl sign have been detected to date during these surveys, nor have any other surveys detected Burrowing Owl on the site and the species is presumed to be unlikely for the site.

Special status wildlife species that were observed, or have a moderate or high potential to occur in the Project Area are discussed below.

*Special Status Species* Observed *in the Project Area*

**Loggerhead Shrike (*Lanius ludovicianus*), CDFG Species of Special Concern.** The Loggerhead Shrike is a common resident and winter visitor in lowlands and foothills throughout California. It prefers open habitats with scattered trees, shrubs, posts, fences, utility lines or other perches. Nests are usually built on a stable branch in a shrub or small tree with dense foliage and are usually well-concealed. Suitable nesting and foraging habitat is available in the Project Area. This species was seen during the site visit.

*Special Status Species With a* High Potential *to Occur in the Project Area*

**Monterey (=Salinas) ornate shrew (*Sorex ornatus salarius*), CDFG Species of Special Concern.** Little is known about this shrew, however, ornate shrews are typically found in brackish water marshes, along streams, in brushy areas of valleys and foothills and in forests. Suitable habitat is available for this species in the oak woodland and riparian habitat of Toro Creek in the Project Area. This species is known to occur in Fort Ord, near the intersection of Watkins Gate Rd. and West Camp Rd., S of Watkins Gate (MVZ 2005).

**Monterey dusky-footed woodrat (*Neotoma fuscipes luciana*), CDFG Species of Special Concern.** This species inhabits hardwood forests of moderate canopy with a moderate to dense

understory. Nests are constructed out of leaves, shredded grass, and other material. Suitable habitat for this species exists in the oak woodland and Toro Creek riparian area.

**American badger (*Taxidea taxus*), CDFG Species of Special Concern.** Badgers occur in drier open stages of most scrub, forest, and herbaceous habitats where friable soils and prey populations are present. Suitable habitat for this species exists in the annual grassland and coastal scrub of the Project Area. Prey species, such as the California ground squirrel (*Spermophilus beecheyi*), are also present.

**Cooper's Hawk (*Accipiter cooperi*), CDFG Species of Special Concern.** This hawk is associated with woodland and forest habitats throughout California. Although nest sites are usually found in isolated areas, this species frequently occurs in urban habitats in winter and during migration. The Project Area contains suitable nesting and foraging habitat for this species in the oak woodland and riparian corridor.

**Golden Eagle (*Aquila chrysaetos*), CDFG Fully Protected Species.** Golden Eagles occur in a variety of habitats throughout California. This large raptor typically nests in large isolated trees or cliffs. Golden Eagles forage over a large areas, feeding primarily on ground squirrels, rabbits, large birds, and carrion. This species is not expected to nest in the Project Area but may forage in the Project Area in the oak savannah and annual grassland communities.

**White-tailed Kite (*Elanus leucurus*), CDFG Fully Protected Species.** White-tailed Kites are associated with annual grasslands, agricultural areas, scrub habitats, wet meadows, and emergent wetlands throughout the lower elevations of California. Nesting generally occurs in shrubs or small trees. Individuals are likely to forage over open areas of the site throughout the year. The Project Area contains suitable nesting habitat in the oak savannah and suitable foraging habitat in the savannah and annual grasslands.

**California Horned Lark (*Eremophila alpestris actia*), CDFG Species of Special Concern.** In nonagricultural lands, this species typically inhabits areas of short vegetation or bare ground, including shortgrass prairie, deserts, brushy flats, and alpine habitat. Suitable breeding and foraging habitat for this species is available in the Project Area in the oak savannah and annual grassland.

**California tiger salamander (*Ambystoma californiense*), Federal Threatened, CDFG Species of Concern.** The California tiger salamander (CTS) is restricted to grasslands and low-elevation foothill regions in California (generally under 1500 feet) where it uses seasonal aquatic habitats for breeding. The salamanders breed in natural ephemeral pools, or ponds that mimic ephemeral pools (stock ponds that go dry), and occupy substantial areas surrounding the breeding pool as adults. California tiger salamanders spend most of their time in the grasslands surrounding breeding pools. They survive hot, dry summers by estivating (going through a dormant period) in refugia (such as burrows created by ground squirrels and other mammals and deep cracks or holes in the ground) where the soil atmosphere remains near the water saturation point. During wet periods, the salamanders may emerge from refugia and feed in the surrounding grasslands. California tiger salamander potential breeding habitat requires 10 weeks of standing water extending into April (USFWS 2003).

Pond 18 is the only aquatic feature that may be capable of sustaining the aquatic phase of the California tiger salamander, in the northern portion of the southern parcel of the Project Area. If breeding does occur in this pond, adjacent estivation habitat exists in the form of ground squirrel

burrows , gopher holes and expansion cracks. During the 2006-2007 rainy season, Pond 18 did not pond and no CTS were observed. Protocol level surveys using methods approved by the U.S. Fish and Wildlife Service are currently underway at this water feature.

The Salinas Valley CTS population is largely a hybrid swarm of CTS with most samples containing high frequencies of introduced alleles (Fitzpatrick, Shaffer 2007). The only ostensibly pure native samples from the Salinas Valley were from an isolated vernal pool complex on Old Fort Ord Public Lands (Fitzpatrick, Shaffer 2007). A known breeding population of CTS and hybrid tiger salamanders exists in Toro Pool, approximately 0.8 kilometers southwest of Pond 18. The Service has been reviewing genetic data in this region and making determinations of hybrid presence on a case by case basis (J. Martin, USFWS, pers. comm. 2007). Hybrid species are usually not afforded protection under the Endangered Species Act.

**Coast Range newt (*Taricha torosa torosa*), CDFG Species of Concern.** This amphibian lives in terrestrial habitats and will migrate over 1 kilometer to breed in ponds, reservoirs and slow moving streams. This species is listed as a state species of concern from Monterey County south. The seasonal aquatic features and riparian habitat in the Project Area may provide suitable breeding habitat for this species.

**California horned lizard (*Phrynosoma coronatum frontale*), CDFG Species of Special Concern.** The California horned lizard occurs in several habitat types, ranging from areas with an exposed sandy-gravelly substrate containing scattered shrubs, to clearings in riparian woodlands, to dry uniform chamise chaparral to annual grassland (Jennings and Hayes 1994). Suitable foraging, breeding and hibernation habitat for this species is available in these areas of the Project Area.

*Special Status Species With a* Moderate Potential *to Occur in the Project Area*

**Pallid bat (*Antrozous pallidus*), CDFG Species of Special Concern.** The pallid bat is found in a variety of low elevation habitats throughout California. It selects a variety of day roosts including rock outcrops, mines, caves, hollow trees, buildings, and bridges. Night roosts are usually found under bridges, but also in caves, mines, and buildings. Pallid bats are sensitive to roost disturbance. Hollow trees in the oak woodland provide potential roost habitat for this species.

**Northern Harrier (*Circus cyaneus*). CDFG Species of Special Concern.** Northern Harrier populations have decreased in recent decades but can be locally abundant where suitable habitat exists free of disturbance. Northern Harriers frequent meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands. Open areas of tall, dense grasses, moist or dry shrubs, and edges are used for nesting, cover, and feeding. The grassland in the Project Area may provide suitable nesting and foraging habitat for this species.

**Sharp-shinned Hawk *(Accipiter striatus*), CDFG Species of Special Concern.** This species is a fairly common migrant and winter visitor throughout California and is found in a variety of habitats, especially woodlands. It usually nests in dense small-tree stands of conifers near water. Preferred roost sites are within intermediate to high-canopy forest areas. This species is not expected to nest in the Project Area but may forage in the area during the non-breeding season.

**Ferruginous Hawk (*Buteo regalis*), CDFG Species of Special Concern.** The Ferruginous Hawk is a winter visitor to open grasslands, sagebrush flats, desert scrub, low foothills surrounding

valleys, and fringes of pinyon-juniper habitats. This species may forage in the annual grassland of the Project Area during the non-breeding season.

**Prairie Falcon (*Falco mexicanus*), CDFG Species of Special Concern.** This species is an uncommon resident and migrant that ranges from southeastern deserts northwest along the Coast Ranges and Sierra Nevada. It occurs in many habitats, but typically is associated with grasslands, savannahs, rangeland, agricultural areas, and desert scrub. This falcon typically nests on cliffs. This species is not expected to nest in the Project Area but may forage in the Project Area.

**American Peregrine Falcon (*Falco peregrinus anatum*), CDFG Fully Protected Species**. The American Peregrine Falcon is a Federal Delisted, State Endangered, and California Fully Protected Species. Historical DDT contamination is the primary source of decline for this species. It winters throughout the Central Valley and occurs as a vagrant in a wide variety of habitats. This species is not expected to nest in the Project Area but may forage in the Project Area.

**Long-eared Owl (*Asio otus*), CDFG Species of Special Concern.** Nesting Long-eared Owls range from coastal lowlands to interior deserts, preferring riparian groves, planted woodlots, and belts of live oaks paralleling streams (Shuford, 1993). Generally, this owl frequents dense, riparian and live oak thickets near meadow edges, and nearby woodland and forest habitats (Zeiner, et al., 1990). Suitable nesting and foraging habitat are available in the oak woodland and riparian habitat of the Project Area.

**Lewis's Woodpecker (*Melanerpes lewis*), USFWS:BCC.** Lewis's Woodpecker is a resident or winter migrant in California, more commonly found in mountain ranchlands. Preferred habitats include open pine-oak woodlands, ponderosa pine woodland, and oak woodlands. This spcies is a cavity nester that forms loose colonies, often in a dead tree stump or limb. Suitable nesting and foraging habitat are available in the oak woodland of the Project Area.

**Olive-sided Flycatcher (*Contopus cooperi)*, UFWS:BCC-nesting.** Within the coniferous forest, this species is most often associated with forest openings, forest edges near natural openings (e.g., meadows, canyons, rivers) or human-made openings (e.g., harvest units), or open to semiopen forest stands (Altman, 2000). Suitable nesting and foraging habitat is available in the oak woodland and riparian habitat of the Project Area.

**Bell's Sage Sparrow *(Amphispiza belli belli*), CDFG Species of Special Concern**. Bell's Sage Sparrow is an uncommon to fairly common but localized resident breeder in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains. Suitable coastal scrub breeding and foraging habitat is available in the Project Area.

**Yellow Warbler (*Dendroica petechia*), CDFG Species of Special Concern.** Yellow Warblers prefer dense riparian vegetation for breeding. Yellow Warbler populations have declined due to brood parasitism by brown-headed cowbirds (*Molothrus ater*) and habitat destruction. This species' diet is primarily insects supplemented with berries. Toro Creek may provide suitable breeding and foraging habitat.

**Lawrence's Goldfinch (*Carduelis lawrencei*), FWS:BCC.** Lawrence's goldfinch is endemic to the arid woodlands of California and northern Baja. It inhabits oak woodlands, chaparral, riparian woodlands, pinyon-juniper associates, and weedy water during the breeding season. Suitable breeding and foraging habitat is available in the oak woodland, riparian, pond and scrub habitats of the Project Area.

**Western spadefoot toad (*Spea hammondii*), CDFG Species of Special Concern.** The western spadefoot toad ranges throughout the Central Valley and adjacent foothills and can be quite common where it occurs. Western spadefoot toads spend most of the year in underground burrows they construct themselves. Breeding and egg laying occurs in shallow, temporary pools formed by heavy winter rains. Grasslands with shallow temporary pools are optimal habitat for this species. The seasonal aquatic features in the Project Area, such as Pond 18, may provide suitable breeding habitat dependent on the degree of ponding. Western Spadefoot may only require a week of ponding to transform from egg to subadult.

**Silvery legless lizard (*Anniella pulchra pulchra*), CDFG Species of Special Concern.** This reptile occurs primarily in areas with sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, or pine-oak woodland; or sycamores, cottonwoods, or oaks that grow on stream terraces (Jennings and Hayes 1994). Suitable foraging, breeding and hibernation habitat for this species is available in the sandy or loose loamy soils of the riparian, oak woodland and scrub habitat of the Project Area.

**Two-striped gartersnake (*Thamnophis hammondii*), CDFG Species of Special Concern**. *Thamnophis hammondii* commonly inhabits perennial and intermittent streams having rocky beds bordered by willow thickets or other dense vegetation. Two-striped garter snakes also inhabit large sandy riverbeds, such as the Santa Clara River (Ventura County), if a strip of riparian vegetation is present along the stream course. This taxon also utilizes stock ponds and other artificially-created aquatic habitats (e.g., Lake Hemet [Riverside County]) if a dense riparian border of emergent vegetation and amphibian and fish prey are present (CDFG 1994). The Toro Creek riparian area may provide suitable foraging, breeding and hibernation habitat for this species.

**Southwestern pond turtle (*Clemmys marmorata pallida*), CDFG Species of Concern.** The southwestern pond turtle is an aquatic turtle that leaves aquatic habitat to reproduce, estivate, and overwinter. Aquatic habitat requires basking sites such as mats of submergent vegetation, logs, or banks. Western pond turtles also require an upland nesting site in the vicinity of an aquatic site. Nests are typically dug in a substrate with a high clay or silt fraction where the female moistens the site and excavates the nest prior to nesting. The Toro Creek riparian area may provide suitable foraging, breeding and hibernation habitat for this species.

Many of the wildlife observed in the Project Area are commonly found species, and many are adapted to occupying disturbed or urban areas. A list of species observed during the site visit is contained in Appendix A. One special status wildlife species was observed: Loggerhead Shrike (*Lanius ludovicianus*).

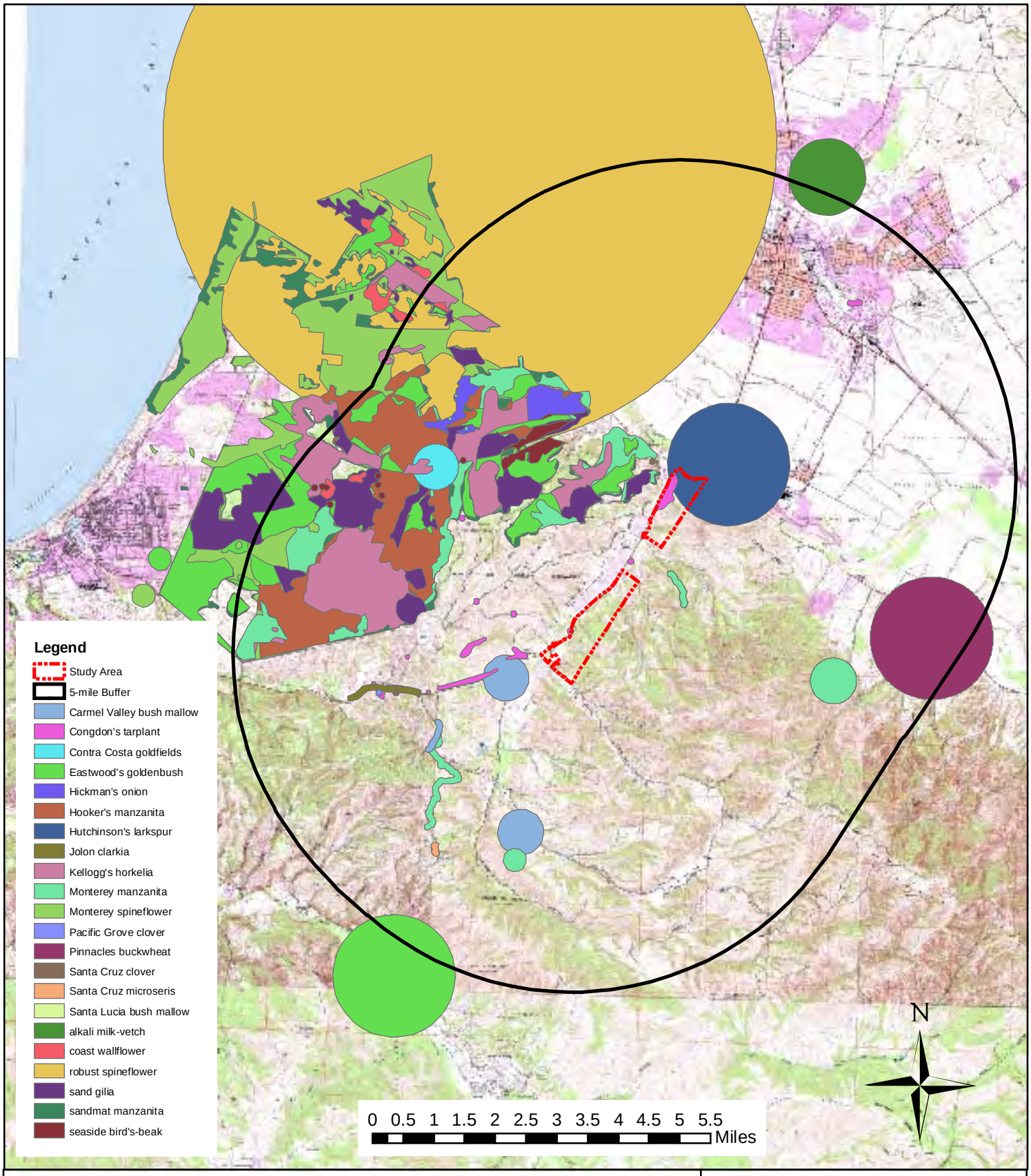


Figure 3. Special Status Plant Species within 5 miles of Project Area.

Ferrini Property
Monterey County, California

wra
ENVIRONMENTAL CONSULTANTS

Date: September 2007
Basemap: USGS Topo Quad
Map By: Derek Chan
Filepath:I:\ACAD2000\16138\GIS\ArcMap\Fig3_CNDDB_Plant_20070921.mxd

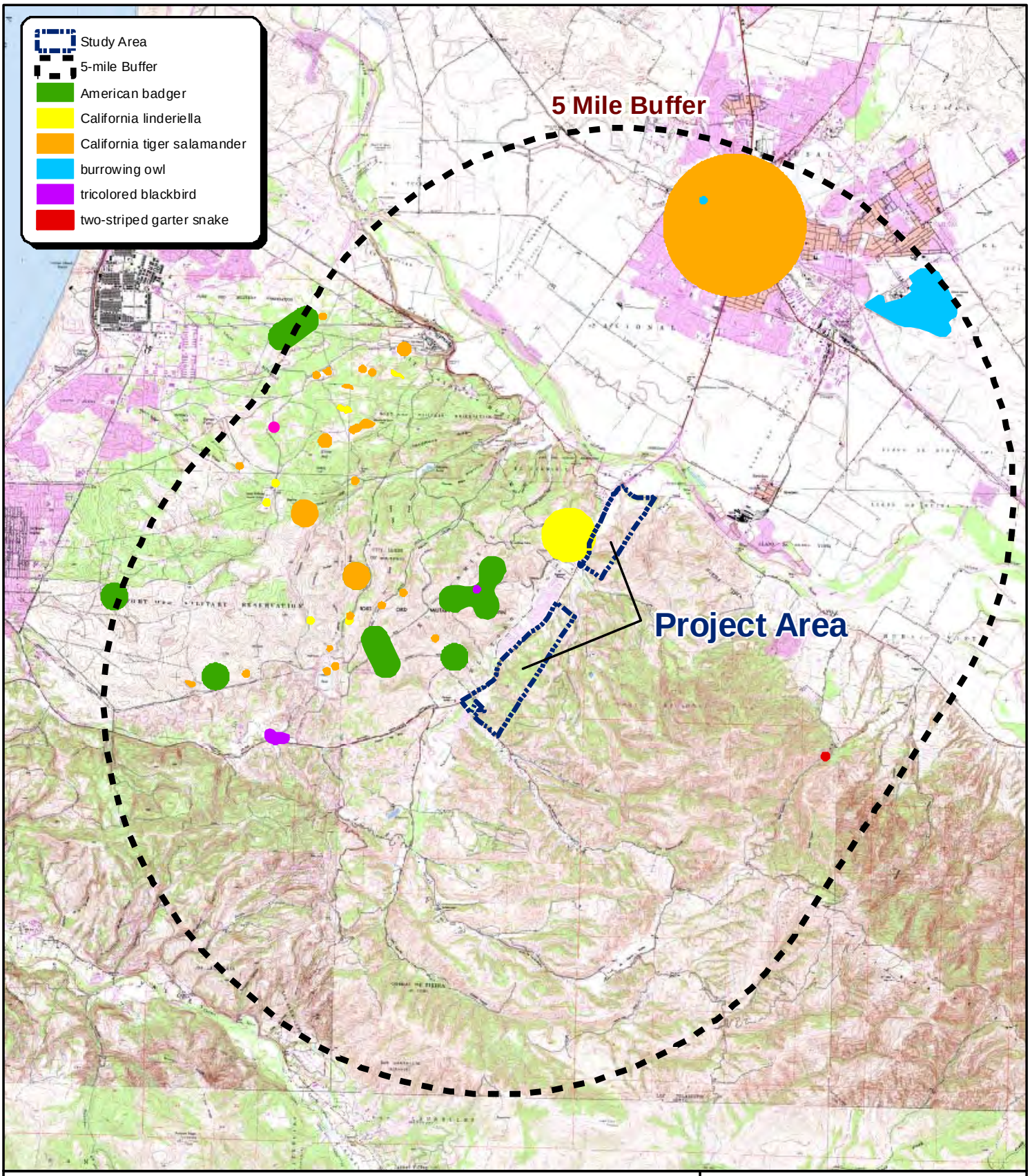


Figure 4. Special Status Wildlife Species within 5 miles of Project Area.

N

0 1 2 4 Miles

Ferrini Property
Monterey County, California

wra
ENVIRONMENTAL CONSULTANTS

Date: November 2007
Basemap: USGS Topo Quad
Map By: Michael Rochelle
Filepath: I:\ACAD2000\16138\GIS\ArcMap\Fig4_CNDDB_Wildlife.mxd

## 5.0 SUMMARY

Two sensitive plant communities were identified within the Project Area. Three special status plant species occur in the Project Area, and twenty-seven special status wildlife species have a moderate or high potential to occur within the Project Area.

### 5.1 Biological Communities

Most of the Project Area is comprised of coast live oak woodland / savannah and annual grassland which are not sensitive habitats. Oak tree removal will be subject to the replacement requirements set forth in the Monterey Zoning Ordinance. The Project Area also contains 3.61 acres of isolated seasonal and seep wetlands, 0.77 acres of isolated seasonal ponds, over 12,000 linear feet of isolated ephemeral drainages. However, according to a final verification by the Corps, only the 2,099 linear foot segment of El Toro Creek is a verified "Waters of the U.S."; however, the isolated wetlands may still be considered as "waters of the State" by the Regional Water Quality Control Board. In addition, the Project Area contains 12 acres of riparian woodlands which may fall under the jurisdiction of CDFG.

### 5.2 Special Status Plant Species

Of the 38 special status plant species known to occur in the vicinity of the Project Area, three species, Pacific Grove clover, Mt. Diablo cottonweed, and Congdon's tarplant, were found in the Project Area during rare plant surveys performed in April, May, and September of 2007 (Denise Duffy and Associates, 2007). Maps depicting the locations of Pacific Grove clover and Congdon's tarplant in the Project Area are provided in Appendix D.

### 5.3 Sensitive Wildlife Species

Twenty-seven special status wildlife species have a moderate or high potential to occur within the Project Area. Most of these species are avian and bat species. Trees, shrubs, and grassland may be potential nesting habitat for some avian species. In addition, the large trees in the Project Area may provide roosting or hibernating habitat for a number of bat species. Standard mitigation measures including avoidance of nesting/maturity seasons or preconstruction surveys are a standard requirement to avoid harm to young.

Mammalian species associated with the habitats found in the Project Area or with nearby occurrences include: American badger, Monterey shrew and Monterey dusky-footed woodrat. The shrew and woodrat are more likely to be found in riparian areas such as Toro Creek whereas the badger may occur where suitable soil is present for burrowing. To date, none of these species have been observed on the site.

Some seasonal aquatic features in the Project Area may provide suitable habitat for sensitive species including: California tiger salamander, Coast Range newt and Western spadefoot toad. However, the extent of ponding in the seasonal ponds and wetlands in the Project Area may limit which species may utilize them for breeding habitat. For example, while the Western spadefoot toad may only require ponding of less than a week to develop from egg to subadult, the California tiger salamander and Coast Range newt require approximately three months.

Pond 18 is the only aquatic feature that may be capable of sustaining the aquatic phase of the California tiger salamander. Protocol level surveys are currently underway around this feature

(Josh Harwayne, pers. comm.). The Coast Range newt may also be capable of breeding in Pond 18 and Toro Creek. Suitable upland estivation habitat may be available for the tiger salamander near Pond 18 in the form of gopher holes and ground squirrel burrows.

Protocol level surveys have been conducted for several species that were considered as potentially occurring on the site; however, none have been observed. Protocols surveys by qualified biologists from Denise Duffy and Associates were conducted or underway for two species, the California red-legged frog and the Western burrowing owl. All suitable habitat was included in the surveys. No California red-legged frog were observed and the species is presumed absent. The burrowing owl survey has been negative to date and none have been seen during other site visits.

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# APPENDIX A

# LIST OF OBSERVED ANIMAL SPECIES

| Appendix A: List of Observed Animal Species | |
|---|---|
| **Mammals** | |
| *Odocoileus hemionus columbianus* | Coyote |
| *Felis rufus* | Bobcat (tracks) |
| *Mephitis sp.* | Skunk (tracks) |
| *Spermophilus beecheyi* | California ground squirrel |
| **Birds** | |
| *Branta canadensis* | Canada Goose |
| *Cathartes aura* | Turkey Vulture |
| *Buteo lineatus* | Red-shouldered Hawk |
| *Buteo jamaicensis* | Red-tailed Hawk |
| *Falco sparverius* | American Kestrel |
| *Zenaida macroura* | Mourning Dove |
| *Calypte anna* | Anna's Hummingbird |
| *Melanerpes formicivorus* | Acorn Woodpecker |
| *Colaptes auratus* | Northern Flicker |
| *Sayornis nigricans* | Black Phoebe |
| *Sayornis saya* | Says Phoebe |
| *Aphelocoma californica* | Western Scrub Jay |
| *Corvus brachyrhynchos* | American Crow |
| *Psaltriparus minimus* | Bushtit |
| *Thryomanes bewickii* | Bewick's Wren |
| *Regulus calendula* | Ruby-crowned Kinglet |
| *Chamaea fasciata* | Wrentit |
| *Lanius ludovicianus* | Loggerhead Shrike |
| *Sturnus vulgaris* | European Starling |
| *Dendroica coronata* | Yellow-rumped Warbler |
| *Pipilo crissalis* | California Towhee |
| *Chondestes grammacus* | Lark Sparrow |
| *Passerculus sandwichensis* | Savannah Sparrow |
| *Zonotrichia leucophrys* | White-crowned Sparrow |

| | |
|---|---|
| *Junco hyemalis* | Dark-eyed Junco |
| *Sturnella neglecta* | Western Meadowlark |
| *Carpodacus mexicanus* | House finch |
| **Herpetofauna** | |
| *Pseudacris regilla* | Pacific treefrog |
| *Sceloporus occidentalis* | Western fence lizard |

# APPENDIX B

# POTENTIAL FOR SPECIAL STATUS PLANT AND WILDLIFE SPECIES TO OCCUR IN THE PROJECT AREA

**Appendix B**. Special status plant and animal species known in the vicinity of the Ferrini Ranch Project Area. List compiled from the California Department of Fish and Game (CDFG) Natural Diversity Database (CDFG 2007) and California Native Plant Society (CNPS 2007) Electronic Inventory search of the Spreckels, Carmel Valley, Rana Creek, Marina, Seaside, Salinas, Mount Carmel, Natividad and Chualar USGS quadrangles; USFWS species lists (USFWS 10/07); and CNDDB Monterey County lists (October 2007).

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| **Plants** | | | |
| *Allium hickmanii*<br>Hickman's onion | 1B | Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland, coastal prairie. 20-200 m. Blooms April-May. | **Not present.** Potentially suitable habitat consisting of grassland and chaparral found onsite, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Amorpha californica* var. *napensis*<br>Napa false indigo | 1B | Broadleaved upland forest (openings), chaparral, cismontane woodland. 150-2000 m. Blooms April-July. | **Not Present.** Potentially suitable woodland habitat present, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Arctostaphylos hookeri* ssp. *hookeri*<br>Hooker's manzanita | 1B | Chaparral, coastal scrub/sandy, closed cone coniferous forest, cismontane woodland. 85-300 m. Blooms February-June. | **Not Present.** Potentially suitable habitat on sandy substrate present on-site however this genus can be identified outside of its blooming period, and no *Arctostaphylos* species were observed during rare plant surveys. |
| *Arctostaphylos montereyensis*<br>Monterey manzanita | 1B | Chaparral, cismontane woodland, coastal scrub/sandy. 30-730 m. Blooms February-March. | **Not Present.** Potentially suitable habitat on sandy substrate present on-site however this genus can be identified outside of its blooming period, and no *Arctostaphylos* species were observed during rare plant surveys. |
| *Arctostaphylos pajaroensis*<br>Pajaro manzanita | 1B | Chaparral (sandy). 30-760 m. Blooms December-March. | **Not Present.** Potentially suitable habitat on sandy substrate present on-site however this genus can be identified outside of its blooming period, and no *Arctostaphylos* species were observed during rare plant surveys. |
| *Arctostaphylos pumila*<br>sandmat manzanita | 1B | Closed-cone coniferous forest, chaparral, cismontane woodland, coastal dunes, coastal scrub/sandy, openings. 3-205 m. Blooms February-May. | **Not Present.** Potentially suitable habitat on sandy substrate present on-site however this genus can be identified outside of its blooming period, and no *Arctostaphylos* species were observed during rare plant surveys. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| *Astragalus tener* var. *tener*<br>alkali milk-vetch | 1B | Alkali playa, valley and foothill grassland, vernal pools. 1-170 m. Blooms April-May. | **Not Present.** Potentially suitable habitat consisting of grassland and seasonal wetlands found on-site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Centromadia* = *Hemizonia parryi* ssp. *congdonii*<br>Congdon's tarplant | 1B | Valley and foothill grassland, alkaline soils. 1-230m. Blooms June - November. | **Present**. Annual grassland habitat found to host several populations of this species. Refer to Appendix D for distribution information. |
| *Chorizanthe pungens* var. *pungens*<br>Monterey spineflower | FT, 1B | Coastal dunes, chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/sandy. 3-450 m. Blooms April-June. | **Not Present.** Potentially suitable habitat consisting of grassland, coastal scrub, and cismontane woodland found on-site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Chorizanthe robusta* var. *robusta*<br>robust spineflower | FE, 1B | Cismontane woodland, coastal dunes, coastal scrub/sandy or gravelly. 3-120 m. Blooms April-September. | **Not Present.** This species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Clarkia jolonensis*<br>Jolon clarkia | 1B | Chaparral, cismontane woodland, coastal scrub. 20-660 m. Blooms April-June. | **Not Present.** This species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Cordylanthus rigidus* ssp. *littoralis*<br>seaside bird's-beak | SE, 1B | Closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub/sandy, coastal dunes, often disturbed sites. 0-215 m. Blooms May-October. | **Not Present.** Suitable habitat with direct coastal influence (e.g., coastal dunes) not found on-site, and this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Corethrogyne leucophylla*<br>branching beach aster | 3 | Closed-cone coniferous forest, coastal dunes. 3-60 m. Blooms May-December. | **Not Present**. Coastal dune or closed cone coniferous forest not found on-site, and this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Delphinium hutchinsoniae*<br>Hutchinson's larkspur | 1B | Broadleaved upland forest, chaparral, coastal prairie, coastal scrub. 0-400m. Blooms March-June. | **Not Present.** Potentially suitable habitat consisting of oak woodland and coastal scrub found on-site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Ericameria fasciculata*<br>Eastwood's goldenbush | 1B | Closed-cone coniferous forest, chaparral (maritime), coastal dunes, coastal scrub/ sandy, openings. 30-275 m. Blooms July-October. | **Not Present.** This species can be identified outside of its blooming period, and was not observed during rare plant surveys. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| *Eriogonum nortonii* *Pinnacles buckwheat* | 1B | Chaparral, valley and foothill grassland/sandy, often on recent burns. 300-975 m. Blooms May-June. | **Not Present.** Potentially suitable grassland habitat on sandy soils found on-site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Erysimum ammophilum* coast wallflower | 1B | Chaparral (maritime), coastal dunes, coastal scrub (sandy), openings. 0-60 m. Blooms February-June. | **Not Present**. Suitable coastal strand habitat not found onsite, and this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Erysimum menziesii* ssp. *yadonii* Yadon's wallflower | FE, SE, 1B | Coastal dunes; 0-10 m. Blooms May-September. | **Not Present**. Suitable coastal dune habitat not found onsite, and this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Fritillaria liliacea* fragrant fritillary | 1B | Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland/often serpentinite. 3-410 m. Blooms February-April. | **Not Present.** Potentially suitable habitat consisting of cismontane woodland and grassland found on-site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Galium clementis* Santa Lucia bedstraw | 1B | Lower montane coniferous forest, upper montane coniferous forest, rocky. 1130-1780 m. Blooms May-July. | **Not Present**. Suitable coniferous forest not present, and this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Gilia tenuiflora* ssp. *arenaria* sand gilia | FE, ST, 1B | Chaparral (maritime), cismontane woodland, coastal dunes, coastal scrub/sandy; openings. 0-45 m. Blooms April-June. | **Not Present.** Potentially suitable sandy coastal scrub habitat found on site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Grindelia hirsutula* var. *maritima* San Francisco gumplant | 1B | Coastal bluff scrub, coastal scrub, valley and foothill grassland/sandy or serpentinite. 15-400 m. Blooms August-September. | **Not Present**. Potentially suitable grassland and coastal scrub habitat found on-site, however this species was not observed during September 2007 focused rare plant surveys which coincided with the blooming period for this species. |
| *Horkelia cuneata* ssp. *sericea* Kellogg's horkelia | 1B | Closed -cone coniferous forest, chaparral (maritime), coastal scrub/sandy or gravelly, openings. 10-200 m. Blooms April-September. | **Not Present.** Potentially suitable sandy coastal scrub habitat found on site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| *Lasthenia conjugens* Contra Costa goldfields | FE, 1B | Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools/mesic. 0-470 m. Blooms March-June. | **Not Present.** Potentially suitable grassland and seasonal wetland habitat found on site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Lessingia hololeuca* wooly-headed lessingia | 3 | Broadleaved upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland/clay, serpentinite. 15-305 m. Blooms June-October. | **Not Present.** Potentially suitable grassland and coastal scrub habitat found on site, however this species was not observed during September 2007 rare plant surveys which coincided with the blooming period for this species. |
| *Lupinus tidestromii* Tidestrom's lupine | 1B | Coastal dunes. 0-100 m. Blooms April-June. | **Not Present**. Suitable coastal dune habitat not found onsite, and this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Malacothamnus aboriginum* Indian Valley bush mallow | 1B | Chaparral, cismontane woodland/rocky, often in burned areas. 150-1700 m. Blooms April-October. | **Not Present.** Potentially suitable coastal scrub habitat found on site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Malacothamnus palmeri* var. *involucratus* Carmel Valley bush mallow | 1B | Cismontane woodland, chaparral, coastal scrub. 30-1100 m. Blooms May-October. | **Not Present.** Potentially suitable woodland and coastal scrub habitat found on-site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Malacothamnus palmeri* var. *palmeri* Santa Lucia bush mallow | 1B | Chaparral (rocky). 60-360 m. Blooms May-July. | **Not present.** Suitable habitat not found on site, and species not observed during plant surveys. |
| *Malacothrix saxatalis* var. *arachnoidea* Carmel Valley malacothrix | 1B | Chaparral (rocky). 25-335 m. Blooms March-December. | **Not Present.** Potentially suitable coastal scrub habitat found on site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Microseris paludosa* marsh microseris | 1B | Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 5-300 m. Blooms April-June. | **Not Present.** Potentially suitable oak woodland, coastal scrub, and grassland habitat found on site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| *Micropus amphibolus*<br>Mt. Diablo cottonweed | 3 | Broadleaved upland forest, chaparral, cismontane woodland, valley and foothill grassland/rocky. 45-825 m. Blooms March-May. | **Present.** Species identified during rare plant surveys in spring of 2007 in small relatively isolated patches in the coast live oak woodland / savannah habitat. |
| *Pinus radiata*<br>Monterey pine | 1B | Closed-cone coniferous forest, cismontane woodland. 25-185 m. | **Not Present.** Native, intact Monterey pine forest not found on-site. However, intentionally planted individuals may be present. These trees would not be afforded protection as a special status species under CEQA, but removal may be regulated by local tree ordinance. |
| *Piperia yadonii*<br>Yadon's rein orchid | FE, 1B | Coastal bluff scrub, closed-cone coniferous forest, chaparral (maritime)/sandy. 10-415 m. Blooms May-August. | **Not Present.** Suitable coastal bluff scrub or maritime chaparral habitat not found on-site, and this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Plagiobothrys uncinatus*<br>hooked popcorn flower | 1B | Chaparral (sandy), cismontane woodland, valley and foothill grassland. 300-730 m. Blooms April-May. | **Not Present.** Potentially suitable chaparral, woodland, and grassland habitat found on-site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Stebbinsoseris decipiens*<br>Santa Cruz microseris | 1B | Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. 10-500 m. Blooms April-May. | **Not Present.** Potentially suitable chaparral, coastal scrub, woodland, and grassland habitat found on-site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Trifolium buckwestiorum*<br>Santa Cruz clover | 1B | Coastal prairie, broadleaved upland forest, cismontane woodland. 105-610 m. Blooms April-October. | **Not Present.** Potentially suitable woodland and grassland habitat found on-site, however this species was not observed during the spring 2007 rare plant surveys which occurred during the blooming period for this species. |
| *Trifolium polyodon* (syn. *T. tridentatum* var. *polyodon*)<br>Pacific Grove clover | 1B | Closed-cone coniferous forest, coastal prairie, meadows and seeps, valley and foothill grassland/mesic. 5-120 m. Blooms April-June. | **Present.** Species identified during rare plant surveys in spring of 2007 in wetland and mesic areas within grassland, coast live oak woodland / savannah, and riparian woodland habitats. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| **Mammals** | | | |
| Pallid bat<br>*Antrozous pallidus* | CSC | Selects a variety of day roosts including rock outcrops, mines, caves, hollow trees, buildings, and bridges. Night roosts are usually found under bridges, but also in caves, mines, and buildings. | **Moderate.** Large oak and sycamore trees may provide roosting habitat. |
| Townsend's big-eared bat<br>*Corynorhinus townsendii townsendii* | CSC | Primarily found in rural settings in a wide variety of habitats including oak woodlands and mixed coniferous-deciduous forest. Day roosts highly associated with caves and mines. Very sensitive to human disturbance. | **Unlikely.** Suitable roosting habitat not available. |
| Western mastiff bat<br>*Eumops perotis* | CSC | Found in a wide variety of habitat. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders. | **Unlikely.** Project Area at northern limit of its range. |
| Monterey dusky-footed woodrat<br>*Neotoma fuscipes luciana* | CSC | Occurs in forest habitats of moderate canopy and moderate to dense understory. Also found in chaparral habitats. Feeds mainly on woody plants: live oak, maple, coffeeberry, alder, and elderberry. | **High.** Suitable habitat found in Project Area. |
| big-eared kangaroo rat<br>*Dipodomys elephantinus* | CSC | Year-long resident of chaparral-covered slopes of the southern part of the Gabilan Range, in the vicinity of the Pinnacles, in San Benito and Monterey cos. Distribution restricted to a very small area. | **Unlikely.** Project Area is not in Gabilan Range. |
| Salinas pocket mouse<br>*Perognathus inornatus psammophilus* | CSC | The known distribution of *P.i.psammophilus* extends from near Soledad southward to Hog Canyon in the Salinas Valley, Monterey Co. | **Unlikely.** Project Area north of its known range. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Monterey (Salinas ornate) shrew<br>*Sorex ornatus salarius* | CSC | Little is known about this shrew, however, ornate shrews are typically found in brackish water marshes, along streams, in brushy areas of valleys and foothills and in forests. | **High.** Known occurrence near Project Area. |
| American Badger<br>*Taxidea taxus* | CSC | Badgers occur in drier open stages of most scrub, forest, and herbaceous habitats where friable soils and prey populations are present. | **High.** Suitable habitat available in Study Area. |
| San Joaquin kit fox<br>*Vulpes macrotis mutica* | FE, ST | Found in annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing and suitable prey base. | **Unlikely.** Outside of known range. |
| **Birds** | | | |
| Common Loon (nesting)<br>*Gavia immer* | CSC | Winter in estuarine and subtidal marine habitats along coast, San Francisco Bay. | **Not Present.** No marine habitat in Project Area. |
| California Brown Pelican (nesting colony and roosts)<br>*Pelecanus occidentalis californicus* | FE, SE, CFP | Found in estuarine, marine subtidal, and marine pelagic waters along the coast. Nest on rocky or low brushy slopes of undisturbed islands. | **Not Present.** No marine habitat in Project Area. |
| Double-crested Cormorant (rookery)<br>*Phalacrocorax auritus* | CSC | A Year-long resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. Requires undisturbed nest-sites beside water, on islands or mainland.<br>Uses wide rock ledges on cliffs; rugged slopes; and live or dead trees, especially tall ones. | **Not Present.** No lakes in Project Area. |
| California Condor<br>*Gymnogyps californianus* | FE, SE, CFP | Requires vast expanses of open savannah, grasslands, and foothill chaparral, with cliffs, large trees, and snags for roosting and nesting. Forages over wide areas of open rangelands. | **Unlikely.** Occurrences for this species are to the southeast. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Cooper's Hawk<br>*Accipter cooperi* | CSC | Inhabits areas with dense tree stands or patchy woodlands. Usually nests in deciduous riparian areas or second-growth conifer stands near streams. | **High.** Suitable nesting and foraging habitat available. |
| Sharp-shinned Hawk<br>*Accipiter striatus* | CSC | Generally associated with woodland habitats. Typically nests in isolated areas away from human disturbance. | **Moderate.** Typical coniferous forest not present, species may occur on site during migration. |
| Golden Eagle<br>*Aquila chrysaetos* | CSC, CFP | Found in rolling foothill and mountain areas, sage-juniper flats, dessert. Cliff-walled canyons provide nesting habitat in most parts of range. | **High.** Suitable foraging habitat available for this species. |
| Ferruginous Hawk<br>*Buteo regalis* | CSC | Frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys and fringes of pinyon-juniper habitats. | **Moderate.** May winter in Study Area. |
| Northern Harrier<br>*Circus cyaneus* | CSC | Found in open grasslands, prairies, and marshes. Tend to nest near water. | **Moderate.** Suitable foraging and nesting habitat available. |
| White-tailed Kite<br>*Elanus leucurus* | CFP | Year-long resident of coastal and valley lowlands; rarely found away from agricultural areas. Preys on small diurnal mammals and occasional birds, insects, reptiles, and amphibians. | **High.** Suitable foraging and nesting habitat available. |
| Bald Eagle<br>*Haliaeetus leucocephalus* | FT, SE, CFP | Requires large bodies of water, or free-flowing rivers with abundant fish adjacent snags or other perches. Nests in large, old-growth, or dominant live tree with open branchwork. | **Unlikely.** No large bodies of water present. |
| Osprey<br>*Pandion haliaetus* | CSC | (Nesting) Frequents ocean shores, bays, fresh-water lakes, and larger streams. Prefers large trees, snags and dead-topped trees near large water bodies for cover and nesting. May travel 5-6 miles from nest to fishing areas. | **Unlikely.** No large bodies of water present. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Merlin<br>*Falco columbarius* | CSC | Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country. | **Moderate.** Suitable foraging habitat available. |
| Prairie Falcon<br>*Falco mexicanus* | CSC | Inhabits dry, open terrain. Breeding sites located on cliffs. Forages widely. | **Moderate.** Suitable foraging habitat available. |
| American Peregrine Falcon<br>*Falco peregrinus anatum* | FD, SE, CFP | Winters throughout Central Valley. Requires protected cliffs and ledges for cover. Feeds on a variety of birds, and some mammals, insects, and fish. | **Moderate.** Suitable foraging habitat available. |
| California Clapper Rail<br>*Rallus longirostris obsoletus* | FE, SE | Found in tidal salt marshes of the San Francisco Bay. Require mudlfats for foraging and dense vegetation on higher ground for nesting. | **Not Present.** No salt marsh habitat available. |
| Western Snowy Plover<br>*Charadrius alexandrinus nivosus* | FT, CSC | Found on sandy beaches, salt pond levees and shores of large alkali lakes. Need sandy gravelly or friable soils for nesting. | **Not Present.** Suitable nesting habitat not available. |
| Mountain Plover<br>*Charadrius montanus* | FPT, CSC | Winters in the central valley in short grasslands and plowed fields below 1000m. | **Unlikely.** May rarely occur in winter. |
| Long-billed Curlew<br>*Numenius americanus* | CSC | Winters in large coastal estuaries, upland herbaceous areas, and croplands. Breeds in northeastern California in wet meadow habitat. | **Unlikely.** May rarely occur in winter. |
| California Least Tern<br>*Sterna antillarum browni* | FE, SE | Breeding colonies in San Francisco Bay found in abandoned salt ponds and along estuarine shores. Nests on barren to sparsely vegetated site near water. | **Not Present.** Suitable aquatic habitat not present. |
| Marbled Murrelet<br>*Brachyramphus marmoratus* | FT, SE | Breed in old-growth redwood stands containing platform-like branches along coastal | **Not Present.** No old growth forest present. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Western Yellow-billed Cuckoo *Coccyzus americanus occidentalis* | FC, SE | Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. | **Not Present.** Known occurrences are further south. |
| Long-eared Owl *Asio otus* | CSC | Inhabit open woodlands, forest edges, riparian strips along rivers, hedgerows, juniper thickets, woodlots, and wooded ravines and gullies. Breeding habitat must include thickly wooded areas for nesting and roosting with nearby open spaces for hunting. | **Moderate.** Typically utilizes denser woods than in Project Area. |
| Short-eared Owl *Asio flammeus* | CSC | Found in open, treeless areas with elevated sites for perches and dense vegetation for roosting and nesting. Tule patches/tall grass needed for nesting and daytime seclusion. | **Unlikely.** Typical tule patches and dense ground cover minimal in Project Area. |
| Western Burrowing Owl *Athene cunicularia hypugea* | CSC | Frequents open grasslands and shrublands with perches and burrows. Preys upon insects, small mammals, reptiles, birds, and carrion. Nests and roosts in old burrows of small mammals. | **Unlikely.** Surveys did not detect this species in 2007 nor any sign–additional surveys are being completed in 2008. |
| Vaux's Swift *Chaetura vauxi* | CSC | Forages high in the air over most terrain and habitats but prefers rivers/lakes. Requires large hollow trees for nesting. | **Unlikely.** No nearby occurrences. |
| Black Swift *Cypseloides niger* | CSC | Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above surf. Forages widely. | **Unlikely.** No suitable breeding habitat available. |
| Lewis' Woodpecker *Melanerpes lewis* | FWS:BCC | Found in riparian areas, nests in cavities excavated by other woodpeckers. | **Moderate.** Suitable breeding and foraging habitat in Project Area. |
| Olive-sided Flycatcher (nesting) *Contopus cooperi* | FWS:BCC | May occur at any elevation from sea level to timberline, but usually at mid- to high-elevation forest (920–2,130 m). | **Moderate.** Typical breeding habitat not present but may migrate through Project Area. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Willow Flycatcher (nesting) *Empidonax traillii* | SE | Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters. Winter migrant. | **Unlikely.** No known occurrences near Project Area. |
| Least Bell's Vireo *Vireo bellii pusillus* | FE, SE | Summer resident of southern California. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. Found in low riparian in vicinity of water. | **Unlikely.** Known from Salinas River however, surveys were conducted in 1999-2000 with negative results. |
| Bank Swallow *Riparia riparia* | ST | Migrant in riparian and other lowland habitats in western California. Nests in riparian areas with vertical cliffs and bands with fine-textured or sandy soils in which to nest. | **Unlikely.** Suitable breeding habitat minimal in Project Area. |
| Loggerhead Shrike *Lanius ludovicianus* | CSC | Prefers open habitats with scattered shrubs, trees, pots, utility lines from which to forage for large insects. Nest well concealed above ground in densely-foliaged shrub or tree. | **Present.** This species seen perched in the north parcel. |
| California Horned Lark *Eremophila alpestris actia* | CSC | In nonagricultural lands, typically inhabits areas of short vegetation or bare ground, including shortgrass prairie, deserts, brushy flats, and alpine habitat (Cannings and Threlfall 1981). | **High.** Suitable nesting and foraging habitat is available in the Project Area. |
| Yellow Warbler *Dendroica petechia brewsteri* | CSC | Nests in riparian stands of willows, cottonwoods, aspens, sycamores, and alders. Also nests in montane shrubbery in open conifer forests. | **Moderate.** Suitable breeding and foraging habitat in Project Area. Known occurrence on Salinas River. |
| Bell's Sage Sparrow *Amphispiza belli* | CSC | Prefers dense chaparral and scrub habitats in breeding season. Found in more open habitats in winter. | **Moderate.** Suitable breeding and foraging habitat in Project Area. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Tricolored Blackbird<br>*Agelaius tricolor* | CSC | Usually nests over or near freshwater in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall herbs. | **Unlikely.** Typical freshwater habitat not available. |
| Lawrence's Goldfinch<br>*Carduelis lawrencei* | FWS:BCC | Inhabits oak woodlands, chaparral, riparian woodlands, pinyon-juniper associations, and weedy areas near water during the breeding season. | **Moderate.** Suitable breeding and foraging habitat in Project Area. |
| **Reptiles and Amphibians** | | | |
| California tiger salamander<br>*Ambystoma californiense* | ST | Inhabits annual grass habitat and mammal burrows. Seasonal ponds and vernal pools crucial to breeding | **Survey Results Pending**. Potential upland and breeding habitat are available near and in Pond 18, respectively. Protocol level surveys are currently underway. |
| Santa Cruz long-toed salamander<br>*Ambystoma macrodactylum croceum* | SE, FE, CFP | Wet meadows near sea level in a few restricted locales in Santa Cruz and Monterey Counties. Aquatic larvae prefer shallow (<12 inches) water, using clumps of veg or debris for cover. Adults use mammal burrows. | **Unlikely.** Suitable habitat not present. |
| Coast Range newt<br>*Taricha torosa torosa* | CSC | Coast Range newts frequent terrestrial habitats, but breed in ponds, reservoirs, and slow-moving streams | **High.** Suitable aquatic habitat present in El Toro Creek. |
| California red-legged frog<br>*Rana aurora draytonii* | FT, CSC | Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Documented to disperse through upland habitats after rains. | **Not present.** There are no nearby occurrences and no suitable year-round aquatic habitat through most of the Project Area. Protocol level surveys were conducted by Denise Duffy and Associates in 2007 in areas of suitable habitat did not detect this species. |
| Foothill yellow-legged frog<br>*Rana boylii* | CSC | Found in or near rocky streams in a variety of habitats. Feed on both aquatic and terrestrial invertebrates. | **Unlikely.** No nearby occurrences. Toro Creek does not appear to have the preferred cobbly substrate in Project Area. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Western spadefoot toad<br>*Spea hammondii* | CSC | It prefers areas of open vegetation and short grasses where<br>the soil is sandy or gravelly in grassland, scrub, chaparral and woodland. Require temporary rainpools that last 3 weeks. | **Moderate.** Suitable habitat available in Project Area. |
| Arroyo toad<br>*Bufo californicus* | FE, CSC | Adults require overflow pools adjacent to the inflow channel of 3rd- to greater-order streams that are free of predatory fishes in which to breed . Exposed pools that are shallow, sand- or gravel-based and have a low current velocity are strongly favored | **Unlikely.** Only known occurrences in county in San Antonio River. |
| Southwestern pond turtle<br>*Actinemys marmorata pallida* | CSC | Occurs in perennial ponds, lakes, rivers and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and submerged shelter. | **Unlikely.** There are no nearby occurrences and no suitable year-round aquatic habitat through most of the Project Area. CRLF surveys did not detect this species in Toro Creek. |
| Black legless lizard<br>*Anniella pulchra nigra* | CSC | Inhabits sandy soil/dune areas with bush lupine and mock heather as dominant plants. | **Unlikely.** Associated plants not detected in Project Area. |
| Silvery legless lizard<br>*Anniella pulchra pulchra* | CSC | Burrowing species found in loose, friable soils or sand. | **Moderate.** Suitable habitat found in Project Area. |
| Coast (California) horned lizard<br>*Phrynosoma coronatum frontale* | CSC | Occurs in valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress juniper and annual grass habitats. Prefers sand areas, washes, flood plains and wind-blown deposits. | **High.** Suitable habitat available in Project Area. |
| Blunt-nosed leopard lizard<br>*Gambelia silus* | FE, SE | Occupy alkali flats and sparsely vegetated plains of the San Joaquin Valley. Utilize small mammal burrows and rocks for shelter. | **Not Present.** Not known to occur in Monterey County. |
| San Joaquin whipsnake<br>*Masticophis flagellum ruddocki* | CSC | Lives in dry grassy/saltbush habitats. Uses mammal burrows for refuge and breeding. | **Unlikely.** Occurs east of Project Area. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Two-striped garter snake *Thamnophis hammondii* | CSC | Commonly inhabits perennial and intermittent rocky streams and large sandy river beds bordered by willow thickets or other dense vegetation. Utilizes stock ponds and other artificially-created aquatic habitats if a dense riparian border of emergent vegetation and amphibian and fish prey are present. | **Moderate.** Toro Creek may provide habitat for this species. |
| **Fishes** | | | |
| Green sturgeon *Acipenser medirostris* | FT, CSC | Anadromous fish that spawns in Sacramento river. Feeds in estuaries and bays, including San Francisco Bay. | **Not Present.** Toro Creek does not provide suitable habitat. |
| South/central coast ESU steelhead *Oncorhynchus mykiss irideus* | FT, CSC | Fed listing refers to runs in coastal basins from the Pajaro River south to, but not including the Santa Maria River. | **Unlikely.** No known occurrences in Toro Creek. |
| Tidewater goby *Eucyclogobius newberryi* | FE, CSC | Found in the brackish waters of coastal lagoons, marshes, creeks, and estuaries. Unique among fishes of the Pacific coast, gobies are restricted to waters of low salinity in coastal wetlands. They feed along the bottom, preferring clean, shallow, slow-moving waters. | **Not Present.** Toro Creek does not provide suitable habitat. |
| **Invertebrates** | | | |
| redwood shoulderband (snail) *Helminthoglypta sequoicola consors* | none | Known only from south slope of San Juan Grade, near foot, 8 miles northwest of Salinas. | **Unlikely.** No nearby occurrences. |
| mimic tryonia (California brackish water snail) *Tryonia imitator* | none | Inhabits coastal lagoons, estuaries and salt marshes from Sonoma Co. south to San Diego Co. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities. | **Unlikely.** No suitable habitat in Project Area. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Conservancy fairy shrimp *Branchinecta conservatio* | FE | Live in ephemeral or temporary pools of fresh water (vernal pools) that form in the cool, wet months of the year. Inhabit highly turbid water in vernal pools. | **Unlikely.** No documented occurrences in Monterey County. |
| Longhorn fairy shrimp *Branchinecta longiantenna* | FE | Inhabit small, clear-water depressions in sandstone and clear-to-turbid clay-grass-bottomed pools in shallow swales. | **Unlikely.** No documented occurrences in Monterey County. |
| Vernal pool fairy shrimp *Branchinecta lynchi* | FT | Inhabit small, clear-water sandstone-depression pools, grassy swales, slumps, or basalt-flow depression pools. | **Unlikely.** No documented occurrences in Monterey County. |
| Vernal pool tadpole shrimp *Lepidurus packardi* | FE | Pools commonly found in grass bottomed swales of unplowed grasslands. Som pools are mud-bottomed and highly turbid. | **Unlikely.** No documented occurrences in Monterey County. |
| Globose dune beetle *Coelus globosus* | none | The Globose dune beetle is an inhabitant of California's coastal dune system. These beetles are primarily subterranean, tunneling through sand underneath dune vegetation. | **Unlikely.** No coastal dune habitat in Project Area. |
| Dolloff Cave spider *Meta dolloff* | SSI | Known from caves in the Santa Cruz area. This species is an orb-weaver and occurs from the cave mouth into deep twilight. | **Unlikely.** No caves known in Project Area. |
| Bay Checkerspot Butterfly *Euphydryas editha bayensis* | FT, SSI, RP | Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants. | **Unlikely.** No nearby occurrences to Project Area. |

| SPECIES | STATUS* | HABITAT | POTENTIAL FOR OCCURRENCE |
|---|---|---|---|
| Smith's blue butterfly *Euphilotes enoptes smithi* | FE | Occurring in scattered populations in association with coastal dune, coastal scrub, chaparral, and grassland habitats. They spend their entire lives in association with two buckwheat plants in the genus *Eriogonum*. | **Unlikely.** Host plant not detected on site. |
| Monarch butterfly *Danaus plexippus* | SSI | Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby. | **Unlikely**. No known occurrences near Project Area. |

*** Key to status codes:**

| | |
|---|---|
| FE | Federal Endangered |
| FT | Federal Threatened |
| FC | Federal Candidate |
| FSC | Federal Species of Concern |
| FPD | Federal Proposed for De-listing |
| FD | Federal De-listed |
| FWS:BCC | Fish and Wildlife Service Bird of Conservation Concern |
| SE | State Endangered |
| ST | State Threatened |
| SR | State Rare |
| Draft CSC | 4 April 200 Draft CDFG Species of Special Concern |
| CSC | CDFG Species of Special Concern |
| CFP | CDFG Fully Protected Animal |
| List 1A | CNPS List 1A: Plants presumed extinct in California |
| List 1B | CNPS List 1B: Plants rare, threatened or endangered in California and elsewhere |
| List 2 | CNPS List 2: Plants rare, threatened, or endangered in California, but more common elsewhere |
| List 3 | CNPS List 3: Plants about which more information is needed. |

# APPENDIX C

# REPRESENTATIVE PROJECT AREA PHOTOGRAPHS

**Top**: Annual grassland community
**Bottom**: Coast live oak woodland / savanna

Photos taken October 18, 2006

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**Top**: Seep wetland feature
**Bottom**: Seasonal wetland feature at mouth of an ephemeral drainage

Photos taken October 18, 2006

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# APPENDIX D

# 2007 SPECIAL-STATUS PLANT FOCUSED SURVEYS REPORT

Denise Duffy & Associates, Inc.
PLANNING AND ENVIRONMENTAL CONSULTING

December 3, 2007

Mike Josselyn
2169-G East San Francisco Blvd.
San Rafael, CA 94901

Subject: 2007 Special-Status Plant Focused Surveys, Ferrini Ranch, Monterey County, CA.

Dear Mr. Josselyn:

This letter documents the findings of special-status plant surveys of the Ferrini Ranch (ranch) conducted by Denise Duffy and Associates, Inc. (DD&A) and Jeff Norman Consulting. The purpose of the survey was to determine which, if any, special-status plants occur on the ranch and may be affected by proposed development. In addition, a list of plant species observed during current and previous plant surveys is attached. This list includes: plants identified in 2005 by DD&A (*Vegetation Mapping of the Ferrini Ranch*, 26 August 2006); in 2006 by WRA Environmental Consulting (*Biological Assessment, Ferrini Property, Monterey County, California*, 15 December 2006); and in 2007 by DD&A and Jeff Norman Consulting, with assistance in plant identification from Vern Yadon and Randy Morgan. The current list presented in this letter report contains plants that have been added to the previous lists in addition to other plants that have been removed because of misidentification.

The Ferrini Ranch is a large (ca. 895-acre) property that lies along the eastern side of Highway 68, south of the intersection with River Road. The proposed project would involve construction of residences and supporting infrastructure on the property, which consists of two blocks of land (north and south) that are divided by the Marks Ranch and Toro Regional Park. The overall project area also includes a strip of land along the east side of Highway 68 that traverses Toro Park, which is proposed as an entrance to the Ferrini Ranch property. The project area was surveyed for special-status plants with specific attention given to areas proposed for development. Such plants include those taxa listed by the California Native Plant Society (CNPS), and/or those protected under local, State and/or Federal regulations. Although attention was paid to locating any and all rare plants that may be present in the Ferrini Ranch project area, particular attention was given to taxa known from habitats present in this region of Monterey County. Surveying was scheduled in an attempt to include the flowering period for the targeted special-status plants. The target list below is based on previous documentation for the project contained in the 2006 WRA report referenced above. These taxa are:

***Allium hickmanii,*** Hickman's onion
***Amorpha californica*** var. ***napensis***, Napa false indigo
***Arctostaphylos hookeri*** ssp. ***hookeri,*** Hooker's manzanita
***Arctostaphylos montereyensis,*** Monterey manzanita
***Arctostaphylos pajaroensis,*** Pajaro manzanita
***Arctostaphylos pumila,*** sandmat manzanita
***Astragalus tener*** var.***tener,*** alkali milk vetch
***Astragalus tener*** var. ***titi,*** coastal dunes milk-vetch

***Castilleja latifolia,*** Monterey Indian paintbrush
***Ceanothus cuneatus*** var**.** ***rigidus,*** Monterey ceanothus
***Centromadia (= Hemizonia) parryi*** ssp. ***congdonii***, Congdon's tarplant
***Chorizanthe pungens*** var**.** ***pungens,*** Monterey spineflower
***Chorizanthe robusta*** var**.** ***robusta,*** robust spineflower
***Clarkia lewisii,*** Lewis' clarkia
***Clarkia jolonensis,*** Jolon clarkia
***Cordylanthus rigidus*** ssp**.** ***littoralis,*** seaside bird's-beak
***Corethrogyne leucophylla,*** branching beach-aster
***Delphinium hutchinsoniae,*** Hutchinson's larkspur
***Ericameria fasciculata,*** Eastwood's ericameria
***Eriogonum latifolium,*** dune buckwheat
***Eriogonum nortonii,*** Pinnacles buckwheat
***Eriogonum parvifolium,*** seacliff buckwheat
***Erysimum ammophilum,*** coast wallflower
***Erysimum menziesii*** ssp**.** ***menziesii,*** Menzies' wallflower
***Erysimum menziesii*** ssp**.** ***yadonii,*** Yadon's wallflower
***Fritillaria liliacea,*** fragrant fritillary
***Galium clementis,*** Santa Lucia bedstraw
***Gilia tenuiflora*** ssp**.** ***arenaria,*** sand gilia
***Grindelia hisrsutula*** var. ***maritima,*** San Francisco gumplant
***Horkelia cuneata*** ssp**.** ***sericea,*** Kellogg's horkelia
***Lasthenia conjugens,*** Contra Costa goldfields
***Layia carnosa,*** beach layia
***Layia jonesii,*** Jones's layia
***Lessingia hololeuca,*** woolly-headed lessingia
***Lupinus tidestromii,*** Tidestrom's lupine
***Malacothamnus aboriginum,*** Indian Valley bush mallow
***Malacothamnus palmeri*** var. ***involucratus,*** Carmel Valley bush mallow
***Malacothamnus palmeri*** var. ***palmeri,*** Santa Lucia bush mallow
***Malacothrix saxatilis*** var. ***arachnoides,*** Carmel Valley cliff-aster
***Micropus amphibolus,*** Mt. Diablo cottonweed
***Microseris paludosa,*** marsh microseris
***Pinus radiata,*** Monterey pine
***Piperia yadonii,*** Yadon's rein orchid
***Piperia michaelii***, Michael's rein-orchid
***Plagiobothrys uncinatus,*** hooked popcorn flower
***Potentilla hickmanii,*** Hickman's cinquefoil
***Sidalcea malachroides,*** maple-leaved checkerbloom
***Stebbinsoseris decipiens,*** Santa Cruz microseris
***Trifolium buckwestiorum,*** Santa Cruz clover
***Trifolium polyodon,*** Pacific Grove clover
***Trifolium trichocalyx,*** Monterey clover

Surveying was conducted in 2005 and 2006, with no special-status plants observed during that period *op. cit.* Survey dates in 2007 were as follows: April 10, 12, 16, 18, 23, 27; May 2, 3, 4, 8, 9, 10, 11, 14, 18, 20; September 19, 25, 27, 28; and October 3. Many of the perennial plant taxa on the target list (e.g., *Arctostaphylos* spp. and Monterey pine) may be identified outside their blooming period (i.e., determination of these plants can rely on vegetative features or characteristics other than those displayed by flowering material). Other taxa require determination

based on flower parts. Surveying during the appropriate flowering period was conducted for all listed target taxa that require it.

Field staff during the 2007 season consisted of Josh Harwayne, Jami Davis and Jeff Norman. Methodology involved several tactics: prioritizing the survey schedule so that the earliest-blooming plants were searched for first, identifying suitable habitat for target taxa, searching the entire property for listed taxa, and focusing the survey on potential areas of project impact vis-à-vis the habitats found there. Surveying was conducted using a general relevé technique, crisscrossing the area of observation and listing all plants seen. When listed taxa were encountered, pin flags were set to enable subsequent GPS mapping.

Most plant identifications were made in the field. Specimens were also taken for identification in the laboratory. Authorities used were: *An Illustrated Field Guide to the Flowering Plants of Monterey County, version 1.1*, M.A. Matthews, 2006; and *The Jepson Manual*, James Hickman ed., 1993. Confirmations of the identities of certain plants were contributed by Vernal Yadon, former curator of the Pacific Grove Museum of Natural History, and Randall Morgan, Monterey Bay Area botanist. Listing was made of all naturalized vascular plant taxa within the area of potential impact; the list is attached to this letter.

The following special-status plants were found to occur within the project area:

1. Pacific Grove clover, CNPS List 1B
2. Mt. Diablo cottonweed, CNPS List 3
3. Congdon's tarplant, CNPS List 1B

Coast live oak woodland/savannah supports two of the rare plant taxa found on-site, Pacific Grove clover (*Trifolium polyodon*) and Mt. Diablo cottonweed (*Micropus amphibolus*). Mt. Diablo cottonweed was found in the larger grassy areas within the coast live oak woodland, and less frequently in the more extensive grassland of the savannah. It often grows in areas that also support slender cottonweed (*M. californica*), a very similar non-listed taxon. Mt. Diablo cottonweed occurs in dense, relatively isolated small patches (< 10 $m^2$), as does slender cottonweed. The distribution of this species within the project site was not mapped as CNPS List 3 species are not typically provided management consideration during the California Environmental Quality Act (CEQA) process and have no specific legal protection.

Mesic areas are present within several plant communities: annual grassland, coast live oak woodland/savannah, and willow riparian forest. Within the annual grassland community, mesic areas support several rush taxa, including Mexican rush (*Juncus mexicanus*), spreading rush (*J. patens*), common toad rush (*J. bufonius* var. *bufonius*), round-fruited toad rush, (*J. bufonius* var. *occidentalis*), brown-headed rush (*J. phaeocephalus*), and low club rush (*Scirpus* sp.). These mesic areas also support a number of populations of Pacific Grove clover (*Trifolium polyodon*), the second of the two special-status plant taxa found on the Ferrini Ranch. Pacific Grove clover was found only on the south portion of the property, and was present in many of the seasonal drainages there which trend westerly through the property toward El Toro Creek (see attached Ferrini Ranch Rare Plant Maps). These occurrences begin within the upper reaches of the drainages, where a rather open savannah is encountered. Here, the clover is likely to occur in broad, ill-defined patches. Where the drainage areas narrow downstream into canyons and gullies, occurrences of the clover follow areas in or adjacent to seasonal stream flow (dry or drying during the 2007 survey period). These lower occurrences are best-developed where extra moisture can be found. Thus, in moister soil beneath oak trees, Pacific Grove clover was found to be in bloom longer, and the plants were better developed. Where the oak canopy becomes denser the clover is shaded out. Conversely, in the lowest parts of these drainages, the number of Pacific

Grove clover plants is reduced, until finally no plants can be found due to lack of moisture. The more alkaline soil present at the lowest elevations of the property may also reduce the likelihood that Pacific Grove clover occurs there. Please note that although the location of Pacific Grove clover plants were identified in a survey conducted in April and May, it is possible that additional plants will occur in other locations of suitable habitat. Therefore, it is recommended that prior to construction, a subsequent survey be conducted during the appropriate blooming period to identify areas where the plant is growing. This should be included as a mitigation measure with either avoidance or transplantation of the species to appropriate habitat undertaken.

Congdon's tarplant, the third special-status plant species occurring on Ferrini Ranch, was found on both the north and south portions of the property (see attached Ferrini Ranch Rare Plant Maps), present only within the dense soils of the flat lowlands in the annual grassland habitat. Although not associated with the highly mesic areas that support rush species, this species is only found in seasonally wet areas and is often associated with Chinese pusley (*Heliotropium curassavicum*) and spiny clotbur (*Xanthium spinosum*) on the Ferrini Ranch property. Additionally, all of the locations where Congdon's tarplant was found were sparsely vegetated and support some level of disturbance (i.e. grazing and road grading).

The proposed Ferrini Ranch project may impact Monterey pines and Monterey cypresses near Highway 68 within the project area. It should be noted that all Monterey pines and Monterey cypresses in the project area are planted specimens, or are volunteers from such trees. Because they have been planted outside their area of natural distribution, and therefore support no habitat associated with native stands of these trees, such trees are considered exotic and have little or no botanical value. Thus, from a botanical standpoint only, all Monterey pines and Monterey cypresses encountered in the project area have no special-status.

Sincerely,

Josh Harwayne
Senior Environmental Scientist
DENISE DUFFY & ASSOCIATES, INC.

Native and Naturalized Vascular Plant Species Observed at the Ferrini Ranch 2005-2007

| Scientific name | Common Name | Family | fern/conifer/ dicot/mono | native/ exotic |
|---|---|---|---|---|
| *Acaena pinnatifida* var. *californica* | California acaena | Rosaceae | d | n |
| *Acer macrophyllum* | big-leaf maple | Aceraceae | d | n |
| *Acer negundo* var. *californicum* | box elder | Aceraceae | d | n |
| *Achillea millefolium* | common yarrow | Asteraceae | d | n |
| *Adiantum jordanii* | California maidenhair fern | Pteridaceae | f | n |
| *Aesculus californica* | buckeye | Hippocastanaceae | d | n |
| *Agoseris grandiflora* | large-flowered agoseris | Asteraceae | d | n |
| *Agoseris heterophylla* ssp. *heterophylla* | annual agoseris | Asteraceae | d | n |
| *Ailanthus altissima* | tree-of-heaven | Simaroubaceae | d | e |
| *Aira caryophyllea* | silvery hair-grass | Poaceae | m | e |
| *Amsinckia menziesii var. intermedia* | harvest fireweed | Boraginaceae | d | n |
| *Amsinckia menziesii* var. *menziesii* | harvest fireweed | Boraginaceae | d | n |
| *Anagallis arvensis* | scarlet pimpernel | Primulaceae | d | e |
| *Anthemis cotula* | dog-fennel | Asteraceae | d | e |
| *Anthriscus caucalis* | bur-chervil | Apiaceae | d | e |
| *Aphanes occidentalis* | lady's mantle | Rosaceae | d | n |
| *Artemisia californica* | California sagebrush | Asteraceae | d | n |
| *Artemisia douglasiana* | mugwort | Asteraceae | d | n |
| *Asclepias eriocarpa* | Indian milkweed | Asclepiadaceae | d | n |
| *Asclepias fascicularis* | California milkweed | Asclepiadaceae | d | n |
| *Atriplex californicus* | California saltbush | Chenopodiaceae | d | n |
| *Avena barbata* | slender oat | Poaceae | m | e |
| *Avena fatua* | fat oat | Poaceae | m | e |
| *Baccharis douglasii* | Douglas' baccharis | Asteraceae | d | n |
| *Baccharis pilularis* | coyote brush | Asteraceae | d | n |
| *Barbarea verna* | winter cress | Brassicaceae | d | e |
| *Bowlesia incana* | bowlesia | Apiaceae | d | n |
| *Brassica nigra* | black mustard | Brassicaceae | d | e |
| *Brassica rapa* | field mustard | Brassicaceae | d | e |
| *Briza maxima* | rattlesnake grass | Poaceae | m | e |
| *Briza minor* | little quaking grass | Poaceae | m | e |
| *Brodiaea terrestris* | dwarf brodiaea | Liliaceae | m | n |
| *Bromus carinatus* | California brome | Poaceae | m | n |
| *Bromus catharticus* | rescue grass | Poaceae | m | e |
| *Bromus diandrus* | ripgut brome | Poaceae | m | e |
| *Bromus hordaceus* | soft chess | Poaceae | m | e |
| *Bromus madritensis* ssp. *rubens* | red brome | Poaceae | m | e |
| *Calandrinia ciliata* | red maids | Portulacaceae | d | n |
| *Calochortus albus* | globe-lily | Liliaceae | m | n |
| *Calochortus luteus* | yellow mariposa lily | Liliaceae | m | n |
| *Calystegia subacaulis* | hill morning-glory | Convolvulaceae | d | n |
| *Camissonia ignota* | fire primrose | Onagraceae | d | n |

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|---|---|---|---|---|
| *Camissonia ovata* | sun-cups | Onagraceae | d | n |
| *Camissonia strigulosa* | strigulose primrose | Onagraceae | d | n |
| *Capsella bursa-pastoris* | shepherd's purse | Brassicaceae | d | e |
| *Cardamine californica* | milk maids | Brassicaceae | d | n |
| *Cardamine oligosperma* | hill cress | Brassicaceae | d | n |
| *Cardionema ramosissimum* | sand mat | Caryophyllaceae | d | n |
| *Carduus pycnocephalus* | Italian thistle | Asteraceae | d | e |
| *Carex alma* | sturdy sedge | Cyperaceae | m | n |
| *Carex barbarae* | Santa Barbara sedge | Cyperaceae | m | n |
| *Carex harfordii* | Monterey sedge | Cyperaceae | m | n |
| *Castilleja affinis* | Indian paint-brush | Scrophulariaceae | d | n |
| *Castilleja attenuata* | narrow-leaved owl's clover | Scrophulariaceae | d | n |
| *Castilleja densiflora* var. *densiflora* | owl's clover | Scrophulariaceae | d | n |
| *Castilleja exserta* var. *exserta* | escobita | Scrophulariaceae | d | n |
| *Centromadia (= Hemizonia) parryi* ssp. *congdonii* | Congdon’s tarweed | Asteraceae | d | n |
| *Centromadia (= Hemizonia) parryi* ssp. *parryi* | pappose spikeweed | Asteraceae | d | n |
| *Cerastium glomeratum* | mouse-ear chickweed | Caryophyllaceae | d | e |
| *Chamomilla suaveolens* | pineapple weed | Asteraceae | d | e |
| *Chenopodium californicum* | California goosefoot | Chenopodiaceae | d | n |
| *Chenopodium rubrum* | red goosefoot | Chenopodiaceae | d | n |
| *Chlorogalum pomeridianum* | amole | Liliaceae | m | n |
| *Cicendia quadrangularis* | American microcala | Gentianaceae | d | n |
| *Cirsium occidentale* var. *venustum* | red thistle | Asteraceae | d | n |
| *Cirsium vulgare* | bull thistle | Asteraceae | d | e |
| *Clarkia affinis* | common clarkia | Onagraceae | d | n |
| *Clarkia purpurea* ssp. *purpurea* | wine-cup clarkia | Onagraceae | d | n |
| *Clarkia purpurea* ssp. *quadrivulnera* | four-spot clarkia | Onagraceae | d | n |
| *Clarkia unguiculata* | canyon clarkia | Onagraceae | d | n |
| *Claytonia parviflora* var. *parviflora* | small-flowered claytonia | Portulacaceae | d | n |
| *Claytonia perfoliata* | miner's lettuce | Portulacaceae | d | n |
| *Clematis ligusticifolia* | western virgin's-bower | Ranunculaceae | d | n |
| *Collinsia heterophylla* | Chinese houses | Scrophulariaceae | d | n |
| *Conium maculatum* | poison hemlock | Apiaceae | d | e |
| *Convolvulus arvensis* | field bindweed | Convolvulaceae | d | e |
| *Conyza canadensis* | horse weed | Asteraceae | d | n |
| *Corethrogyne filaginifolia* var. *filaginifolia* | common beach-aster | Asteraceae | d | n |
| *Cotoneaster* sp. | cotoneaster | Rosaceae | d | e |
| *Cotula coronopifolia* | brass buttons | Asteraceae | d | e |
| *Crassula connata* | sand pygmy | Crassulaceae | d | n |
| *Cynodon dactylon* | Bermuda grass | Poaceae | m | e |
| *Danthonia californica* var. *californica* | California oat grass | Poaceae | m | n |
| *Deinandra corymbosa* ssp. *corymbosa* | coast tarweed | Asteraceae | d | n |
| *Delphinium patens* | coast larkspur | Ranunculaceae | d | n |
| *Dichelostemma capitatum* | blue-dicks | Liliaceae | m | n |
| *Distichlis spicata* | salt grass | Poaceae | m | n |
| *Dodecatheon clevelandii* ssp. *sanctarum* | padres' shooting-star | Primulaceae | d | n |

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|---|---|---|---|---|
| *Dryopteris arguta* | California wood fern | Dryopteridaceae | f | n |
| *Dudleya lanceolata* | lance-leaved dudleya | Crassulaceae | d | n |
| *Eleocharis macrostachya* | pale spike-rush | Cyperaceae | m | n |
| *Elymus glaucus* | blue wild rye | Poaceae | m | n |
| *Epilobium brachycarpum* | panicled willow-herb | Onagraceae | d | n |
| *Epilobium ciliatum* ssp. *watsonii* | San Francisco willow-herb | Onagraceae | d | n |
| *Erechtites glomerata* | cut-leaved fireweed | Asteraceae | d | e |
| *Eremocarpus setigerus* | dove weed | Euphorbiaceae | d | n |
| *Ericameria ericoides* | mock-heather | Asteraceae | d | n |
| *Erigeron foliosus* var. *foliosus* | leafy daisy | Asteraceae | d | n |
| *Eriogonum nudum* var. *alternans* | naked buckwheat | Polygonaceae | d | n |
| *Erodium botrys* | long-beaked filaree | Geraniaceae | d | e |
| *Erodium cicutarium* | red-stemmed filaree | Geraniaceae | d | e |
| *Erodium moschatum* | white-stemmed filaree | Geraniaceae | d | e |
| *Eschscholzia californica* var. *californica* | California poppy | Papaveraceae | d | n |
| *Eschscholzia californica* var. *maritima* | maritime California poppy | Papaveraceae | d | n |
| *Euphorbia peplus* | petty spurge | Euphorbiaceae | d | e |
| *Festuca arundinacea* | reed fescue | Poaceae | m | e |
| *Filago californica* | California filago | Asteraceae | d | n |
| *Filago gallica* | narrow-leaved filago | Asteraceae | d | e |
| *Galium aparine* | goose-grass | Rubiaceae | d | e |
| *Galium porrigens* | climbing bedstraw | Rubiaceae | d | n |
| *Gastridium ventricosum* | nit-grass | Poaceae | m | e |
| *Genista monspessulana* | French broom | Fabaceae | d | e |
| *Geranium bicknellii* | Bicknell's geranium | Geraniaceae | d | n |
| *Geranium dissectum* | cut-leaf geranium | Geraniaceae | d | e |
| *Geranium molle* | dove's-foot geranium | Geraniaceae | d | e |
| *Gnaphalium californicum* | California everlasting | Asteraceae | d | n |
| *Gnaphalium luteo-album* | weedy cudweed | Asteraceae | d | e |
| *Gnaphalium purpureum* | purple cudweed | Asteraceae | d | n |
| *Gnaphalium ramosissimum* | pink everlasting | Asteraceae | d | n |
| *Grindelia camporum* ssp. *bracteosum* | Great Valley gumplant | Asteraceae | d | n |
| *Heliotropium curassavicum* | Chinese pusley | Boraginaceae | d | e |
| *Heteromeles arbutifolia* | toyon | Rosaceae | d | n |
| *Heterotheca grandiflora* | telegraph weed | Asteraceae | d | n |
| *Heterotheca sessiliflora* | hairy golden aster | Asteraceae | d | n |
| *Hirschfeldia incana* | summer mustard | Brassicaceae | d | e |
| *Hordeum murinum* ssp. *glaucum* | glaucous foxtail | Poaceae | m | e |
| *Hordeum murinum* ssp. *leporinum* | barnyard foxtail | Poaceae | m | e |
| *Hordeum vulgare* | barley | Poaceae | m | e |
| *Hypochaeris glabra* | smooth cat's ear | Asteraceae | d | e |
| *Hypochaeris radicata* | hairy cat's ear | Asteraceae | d | e |
| *Isocoma* sp.? | isocome? | Asteraceae | d | n |
| *Juncus bufonius* var. *bufonius* | common toad rush | Juncaceae | m | n |
| *Juncus bufonius* var. *occidentalis* | round-fruited toad rush | Juncaceae | m | n |
| *Juncus effusus* var. *pacificus* | common rush | Juncaceae | m | n |

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|---|---|---|---|---|
| *Juncus mexicanus* | Mexican rush | Juncaceae | m | n |
| *Juncus occidentalis* | western rush | Juncaceae | m | n |
| *Juncus patens* | spreading rush | Juncaceae | m | n |
| *Juncus phaeocephalus* | brown-headed rush | Juncaceae | m | n |
| *Lactuca saligna* | willow lettuce | Asteraceae | d | e |
| *Lactuca serriola* | prickly lettuce | Asteraceae | d | e |
| *Lasthenia minor* | gold-fields | Asteraceae | d | n |
| *Lathyrus vestitus* ssp. *puberulus* | Pacific pea | Fabaceae | d | n |
| *Layia platyglossa* | tidy tips | Asteraceae | d | n |
| *Lepidium nitidum* | common pepper grass | Brassicaceae | d | e |
| *Linanthus parviflorus* | common linanthus | Polemoniaceae | d | n |
| *Linaria canadensis* | blue toad-flax | Scrophulariaceae | d | e |
| *Lippia nodiflora* | garden lippia | Verbenaceae | d | e |
| *Lithophragma affine* | woodland star | Saxifragaceae | d | n |
| *Lolium multiflorum* | annual ryegrass | Poaceae | m | e |
| *Lomatium caruifolium* | caraway-leaved lomatium | Apiaceae | d | n |
| *Lomatium utriculatum* | common lomatium | Apiaceae | d | n |
| *Lotus micranthus* | small-flowered lotus | Fabaceae | d | n |
| *Lotus purshianus* | Spanish clover | Fabaceae | d | n |
| *Lotus salsuginosus* var. *salsuginosus* | coastal lotus | Fabaceae | d | n |
| *Lotus scoparius* var. *scoparius* | deerweed | Fabaceae | d | n |
| *Lotus strigosus* | bishop's lotus | Fabaceae | d | n |
| *Lupinus arboreus* | tree lupine | Fabaceae | d | n |
| *Lupinus bicolor* | Lindley's annual lupine | Fabaceae | d | n |
| *Lupinus microcarpus* var. *microcarpus* | red-flowered platycarpos | Fabaceae | d | n |
| *Lupinus nanus* | sky lupine | Fabaceae | d | n |
| *Luzula comosa* | wood rush | Juncaceae | m | n |
| *Lythrum hyssopifolium* | grass poly | Lythraceae | d | e |
| *Madia exigua* | small tarweed | Asteraceae | d | n |
| *Madia gracilis* | slender madia | Asteraceae | d | n |
| *Madia sativa* | coast tarweed | Asteraceae | d | n |
| *Malacothrix clevelandii* | Cleveland's malacothrix | Asteraceae | d | n |
| *Malva nicaeensis* | bull mallow | Malvaceae | d | e |
| *Malva parviflora* | cheeseweed | Malvaceae | d | e |
| *Malvella leprosa* | alkali mallow | Malvaceae | d | e |
| *Marah fabaceus* | wild cucumber | Cucurbitaceae | d | n |
| *Marrubium vulgare* | common horehound | Lamiaceae | d | e |
| *Meconella linearis* | narrow-leaved meconella | Papaveraceae | d | n |
| *Medicago lupulina* | black medic | Fabaceae | d | e |
| *Medicago polymorpha* | bur clover | Fabaceae | d | e |
| *Melica imperfecta* | California melica | Poaceae | m | n |
| *Micropus amphibolus* | Mount Diablo cottonweed | Asteraceae | d | n |
| *Micropus californicus* | slender cottonweed | Asteraceae | d | n |
| *Mimulus aurantiacus* var. *aurantiacus* | northern sticky monkey-flower | Scrophulariaceae | d | n |
| *Mimulus guttatus* | seep-spring monkey-flower | Scrophulariaceae | d | n |
| *Monardella villosa* | coyote mint | Lamiaceae | d | n |

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|---|---|---|---|---|
| *Nassella lepida* | foothill needlegrass | Poaceae | m | n |
| *Nassella pulchra* | purple needlegrass | Poaceae | m | n |
| *Navarretia atractyloides* | holly-leaved navarretia | Polemoniaceae | d | n |
| *Navarretia hamata* | hooked navarretia | Polemoniaceae | d | n |
| *Nemophila menziesii* | baby blue-eyes | Hydrophyllaceae | d | n |
| *Nicotiana glauca* | tree tobacco | Solanaceae | d | e |
| *Opuntia ficus-indica* | mission cactus | Cactaceae | d | e |
| *Oxalis albicans* ssp. *pilosa* | creeping wood-sorrel | Oxalidaceae | d | n |
| *Oxalis laxa* | lax oxalis | Oxalidaceae | d | e |
| *Oxalis pes-caprae* | Bermuda buttercup | Oxalidaceae | d | e |
| *Pellaea andromedaefolia* | coffee fern | Pteridaceae | f | n |
| *Pellaea mucronata* | bird's-foot fern | Pteridaceae | f | n |
| *Pentagramma triangularis* ssp. *triangularis* | print-back fern | Pteridaceae | f | n |
| *Pholistoma auritum* var. *auritum* | fiesta flower | Hydrophyllaceae | d | n |
| *Pholistoma membranaceum* | white fiesta flower | Hydrophyllaceae | d | n |
| *Pinus radiata* | Monterey pine | Pinaceae | c | e |
| *Plagiobothrys canescens* | valley popcorn flower | Boraginaceae | d | n |
| *Plagiobothrys undulatus?* | coast popcorn flower? | Boraginaceae | d | n |
| *Plagiobothrys nothofulvus* | common popcorn flower | Boraginaceae | d | n |
| *Plantago coronopus* | cut-leaf plantain | Plantganiaceae | d | e |
| *Plantago erecta* | California plantain | Plantganiaceae | d | n |
| *Plantago lanceolata* | English plantain | Plantganiaceae | d | e |
| *Platanus racemosa* | western sycamore | Platanaceae | d | n |
| *Platystemon californicus* | cream-cups | Papaveraceae | d | n |
| *Plectritis brachystemon* | plectritis | Valerianaceae | d | n |
| *Plectritis macrocera* | white plectritis | Valerianaceae | d | n |
| *Poa annua* | annual bluegrass | Poaceae | m | e |
| *Poa secunda* | pine bluegrass | Poaceae | m | n |
| *Pogogyne serpylloides* | thyme-leaved pogogyne | Lamiaceae | d | n |
| *Polygonum arenastrum* | common knotweed | Polygonaceae | d | e |
| *Polypodium californicum* | California polypody | Polypodiaceae | f | n |
| *Polypogon interruptus* | beard grass | Poaceae | m | e |
| *Polypogon monspeliensis* | rabbit's-foot grass | Poaceae | m | e |
| *Potentilla glandulosa* | sticky cinquefoil | Rosaceae | d | n |
| *Psilocarphus brevissimus* ssp. *brevissimus* | dwarf woolly-heads | Asteraceae | d | n |
| *Psilocarphus tenellus* var. *tenellus* | slender woolly-heads | Asteraceae | d | n |
| *Pterostegia drymarioides* | pterostegia | Polygonaceae | d | n |
| *Pyracantha* sp. | firethorn | Rosaceae | d | e |
| *Quercus agrifolia* | coast live oak | Fagaceae | d | n |
| *Quercus lobata* | valley oak | Fagaceae | d | n |
| *Ranunculus californicus* | California buttercup | Ranunculaceae | d | n |
| *Ranunculus hebecarpus* | downy buttercup | Ranunculaceae | d | n |
| *Ranunculus muricatus* | prickle-fruited buttercup | Ranunculaceae | d | e |
| *Raphanus sativus* | wild radish | Brassicaceae | d | e |
| *Rhamnus crocea* | redberry | Rhamnaceae | d | n |
| *Ribes divaricatum* var. *pubiflorum* | straggly gooseberry | Saxifragaceae | d | n |

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|---|---|---|---|---|
| *Ribes speciosum* | garnet gooseberry | Saxifragaceae | d | n |
| *Rorippa curvisiliqua* | western yellow cress | Brassicaceae | d | n |
| *Rosa californica* | California wild rose | Rosaceae | d | n |
| *Rubus ursinus* | Pacific blackberry | Rosaceae | d | n |
| *Rumex acetosella* | sheep-sorrel | Polygonaceae | d | e |
| *Rumex conglomeratus* | clustered dock | Polygonaceae | d | e |
| *Rumex crispus* | curly dock | Polygonaceae | d | e |
| *Rumex occidentalis* | western dock | Polygonaceae | d | n |
| *Rumex salicifolius* var. *salicifolius* | willow dock | Polygonaceae | d | n |
| *Sagina decumbens* ssp. *occidentalis* | western pearlwort | Caryophyllaceae | d | n |
| *Salix laevigata* | red willow | Salicaceae | d | n |
| *Salix lasiolepis* | arroyo willow | Salicaceae | d | n |
| *Salvia mellifera* | black sage | Lamiaceae | d | n |
| *Sambucus mexicana* | blue elderberry | Caprifoliaceae | d | n |
| *Sanicula arctopoides* | footsteps-of-spring | Apiaceae | d | n |
| *Sanicula bipinnata* | poison sanicle | Apiaceae | d | n |
| *Sanicula bipinnatifida* | purple sanicle | Apiaceae | d | n |
| *Sanicula crassicaulis* | gamble weed | Apiaceae | d | n |
| *Scirpus cernuus* | low club rush | Cyperaceae | m | n |
| *Scirpus microcephalus* | panicled bulrush | Cyperaceae | m | n |
| *Scrophularia californica* ssp. *californica* | coast figwort | Scrophulariaceae | d | n |
| *Senecio vulgaris* | common groundsel | Asteraceae | d | e |
| *Sidalcea malvaeflora* ssp. *laciniata* | checkerbloom | Malvaceae | d | n |
| *Silene gallica* | windmill pink | Caryophyllaceae | d | e |
| *Silybum marianum* | milk thistle | Asteraceae | d | e |
| *Sisymbrium officinale* | hedge mustard | Brassicaceae | d | e |
| *Sisyrinchium bellum* | blue-eyed grass | Iridaceae | m | n |
| *Solanum umbelliferum* | blue witch | Solanaceae | d | n |
| *Soliva sessilis* | common soliva | Asteraceae | d | e |
| *Sonchus asper* | prickly sow-thistle | Asteraceae | d | e |
| *Sonchus oleraceus* | common sow-thistle | Asteraceae | d | e |
| *Spergula arvensis* | corn spurry | Caryophyllaceae | d | e |
| *Spergularia bocconei* | Boccone's sand spurry | Caryophyllaceae | d | e |
| *Stachys bullata* | hedge nettle | Lamiaceae | d | n |
| *Stellaria media* | common chickweed | Caryophyllaceae | d | e |
| *Stephanomeria exigua* | small stephanomeria | Asteraceae | d | n |
| *Stylomecon heterophylla* | wind poppy | Papaveraceae | d | n |
| *Symphoricarpos albus* var. *laevigatus* | common snowberry | Caprifoliaceae | d | n |
| *Symphoricarpos mollis* | creeping snowberry | Caprifoliaceae | d | n |
| *Thysanocarpus curvipes* | hairy fringe pod | Brassicaceae | d | n |
| *Toxicodendron diversilobum* | poison-oak | Anacardiaceae | d | n |
| *Tragopogon porrifolius* | salsify | Asteraceae | d | e |
| *Trifolium angustifolium* | narrow-leaved clover | Fabaceae | d | e |
| *Trifolium bifidum* var. *decipiens* | notch-leaved Pinole clover | Fabaceae | d | n |
| *Trifolium campestre* | hop clover | Fabaceae | d | e |
| *Trifolium ciliolatum* | tree clover | Fabaceae | d | n |

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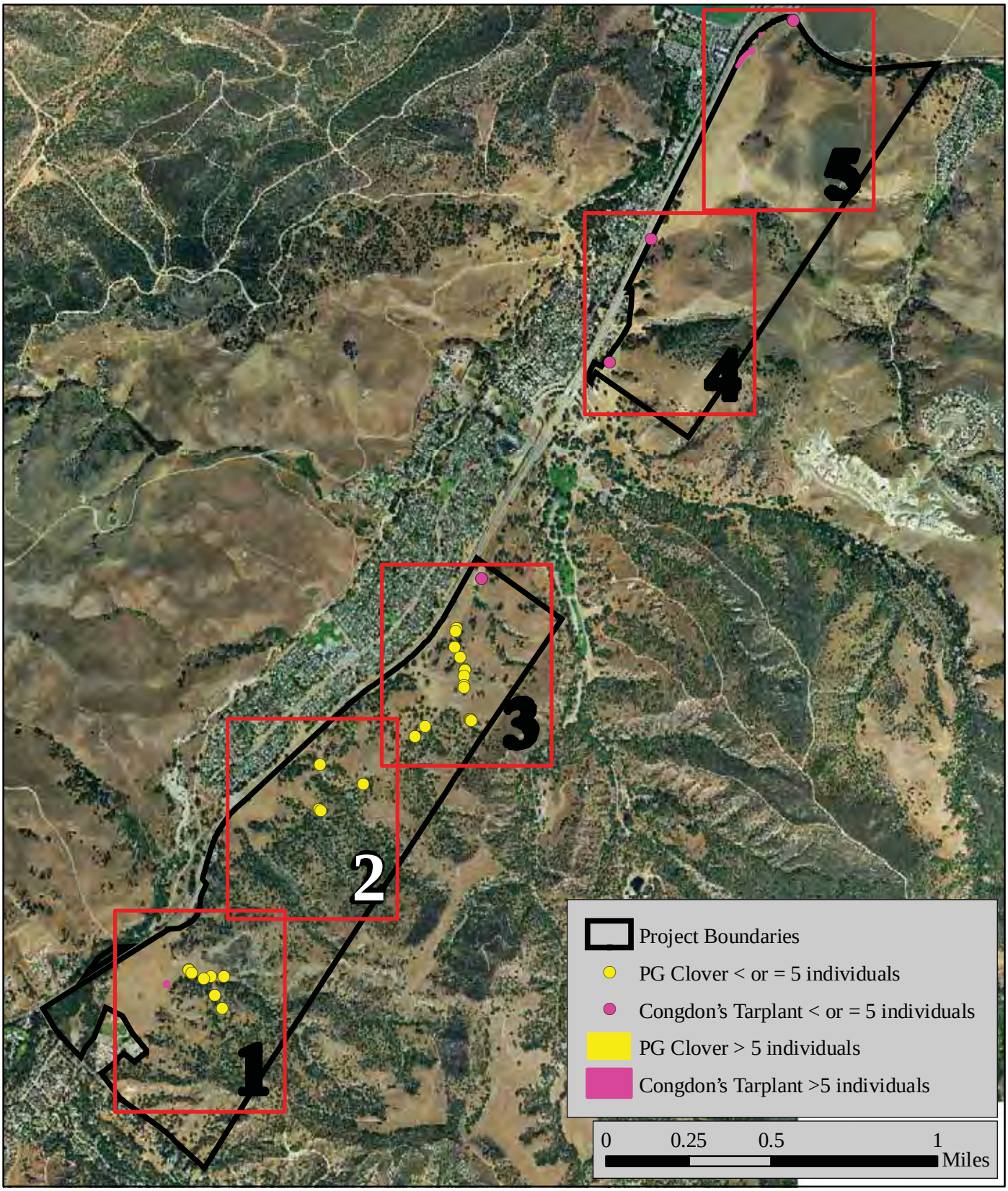
|---|---|---|---|---|
| *Trifolium depauperatum var. amplectens* | pale sack clover | Fabaceae | d | n |
| *Trifolium depauperatum var. truncatum* | truncate pale sack clover | Fabaceae | d | n |
| *Trifolium dubium* | shamrock | Fabaceae | d | n |
| *Trifolium glomeratum* | glomerate clover | Fabaceae | d | n |
| *Trifolium gracilentum* | pinpoint clover | Fabaceae | d | n |
| *Trifolium hirtum* | rose clover | Fabaceae | d | n |
| *Trifolium incarnatum* | crimson clover | Fabaceae | d | n |
| *Trifolium microcephalum* | maiden clover | Fabaceae | d | n |
| *Trifolium microdon* | Valparaiso clover | Fabaceae | d | n |
| *Trifolium polyodon* | Pacific Grove clover | Fabaceae | d | n |
| *Trifolium resupinatum* | resupinate clover | Fabaceae | d | n |
| *Trifolium subterraneum* | subterranean clover | Fabaceae | d | n |
| *Trifolium variegatum* | white-tipped clover | Fabaceae | d | n |
| *Trifolium vesiculosum* | arrow-leaf clover | Fabaceae | d | n |
| *Trifolium willdenovii* | tomcat clover | Fabaceae | d | n |
| *Triphysaria pusilla* | dwarf owl's-clover | Scrophulariaceae | d | n |
| *Triteleia ixioides* | pretty face | Liliaceae | m | n |
| *Triticum aestivum* | wheat | Poaceae | m | n |
| *Tropidocarpum gracile* | dobie pod | Brassicaceae | d | n |
| *Urtica dioica* ssp. *holosericea* | hoary nettle | Urticaceae | d | n |
| *Urtica urens* | dwarf nettle | Urticaceae | d | n |
| *Verbena bracteata* | bracted vervain | Verbenaceae | d | n |
| *Verbena lasiostachys* var. *lasiostachys* | western vervain | Verbenaceae | d | n |
| *Veronica peregrina* ssp. *xalapensis* | purslane speedwell | Scrophulariaceae | d | n |
| *Veronica persica* | Persian speedwell | Scrophulariaceae | d | n |
| *Vicia benghalensis* | Bengal vetch | Fabaceae | d | n |
| *Vicia ludoviciana* | slender vetch | Fabaceae | d | n |
| *Vicia sativa* ssp. *sativa* | spring vetch | Fabaceae | d | n |
| *Viola pedunculata* | Johnny-jump-up | Violaceae | d | n |
| *Vulpia microstachys* var. *pauciflora* | Pacific fescue | Poaceae | m | n |
| *Vulpia myuros* var. *myuros* | rat-tail fescue | Poaceae | m | n |
| *Wyethia helenoides* | gray mule-ears | Asteraceae | d | n |
| *Xanthium spinosum* | spiny clotbur | Asteraceae | d | n |
| *Zeltnera daveyi* | Davey's centaury | Gentianaceae | d | n |

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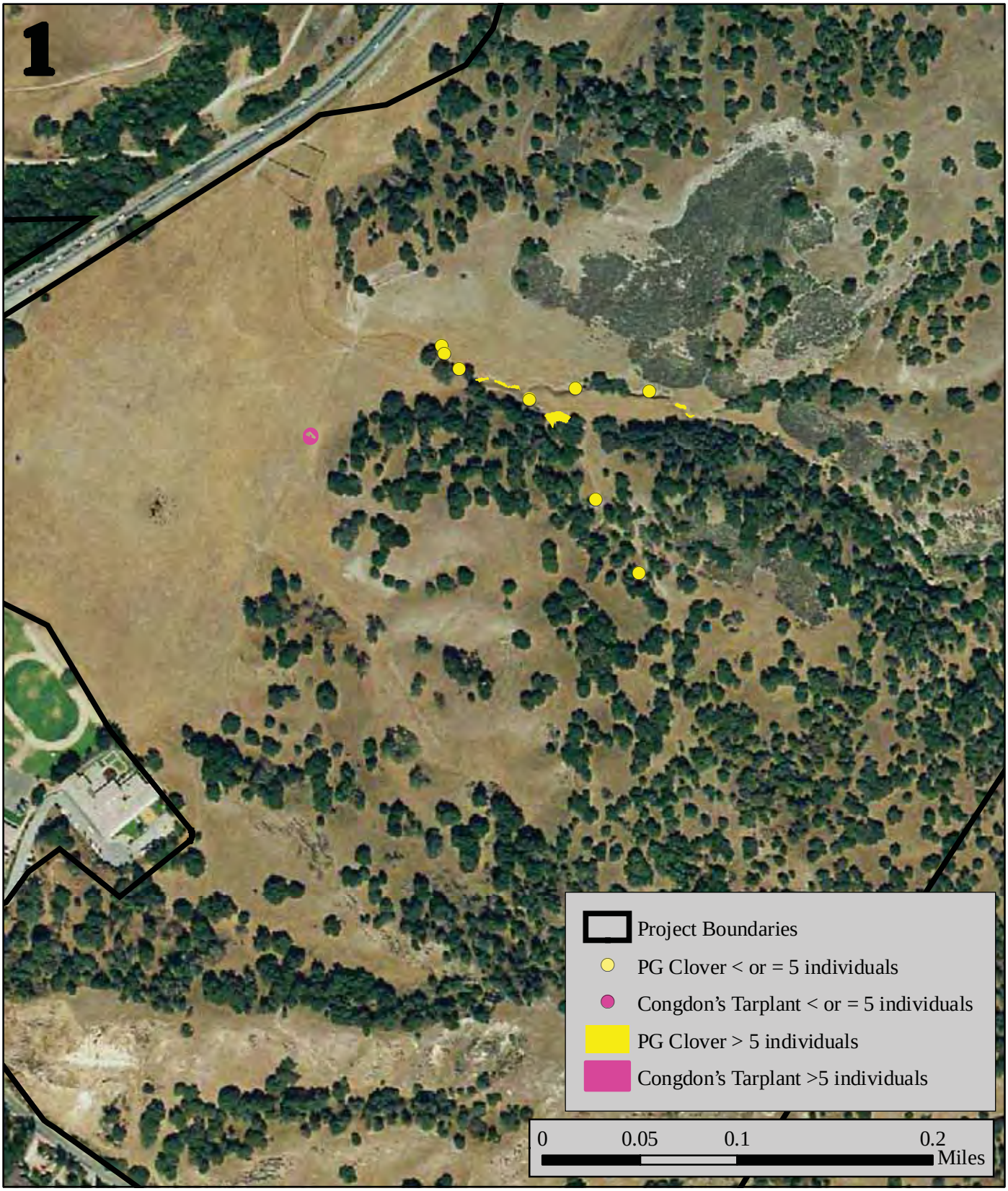
# Ferrini Ranch Rare Plants

DENISE DUFFY & ASSOCIATES, INC.

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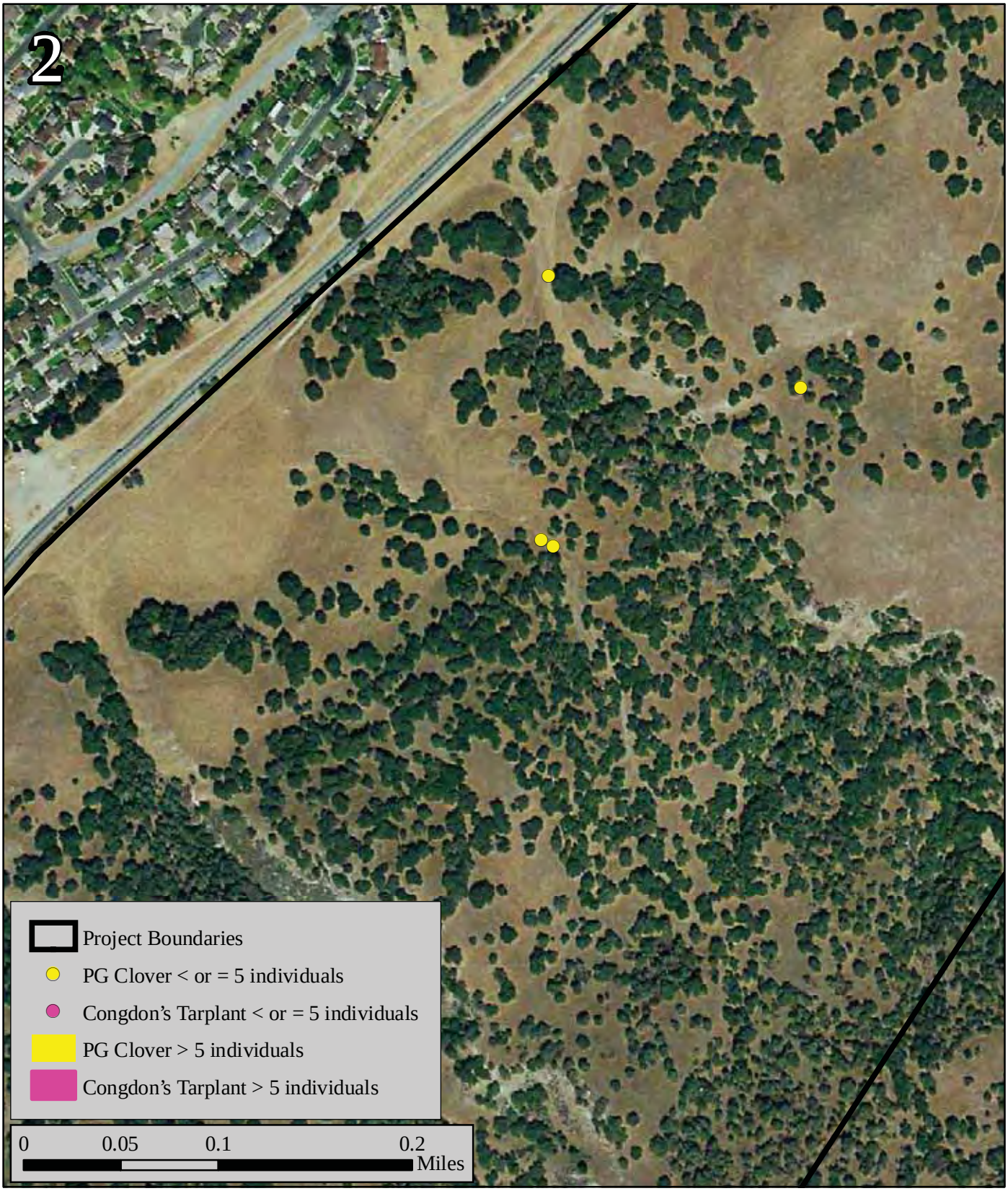


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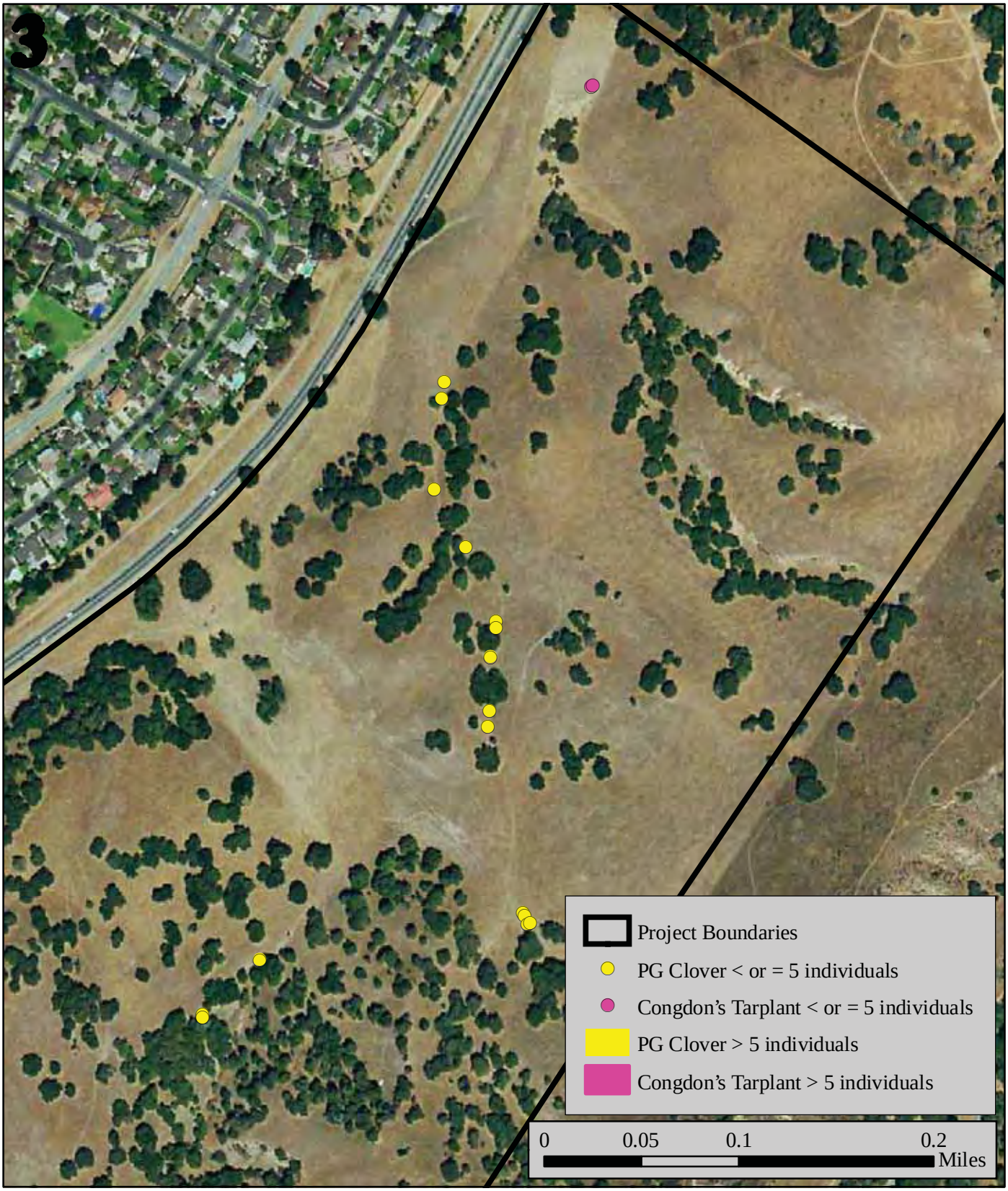


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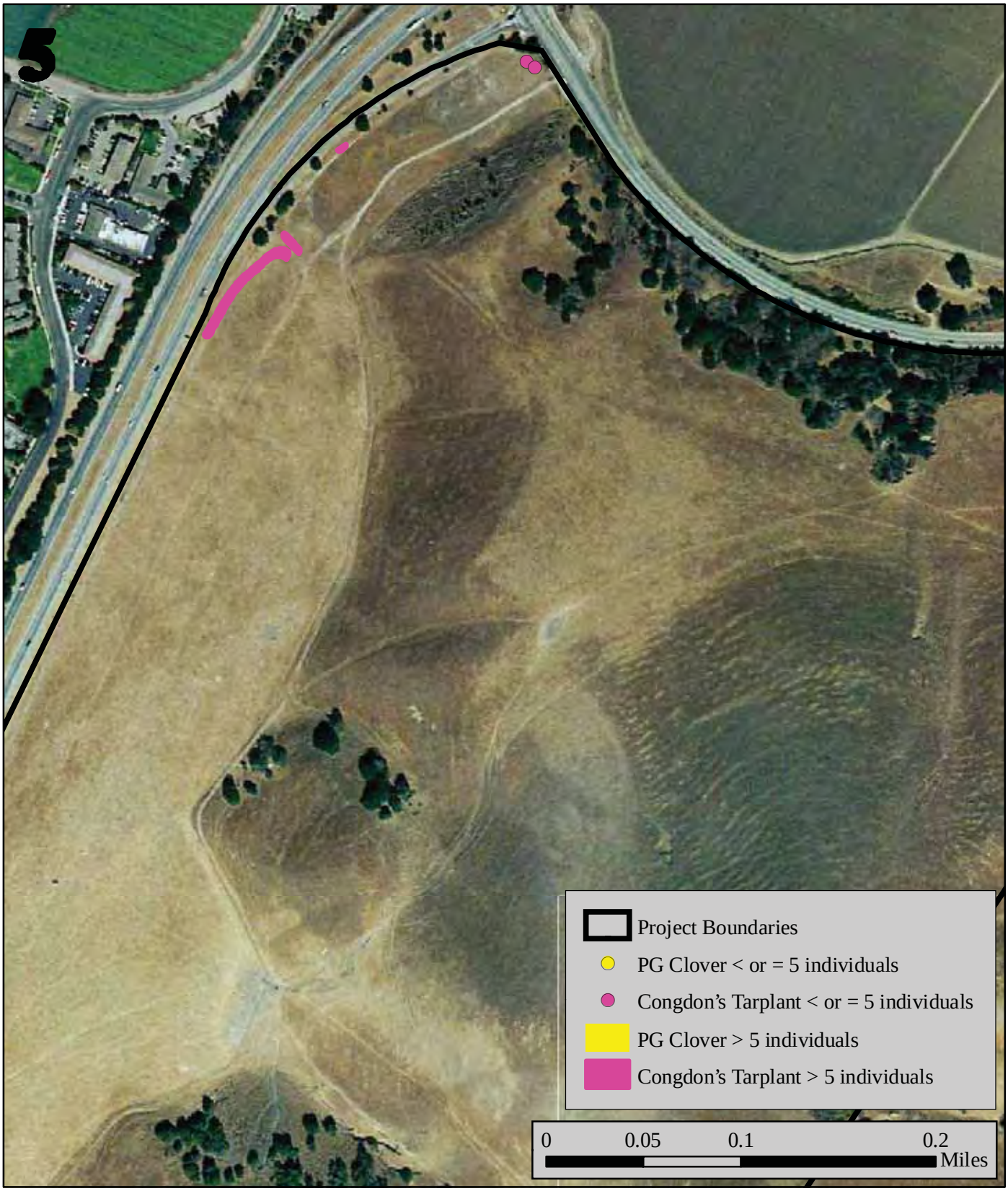


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# Ferrini Ranch Rare Plants

DENISE DUFFY & ASSOCIATES, INC.

# MEMO

**To:** Mr. Luis Osorio
MONTEREY COUNTY RESOURCE MANAGEMENT AGENCY

**From:** Joyce Hunting

**Cc:** Mr. Tad Stearn

**Date:** March 1, 2008

**Re:** Ferrini Ranch Subdivision - Peer Review Revised Biological Assessment

We have reviewed the revised Biological Assessment and find that the applicant has addressed the majority of our concerns. Specifically, I have outlined the three comments that were not completely addressed below with suggestions for revision.

> There are some discrepancies in the text related to the acreage of "wetlands and waters" delineated at the site. The acreage discussed in the actual text equates to a total of 4.46 acres. The acreage shown in Table 1 for wetlands and waters is 4.96 acres. The summary states that the site "contains 3.46 acres of potential seasonal and seep wetlands," then describes the linear feet of ephemeral drainages and El Toro Creek. Please ensure the size and descriptions of potential wetlands are consistent throughout the report based on the wetland delineation conducted by WRA. The wetland delineation is currently being peer reviewed by PMC.

This comment was not completely addressed. There remains confusion in the document regarding the amount and type of wetlands and other waters of the US on site. The acreage number for "wetlands and waters" is rounded up in Table 1 (Section 4.1, page 8), which appears inaccurate. On page 9 (section 4.1.2), it is explained that there are 3.61 acres of non-jurisdictional wetlands which include seasonal wetlands and seeps. On page 12 (still under section 4.1.2) it is further explained that there is 0.77 acre of ephemeral drainage and 0.17 acre of perennial waters in the study area. These added together equal 4.55 acres. In my opinion, the data should be represented to two decimal places instead of rounded up to a whole number. Then on page 20 (Section 5.1), the 0.77 acre is described as isolated seasonal pond, not ephemeral drainage. I'm not certain if this is a typo or if this information just wasn't described under section 4.1.2. Furthermore, on page 20 the linear feet of the collective drainages are mentioned, but not the acreage. The information for waters and wetlands throughout the report needs to be consistently presented.

> There are some discrepancies in the text related to the acreage of "wetlands and waters" delineated at the site. The acreage discussed in the actual text equates to a total of 4.46 acres. The acreage shown in Table 1 for wetlands and waters is 4.96 acres. The summary states that the site "contains 3.46 acres of potential seasonal and seep wetlands," then describes the linear feet of ephemeral drainages and El Toro Creek. Please ensure the size and descriptions of potential wetlands are consistent throughout the report based on the wetland delineation conducted by WRA. The wetland delineation is currently being peer reviewed by PMC.

Mitigation measures in the revised documents are only briefly mentioned in the first paragraph under section 5.3. These measures should be discussed in more detail for each species of concern or appropriate grouping of species (i.e. migratory birds and raptors; bats) that could be present (as there is suitable habitat). It's mentioned that there is suitable habitat for a number of special-status species including, but not limited to, American badger, Coast Range newt, and western spadefoot toad, but no specific survey data/report is provided or mentioned, nor is there any mention of appropriate mitigation measures. It was only casually mentioned that some of the mammalian species were not incidentally observed to date. On page 21 it's mentioned that "Protocol level surveys have been conducted for several species...", but no further detail or report is provided. Protocol or focused wildlife surveys are only mentioned for California tiger salamander, California red-legged frog, and western burrowing owl on pages 13, 15, 20, and 21.

> There are some discrepancies in the text related to the acreage of "wetlands and waters" delineated at the site. The acreage discussed in the actual text equates to a total of 4.46 acres. The acreage shown in Table 1 for wetlands and waters is 4.96 acres. The summary states that the site "contains 3.46 acres of potential seasonal and seep wetlands," then describes the linear feet of ephemeral drainages and El Toro Creek. Please ensure the size and descriptions of potential wetlands are consistent throughout the report based on the wetland delineation conducted by WRA. The wetland delineation is currently being peer reviewed by PMC.

More detail (i.e. how far from project area; actual date of observation; how may observations) would useful in the document. .

Please let me know if I can provide any further assistance.

# FERRINI RANCH DEVELOPMENT
# PROPOSED BIOLOGICAL RESOURCES IMPACT AND MITIGATION MEASURES

Prepared by:

WRA, Inc.
2169 E Francisco Blvd  Suite G
San Rafael, CA 94901
Attn: Michael Josselyn, PhD

January 27, 2009

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## 1.0 INTRODUCTION

The purpose of this document is to describe the potential impacts and mitigation measures to sensitive habitats, plants, and wildlife species for the proposed Ferrini Ranch development outside Salinas, Monterey County, California. The estimates presented here are based upon the revised site plan dated February 2008. Mitigation actions recommended herein are subject to review and approval by the regulatory agencies (Army Corps of Engineers (Corps), Central Coast Regional Water Quality Control Board (RWQCB), California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS) and Monterey County. However, the recommended measures are consistent with federal and state regulations and with County policies.

## 2.0 BACKGROUND

Biological resources were mapped and described in 2006-2007 in reports submitted to the County including:

- The location and extent of wetlands and other “waters” subject to the jurisdiction of the Army Corps of Engineers and/ or the State Water Resources Control Board were delineated in the “Delineation of Potential Wetlands and Waters Under Section 404 of the Clean Water Act for the Ferrini Property” (WRA 2007) and as verified by the Corps of Engineers.
- The location and extent of biological communities were mapped in an August 2006 letter report (Denise Duffy and Associates 2006) and in the Biological Assessment for the Ferrini Property (WRA 2007).
- The location and extent of special status plants were mapped in a December 2007 letter report (Denise Duffy and Associates 2007).
- Preliminary estimates of oak tree density within oak woodland communities is provided in the Forest Management Plan for the Ferrini Ranch Proposed Subdivision in Monterey County, California (Staub Forestry and Environmental Consulting 2006).
- Protocol level surveys were completed for the California red-legged frog, California tiger salamander, and western Burrowing owl (Denise Duffy and Associates 2008).

*Special Status Plant Species*

Special status plant surveys were conducted in April, May, and September of 2007 by Denise Duffy and Associates (Denise Duffy and Associates 2007). Based on this survey, two special-status species (CNPS list 1 or 2) were found:

- Pacific Grove clover (*Trifolium polyodon*, List 1B),
- Congdon's tarplant (*Hemizonia = Centromadia parryi ssp. congdonii*, List 1B).

Because Pacific Grove clover and Congdon's tarplant are listed as CNPS (California Native Plant Society) categories 1 or 2, they may be considered by lead agencies such as the County of Monterey under the CEQA guidelines as rare species that require mitigation.

*California Tiger Salamander*

Protocol level California Tiger Salamander (*Ambystoma californiense*) surveys were conducted by Denise Duffy & Associates in 2008 around one feature (Pond 18). No other areas on the property provide suitable breeding habitat. Eleven California Tiger Salamander (CTS) were trapped. Hybrid genomes with the non-native, non-listed eastern tiger salamander were detected in this population.

*Biological Communities*

The location and extent of protected biological communities were mapped in an August 2006 letter report (Denise Duffy and Associates 2006) and subsequent Biological Assessment for the Ferrini Property (WRA 2007). Three sensitive biological communities were found in the Project Area: riparian woodland, wetlands, and ephemeral streams.

Additionally, oak woodlands were characterized in the Forest Management Plan for the Ferrini Ranch Proposed Subdivision in Monterey County, California (Staub Forestry and Environmental Consulting 2006). Oak woodlands are subject to Monterey County Zoning Ordinance #21.64.260, which applies restrictions for the preservation of oak and other protected trees as required in the Monterey County General Plan, area plans, and master plans.

*Impact Assessment*

An impact assessment was performed by overlaying the proposed and revised (February 2008) site plans on the map of biological resources using GIS. Impacts to wetlands, streams, and habitat for special status plants and animals were identified as the acreage of mapped resources directly overlain by the proposed project plan. Resource elements falling within the limits of a residential lot were considered impacts. Acreages of ephemeral drainages and wetlands crossed by proposed roads were identified as impacts as well.

A preliminary impact assessment was conducted in early 2008 in which site plans dated November 2007 were overlain on the biological resources map. Subsequently, a revised site plan was prepared by the applicant in which impacts to biological resources were reduced. A comparison of impacts associated with the November 2007 site plan and the revised February 2008 site plan is provided in Table 1.

**Table 1.** Impact assessment and avoidance achieved through project redesign

| Biological Resource | November 2007 plan impacts | February 2008 plan impacts | Design-phase avoidance |
|---|---|---|---|
| Pacific Grove Clover | 0.08 acres | 0.08 acres | NC |
| Congdon's Tarplant | 0.008 acres | 0.007 acres | 0.001 acres |
| Riparian Woodland | 1.6 acres | 1.3 acres | 0.3 acres |
| Seasonal Wetlands | 2.8 acres | 0.6 acres | 2.2 acres |
| Ephemeral Drainages | 200 linear feet | 200 linear feet | NC |
| Perennial Streams | 200 linear feet | 200 linear feet | NC |
| Oak Woodland | 630-920 trees | 644-940 trees | -14-20 trees |

*Mitigation Measures*

Mitigation measures were developed through review of the physical and biological aspects of open space areas within the proposed project plan to identify areas capable of supporting preservation, enhancement, restoration, or creation of sensitive habitats or plant populations.

## 3.0 IMPACTS AND MITIGATION MEASURES

The following sections provide the project proponents proposed mitigation measures to address impacts to sensitive habitats and species. These mitigation measures are consistent with federal, state, and county regulations and policy. Some of these measures will require federal or state agency approval prior to implementation.

### Sensitive Habitats

**Potential Project Impact 3.1 - Impacts to riparian woodland**

Twelve (12) acres of riparian woodland are present in the Project Area. A riparian corridor exists within the west corner of the project site adjacent to San Benancio Road at the confluence of El Toro and Harper Creeks. The riparian habitat in this area is dominated by willows (*Salix* spp.) and California bay laurel (*Umbellularia californica*). Dominant understory species include California blackberry (*Rubus ursinus*), California buckeye (*Aesculus californica*), mugwort (*Artemisia douglasiana*), and poison oak (*Toxicodendron diversilobum*).

Impacts to riparian habitat are regulated under California Department of Fish and Game Code 1600. Generally, impacts to riparian habitat are measured as the acreage of riparian tree cover removed or disturbed. Based upon the revised site plans, 1.3 acres of riparian habitat would be impacted by development of home lots.

Proposed Project Mitigation Measure 3.1.a  Enhancement of riparian woodland

Riparian woodland in the project area is currently degraded in some areas by the presence of debris and trash, soil compaction related to the use of dirt bikes throughout the area, and the presence of invasive species in the understory. Enhancement of the preserved riparian woodland within open space areas of the project will include the removal of trash and debris, the removal of invasive species, and erosion control in areas of bank erosion. A Riparian Mitigation and Monitoring Plan will be prepared to describe the details of enhancement including species, planting plans, maintenance, and monitoring activities to ensure enhancement of the existing riparian woodland.

Proposed Project Mitigation Measure 3.1.b Restoration of riparian woodland

Approximately 2.6 acres of riparian woodland will be restored within the open space areas along existing drainages. A Riparian Mitigation and Monitoring Plan will be prepared to describe the details of restoration including species, planting plans, maintenance, and monitoring activities to ensure restoration in this area of similar structure and composition to the adjacent existing riparian woodland.

Level of significance with Mitigation Measures 3.1.a and 3.1.b

Implementation of the measures a and b listed above would reduce impacts to riparian woodland to a level of *less than significant*.

**Potential Project Impact 3.2 - Impacts to wetlands**

Approximately 3.6 acres of wetlands are present in the Project Area (WRA 2006). Wetlands in the Project Area consist of seasonal wetlands and seep wetlands. Seasonal wetlands are situated within depressions or flat areas that are inundated for a duration sufficient to sustain a community of wetland-adapted plant species and induce hydric soil conditions, although the water source is ephemeral. In the Project Area, seasonal wetlands generally occur in depressions and flat areas at the mouths of ephemeral drainages.

Seep wetlands occur on foot slopes and toe slopes in the Project Area where groundwater intersects the soil surface. Seep wetlands in the Project Area range from ephemeral to perennial. All wetlands in the Project Area are dominated by wetland adapted plant species including various rushes particularly iris-leaved rush (*Juncus xiphioides*) and Mexican rush (*Juncus mexicanus*), cut-leaf plantain (*Plantago coronopus*), bermudagrass (*Cynodon dactylon*), and Hyssop's loosestrife (*Lythrum hyssopifolia*).

None of the wetlands were determined to be jurisdictional under Section 404 of the Clean Water Act as determined by the Corps of Engineers (December 18, 2007, Corps of Engineers, San Francisco District); however, they are still be considered "waters of the State" by the Regional Water Quality Control Board and are subject to regulation under the Porter Cologne Act.

Based upon the February 2008 plans, 0.6 acres of wetlands would be directly impacted by development of home lots and roads. Avoidance of 2.3 acres of these impacts was achieved by eliminating or reconfiguring lots and realigning several small portions of planned roads.

Proposed Project Mitigation Measure 3.2.a Enhancement and protection of wetlands with open space areas

Wetlands in the Project Area are currently degraded in some areas by erosion and bank slumping. General enhancement measures will include planting of native wetland shrub and herb species and removal of non-native weed species. Within the proposed wetland mitigation area, wetland swales will also be restored through recreation of the hydrologic connection of previously separated wetland features. Signs will be posted to alert recreationists to the presence of the sensitive habitat and the importance of preservation.

Proposed Project Mitigation Measure 3.2.b Creation of wetlands

Mitigation for impacts to impacted wetlands will be achieved by creating additional wetland acreage on-site. Approximately 1.2 acres of wetland habitat will be created in the open space areas of the project. Created wetlands will be seeded with native wetland plant species and will be protected into perpetuity under a conservation easement. A Wetland Mitigation and Management Plan in accordance with Regional Water Quality Control Board requirements will be prepared for created isolated wetlands detailing weed control and grazing management appropriate to maintaining the functions and values of the created wetlands.

Level of significance with Mitigation Measures 3.2.a, 3.2.b

Implementation of the measures a or b listed above would reduce impacts to wetlands to a level of *less than significant*.

**Potential Project Impact 3.3 - Impacts to ephemeral drainages**

Approximately 12,249 linear feet (0.77 acres) of ephemeral drainages are present in the Project Area. Ephemeral drainages occur in swales where water flow is restricted to peak rainfall events, and has created a defined drainage channel with a clearly defined ordinary high water mark. Ephemeral drainages occur throughout the Project Area generally flowing from east to west. No ephemeral drainages within the Project Area were determined to be jurisdictional under Section 404 of the Clean Water Act following a site visit by Corps personnel in May 2007. A final determination letter was issued by the Corps on December 18, 2007.

Impacts to ephemeral drainages will be regulated by the RWQCB under the Porter Cologne Act and by the Department of Fish and Game under the Fish and Game Code. Mitigation locations onsite will require approval by these agencies.

The project design has avoided most impacts to ephemeral drainages. Approximately 200 feet of impacts to ephemeral drainages (1.6% of total in project) will occur in the revised project. Creation of ephemeral drainages is difficult and it is likely that preservation is the preferred option for this site. Mitigation for impacts to ephemeral streams will include bank stabilization measures on existing ephemeral drainages and preservation of drainages on-site in open space areas.

Proposed Project Mitigation Measure 3.3.a Preservation and restoration of ephemeral drainages

Ephemeral drainages in the Project Area are currently degraded in some areas by erosion and bank slumping related to the long history of grazing on the ranch. Within the preserved open space areas of the proposed project, areas of bank slumping and erosion will be identified and repaired with biotechnical means, e.g. planting, log revetment, etc., so as to stabilize eroding banks. Approximately 400 feet of bank stabilization projects will be identified as mitigation for loss of ephemeral drainages.

Level of significance with Mitigation Measure 3.3.a

Implementation of the mitigation measure listed above would reduce impacts to ephemeral drainages to a level of *less than significant*.

**Potential Project Impact 3.4 - Temporary impacts to perennial waters**

Approximately 2,099 linear feet (0.17 acres) of perennial waters occur at the confluence of El Toro Creek and Harper Creek in the western-most portion of the Project Area. This portion of El Toro Creek is perennial in all but the driest of years. As a result, a riparian corridor can be found in this area of the Project Area. These perennial waters were determined to be Waters of the U.S. under Section 404 of the Clean Water Act in its verification letter of December 18, 2007.

Based on the site plans provided, one temporary impact to Harper Creek is anticipated. At the request of the County of Monterey to meet the need for additional recreational trails and improved connectivity to Toro Regional Park, a pedestrian/bikeway path is proposed to run parallel to Highway 68. This pathway will require the construction of a crossing over Harper Creek, a tributary to El Toro Creek. Eighty linear feet of El Toro Creek will be impacted from the installation of a culvert that is 20 feet wide in diameter, has an 8 foot rise, and is 80 feet long.

Proposed Project Mitigation Measure 3.4.a. Construction Best Management Practices

To minimize the temporary and indirect impacts to perennial waters such as sedimentation and erosion, Best Management Practices (BMPs) should be implemented both during and following construction. In addition, all work will be done during the dry season.

Proposed Project Mitigation Measure 3.4.b Riparian habitat enhancement

Mitigation will consist of enhancement of 0.08 acres of riparian habitat along El Toro Creek in the immediate vicinity of the proposed bridge crossing. Riparian enhancement will include removal of invasive plant species, removal of trash and debris, and restoration of disturbed areas. A Riparian Mitigation and Monitoring Plan will be prepared to describe the details of enhancement including species, planting plans, maintenance, and monitoring activities to ensure long term enhancement of the riparian habitat in this area.

Through the enhancement of 0.08 acres of riparian habitat within the banks of Harper Creek, temporary impacts to Harper Creek.

Level of significance with Mitigation Measures 3.4.a and 3.4b

Implementation of the measures listed above would reduce impacts to perennial waters to a level of *less than significant*.

**Potential Project Impact 3.5 - Impacts to oak woodlands**

Approximately 422 acres of coast live oak woodland and savannah are present in the Project Area. It is estimated that the over 29,000 oaks are present with a DBH of greater than 6 inches. Oak woodland communities in the Project Area are dominated by open to nearly closed canopies of coast live oak (*Quercus agrifolia*) with grass or shrub under stories. Savannahs are transitional between woodlands and grassland with trees more widely spaced and a grassland dominated understory. In the Project Area the denser oak woodlands are found on the more mesic, north-facing slopes and canyon bottoms. The densest oak woodlands have an understory dominated by oak leaf duff and sparse herbaceous vegetation. The oak savannahs are found on the drier, east-facing slopes and ridge tops.

Impacts to oak woodlands are regulated by Monterey County Ordinance. Based upon the Forest Management Plan prepared by Staub forestry and using the February 2008 site plans, approximately 644-940 oak trees would be removed for the proposed development. This corresponds to approximately 2-3% of oaks estimated to occur within the entire Project Area.

Proposed Project Mitigation Measure 3.5a Planting oak trees

Mitigation for impacts to oak trees includes planting and maintaining oak trees on site for five years. The County's required mitigation ratio for individual trees less than 24 inches DBH is 1:1. A final count of tree removal will only be possible once final site plans are approved. Ample acreage in open space areas on site to plant oaks to achieve this requirement.

Measures proposed within the Forestry Plan as consistent with the County Ordinance 21.64.260 will be followed to reduce impacts to less than significant.

Level of significance with Mitigation Measure 3.5.a

Implementation of the measure a listed above would reduce impacts to oak woodlands to a level of *less than significant*.

**Sensitive Species Impacts and Mitigation**

**Potential Project Impact 3.6 - Impacts to Pacific Grove clover.**

Pacific Grove clover (*Trifolium tridentatum* var. *polyodon*, syn. *Trifolium polyodon*, CNPS List 1B Species) is a variety of annual clover that occurs in closed-cone coniferous forests, coastal prairies, meadows and seeps, and mesic grasslands at elevations from 5 to 120 meters. The species is found primarily in wetlands, seasonally mesic grasslands, or woodland habitats. Wetlands and mesic oak woodlands in the southern portion of the Project Area support a number of populations of this species.

Based on the February 2008 site plan, impacts to Pacific Grove clover include small populations covering approximately 0.08 acres or 3,485 sq. ft.

Proposed Project Mitigation Measure 3.6.a Preservation of Pacific Grove clover populations

The open space easement will include the existing populations of Pacific Grove clover in the Project Area, with a buffer of approximately 50 feet where possible to minimize potential disturbance. Plants will be identified on site prior to construction activities and a fenced protected buffer will be established to eliminate unintended construction impacts. Signs will be posted to alert recreationists to the presence of the protected plants and the importance of preservation. A rare plant management plan will be incorporated into the Open Space Management Plan protected special status plant populations detailing weed control, fuel management restrictions, and annual monitoring requirements appropriate to maintaining the populations.

Proposed Project Mitigation Measure 3.6.b Creation of Pacific Grove clover populations

Approximately 3,500 sq. ft. of restored or created seasonal wetlands will be managed as created Pacific Grove clover habitat. Pacific Grove clover populations will be created by collecting seed from existing plants or soil from the existing populations prior to disturbance. A rare plant management and monitoring plan will be developed for protected special status plant populations detailing weed control, land use measures to protect Pacific Clover, and annual monitoring requirements appropriate to maintaining the populations.

Level of significance with Mitigation Measures 3.6.a and 3.6.b

Implementation of the measures a and b listed above would reduce impacts to Pacific Grove clover to a level of *less than significant*.

**Potential Project Impact 3.7 - Impacts to Congdon's tarplant.**

Congdon's tarplant (*Hemizonia* = *Centromadia parryi* ssp. *congdonii*, CNPS List 1B Species) is an annual herb that occurs in grasslands at elevations from 1 to 230 meters. It blooms between June and November. The lower elevation grasslands in the Project Area host several populations of this species (Denise Duffy and Associates 2007).

Based upon the February 2008 plans, impacts to Congdon's tarplant include small populations covering approximately 300 sq.ft. Forty square feet of impacts to Congdon's tarplant population have been avoided through revision of the project plan.

Proposed Project Mitigation Measure 3.7.a Preservation of Congdon's tarplant populations

The existing populations of Congdon's tarplant in the northeastern parcel in the Project Area will be protected under the open space easement, with a buffer of approximately 50 feet where possible to minimize potential disturbance. Plants will be identified on site prior to construction activities and a fenced protected buffer will be established to eliminate unintended construction impacts. Signs will be posted to alert recreationists to the presence of the protected plants and the importance of preservation. A management plan will be developed for protected special status plant populations detailing weed control and any other management measures

appropriate to maintaining the populations.

Proposed Project Mitigation Measure 3.7.b Creation of Congdon's tarplant populations

Approximately 300 sq feet of grassland in the southern portion of the northeastern parcel will be managed as created Congdon's tarplant habitat. Congdon's tarplant populations will be created by collecting seed from existing plants or soil from the existing populations prior to disturbance. The annual grassland habitat will be seeded or covered with harvested soil and will be protected. A management plan will be developed for protected special status plant populations detailing weed control and grazing management appropriate to maintaining the populations.

Level of significance with Mitigation Measures 3.7.a and 3.7.b

Implementation of the measures a and b listed above would reduce impacts to Congdon's tarplant to a level of *less than significant*.

**Potential Project Impact 3.8 - Potential Bat Roost Impact**

Construction activities may result in the removal or disturbance of hibernation or maternal roost sites, if they are present in the Project Area, due to building removal, noise, or human intrusion. If bats are present, this constitutes a direct impact, as it may result in direct mortality and/or reduction in reproductive success.

Increased night lighting for street, residential, and industrial development may result in disturbance to movement and behavior and may be a potential indirect impact. Because these species are able to travel great distances to forage, impacts to foraging habitat are not expected to affect the long-term survival of this species.

Proposed Project Mitigation Measure 3.8a Roost Survey, Buffers and Avoidance

Mitigation for direct impacts to special status bats will consist of work windows and, if needed, pre-construction surveys for potential roost sites in the Project Area prior to construction. Preconstruction surveys will not be required if trees, snags and man made potential roost structures are removed in September and October when bat species are neither hibernating nor in a maternity roost. If removal of potential roost sites in this work window is not possible, a bat roost survey in areas of potential roosting areas will be conducted. If present, establishment of temporary protective buffers will avoid direct take of roosting bats until they no longer are occupying these areas.

Nighttime artificial lighting will not be directed into areas of potential bat presence. In addition, artificial lighting within or adjacent to open space areas will incorporate measures to lessen impacts to sensitive species and communities. These measures include prismatic glass coverings, cutoff shields, embedded road lights, use of narrow spectrum bulbs, or other appropriate lighting technology.

Level of significance with Mitigation Measure 3.8a

Implementation of the measure a listed above would reduce impacts to bats to a level of *less than significant*.

**Potential Project Impact 3.9 - Potential Sensitive Mammal Impacts**

Removal of riparian may result in direct impacts to woodrat nests. In addition, construction activities may impact mammals such as the American badger, if present in the Project Area.

Indirect impacts include increased predation or harassment from pets, increased nighttime lighting (which may affect behavior and movement), and nest or burrow abandonment due to noise or other human disturbances such as traffic. For small, nocturnal, herbivorous mammals, artificial night lighting increases the risk of predation and decreases food consumption.

Proposed Project Mitigation Measure 3.9a Survey and Avoidance

For any work within riparian areas along El Toro Creek, pre-construction surveys for the Monterey dusky-footed woodrat will be conducted prior to construction will determine if this species is present. Work will be planned to avoid impacts to wood rat nests; however, if removal is necessary, a qualified biologist will dismantle the nests prior to construction to assure that no animals are taken during construction.

Pre-construction surveys in the months prior to construction will determine if badgers are present in the grassland areas where grading will occur. If present, establishment of temporary protective buffers will avoid direct take of this species in breeding dens.

Level of significance with Mitigation Measure 3.9a

Implementation of the measure a listed above would reduce impacts to sensitive mammals to a level of *less than significant*.

**Potential Project Impact 3.10 - Potential Sensitive Avian Species Impacts**

Avian species may use trees, shrubs, or the ground for nesting habitat, and agricultural fields and open space for foraging. Potential direct impacts to nesting special status avian species could occur during construction as a result of tree and shrub removal, removal of riparian habitat, ground disturbance, equipment movement, or by direct mortality. If present, the project could also result in impacts to foraging habitat for these species.

Several special status bird species have the potential to forage over the Project Area, but will not be affected by the Project because of lack of nesting habitat. These species include: Ferruginous Hawk, Merlin, American Peregrine Falcon and Prairie Falcon. Ferruginous Hawk and Merlin are uncommon winter visitors to the Project Area; they do not nest on the site. American Peregrine Falcon and Prairie Falcon may forage in the Project Area, but nesting habitat for these species is not available in the Project Area. The proposed project will not directly impact these birds.

Although no Burrowing Owls have been detected on the site in the protocol level surveys, development or other construction-related activities could impact this species should they disperse to the site in the future. In addition, should Burrowing Owls establish nests within squirrel burrows, grading and construction activities could result in chick mortality in those nests.

Indirect impacts to special status avian species may include increased predation from pets, increased nighttime lighting and nest abandonment due to noise or other human disturbances such as traffic.

Proposed Project Mitigation Measure 3.10a Pre-construction Survey, Buffers and Avoidance

Mitigation for direct impacts to special status avian species will be conducted together with mitigation for other special status wildlife species. The preservation of suitable nesting and foraging habitat on site will mitigate for the loss of nesting and foraging habitat for these species.

Pre-construction surveys and biological monitoring in the months prior to construction will determine if any of these species are present in the Project Area in the construction year. If present, establishment of temporary protective breeding season buffers will avoid direct take of these birds. Alternatively, the removal of suitable nesting habitat prior to construction and outside of the nesting period would reduce the potential for nesting to occur during construction.

Protocol level Burrowing Owl surveys in 2007 by Denise Duffy and Associates did not detect the presence of this species. However, Burrowing Owls have the potential to move into the Project Area as long as there is suitable habitat. Pre-construction surveys and biological monitoring in the months prior to construction will determine if Burrowing Owls are present in the Project Area in the construction year. If present, establishment of temporary protective breeding season buffers of 300 feet shall be established around the nest site until the fledglings have left.

Burrowing owls may be relocated through the use of one-way doors over burrows as approved by DFG and by a qualified biologist during a time other than the nesting season (March through August).

Level of significance with Mitigation Measure 3.10a

Implementation of the measure a listed above would reduce impacts avian species to a level of *less than significant*.

**Potential Project Impact 3.11- Potential Impacts to California Tiger Salamander**

California tiger salamander (CTS) habitat is limited to a single potential breeding pond (Pond 18) within the project site and to suitable estivation habitat surrounding that pond. The population of CTS has been determined to consist of hybrid individuals and therefore, the level of protection afforded these species is determined on a case-by-case basis by the US Fish and Wildlife Service (Service). The impacts and mitigation measures proposed by the Developer is based on standard protocols and mitigation for CTS as protected under the Endangered Species Act. However, the Service may modify and reduce these mitigation measures based on its review of the genetic information for this population.

In addition to the breeding pond site, suitable upland and dispersal habitat for CTS may include undisturbed grazed annual grassland containing small mammal burrows or other underground habitat up to 2,200 feet from suitable aquatic breeding habitat (USFWS 2005). The Service has previously required mitigation for impacts to upland habitat up to 2,200 feet of occupied CTS aquatic habitat. Mitigation for permanent direct impacts to CTS and its habitat is typically

conducted at a 2:1 ratio of preserved habitat acreage to impacted acreage (3:1 for aquatic impacts).

Temporary impacts are usually mitigated at a 1:1 ratio of preserved habitat acreage to impacted acreage. Areas of temporary disturbance are usually restored and managed to provide CTS upland habitat.

Using the February 2008 plan and a maximum distance of 2,200 feet from suitable aquatic habitat, an estimated 39.2 acres of potential CTS habitat would be permanently impacted by roads and lots in the proposed project alternative.

Potential indirect impacts to CTS include increased traffic, potential introduction of predatory non-native species, increased nighttime lighting, and harassment by pets in or adjacent to suitable CTS habitat. Expansion and construction of new roads along with increased traffic may increase vehicular-mortality to CTS individuals.

Proposed Project Mitigation Measure 3.11a Service Approved Mitigation Measures

The following measures are standard operating procedures developed by the US Fish and Wildlife Service for construction activities within the areas known to support CTS. To the extent that the Service desires to preserve or salvage potential hybrid CTS individuals, the Developer will undertake the following steps:

- The Developer shall have a Service-Approved Biologist develop, and shall implement, a plan to salvage adult and juvenile California tiger salamanders from Project Sites via drift fence and pitfall trap captures prior to grading. The purpose of the capture shall be to both minimize mortality of adult California tiger salamanders on Project Sites and to provide information on the level of upland habitat use in the area to promote more effective conservation of the species in adjacent Conserved Habitat Areas.

  The salvage plan shall be approved in writing by the Service and shall include the following: (1) salvaging shall be via drift fence and pitfall trap captures along a sufficient amount of a Project Site boundary to intercept the majority of the adult population migrating to or from known and potential breeding ponds in the year the captures take place; (2) drift fence installation shall be timed to capture and repel individuals migrating to and from breeding areas; (3) identification of appropriate areas where captured California tiger salamanders shall be released. Only a Service-Approved Biologist may capture and handle California tiger salamanders. Before project activities begin a Service-Approved Biologist shall identify appropriate areas to receive relocated California tiger salamanders. These areas must be outside the Developer Property boundaries in a designated Conserved Habitat Area, in proximity to the capture site, and support suitable vegetation for the California tiger salamander. The Service-Approved Biologist must maintain detailed records of any California tiger salamanders that are moved (e.g., size, coloration, any distinguishing features, photographs [digital preferred]) to assist him or her in determining whether translocated animals are returning to the original point of capture.

- Any storm water detention basins or other water features created on the property will be designed to reduce attracting breeding California tiger salamanders. This is usually accomplished through the use of features which drain following storm events. A

Service-approved strategy shall be developed and implemented to ensure that water features do not become a source for nonnative species, such as bullfrogs, which could move into nearby Conserved Habitat Areas.

- Before grading or construction work begins on a Project Site, a Service-Approved Biologist shall conduct a training session for all construction personnel who may be working on the Project Site. At a minimum, the training shall include a description of the California tiger salamander and its habitat, the specific measures that are being implemented to conserve it, and the boundaries of the project site.

- Construction areas in the vicinity of Pond 18 and its upland estivation area shall be clearly demarcated by construction fencing or other materials to ensure that grading and the staging of equipment or supplies do not exceed the construction boundaries.

- During project construction activities, all trash that may attract predators shall be properly contained and removed from the work site. Pets shall not be permitted at the Project Site.

- During project construction activities, any California tiger salamanders that are discovered shall be recorded and measured by a Service-Approved Biologist. If alive, the California tiger salamander(s) shall be relocated to the appropriate pre-determined area outside the Developer Property boundaries.

- The Developer shall report the results of its salvage operations (e.g., number, size, condition, location, and dates of capture and release of individual California tiger salamanders; problems encountered during capture, handling, or release) to the Service upon completion of each salvage operation conducted on a Project Site. Developer shall report on Developer's compliance with these Restrictions within 90 days of the completion of all planned development on the Developer Property.

Proposed Project Mitigation Measure 3.11b CTS Mitigation Bank Option

Currently, there are no mitigation banks that service the Project Area. However, should a mitigation bank be available, the Developer may choose to purchase appropriate credits as approved by the Service to offset lost of any upland estivation habitat. The amount of credits to be purchased will be set by the Service in its approval of the mitigation bank.

Proposed Project Mitigation Measure 3.11c On-site Option

If no mitigation banks are available and/or the Service or the Developer determine that on-site mitigation is preferred, the Developer will create an additional breeding pond within the preserved open space areas of the project. Consultation with the Service shall be initiated for approval on the location and size of the breeding pond and associated upland estivation lands.

CTS breeding success in the pond may be achieved by natural dispersal means, but may also necessitate inoculation with native CTS from Pond 18. A long term management and monitoring plan would be required to establish the success criteria for the pond and its management requirements.

The CTS breeding pond and upland estivation habitat will be placed within the open space

preserve lands and a conservation easement established to provide funding for protection and management in perpetuity.

Level of significance with Mitigation Measures 3.11 a and either Mitigation Measure 3.11b or 3.11c

Implementation of these measures will reduce impacts to California tiger salamander to a level of *less than significant.*

**Potential Project Impact 3.12 - Potential Impacts to Other Sensitive Herpetofauna**

Some areas of the Project Area may contain suitable habitat for special status terrestrial herpetofauna. The Silvery Legless Lizard occurs primarily in areas with sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, or pine-oak woodland; or sycamores, cottonwoods, or oaks that grow on stream terraces (Jennings and Hayes 1994). The riparian habitat within the Project Area may contain suitable habitat for the Two-striped Garter Snake. Temporary pool-like habitats may provide suitable habitat for Western Spadefoot and Coast Range Newt and ephemeral drainages with sandy substrates may provide habitat for the Coast Horned Lizard. Construction activities that affect habitat for these species may result in loss of habitat or direct mortality.

Proposed Project Mitigation Measure 3.12a

If present, mitigation for direct impacts to Western Spadefoot, Coast Horned Lizard and their habitat will be conducted together with mitigation for other impacted species. Seasonal wetland mitigation will apply to the Western Spadefoot. Upland habitat mitigation for CTS will also provide appropriate habitat for Coast Horned Lizard and Silvery Legless Lizard. Riparian mitigation will be applied to Two-striped Garter Snake.

Level of Significance with Mitigation Measure 3.12

Implementation of these measures will reduce impacts to these herptofauna species to a level of *less than significant.*

# FERRINI RANCH DEVELOPMENT
# PROPOSED BIOLOGICAL RESOURCES IMPACT AND MITIGATION MEASURES

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## 1.0 INTRODUCTION

The purpose of this document is to describe the potential impacts and mitigation measures to sensitive habitats, plants, and wildlife species for the proposed Ferrini Ranch development outside Salinas, Monterey County, California. The estimates presented here are based upon the revised site plan dated February 2008. Mitigation actions recommended herein are subject to review and approval by the regulatory agencies (Army Corps of Engineers (Corps), Central Coast Regional Water Quality Control Board (RWQCB), California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS) and Monterey County. However, the recommended measures are consistent with federal and state regulations and with County policies.

## 2.0 BACKGROUND

Biological resources were mapped and described in 2006-2007 in reports submitted to the County including:

- The location and extent of wetlands and other “waters” subject to the jurisdiction of the Army Corps of Engineers and/ or the State Water Resources Control Board were delineated in the “Delineation of Potential Wetlands and Waters Under Section 404 of the Clean Water Act for the Ferrini Property” (WRA 2007) and as verified by the Corps of Engineers.
- The location and extent of biological communities were mapped in an August 2006 letter report (Denise Duffy and Associates 2006) and in the Biological Assessment for the Ferrini Property (WRA 2007).
- The location and extent of special status plants were mapped in a December 2007 letter report (Denise Duffy and Associates 2007).
- Preliminary estimates of oak tree density within oak woodland communities is provided in the Forest Management Plan for the Ferrini Ranch Proposed Subdivision in Monterey County, California (Staub Forestry and Environmental Consulting 2006).
- Protocol level surveys were completed for the California red-legged frog, California tiger salamander, and western Burrowing owl (Denise Duffy and Associates 2008).

*Special Status Plant Species*

Special status plant surveys were conducted in April, May, and September of 2007 by Denise Duffy and Associates (Denise Duffy and Associates 2007). Based on this survey, two special-status species (CNPS list 1 or 2) were found:

- Pacific Grove clover (*Trifolium polyodon*, List 1B),
- Congdon's tarplant (*Hemizonia = Centromadia parryi ssp. congdonii*, List 1B).

Because Pacific Grove clover and Congdon's tarplant are listed as CNPS (California Native Plant Society) categories 1 or 2, they may be considered by lead agencies such as the County of Monterey under the CEQA guidelines as rare species that require mitigation.

*California Tiger Salamander*

Protocol level California Tiger Salamander (*Ambystoma californiense*) surveys were conducted by Denise Duffy & Associates in 2008 around one feature (Pond 18). No other areas on the property provide suitable breeding habitat. Eleven California Tiger Salamander (CTS) were trapped. Hybrid genomes with the non-native, non-listed eastern tiger salamander were detected in this population.

*Biological Communities*

The location and extent of protected biological communities were mapped in an August 2006 letter report (Denise Duffy and Associates 2006) and subsequent Biological Assessment for the Ferrini Property (WRA 2007). Three sensitive biological communities were found in the Project Area: riparian woodland, wetlands, and ephemeral streams.

Additionally, oak woodlands were characterized in the Forest Management Plan for the Ferrini Ranch Proposed Subdivision in Monterey County, California (Staub Forestry and Environmental Consulting 2006). Oak woodlands are subject to Monterey County Zoning Ordinance #21.64.260, which applies restrictions for the preservation of oak and other protected trees as required in the Monterey County General Plan, area plans, and master plans.

*Impact Assessment*

An impact assessment was performed by overlaying the proposed and revised (February 2008) site plans on the map of biological resources using GIS. Impacts to wetlands, streams, and habitat for special status plants and animals were identified as the acreage of mapped resources directly overlain by the proposed project plan. Resource elements falling within the limits of a residential lot were considered impacts. Acreages of ephemeral drainages and wetlands crossed by proposed roads were identified as impacts as well.

A preliminary impact assessment was conducted in early 2008 in which site plans dated November 2007 were overlain on the biological resources map. Subsequently, a revised site plan was prepared by the applicant in which impacts to biological resources were reduced. A comparison of impacts associated with the November 2007 site plan and the revised February 2008 site plan is provided in Table 1.

**Table 1.** Impact assessment and avoidance achieved through project redesign

| Biological Resource | November 2007 plan impacts | February 2008 plan impacts | Design-phase avoidance |
|---|---|---|---|
| Pacific Grove Clover | 0.08 acres | 0.08 acres | NC |
| Congdon's Tarplant | 0.008 acres | 0.007 acres | 0.001 acres |
| Riparian Woodland | 1.6 acres | 1.3 acres | 0.3 acres |
| Seasonal Wetlands | 2.8 acres | 0.6 acres | 2.2 acres |
| Ephemeral Drainages | 200 linear feet | 200 linear feet | NC |
| Perennial Streams | 200 linear feet | 200 linear feet | NC |
| Oak Woodland | 630-920 trees | 644-940 trees | -14-20 trees |

*Mitigation Measures*

Mitigation measures were developed through review of the physical and biological aspects of open space areas within the proposed project plan to identify areas capable of supporting preservation, enhancement, restoration, or creation of sensitive habitats or plant populations.

## 3.0 IMPACTS AND MITIGATION MEASURES

The following sections provide the project proponents proposed mitigation measures to address impacts to sensitive habitats and species. These mitigation measures are consistent with federal, state, and county regulations and policy. Some of these measures will require federal or state agency approval prior to implementation.

### Sensitive Habitats

**Potential Project Impact 3.1 - Impacts to riparian woodland**

Twelve (12) acres of riparian woodland are present in the Project Area. A riparian corridor exists within the west corner of the project site adjacent to San Benancio Road at the confluence of El Toro and Harper Creeks. The riparian habitat in this area is dominated by willows (*Salix* spp.) and California bay laurel (*Umbellularia californica*). Dominant understory species include California blackberry (*Rubus ursinus*), California buckeye (*Aesculus californica*), mugwort (*Artemisia douglasiana*), and poison oak (*Toxicodendron diversilobum*).

Impacts to riparian habitat are regulated under California Department of Fish and Game Code 1600. Generally, impacts to riparian habitat are measured as the acreage of riparian tree cover removed or disturbed. Based upon the revised site plans, 1.3 acres of riparian habitat would be impacted by development of home lots.

Proposed Project Mitigation Measure 3.1.a  Enhancement of riparian woodland

Riparian woodland in the project area is currently degraded in some areas by the presence of debris and trash, soil compaction related to the use of dirt bikes throughout the area, and the presence of invasive species in the understory. Enhancement of the preserved riparian woodland within open space areas of the project will include the removal of trash and debris, the removal of invasive species, and erosion control in areas of bank erosion. A Riparian Mitigation and Monitoring Plan will be prepared to describe the details of enhancement including species, planting plans, maintenance, and monitoring activities to ensure enhancement of the existing riparian woodland.

Proposed Project Mitigation Measure 3.1.b Restoration of riparian woodland

Approximately 2.6 acres of riparian woodland will be restored within the open space areas along existing drainages. A Riparian Mitigation and Monitoring Plan will be prepared to describe the details of restoration including species, planting plans, maintenance, and monitoring activities to ensure restoration in this area of similar structure and composition to the adjacent existing riparian woodland.

Level of significance with Mitigation Measures 3.1.a and 3.1.b

Implementation of the measures a and b listed above would reduce impacts to riparian woodland to a level of *less than significant*.

**Potential Project Impact 3.2 - Impacts to wetlands**

Approximately 3.6 acres of wetlands are present in the Project Area (WRA 2006). Wetlands in the Project Area consist of seasonal wetlands and seep wetlands. Seasonal wetlands are situated within depressions or flat areas that are inundated for a duration sufficient to sustain a community of wetland-adapted plant species and induce hydric soil conditions, although the water source is ephemeral. In the Project Area, seasonal wetlands generally occur in depressions and flat areas at the mouths of ephemeral drainages.

Seep wetlands occur on foot slopes and toe slopes in the Project Area where groundwater intersects the soil surface. Seep wetlands in the Project Area range from ephemeral to perennial. All wetlands in the Project Area are dominated by wetland adapted plant species including various rushes particularly iris-leaved rush (*Juncus xiphioides*) and Mexican rush (*Juncus mexicanus*), cut-leaf plantain (*Plantago coronopus*), bermudagrass (*Cynodon dactylon*), and Hyssop's loosestrife (*Lythrum hyssopifolia*).

None of the wetlands were determined to be jurisdictional under Section 404 of the Clean Water Act as determined by the Corps of Engineers (December 18, 2007, Corps of Engineers, San Francisco District); however, they are still be considered "waters of the State" by the Regional Water Quality Control Board and are subject to regulation under the Porter Cologne Act.

Based upon the February 2008 plans, 0.6 acres of wetlands would be directly impacted by development of home lots and roads. Avoidance of 2.3 acres of these impacts was achieved by eliminating or reconfiguring lots and realigning several small portions of planned roads.

Proposed Project Mitigation Measure 3.2.a Enhancement and protection of wetlands with open space areas

Wetlands in the Project Area are currently degraded in some areas by erosion and bank slumping. General enhancement measures will include planting of native wetland shrub and herb species and removal of non-native weed species. Within the proposed wetland mitigation area, wetland swales will also be restored through recreation of the hydrologic connection of previously separated wetland features. Signs will be posted to alert recreationists to the presence of the sensitive habitat and the importance of preservation.

Proposed Project Mitigation Measure 3.2.b Creation of wetlands

Mitigation for impacts to impacted wetlands will be achieved by creating additional wetland acreage on-site. Approximately 1.2 acres of wetland habitat will be created in the open space areas of the project. Created wetlands will be seeded with native wetland plant species and will be protected into perpetuity under a conservation easement. A Wetland Mitigation and Management Plan in accordance with Regional Water Quality Control Board requirements will be prepared for created isolated wetlands detailing weed control and grazing management appropriate to maintaining the functions and values of the created wetlands.

Level of significance with Mitigation Measures 3.2.a, 3.2.b

Implementation of the measures a or b listed above would reduce impacts to wetlands to a level of *less than significant*.

**Potential Project Impact 3.3 - Impacts to ephemeral drainages**

Approximately 12,249 linear feet (0.77 acres) of ephemeral drainages are present in the Project Area. Ephemeral drainages occur in swales where water flow is restricted to peak rainfall events, and has created a defined drainage channel with a clearly defined ordinary high water mark. Ephemeral drainages occur throughout the Project Area generally flowing from east to west. No ephemeral drainages within the Project Area were determined to be jurisdictional under Section 404 of the Clean Water Act following a site visit by Corps personnel in May 2007. A final determination letter was issued by the Corps on December 18, 2007.

Impacts to ephemeral drainages will be regulated by the RWQCB under the Porter Cologne Act and by the Department of Fish and Game under the Fish and Game Code. Mitigation locations onsite will require approval by these agencies.

The project design has avoided most impacts to ephemeral drainages. Approximately 200 feet of impacts to ephemeral drainages (1.6% of total in project) will occur in the revised project. Creation of ephemeral drainages is difficult and it is likely that preservation is the preferred option for this site. Mitigation for impacts to ephemeral streams will include bank stabilization measures on existing ephemeral drainages and preservation of drainages on-site in open space areas.

Proposed Project Mitigation Measure 3.3.a Preservation and restoration of ephemeral drainages

Ephemeral drainages in the Project Area are currently degraded in some areas by erosion and bank slumping related to the long history of grazing on the ranch. Within the preserved open space areas of the proposed project, areas of bank slumping and erosion will be identified and repaired with biotechnical means, e.g. planting, log revetment, etc., so as to stabilize eroding banks. Approximately 400 feet of bank stabilization projects will be identified as mitigation for loss of ephemeral drainages.

Level of significance with Mitigation Measure 3.3.a

Implementation of the mitigation measure listed above would reduce impacts to ephemeral drainages to a level of *less than significant*.

**Potential Project Impact 3.4 - Temporary impacts to perennial waters**

Approximately 2,099 linear feet (0.17 acres) of perennial waters occur at the confluence of El Toro Creek and Harper Creek in the western-most portion of the Project Area. This portion of El Toro Creek is perennial in all but the driest of years. As a result, a riparian corridor can be found in this area of the Project Area. These perennial waters were determined to be Waters of the U.S. under Section 404 of the Clean Water Act in its verification letter of December 18, 2007.

Based on the site plans provided, one temporary impact to Harper Creek is anticipated. At the request of the County of Monterey to meet the need for additional recreational trails and improved connectivity to Toro Regional Park, a pedestrian/bikeway path is proposed to run parallel to Highway 68. This pathway will require the construction of a crossing over Harper Creek, a tributary to El Toro Creek. Eighty linear feet of El Toro Creek will be impacted from the installation of a culvert that is 20 feet wide in diameter, has an 8 foot rise, and is 80 feet long.

Proposed Project Mitigation Measure 3.4.a. Construction Best Management Practices

To minimize the temporary and indirect impacts to perennial waters such as sedimentation and erosion, Best Management Practices (BMPs) should be implemented both during and following construction. In addition, all work will be done during the dry season.

Proposed Project Mitigation Measure 3.4.b Riparian habitat enhancement

Mitigation will consist of enhancement of 0.08 acres of riparian habitat along El Toro Creek in the immediate vicinity of the proposed bridge crossing. Riparian enhancement will include removal of invasive plant species, removal of trash and debris, and restoration of disturbed areas. A Riparian Mitigation and Monitoring Plan will be prepared to describe the details of enhancement including species, planting plans, maintenance, and monitoring activities to ensure long term enhancement of the riparian habitat in this area.

Through the enhancement of 0.08 acres of riparian habitat within the banks of Harper Creek, temporary impacts to Harper Creek.

Level of significance with Mitigation Measures 3.4.a and 3.4b

Implementation of the measures listed above would reduce impacts to perennial waters to a level of *less than significant*.

**Potential Project Impact 3.5 - Impacts to oak woodlands**

Approximately 422 acres of coast live oak woodland and savannah are present in the Project Area. It is estimated that the over 29,000 oaks are present with a DBH of greater than 6 inches. Oak woodland communities in the Project Area are dominated by open to nearly closed canopies of coast live oak (*Quercus agrifolia*) with grass or shrub under stories. Savannahs are transitional between woodlands and grassland with trees more widely spaced and a grassland dominated understory. In the Project Area the denser oak woodlands are found on the more mesic, north-facing slopes and canyon bottoms. The densest oak woodlands have an understory dominated by oak leaf duff and sparse herbaceous vegetation. The oak savannahs are found on the drier, east-facing slopes and ridge tops.

Impacts to oak woodlands are regulated by Monterey County Ordinance. Based upon the Forest Management Plan prepared by Staub forestry and using the February 2008 site plans, approximately 644-940 oak trees would be removed for the proposed development. This corresponds to approximately 2-3% of oaks estimated to occur within the entire Project Area.

Proposed Project Mitigation Measure 3.5a Planting oak trees

Mitigation for impacts to oak trees includes planting and maintaining oak trees on site for five years. The County's required mitigation ratio for individual trees less than 24 inches DBH is 1:1. A final count of tree removal will only be possible once final site plans are approved. Ample acreage in open space areas on site to plant oaks to achieve this requirement.

Measures proposed within the Forestry Plan as consistent with the County Ordinance 21.64.260 will be followed to reduce impacts to less than significant.

Level of significance with Mitigation Measure 3.5.a

Implementation of the measure a listed above would reduce impacts to oak woodlands to a level of *less than significant*.

**Sensitive Species Impacts and Mitigation**

**Potential Project Impact 3.6 - Impacts to Pacific Grove clover.**

Pacific Grove clover (*Trifolium tridentatum* var. *polyodon*, syn. *Trifolium polyodon*, CNPS List 1B Species) is a variety of annual clover that occurs in closed-cone coniferous forests, coastal prairies, meadows and seeps, and mesic grasslands at elevations from 5 to 120 meters. The species is found primarily in wetlands, seasonally mesic grasslands, or woodland habitats. Wetlands and mesic oak woodlands in the southern portion of the Project Area support a number of populations of this species.

Based on the February 2008 site plan, impacts to Pacific Grove clover include small populations covering approximately 0.08 acres or 3,485 sq. ft.

Proposed Project Mitigation Measure 3.6.a Preservation of Pacific Grove clover populations

The open space easement will include the existing populations of Pacific Grove clover in the Project Area, with a buffer of approximately 50 feet where possible to minimize potential disturbance. Plants will be identified on site prior to construction activities and a fenced protected buffer will be established to eliminate unintended construction impacts. Signs will be posted to alert recreationists to the presence of the protected plants and the importance of preservation. A rare plant management plan will be incorporated into the Open Space Management Plan protected special status plant populations detailing weed control, fuel management restrictions, and annual monitoring requirements appropriate to maintaining the populations.

Proposed Project Mitigation Measure 3.6.b Creation of Pacific Grove clover populations

Approximately 3,500 sq. ft. of restored or created seasonal wetlands will be managed as created Pacific Grove clover habitat. Pacific Grove clover populations will be created by collecting seed from existing plants or soil from the existing populations prior to disturbance. A rare plant management and monitoring plan will be developed for protected special status plant populations detailing weed control, land use measures to protect Pacific Clover, and annual monitoring requirements appropriate to maintaining the populations.

Level of significance with Mitigation Measures 3.6.a and 3.6.b

Implementation of the measures a and b listed above would reduce impacts to Pacific Grove clover to a level of *less than significant*.

**Potential Project Impact 3.7 - Impacts to Congdon's tarplant.**

Congdon's tarplant (*Hemizonia* = *Centromadia parryi* ssp. *congdonii*, CNPS List 1B Species) is an annual herb that occurs in grasslands at elevations from 1 to 230 meters. It blooms between June and November. The lower elevation grasslands in the Project Area host several populations of this species (Denise Duffy and Associates 2007).

Based upon the February 2008 plans, impacts to Congdon's tarplant include small populations covering approximately 300 sq.ft. Forty square feet of impacts to Congdon's tarplant population have been avoided through revision of the project plan.

Proposed Project Mitigation Measure 3.7.a Preservation of Congdon's tarplant populations

The existing populations of Congdon's tarplant in the northeastern parcel in the Project Area will be protected under the open space easement, with a buffer of approximately 50 feet where possible to minimize potential disturbance. Plants will be identified on site prior to construction activities and a fenced protected buffer will be established to eliminate unintended construction impacts. Signs will be posted to alert recreationists to the presence of the protected plants and the importance of preservation. A management plan will be developed for protected special status plant populations detailing weed control and any other management measures

appropriate to maintaining the populations.

Proposed Project Mitigation Measure 3.7.b Creation of Congdon's tarplant populations

Approximately 300 sq feet of grassland in the southern portion of the northeastern parcel will be managed as created Congdon's tarplant habitat. Congdon's tarplant populations will be created by collecting seed from existing plants or soil from the existing populations prior to disturbance. The annual grassland habitat will be seeded or covered with harvested soil and will be protected. A management plan will be developed for protected special status plant populations detailing weed control and grazing management appropriate to maintaining the populations.

Level of significance with Mitigation Measures 3.7.a and 3.7.b

Implementation of the measures a and b listed above would reduce impacts to Congdon's tarplant to a level of *less than significant*.

**Potential Project Impact 3.8 - Potential Bat Roost Impact**

Construction activities may result in the removal or disturbance of hibernation or maternal roost sites, if they are present in the Project Area, due to building removal, noise, or human intrusion. If bats are present, this constitutes a direct impact, as it may result in direct mortality and/or reduction in reproductive success.

Increased night lighting for street, residential, and industrial development may result in disturbance to movement and behavior and may be a potential indirect impact. Because these species are able to travel great distances to forage, impacts to foraging habitat are not expected to affect the long-term survival of this species.

Proposed Project Mitigation Measure 3.8a Roost Survey, Buffers and Avoidance

Mitigation for direct impacts to special status bats will consist of work windows and, if needed, pre-construction surveys for potential roost sites in the Project Area prior to construction. Preconstruction surveys will not be required if trees, snags and man made potential roost structures are removed in September and October when bat species are neither hibernating nor in a maternity roost. If removal of potential roost sites in this work window is not possible, a bat roost survey in areas of potential roosting areas will be conducted. If present, establishment of temporary protective buffers will avoid direct take of roosting bats until they no longer are occupying these areas.

Nighttime artificial lighting will not be directed into areas of potential bat presence. In addition, artificial lighting within or adjacent to open space areas will incorporate measures to lessen impacts to sensitive species and communities. These measures include prismatic glass coverings, cutoff shields, embedded road lights, use of narrow spectrum bulbs, or other appropriate lighting technology.

Level of significance with Mitigation Measure 3.8a

Implementation of the measure a listed above would reduce impacts to bats to a level of *less than significant*.

**Potential Project Impact 3.9 - Potential Sensitive Mammal Impacts**

Removal of riparian may result in direct impacts to woodrat nests. In addition, construction activities may impact mammals such as the American badger, if present in the Project Area.

Indirect impacts include increased predation or harassment from pets, increased nighttime lighting (which may affect behavior and movement), and nest or burrow abandonment due to noise or other human disturbances such as traffic. For small, nocturnal, herbivorous mammals, artificial night lighting increases the risk of predation and decreases food consumption.

Proposed Project Mitigation Measure 3.9a Survey and Avoidance

For any work within riparian areas along El Toro Creek, pre-construction surveys for the Monterey dusky-footed woodrat will be conducted prior to construction will determine if this species is present. Work will be planned to avoid impacts to wood rat nests; however, if removal is necessary, a qualified biologist will dismantle the nests prior to construction to assure that no animals are taken during construction.

Pre-construction surveys in the months prior to construction will determine if badgers are present in the grassland areas where grading will occur. If present, establishment of temporary protective buffers will avoid direct take of this species in breeding dens.

Level of significance with Mitigation Measure 3.9a

Implementation of the measure a listed above would reduce impacts to sensitive mammals to a level of *less than significant*.

**Potential Project Impact 3.10 - Potential Sensitive Avian Species Impacts**

Avian species may use trees, shrubs, or the ground for nesting habitat, and agricultural fields and open space for foraging. Potential direct impacts to nesting special status avian species could occur during construction as a result of tree and shrub removal, removal of riparian habitat, ground disturbance, equipment movement, or by direct mortality. If present, the project could also result in impacts to foraging habitat for these species.

Several special status bird species have the potential to forage over the Project Area, but will not be affected by the Project because of lack of nesting habitat. These species include: Ferruginous Hawk, Merlin, American Peregrine Falcon and Prairie Falcon. Ferruginous Hawk and Merlin are uncommon winter visitors to the Project Area; they do not nest on the site. American Peregrine Falcon and Prairie Falcon may forage in the Project Area, but nesting habitat for these species is not available in the Project Area. The proposed project will not directly impact these birds.

Although no Burrowing Owls have been detected on the site in the protocol level surveys, development or other construction-related activities could impact this species should they disperse to the site in the future. In addition, should Burrowing Owls establish nests within squirrel burrows, grading and construction activities could result in chick mortality in those nests.

Indirect impacts to special status avian species may include increased predation from pets, increased nighttime lighting and nest abandonment due to noise or other human disturbances such as traffic.

Proposed Project Mitigation Measure 3.10a Pre-construction Survey, Buffers and Avoidance

Mitigation for direct impacts to special status avian species will be conducted together with mitigation for other special status wildlife species. The preservation of suitable nesting and foraging habitat on site will mitigate for the loss of nesting and foraging habitat for these species.

Pre-construction surveys and biological monitoring in the months prior to construction will determine if any of these species are present in the Project Area in the construction year. If present, establishment of temporary protective breeding season buffers will avoid direct take of these birds. Alternatively, the removal of suitable nesting habitat prior to construction and outside of the nesting period would reduce the potential for nesting to occur during construction.

Protocol level Burrowing Owl surveys in 2007 by Denise Duffy and Associates did not detect the presence of this species. However, Burrowing Owls have the potential to move into the Project Area as long as there is suitable habitat. Pre-construction surveys and biological monitoring in the months prior to construction will determine if Burrowing Owls are present in the Project Area in the construction year. If present, establishment of temporary protective breeding season buffers of 300 feet shall be established around the nest site until the fledglings have left.

Burrowing owls may be relocated through the use of one-way doors over burrows as approved by DFG and by a qualified biologist during a time other than the nesting season (March through August).

Level of significance with Mitigation Measure 3.10a

Implementation of the measure a listed above would reduce impacts avian species to a level of *less than significant*.

**Potential Project Impact 3.11- Potential Impacts to California Tiger Salamander**

California tiger salamander (CTS) habitat is limited to a single potential breeding pond (Pond 18) within the project site and to suitable estivation habitat surrounding that pond. The population of CTS has been determined to consist of hybrid individuals and therefore, the level of protection afforded these species is determined on a case-by-case basis by the US Fish and Wildlife Service (Service). The impacts and mitigation measures proposed by the Developer is based on standard protocols and mitigation for CTS as protected under the Endangered Species Act. However, the Service may modify and reduce these mitigation measures based on its review of the genetic information for this population.

In addition to the breeding pond site, suitable upland and dispersal habitat for CTS may include undisturbed grazed annual grassland containing small mammal burrows or other underground habitat up to 2,200 feet from suitable aquatic breeding habitat (USFWS 2005). The Service has previously required mitigation for impacts to upland habitat up to 2,200 feet of occupied CTS aquatic habitat. Mitigation for permanent direct impacts to CTS and its habitat is typically

conducted at a 2:1 ratio of preserved habitat acreage to impacted acreage (3:1 for aquatic impacts).

Temporary impacts are usually mitigated at a 1:1 ratio of preserved habitat acreage to impacted acreage. Areas of temporary disturbance are usually restored and managed to provide CTS upland habitat.

Using the February 2008 plan and a maximum distance of 2,200 feet from suitable aquatic habitat, an estimated 39.2 acres of potential CTS habitat would be permanently impacted by roads and lots in the proposed project alternative.

Potential indirect impacts to CTS include increased traffic, potential introduction of predatory non-native species, increased nighttime lighting, and harassment by pets in or adjacent to suitable CTS habitat. Expansion and construction of new roads along with increased traffic may increase vehicular-mortality to CTS individuals.

Proposed Project Mitigation Measure 3.11a Service Approved Mitigation Measures

The following measures are standard operating procedures developed by the US Fish and Wildlife Service for construction activities within the areas known to support CTS. To the extent that the Service desires to preserve or salvage potential hybrid CTS individuals, the Developer will undertake the following steps:

- The Developer shall have a Service-Approved Biologist develop, and shall implement, a plan to salvage adult and juvenile California tiger salamanders from Project Sites via drift fence and pitfall trap captures prior to grading. The purpose of the capture shall be to both minimize mortality of adult California tiger salamanders on Project Sites and to provide information on the level of upland habitat use in the area to promote more effective conservation of the species in adjacent Conserved Habitat Areas.

  The salvage plan shall be approved in writing by the Service and shall include the following: (1) salvaging shall be via drift fence and pitfall trap captures along a sufficient amount of a Project Site boundary to intercept the majority of the adult population migrating to or from known and potential breeding ponds in the year the captures take place; (2) drift fence installation shall be timed to capture and repel individuals migrating to and from breeding areas; (3) identification of appropriate areas where captured California tiger salamanders shall be released. Only a Service-Approved Biologist may capture and handle California tiger salamanders. Before project activities begin a Service-Approved Biologist shall identify appropriate areas to receive relocated California tiger salamanders. These areas must be outside the Developer Property boundaries in a designated Conserved Habitat Area, in proximity to the capture site, and support suitable vegetation for the California tiger salamander. The Service-Approved Biologist must maintain detailed records of any California tiger salamanders that are moved (e.g., size, coloration, any distinguishing features, photographs [digital preferred]) to assist him or her in determining whether translocated animals are returning to the original point of capture.

- Any storm water detention basins or other water features created on the property will be designed to reduce attracting breeding California tiger salamanders. This is usually accomplished through the use of features which drain following storm events. A

Service-approved strategy shall be developed and implemented to ensure that water features do not become a source for nonnative species, such as bullfrogs, which could move into nearby Conserved Habitat Areas.

- Before grading or construction work begins on a Project Site, a Service-Approved Biologist shall conduct a training session for all construction personnel who may be working on the Project Site. At a minimum, the training shall include a description of the California tiger salamander and its habitat, the specific measures that are being implemented to conserve it, and the boundaries of the project site.

- Construction areas in the vicinity of Pond 18 and its upland estivation area shall be clearly demarcated by construction fencing or other materials to ensure that grading and the staging of equipment or supplies do not exceed the construction boundaries.

- During project construction activities, all trash that may attract predators shall be properly contained and removed from the work site. Pets shall not be permitted at the Project Site.

- During project construction activities, any California tiger salamanders that are discovered shall be recorded and measured by a Service-Approved Biologist. If alive, the California tiger salamander(s) shall be relocated to the appropriate pre-determined area outside the Developer Property boundaries.

- The Developer shall report the results of its salvage operations (e.g., number, size, condition, location, and dates of capture and release of individual California tiger salamanders; problems encountered during capture, handling, or release) to the Service upon completion of each salvage operation conducted on a Project Site. Developer shall report on Developer's compliance with these Restrictions within 90 days of the completion of all planned development on the Developer Property.

Proposed Project Mitigation Measure 3.11b CTS Mitigation Bank Option

Currently, there are no mitigation banks that service the Project Area. However, should a mitigation bank be available, the Developer may choose to purchase appropriate credits as approved by the Service to offset lost of any upland estivation habitat. The amount of credits to be purchased will be set by the Service in its approval of the mitigation bank.

Proposed Project Mitigation Measure 3.11c On-site Option

If no mitigation banks are available and/or the Service or the Developer determine that on-site mitigation is preferred, the Developer will create an additional breeding pond within the preserved open space areas of the project. Consultation with the Service shall be initiated for approval on the location and size of the breeding pond and associated upland estivation lands.

CTS breeding success in the pond may be achieved by natural dispersal means, but may also necessitate inoculation with native CTS from Pond 18. A long term management and monitoring plan would be required to establish the success criteria for the pond and its management requirements.

The CTS breeding pond and upland estivation habitat will be placed within the open space

preserve lands and a conservation easement established to provide funding for protection and management in perpetuity.

Level of significance with Mitigation Measures 3.11 a and either Mitigation Measure 3.11b or 3.11c

Implementation of these measures will reduce impacts to California tiger salamander to a level of *less than significant.*

**Potential Project Impact 3.12 - Potential Impacts to Other Sensitive Herpetofauna**

Some areas of the Project Area may contain suitable habitat for special status terrestrial herpetofauna. The Silvery Legless Lizard occurs primarily in areas with sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, or pine-oak woodland; or sycamores, cottonwoods, or oaks that grow on stream terraces (Jennings and Hayes 1994). The riparian habitat within the Project Area may contain suitable habitat for the Two-striped Garter Snake. Temporary pool-like habitats may provide suitable habitat for Western Spadefoot and Coast Range Newt and ephemeral drainages with sandy substrates may provide habitat for the Coast Horned Lizard. Construction activities that affect habitat for these species may result in loss of habitat or direct mortality.

Proposed Project Mitigation Measure 3.12a

If present, mitigation for direct impacts to Western Spadefoot, Coast Horned Lizard and their habitat will be conducted together with mitigation for other impacted species. Seasonal wetland mitigation will apply to the Western Spadefoot. Upland habitat mitigation for CTS will also provide appropriate habitat for Coast Horned Lizard and Silvery Legless Lizard. Riparian mitigation will be applied to Two-striped Garter Snake.

Level of Significance with Mitigation Measure 3.12

Implementation of these measures will reduce impacts to these herptofauna species to a level of *less than significant.*