# Biological Assessment

**for the**

## Twitchell Dam Watercourse Project

## APN 014-271-031

Santa Maria
San Luis Obispo and Santa Barbara Counties
California

Prepared for

**Santa Maria Valley Water Conservation District**
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# Synopsis

- This biological assessment examines an approximately one mile long section of the Cuyama River and associated uplands extending downstream from Twitchell Dam in San Luis Obispo and Santa Barbara Counties, California. The total area included in this assessment is approximately 390 acres.
- The Santa Maria Water Conservation District is preparing an engineered solution to maintain water movement away from the base of Twitchell Dam. Wallace Group has prepared the preliminary plans for the project (refer to maps in Section 8.0).
- Floristic and wildlife surveys were conducted from November 2007 through July 2008. Surveys in the late fall and winter of 2007 focused on habitat mapping, and identifying habitat areas suitable for special status plants and animals. A protocol survey for the California red-legged frog was conducted from February to July 2008.
- The survey area includes nine habitat types in which 178 species of plants were identified during our floristic surveys. Potential habitat was identified at the project site for three special status plants. Two special status plants were identified at the site.
- Wildlife surveys identified one species of fish, four amphibian species, seven reptile species, seventy-nine bird species, and thirteen mammal species. Suitable habitat was identified for a total of 27 special status animals. Twelve special status animals were detected.
- Figure 5 in Section 10.0 provides the current GIS data from the California Natural Diversity Database for special status species occurrences reported near the project site.
- Biological resources that could be impacted by development at the site include riparian, wetland, annual grassland, coast live oak woodland, and coastal scrub habitats, oak and other native trees, common plant and animal species, and special status plant and animal species.
- Potential impacts to biological resources are discussed in Section 5.0, and mitigation recommendations are provided in Section 6.0.

# 1.0 Introduction

This biological assessment examines botanical and zoological resources associated with the Twitchell Dam Watercourse Project, an approximately one mile section of the Cuyama River immediately downstream of Twitchell Dam along the boundary of San Luis Obispo and Santa Barbara Counties. The survey area encompasses a total of approximately 390 acres of land within the river and on adjacent uplands. Results are reported for floristic and wildlife surveys conducted in 2007 and 2008. Also reported is a habitat inventory, and results of database and literature searches of special status species reports within at least five miles of the survey area. Sensitive natural communities and special status species that could occur or be affected by the proposed project are discussed, and lists of plant and animal species that were identified or are expected within the survey area are provided.

This report provides agencies and stakeholders with information regarding biological resources associated with the project, and assesses potential impacts to biological resources that could occur from construction. An evaluation of the effect of the proposed project on biological resources is included, and mitigation measures are provided.

## 1.1 Project Location and Description

The Twitchell Dam Watercourse Project is located in the Cuyama River below Twitchell Reservoir east of the City of Santa Maria, straddling the boundary between San Luis Obispo and Santa Barbara Counties (refer to map in Section 10.0, Figure 1). The survey area (APN 014-271-031) encompasses approximately one linear mile of the Cuyama River extending from the spillway at Twitchell Dam downstream to the vicinity of adjacent vineyards (refer to map in Section 10.0, Figure 2). The survey area extends beyond the limits of proposed work. The project site includes all areas proposed for excavation, fill, or other impacts (refer to maps in Section 9.0). Approximate coordinates for the end of the dam spillway are N34.98410 / W120.31910 (NAD27) in the Twitchell Dam United States Geological Survey (USGS) 7.5 minute quadrangle. Elevation of the stream bottom varies from approximately 465 feet above mean sea level at the south end up to approximately 480 feet at the spillway.

The proposed project is to excavate accumulated sediment from the stream bottom below Twitchell Dam to facilitate efficient dam releases. The elevation of the main channel would be reduced from between five and eight feet through the length of the project site. Excavation would be completed so that the channel bottom would meet with the existing grade at the downstream end of the survey area. A sedimentation basin would be created at the spillway mouth that would be 700 feet long and 60 feet wide, with a maximum depth of approximately 10 feet. The north bank of the basin would be approximately 10 feet lower than the south bank so that high flows would spill over into the adjacent wetlands. The sedimentation basin would be subject to frequent maintenance to remove accumulated material. Dredged material excavated during construction would be trucked to a spoils site in a disturbed grassland area at the southwest corner of the survey area. An estimated 58,600 cubic yards of material would be removed, affecting approximately

662,380 square feet (15 acres) of wetland and riparian habitats. The stockpile would be approximately four feet in height and cover an estimated nine acres of grassland.

The project is currently in the design and engineering phase. A concept plan from Wallace Group (March 19, 2008) is provided in Section 9.0. The project scope and design could change as additional information is obtained during this preliminary planning stage.

### 1.2 Responsible Parties

TABLE 1. RESPONSIBLE PARTIES. Property owner, engineer, biological consultant, and lead agency are provided.

| Property Owner (Applicant) | Engineer |
|---|---|
| U.S. Department of the Interior<br>Bureau of Reclamation<br>South-Central California Area Office<br>1243 N Street<br>Fresno, CA 97321-1813<br>(559) 487-5116 | Wallace Group<br>612 Clarion Ct.<br>San Luis Obispo, CA 93401<br>(805) 544-4011<br>Contact: Cindy Lewis |
| **Biological Consultant** | **Lead Agency** |
| Althouse and Meade, Inc.<br>1875 Wellsona Road<br>Paso Robles, CA 93446<br>(805) 467-1041<br>Contact: Daniel E. Meade, Ph.D. | Santa Maria Valley Water<br>Conservation District<br>110 S. Lincoln, Suite 101<br>Santa Maria, CA 93458<br>(805) 925-5212<br>Contact: Heather Suica |

## 2.0 Methods

Surveys for biological resources were conducted at the 390 acre survey area on May 22, November 14, and December 5, 2007, and February 27, March 27, April 17, May 7, May 28, and June 30, 2008 (Table 2). Biologists Daniel E. Meade, Ph.D., Jason Dart, Audrey Woodruff, Meg Perry, and Kerri Johnson conducted the surveys. Some data was collected during protocol site surveys for the California red-legged frog (Althouse and Meade, Inc. 2008a and 2008b) and during field work conducted for a wetland delineation (Althouse and Meade, Inc. 2008c).

Botanical and wildlife surveys were conducted on foot in order to compile species lists, to search for special status plants and animals, and to photo-document the existing conditions in the survey area. Each habitat type was inspected, described, and catalogued. All plant and animal species observed within the survey area were identified and recorded.

Identification of botanical resources included field observations and laboratory analysis of collected material. Floristic surveys were conducted in March, May, and June of 2008, and were timed to coincide with the typical blooming period for special status plant species with the potential to occur within the survey area (refer to Section 3.6, Table 5). Floristic surveys were conducted according to agency guidelines (United States Fish and Wildlife 2000 and California Department of Fish and Game 2000). Botanical nomenclature follows the Jepson Manual and the Index to California Plant Names (ICPN), unless otherwise noted. Some plant collections will be deposited in the R. F. Hoover Herbarium at Cal Poly.

Wildlife documentation included observations of animal presence, nests, tracks, and sign. Birds were identified by sight, using 10 power binoculars, or by vocalizations. Focused bird surveys were conducted in the morning, mid-day, and in the evening throughout the 2008 nesting season. Mammals were detected by direct observation and by sign. Small mammal trapping and focused mammal surveys were not conducted. Reptiles were detected during focused surveys using a combination of survey techniques. Transects were walked through suitable habitat at appropriate times of day in search of horned lizards and other species often found sunning. Fossorial species such as legless lizards were searched for by turning logs, rocks, and boards and sifting through leaf litter. Amphibians were identified by calls and by direct observation, during both daytime surveys and nighttime spotlighting surveys. Three day surveys and five night surveys were conducted as part of a protocol survey for the California red-legged frog. Fish were identified visually using binoculars. A list of wildlife species that could be present in the survey area is annotated with checkmarks indicating all species detected (refer to Section 3.5, Table 4).

Mapping efforts utilized a Trimble GeoXT global positioning system (GPS) with ArcPad 6.0. The embedded firmware of the GPS unit includes the Wide Area Augmentation System (WAAS) that utilizes satellites and ground stations to provide GPS signal corrections, allowing sub-meter accuracy. Maps were created using GPS data imported to ArcGIS 9.2, a Geographic Information System (GIS) software program. GPS data was overlaid on 2006 aerial photographs of the Property. Some map layers, such as parcel boundaries, are from the County of San Luis Obispo.

Biological resource constraints and habitat types were mapped using the Trimble GPS, with point and polygon layers overlaid on high resolution aerial photographs. Sensitive wildlife constraints were mapped where found, but may occur elsewhere. Locations of sensitive wildlife observations are provided on the Rare Species Map (Section 9.0), and discussions of each species are provided in Section 3.6.

We conducted a search of the California Natural Diversity Database (CNDDB August 2, 2008 data) and the California Native Plant Society (CNPS) On-line Inventory of Rare and Endangered Plants of California for special status species known to occur within five miles of the project site. The search area included the Twitchell Dam, Santa Maria, Tepesquet Canyon, Chimney Canyon, Huasna Peak, and Nipomo quadrangles (7.5 minute USGS).

Additional special status species research consisted of reviewing previous biological reports for the area and searching on-line museum and herbarium specimen records for

locality data within San Luis Obispo County. We reviewed online databases of specimen records maintained by the Museum of Vertebrate Zoology (MVZ) at the University of California, Berkeley, and the Consortium of California Herbaria. We submitted a formal request to the United States Fish and Wildlife Service (USFWS) for a list of species protected under the federal Endangered Species Act (USFWS response provided in Appendix C). Additional special status species with potential to occur on or near the survey area were added to our special status species list.

Special status species lists produced by database and literature searches were cross-referenced with the known habitat types at the in the survey area to identify all potential special status species that could occur on or near the project site. Each special status species with a potential for occurrence on or near the site is individually discussed. A report was made to the CNDDB if special status species were found during our surveys (Appendix B).

TABLE 2. BIOLOGICAL SURVEYS. Survey dates, times, weather observations, and biologist are provided.

| Survey Date | Start Time<br>Stop Time | Temp. | Wind | Weather Observations | Biologist |
|---|---|---|---|---|---|
| 5/22/2007 | 11:30 a.m. –<br>3:45 p.m. | 68-75 °F | 5-10 mph | Sunny | D. Meade |
| 11/14/2007 | 8:30 a.m. – 4:00 p.m. | 70-76 °F | 4 – 7 mph | Sunny, warm; winds with gusts 8 – 12 mph | D. Meade<br>J. Dart<br>M. Perry |
| 12/5/2007 | 9:30 a.m. – 3:00 p.m. | 58-72 °F | 15 – 20 mph | Clear skies, windy | J. Dart<br>A. Woodruff |
| 2/27/2008 | 1:15 p.m. – 5:20 p.m. | 70-80 °F | 4 – 7 mph | Sunny and hot | J. Dart<br>A. Woodruff |
| 3/27/2008 | 9:10 a.m. – 2:50 p.m. | 52-62 °F | 10 – 15 mph | Sunny, windy | J. Dart<br>A. Woodruff |
| 4/17/2008 | 9:30 a.m. – 5:00 p.m. | 80-95 °F | 0 – 3 mph | Warm, light breeze | M. Perry<br>K. Johnson |
| 5/7/2008 | 3:00 p.m. – 6:00 p.m. | 60-63 °F | 4 – 7 mph | Sunny with increasing coastal clouds | J. Dart<br>A. Woodruff |
| 5/28/2008 | 7:00 p.m. – 8:50 p.m. | 63 °F | 4 – 7 mph | Partly cloudy | J. Dart<br>A. Woodruff |
| 6/30/2008 | 3:15 p.m. – 7:00 p.m. | 69-76 °F | 0 – 4 mph | Warm, sunny | J. Dart<br>A. Woodruff |

# 3.0 Results

## 3.1 Existing Conditions

The survey area extends south from Twitchell Dam, consisting of approximately one linear mile of the Cuyama River and adjacent upland habitats totaling 390 acres of land (refer to maps in Section 9.0). It encompasses freshwater marsh, riparian woodland, riparian scrub, coast live oak woodland, coastal scrub, chaparral, cliff, anthropogenic, and grassland habitats (refer to photographs in Section 11.0). Through the survey area the Cuyama River forms one distinct flow channel with a broad complex of braided channels formed by flooding water releases. Sediment accumulation has filled in much of the primary channel near the spillway, and raised the elevation of the stream bed across the width of the valley. As water is released through the spillway, the clogged main channel overflows into braided secondary channels, which coalesce downstream into a single main channel again. This overflow created, and sustains, emergent wetlands and riparian woodlands. The riparian and wetland habitats are intricately mixed, with extensive stands of cattail in saturated soils and patches of red and arroyo willows on slightly elevated terraces and river banks. Black cottonwoods and Western sycamores are scattered throughout the drainage and on adjacent flood plains. Occasional live oaks are on the drainage banks with willows and cottonwoods, and patches of coast live oak woodland shade adjacent uplands. Steep hillsides on either side of the Cuyama River are covered in coastal scrub and chaparral communities. A large cliff face on the northeast side of the river provides nesting habitat for birds.

The dam spillway is a deep concrete channel extending out from beneath the dam. Perennial water is present within the spillway channel, and in some years is also present in the shallow main flow channel immediately downstream from the spillway (Photos 1-3). A small beaver dam and dense vegetation in the main channel constrict flows, backing up water releases and creating flooded areas on either side of the spillway. A pool on the north side of the spillway adjacent to the dam seepage gauge is used by pond turtles, bullfrogs, and red-legged frogs. Water releases typically begin in the spring and continue into the early summer, depending upon the quantity of water in the reservoir.

## 3.2 Soils

The United States Department of Agriculture (USDA) Soil Survey of Northern Santa Barbara Area, California (1972), and the Soil Survey of San Luis Obispo County, California, Coastal Part (1984) indicate thirteen soil types occur in the survey area: Chamise shaly loam, 30 to 75 percent slopes, eroded (ChG2), Elder loam, 2 to 9 percent slopes (EmC), Linne clay loam, 30 to 45 percent slopes, Lopez rocky loam, 75 to 100 percent slopes (LkG), Lopez shaly clay loam, 15 to 75 percent slopes (LmG), Metz loamy sand, 2 to 9 percent slopes (MnC), mine pits and dumps (MpG), Riverwash (Rs/194), Lodo-Rock outcrop complex, 9 to 30 percent slopes (151), Lodo-Rock outcrop complex, 30 to 75 percent slopes (152), Psamments and Fluvents, occasionally flooded (192), Still gravelly sandy clay loam, 2 to 9 percent slopes (210), and Xererts-Xerolls-Urban land complex, 0 to 15 percent slopes (221/DAM).

Map units typically encompass one or two dominant soils, which cover more than 50 percent of the mapped area, and one to several included soils, which occur in small patches that are not differentiated in mapping. Complete, accurate description of soil types and capabilities for specific uses on a specific site generally requires additional soil investigations by a qualified professional soil scientist.

Digitized spatial data from the Soil Survey of Northern Santa Barbara Area, California, and the Soil Survey of San Luis Obispo County, California, Coastal Part are shown as an overlay of soil map units on an aerial photo of the region (Figure 3, Section 10.0). A detailed discussion of soil types in the survey area is included in the wetland delineation for the project (Althouse and Meade, Inc. 2008c).

## 3.3 Habitat Types

We describe nine habitat types within the survey area: riparian woodland, riparian scrub, freshwater marsh, coast live oak woodland, annual grassland, coastal scrub, chaparral, cliff, and anthropogenic. A description and the approximate acreage of each habitat type is provided. A Habitat Map is included in Section 9.0. The area examined for this report includes all of the Cuyama River from the spillway to approximately one mile downstream, as well as a broad area of upland habitat on either side of the river. Although the project would disturb only a small area of the upland habitat, we surveyed a broad area in order to gain a better understanding of the organisms inhabiting the area.

### *3.3.1 Riparian woodland*

The Cuyama River supports a mixed riparian woodland consisting of stratified canopies dominated by several native riparian trees. Approximately 56 acres of riparian woodland habitat were mapped in the survey area. The primary tree canopy ranges from 20 to 50 feet tall, composed of arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), Fremont cottonwood (*Populus fremontii*), coast live oak (*Quercus agrifolia*), and large scattered Western sycamores (*Platanus racemosa*). The secondary canopy typically consists of scattered young coast live oaks and dense stands of arroyo willow and poison oak (*Toxicodendron diversilobum*), from 10 to 20 feet in height. Understory vegetation is variable, usually occurring as diverse shrub and herb layers on the stream banks. Common understory species include California rose (*Rosa californica*), California blackberry (*Rubus ursinus*), spikerush (*Eleocharis macrostachya, E. parishii*), Mexican rush (*Juncus mexicanus*), sedges (*Cyperus eragrostis, C. erythrorhizos*), water smartweed (*Polygonum amphibium*), and others. Some areas of the riparian woodland habitat are arroyo willow dominant with 75 to 100 percent canopy cover and no other riparian tree species. The presence of surface water in the riparian habitat is entirely dependent upon dam releases. During years of average or above average rainfall the riparian habitat may have flowing water until mid summer, and in drought years the riparian habitat may be without surface flows year round.

Wetland conditions are present in most of the riparian habitat (refer to Habitat Map, Section 9.0), however some riparian woodland edges extend onto terraces that are not wetland. Emergent wetlands are described as freshwater marsh habitat (refer to Section 3.3.3). Herbaceous wetlands existing as understory vegetation within the riparian woodland habitat are not described as a separate habitat type.

The riparian zone within the survey area is excellent and important wildlife habitat. The presence of water and cover are critical for many organisms living in this arid region. The multi-layered riparian canopy provides a wide variety of niches available to wildlife. Common inhabitants include striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), dusky-footed woodrat (*Neotoma macrotis macrotis*), great-horned owl (*Bubo virginianus*), California quail (*Callipepla californica*), Pacific slope flycatcher (*Empidonax difficilis*), Phainopepla (*Phainopepla nitens*), and many others. Signs of large mammals such as black bear (*Ursus americanus*) and mountain lion (*Puma concolor*) were also found. Two special status species, Southwestern pond turtle (*Actinemys marmorata* ssp. *pallida*) and the California red-legged frog (*Rana draytonii*), were detected in the riparian habitat..

### *3.3.2 Riparian scrub*

Riparian scrub habitat was mapped in an eight acre area on the east side of the Cuyama River on a flat terrace between a dirt road running parallel to the river channel and the eastern cliff face. The terrace is above the ordinary high water mark, but maintains enough soil moisture to support riparian shrubs and small trees. Dominant shrub species include narrow-leafed willow (*Salix exigua*), arrow-weed (*Pluchea sericea*) and mule fat (*Baccharis salicifolia*). Also present are some upland shrub species such as coyote brush (*Baccharis pilularis*) and coastal sagebrush (*Artemisia californica*), and scattered trees such as arroyo willow and coast live oak. The shrub canopy is partly open, allowing a variety of herbaceous plant species to occupy the understory. Common wildlife inhabitants include desert cottontail (*Sylvilagus audubonii*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo erythrophthalmus*), striped skunk, Western wood pewee (*Contopus sordidulus*), and Pacific chorus frog (*Pseudacris regilla*). A migrating (non-breeding) olive-sided flycatcher (*Contopus cooperi*), a Species of Special Concern, was observed perched in a low tree in the riparian scrub habitat in the spring of 2008.

### *3.3.3 Freshwater marsh*

The presence of freshwater marsh habitat in the Cuyama River is largely a result of sedimentation that has filled the main flow channel and backs up dam release water north and east of the main channel. Freshwater marsh habitat near the dam occurs as emergent wetlands within the Cuyama River riparian habitat that are dominated by cattail (*Typha* spp.). Cattails form dense and nearly impenetrable thickets lacking tree canopy, occurring where shallow standing water is present. Willow woodlands often occupy slightly higher ground adjacent to freshwater marsh habitat. Approximately 19 acres of freshwater marsh habitat were mapped in the survey area. Areas of tree canopy within the river are described and mapped as riparian woodland (refer to Section 3.3.1). Access to much of the river by surveyors was limited due to extremely dense vegetation and deep mud.

In some areas near the main stream channel cattails reach 15 feet in height when not grazed or trampled by cattle. Marsh habitat originating near the mouth of the spillway expands outward beyond (east of) the main channel due to flat topography and sediment accumulation from years of reservoir releases. Openings within the cattails support mosquito fern (*Azolla filiculoides*), watercress (*Nasturtium officinale*), and small pondweed (*Potamogeton pusillus*). Wildlife observed in the marsh habitat include beaver

(*Castor canadensis*), red-winged blackbird (*Agelaius phoeniceus*), mallard (*Anas platyrhynchos*), song sparrow (*Melospiza melodia*), winter wren (*Troglodytes troglodytes*), black phoebe (*Sayornis nigricans*), bullfrog (*Rana catesbeiana*), chorus frog (*Pseudacris regilla*), Southwestern pond turtle (Photo 10, Section 11.0), and the California red-legged frog, a federally listed threatened species.

Freshwater marsh habitat mapped within the survey area conforms to the California Department of Fish and Game's Sensitive Natural Community designation for the coastal and valley freshwater marsh habitat type (refer to Table 7 and Section 3.6.7).

### *3.3.4 Coast live oak woodland*

Coast live oak woodland is the dominant woodland vegetation type in the survey area. It consists of pure or nearly pure stands of coast live oak trees, encompassing approximately 73 acres of the land. The understory is variable, often including grass species, scattered poison oak, coyote brush, sage (*Salvia* spp.), and herbaceous species such as fiesta flower (*Pholistoma auritum*), hummingbird sage (*Salvia spathacea*), and common vetch (*Vicia sativa*).

Coast live oak woodland habitat in the survey area varies from an expansive closed-canopy community occurring at higher elevations, to patchy, open woodland with virtually no understory at lower elevations. Due to cattle grazing, the understory in some areas (notably the woodland located on the floodplain southwest of the river) is almost exclusively annual grass species with few scattered shrubs. Coast live oak woodland that occurs at higher elevations bordering the survey area is generally impenetrable on foot due to dense understory vegetation including stands of poison oak. Rocky hillsides beneath oak canopy at the southwest corner of the survey area contain California polypody (P*olypodium californicum*), a native fern.

Wildlife observed in coast live oak woodland habitat includes mule deer (*Odocoileus hemionus*), striped skunk, acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*), Wilson’s warbler (*Wilsonia pusilla*), western blue bird (*Sialia Mexicana*), sharp-shinned hawk (*Accipiter striatus*), and western screech owl (*Otus kennicottii*).

### *3.3.5 Annual grassland*

Grassland habitat mapped in the survey area consist of large meadows or disturbed areas mostly lacking in shrub and tree development and dominated by Mediterranean annual species such as soft chess brome (*Bromus hordeaceus*), wild oats (*Avena* ssp.), and ripgut brome (*Bromus diandrus*). Two large meadows grazed by cattle are located on the southwest side of the Cuyama River, situated within a diverse assemblage of coastal scrub habitat, riparian habitat, and oak woodlands. The meadows occupy areas of gravelly sandy loam soils (refer to Soils Map, Section 10.0, Figure 3). The northern meadow, adjacent to the river, becomes covered with a late-season growth of California croton (*Croton californica*), a native forb typical of sandy soils in coastal areas. This meadow also supports some native wildflowers, including popcorn flower (*Plagiobothrys nothofulvus*), prickly cryptantha (*Cryptantha echinella*), a local concern species, red maids (*Calandrinia ciliata*), suncups (*Camissonia* ssp.), and others. The more southerly meadow is composed of mostly introduced grasses that are typical of heavily grazed

grasslands. Foxtail barley (*Hordeum murinum*) and ripgut brome are dominant, with a patchy late-season growth of field mustard (*Hirschfeldia incana*).

Patches of annual grassland habitat were mapped near the dam and caretakers residence at the north end of the survey area. These are disturbed grasslands created by the mechanical removal of native shrublands. Depending upon the length of time since disturbance, the grasslands show variable shrub development. Areas with at least 50 percent native shrubs are mapped as disturbed coastal scrub habitat (refer to Section 3.3.6, and Habitat Map, Section 9.0). A review of aerial photographs over the last five years shows these disturbed grasslands and scrublands in various stages of growth, and we expect continued manipulation for fire control will be the norm.

Annual grassland habitat is utilized by a variety of wildlife, including coyote (*Canis latrans*), mule deer, bobcat (*Lynx rufus*), Say's phoebe (*Sayornis saya*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), and a variety of snake and lizard species.

### *3.3.6 Coastal scrub*

Coastal scrub communities are a highly variable complex of native shrubs occurring on hillsides and terraces within the survey area. Different shrub species occur in different areas depending upon edaphic (soil-related) conditions, and often exposure. On the higher, steeper, and rockier hillsides the scrub habitat is dominated by purple sage (*Salvia leucophylla*) and coastal sagebrush (*Artemisia californica*). These areas are primarily on soils composed of shaly loams and loamy sands, with steep southern and western aspects. In contrast, a scrub association composed of coyote brush, blue elderberry (*Sambucus mexicana*), mulefat, and narrow-leafed willow occurs on a flat terrace with sandy clay loam soils along the Cuyama River.

Some areas of the coastal scrub habitat are significantly altered by mechanical removal of shrubs, or by sediment deposition from previous spillway clean-out efforts. Areas of coastal scrub on level terrain around the caretaker's residence have been cleared for fire control and as pastureland for a horse. A large areas of coastal scrub habitat on a terrace west of the Cuyama River appears to be the site of spoils deposition many years ago that has now partially recovered. This area is vegetated with approximately 50 percent cover of small coastal sagebrush shrubs, and various annual and perennial grasses. Disturbed coastal scrub areas are indicated on the Habitat Map.

The California Department of Fish and Game (CDFG) lists Venturan Coastal Sage Scrub and Central Lucian Coastal Scrub as sensitive natural communities (refer to Section 3.6.3 Table 7, and Section 3.6.7). The Venturan Coastal Sage Scrub community, occurring from Santa Barbara County south, is dominated by sages which occur in the driest areas and are usually summer dormant. The Central Lucian Coastal Scrub community, occurring from Santa Barbara County north, contains a variety of evergreen shrubs in more mesic areas, but may also contain various sages. In northern Santa Barbara County, including within the survey area, these two community types inter-grade. As such, all coastal scrub vegetation types in the survey area are mapped together. However, to document the diversity of coastal scrub habitats that are present, we characterized the five dominant coastal scrub vegetation types (Table 3).

TABLE 3. COASTAL SCRUB VEGETATION TYPES. Five distinct coastal scrub vegetation types are described on the site within the coastal scrub habitat type designation.

| Vegetation Type | Dominant Shrubs | Secondary Species | Exposure / Gradient | Canopy Closure (%) |
|---|---|---|---|---|
| | | | | |
| **Venturan Coastal Sage Scrub** | | | | |
| Coastal Sage Scrub | Coastal sagebrush and purple sage co-dominant | Coyote brush, deer weed, coast live oak, and herbaceous understory species | South, west / Moderate to steep | 50-100% |
| Purple Sage Scrub | Purple sage dominant | Coastal sagebrush | South, west / Moderate to steep | 75-100% |
| Mixed Coastal Sage Scrub | Coyote brush, sagebrush, *and* purple sage | Variable | Variable / Mild | 75-100% |
| Disturbed | Coyote brush, sage brush, and purple sage | Grassy understory species | Variable / Mild to moderate | 25-50% |
| **Central Lucian Coastal Scrub** | | | | |
| Mixed Coastal Scrub | Variable; coyote brush, monkey-flower, mule fat, elderberry, and small patches of narrow-leafed willow | Coastal sage brush and purple sage | Variable / Mild to moderate | 50-100% |
| Coyote Brush Scrub | Coyote brush | Variable, sage brush, purple sage, often bare | Variable / Mild | 50-100% |

A total of approximately 160 acres of coastal scrub habitat are mapped in the survey area. Common wildlife observed in the coastal scrub habitat includes, Merriam's chipmunk (*Eutamias merriami*), gray fox (*Urocyon cinereoargenteus*), canyon wren (*Catherpes mexicanus*), California quail (*Callipepla californica*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), and coast horned lizard (*Phrynosoma coronatum*), a California Species of Special Concern (Photo 11, Section 11.0).

### *3.3.7 Chaparral*

Chaparral habitat consists of shrub species that are woody, evergreen and longer-lived than typical coastal scrub species. Most of the shrubs are well adapted to fire. Chaparral habitat within the survey area occurs with woodland and scrub habitats on steep hillsides. Chaparral species observed in the survey area include toyon (*Heteromeles arbutifolia*), mountain mahogany (*Cercocarpus betuloides*), greenbark ceanothus (*Ceanothus spinosus*), redberry (*Rhamnus crocea*), and coffeeberry (*Rhamnus californica*). Wildlife

species expected to utilize the chaparral habitat includes bobcat, Merriam's chipmunk, Nuttall's woodpecker, wrentit, and bushtit (*Psaltriparus minimus*).

### *3.3.8 Cliff*

The cliff habitat is composed of vertical rock faces exposed by erosion. A large cliff face is located at the eastern border of the survey area, and a smaller cliff is exposed adjacent to the dam spillway. Occasional shrubs typical of coastal scrub habitat become established in cracks or on ledges. This is primarily a non-vegetated habitat utilized by nesting birds such as white-throated swift (*Aeronautes saxatilis*), common raven (*Corvus corax*), some rodents, and possibly bats.

### *3.3.9 Anthropogenic*

Portions of the survey area that are heavily influenced by human development are mapped and described as anthropogenic habitat. This includes the caretaker's residence and associated landscaped areas, roads, the north side of the dam, and the spillway and associated spoils deposition site. The residence is located in the northern portion of the survey area east of the dam. Anthropogenic habitat is generally poor wildlife habitat and is not expected to support special status species. However, junk piles and old storage barns provides cover for species such as the northern pacific rattlesnake (*Crotalus oreganus oreganus*) and the California kingsnake (*Lampropeltis getula californiae*). Much of the anthropogenic habitat is dominated by ruderal vegetation.

## 3.4 Plant List

Floristic surveys conducted throughout the entire survey area from December 2007 through June 2008 identified a total of 178 species of plants (Table 4). Surveys were floristic in nature, identifying all species encountered. The plant list includes all native and introduced (naturalized) species encountered. Naturalized species are those plants that are introduced to the area but maintain viable reproducing populations. Landscape (planted) species associated with the caretaker's residence are not included.

Of the 178 species, subspecies, and varieties of plants identified in the survey area, 123 are native to the region and 55 are introduced. Native plant species account for approximately 69 percent of the flora in the survey area. The high percentage of native plant species is attributed to the diversity of natural habitats and the relatively low amount of disturbance.

The special status column indicates the listing status of each plant under the Federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), the California Native Plant Society (CNPS), or as a local species of concern. Refer to Section 3.6 for more information on special status species designations, and to Appendix A for special status definitions.

TABLE 4. PLANT LIST. The 178 species of plants identified in the survey area consist of 123 native species and 55 introduced species. Plants are listed alphabetically by scientific name within each of five general groups (ferns, trees, shrubs, herbs, and grasses).

| Scientific Name | Special Status | Origin | Common Name |
|---|---|---|---|
| | | | |
| **Ferns - 2 species** | | | |
| *Azolla filiculoides* | None | Native | Mosquito fern |
| *Polypodium californicum* | None | Native | California polypody |
| **Trees - 6 species** | | | |
| *Acer macrophyllum* | None | Native | Big-leaf maple |
| *Platanus racemosa* | None | Native | Western sycamore |
| *Populus fremontii* | None | Native | Fremont cottonwood |
| *Quercus agrifolia* var. *agrifolia* | None | Native | Coast live oak |
| *Salix laevigata* | None | Native | Red willow |
| *Salix lasiolepis* | None | Native | Arroyo willow |
| **Shrubs - 34 species** | | | |
| *Artemisia californica* | None | Native | Coastal sagebrush |
| *Artemisia dracunculus* | None | Native | Tarragon |
| *Baccharis pilularis* | None | Native | Coyote brush |
| *Baccharis salicifolia* | None | Native | Mule fat |
| *Brickellia californica* | None | Native | Brickelbush |
| *Ceanothus spinosus* | None | Native | Greenbark ceanothus |
| *Cercocarpus betuloides* | None | Native | Mountain mahogany |
| *Clematis ligusticifolia* | None | Native | Virgin's bower |
| *Datura wrightii* | None | Native | Jimsonweed |
| *Encelia californica* | None | Native | California brittlebush |
| *Ericameria ericoides* | None | Native | Mock heather |
| *Eriodictyon crassifolium* | None | Native | Yerba santa |
| *Hazardia squarrosa* | None | Native | Saw-toothed goldenbush |
| *Hesperoyucca whipplei* | None | Native | Chaparral yucca |
| *Heteromeles arbutifolia* | None | Native | Toyon |
| *Lepidospartum squamatum* | None | Native | Scalebroom |
| *Leptodactylon californicum* | None | Native | Prickly phlox |
| *Mimulus aurantiacus* | None | Native | Bush monkeyflower |
| *Nicotiana glauca* | None | Introduced | Tree tobacco |
| *Pluchea sericea* | None | Native | Arrow-weed |

| Scientific Name | Special Status | Origin | Common Name |
|---|---|---|---|
| | | | |
| *Rhamnus californica* ssp. *californica* | None | Native | Coffeeberry |
| *Rhamnus crocea* | None | Native | Redberry |
| *Ribes speciosum* | None | Native | Fuschia-flowered gooseberry |
| *Rosa californica* | None | Native | California rose |
| *Rubus ursinus* | None | Native | California blackberry |
| *Salix exigua* | None | Native | Narrow-leafed willow |
| *Salvia leucophylla* | None | Native | Purple sage |
| *Salvia mellifera* | None | Native | Black sage |
| *Sambucus mexicana* | None | Native | Blue elderberry |
| *Senecio mikanioides* | None | Introduced | German ivy |
| *Solanum douglasii* | None | Native | Nightshade |
| *Stanleya pinnata* var. *pinnata* | None | Native | Prince's plume |
| *Tamarix* sp. | None | Introduced | Tamarisk |
| *Toxicodendron diversilobum* | None | Native | Poison oak |
| **Herbs - 115 species** | | | |
| *Agoseris grandiflora* | None | Native | Giant dandelion |
| *Ambrosia psilostachya* | None | Native | Western ragweed |
| *Amsinckia menziesii* var. *intermedia* | None | Native | Common fiddleneck |
| *Anagallis arvensis* | None | Introduced | Scarlet pimpernel |
| *Apium graveolens* | None | Native | Celery |
| *Artemisia douglasiana* | None | Native | Mugwort |
| *Asclepias eriocarpa* | None | Native | Indian milkweed |
| *Baccharis douglasii* | None | Native | March Baccharis |
| *Brassica nigra* | None | Introduced | Black mustard |
| *Calandrinia ciliata* | None | Native | Red maids |
| *Calystegia macrostegia* ssp. *cyclostegia* | None | Native | Morning glory |
| *Camissonia campestris* | None | Native | Mojave sun cup |
| *Camissonia micrantha* | None | Native | Evening primrose |
| *Carduus pycnocephalus* | None | Introduced | Italian thistle |
| *Castilleja affinis* | None | Native | Indian paintbrush |
| *Centaurea melitensis* | None | Introduced | Tocolote |
| *Cerastium glomeratum* | None | Introduced | Mouse-eared chickweed |
| *Chenopodium californicum* | None | Native | Pigweed |
| *Cirsium vulgare* | None | Introduced | Bull thistle |

| Scientific Name | Special Status | Origin | Common Name |
|---|---|---|---|
| | | | |
| *Clarkia cylindrica* ssp. *cylindrica* | None | Native | Speckled clarkia |
| *Claytonia perfoliata* | None | Native | Miner's lettuce |
| *Conium maculatum* | None | Introduced | Poison hemlock |
| *Conyza bonariensis* | None | Introduced | Asthmaweed |
| *Crassula tillea* | None | Introduced | Moss pygmyweed |
| *Croton californicus* | None | Native | California croton |
| *Cryptantha echinella*[1] | Local Concern | Native | Prickly cryptantha |
| *Cuscuta californica* | None | Native | California dodder |
| *Cyperus eragrostis* | None | Native | Umbrella sedge |
| *Cyperus erythrorhizos* | None | Native | Redroot flatsedge |
| *Cyperus esculentus* | None | Native | Yellow nutsedge |
| *Dichelostemma capitatum* | None | Native | Blue dicks |
| *Dudleya lanceolata* | None | Native | Live-forever |
| *Dudleya pulverulenta* | None | Native | Chalk Dudleya |
| *Eleocharis macrostachya* | None | Native | Common spikerush |
| *Eleocharis parishii* | None | Native | Parish's spikerush |
| *Epilobium ciliatum* | None | Native | Willow herb |
| *Eremocarpus setigerus* | None | Native | Dove weed |
| *Eriogonum elongatum* | None | Native | Elongate buckwheat |
| *Eriogonum fasciculatum* | None | Native | California buckwheat |
| *Eriogonum gracile* var. *gracile* | None | Native | Slender buckwheat |
| *Eriophyllum confertiflorum* | None | Native | Golden yarrow |
| *Erodium botrys* | None | Introduced | Filaree |
| *Erodium cicutarium* | None | Introduced | Redstem filaree |
| *Erodium moschatum* | None | Introduced | Greenstem filaree |
| *Eschscholzia californica* | None | Native | California poppy |
| *Filago gallica* | None | Introduced | Herba impia |
| *Foeniculum vulgare* | None | Introduced | Fennel |
| *Galium angustifolium* | None | Native | Narrow-leaved bedstraw |
| *Galium aparine* | None | Native | Goose grass |
| *Geranium dissectum* | None | Introduced | Geranium |
| *Geranium molle* | None | Introduced | Geranium |
| *Gnaphalium californicum* | None | Native | California everlasting |

[1]Taxonomic identification of this species is tentative pending further review of collected specimens.

| Scientific Name | Special Status | Origin | Common Name |
|---|---|---|---|
| | | | |
| *Gnaphalium palustre* | None | Native | Marsh cudweed |
| *Gnaphalium stramineum* | None | Native | Cotton-batting plant |
| *Heliotropium curassavicum* | None | Native | Heliotrope |
| *Herniaria hirsuta* | None | Introduced | Rupturewort |
| *Heterotheca grandiflora* | None | Native | Telegraph weed |
| *Hirschfeldia incana* | None | Introduced | Field mustard |
| *Hypochaeris radicata* | None | Introduced | Rough cat's-ear |
| *Juncus mexicanus* | None | Native | Mexican rush |
| *Lathyrus vestitus* var. *vestitus* | None | Native | Wild pea |
| *Lessingia filaginifolia* | None | Native | California aster |
| *Lotus humistratus* | None | Native | Hill lotus |
| *Lotus scoparius* | None | Native | Deerweed |
| *Lotus strigosus* | None | Native | Bishop lotus |
| *Lupinus bicolor* | None | Native | Miniature lupine |
| *Lupinus succulentus* | None | Native | Arroyo lupine |
| *Malacothrix saxatilis* var. *tenuifolia* | None | Native | Cliff-dandelion |
| *Malva parviflora* | None | Introduced | Cheeseweed |
| *Marah fabaceous* | None | Native | California man-root |
| *Marrubium vulgare* | None | Introduced | Horehound |
| *Meconella linearis* | None | Native | Meconella |
| *Medicago polymorpha* | None | Introduced | California burclover |
| *Melilotus alba* | None | Introduced | White sweet clover |
| *Melilotus indica* | None | Introduced | Annual sweetclover |
| *Nasturtium officinale* | None | Native | Common watercress |
| *Paeonia californica* | None | Native | California peony |
| *Phacelia viscida* | None | Native | Sticky phacelia |
| *Pholistoma auritum* | None | Native | Fiesta flower |
| *Phoradendron macrophyllum* | None | Native | Big leaf mistletoe |
| *Picris echioides* | None | Introduced | Bristly ox-tongue |
| *Plagiobothrys nothofulvus* | None | Native | Popcorn flower |
| *Plantago coronupus* | None | Native | Buckhorn plantain |
| *Plantago erecta* | None | Native | California plantain |
| *Plantago lanceolata* | None | Introduced | English plantain |
| *Polygonum amphibium* | None | Native | Water smartweed |
| *Polygonum arenastrum* | None | Introduced | Common knotweed |

| Scientific Name | Special Status | Origin | Common Name |
|---|---|---|---|
| | | | |
| *Potamogeton pusillus* | Local Concern | Native | Small pondweed |
| *Potentilla glandulosa* ssp. *glandulosa* | None | Native | Sticky cinquefoil |
| *Pterostegia drymarioides* | None | Native | Pterostegia |
| *Rumex acetosella* | None | Introduced | Sheep sorrel |
| *Rumex salicifolius* | None | Native | Willow dock |
| *Rumex* sp. | None | Native | Dock |
| *Salvia spathacea* | None | Native | Hummingbird sage |
| *Sanicula crassicaulis* | None | Native | Sanicle |
| *Satureja douglasii* | None | Native | Yerba buena |
| *Scirpus americanus* | None | Native | Bulrush |
| *Scirpus californicus* | None | Native | California tule |
| *Scrophularia californica* | None | Native | California figwort |
| *Silene gallica* | None | Introduced | Catchfly |
| *Silybum marianum* | None | Introduced | Milk thistle |
| *Sisyrinchium bellum* | None | Native | Blue-eyed grass |
| *Sonchus asper* ssp. *asper* | None | Introduced | Prickly sow-thistle |
| *Stachys bullata* | None | Native | Hedge nettle |
| *Torilis arvensis* | None | Introduced | Hedge parsley |
| *Trifolium hirtum* | None | Introduced | Rose clover |
| *Typha angustifolia* | None | Native | Narrow-leaved cattail |
| *Typha domingensis* | None | Native | Cattail |
| *Urtica dioica* ssp. *holosericea* | None | Native | Stinging nettle |
| *Urtica urens* | None | Native | Dwarf nettle |
| *Verbena lasiostachys* | None | Native | Verbena |
| *Veronica anagallis-aquatica* | None | Native | Water speedwell |
| *Vicia sativa* | None | Introduced | Common vetch |
| *Xanthium spinosum* | None | Introduced | Spiny cocklebur |
| *Xanthium strumarium* | None | Introduced | Cocklebur |
| **Grasses - 21 Species** | | | |
| *Avena barbata* | None | Introduced | Slender wild oat |
| *Avena fatua* | None | Introduced | Wild oat |
| *Bromus diandrus* | None | Introduced | Ripgut brome |
| *Bromus hordeaceus* | None | Introduced | Soft chess brome |
| *Bromus madritensis* ssp. *rubens* | None | Introduced | Red top brome |

| Scientific Name | Special Status | Origin | Common Name |
|---|---|---|---|
| | | | |
| *Cortaderia selloana* | None | Introduced | Pampas grass |
| *Crypsis schoenoides* | None | Introduced | Swamp grass |
| *Cynodon dactylon* | None | Introduced | Bermuda grass |
| *Distichlis spicata* | None | Native | Saltgrass |
| *Elymus glaucus* | None | Native | Blue wildrye |
| *Gastridium ventricosum* | None | Introduced | Nit grass |
| *Hordeum murinum* | None | Introduced | Foxtail barley |
| *Lamarckia aurea* | None | Introduced | Goldentop |
| *Leymus condensatus* | None | Native | Giant wild rye |
| *Lolium multiflorum* | None | Introduced | Italian ryegrass |
| *Nassella lepida* | None | Native | Foothill needlegrass |
| *Nassella pulchra* | None | Native | Purple needlegrass |
| *Phalaris minor* | None | Introduced | Mediterranean canarygrass |
| *Piptatherum miliaceum* | None | Introduced | Smilo grass |
| *Polypogon monspeliensis* | None | Introduced | Annual beardgrass |
| *Vulpia myuros* | None | Introduced | Annual fescue |

## 3.5 Wildlife List

More than 176 animal species have the potential to occur in the survey area (Table 5). These include at least 9 fish, 9 amphibians, 17 reptiles, 113 birds, and 28 mammals. The survey area supports an ecologically diverse suite of wildlife from top predators such as mountain lion to small mammals such as deer mice.

The Cuyama River provides habitat suitable for a variety of species of fish, amphibians, reptiles, mammals, and birds. Beavers live year round in the river, with fresh sign observed regularly near the dam spillway. Mosquito fish, an introduced species, were observed in the river at the south end of the survey area, and were the only species of fish found within the survey boundaries. Amphibians, including Pacific chorus frog, bullfrog, western toad and the California red-legged frog were observed in the Cuyama River. Southwestern pond turtles were commonly seen during our site surveys throughout the length of the stream. The river also provides a wide variety of mammals a source of fresh water through much of the year.

Grasslands and coastal scrubland provide foraging habitat for raptors and predators, including prairie falcon, red-tail hawk, red-shouldered hawk, American kestrel, king snake, gopher snake, gray fox, coyote, mountain lion, and bobcat. Cliffs located on the western and eastern borders of the survey area provide nesting and roosting habitat for birds such as cliff swallow, white-throated swift, and prairie falcon, and may also support bat colonies.

The oak and riparian woodlands provide an especially rich habitat for animals. Raccoon and striped skunk forage in woodlands and along the stream margins. The cattail-willow wetland provides suitable habitat for red-winged blackbird, song sparrow, garter snake, and chorus frog. Extensive coastal scrub habitats support as the rare coast horned lizard, and provide cover, foraging, and nesting sites for birds including California quail, California towhee, and California thrasher.

The survey area is excellent bird habitat, with 79 species observed during our surveys in 2007 and 2008. The diverse habitat structure attracts numerous migrants, providing temporary shelter to species that breed north of the region, or winter to the south.

TABLE 5. WILDLIFE LIST. More than 176 animal species have the potential to occur in the survey area. The Special Status column indicates listing status of the organism under the Federal Endangered Species Act, the State Endangered Species Act, or by the CDFG (see Appendix A for special status definitions). Species observed at the site during our surveys are designated by the check symbol (✓) in the fourth column.

| Common Name | Scientific Name | Special Status[2] | Observed | Typical Habitat Type(s) |
|---|---|---|---|---|
| | | | | |
| **Fish – 9 species** | | | | |
| Mosquito Fish | *Gambusia affinis* | None | ✓ | Rivers, creeks, lakes, ponds |
| Three-spine Stickleback | *Gasterosteus aculeatus* | None | | Rivers, creeks, lakes, ponds |
| Arroyo Chub | *Gila orcuttii* | SSC[3] | | Introduced to Santa Maria River basin |
| Black Bullhead Catfish | *Ictalurus melas* | None | | Rivers, creeks, lakes, ponds |
| Bluegill | *Lepomis macrochirus* | None | | Rivers, creeks, lakes, ponds |
| Green Sunfish | *Lepomis cyanellus* | None | | Rivers, creeks, lakes, ponds |
| Large Mouth Bass | *Micropterus salmoides* | None | | Lakes, ponds |
| Speckled Dace | *Rhinichthys osculus* | None | | Rivers, creeks, lakes, ponds |
| Sacramento Pikeminnow | *Ptychocheilus grandis* | None | | Rivers, creeks, ponds |
| **Amphibians – 9 species** | | | | |
| Arboreal Salamander | *Aneides lugubris* | None | | Oak savanna |
| Black-bellied Slender Salamander | *Batrachoseps nigriventris* | None | | Moist habitats |
| California (Western) Toad | *Bufo boreas halophilus* | None | ✓ | Grassland, woodland |
| Monterey Ensatina | *Ensatina eschscholzi eschscholzi* | None | | Riparian, oak woodlands, grasslands |
| California Tree Frog | *Pseudacris cadaverina* | None | | Rocky streams |
| Pacific Chorus Frog | *Pseudacris regilla* | None | ✓ | Many habitats near water |
| California Red-legged Frog | *Rana draytonii* | FT[4] | ✓ | Streams, creeks, and ponds |
| Bullfrog | *Rana catesbeiana* | None | ✓ | Perennial streams, ponds |
| Western Spadefoot Toad | *Spea hammondii* | SSC | | Grassland habitat with seasonal pools |

[2] Special status designations for birds may be specific to nesting or wintering sites (as noted), or may protect the species throughout the year (no specific designation).

[3] SSC = California Species of Special Concern

[4] FT = Federally Threatened

| Common Name | Scientific Name | Special Status[2] | Observed | Typical Habitat Type(s) |
|---|---|---|---|---|
| | | | | |
| **Reptiles – 17 species** | | | | |
| Southwestern Pond Turtle | *Actinemys marmorata pallida* | SSC | ✓ | Lakes, ponds, streams |
| California (Silvery) Legless Lizard | *Anniella pulchra* (*pulchra*) | SSC | | Sandy soils in dunes, woodlands, coastal scrub |
| California Whiptail | *Aspidoscelis tigris munda* | None | | Dry, rocky areas |
| Western Yellow-bellied Racer | *Coluber constrictor mormon* | None | | Grasslands, open areas |
| Northern Pacific Rattlesnake | *Crotalus oreganus oreganus* | None | | Dry, rocky habitats |
| Monterey Ringneck Snake | *Diadophis punctatus vandenburgii* | None | | Woodlands, grasslands, chaparral |
| California Alligator Lizard | *Elgaria multicarinata multicarinata* | None | ✓ | Open grassland, woodland, chaparral |
| Western Skink | *Eumeces skiltonianus skiltonianus* | None | | Woodland, grassland, chaparral |
| California Nightsnake | *Hypsiglena torquata nuchalata* | None | | Chaparral, grassland |
| California Kingsnake | *Lampropeltis getula californiae* | None | ✓ | Woodland, grassland, streams |
| California Striped Racer | *Masticophis lateralis lateralis* | None | | Chaparral, brushy habitats |
| Coast (California) Horned Lizard | *Phrynosoma coronatum* (*frontale* population) | SSC | ✓ | Dune scrub, alkali scrub, chaparral, grasslands |
| San Diego Gopher Snake | *Pituophis catenifer annectens* | None | ✓ | Woodland, grassland, rural |
| Coast Patch-nosed Snake | *Salvadora hexalepis virgultea* | SSC | | Semi-arid brushy habitats, canyons, rocky plains |
| Western Fence Lizard | *Sceloporus occidentalis* | None | ✓ | Wide range |
| Valley Garter Snake | *Thamnophis sirtalis fitchii* | None | ✓ | Many habitats near water |
| Side-blotched Lizard | *Uta stansburiana* | None | | Dry habitats |
| **Birds – 113 species** | | | | |

| Common Name | Scientific Name | Special Status[2] | Observed | Typical Habitat Type(s) |
|---|---|---|---|---|
| | | | | |
| Cooper's Hawk | *Accipiter cooperii* | Special Animal (Nesting)[5] | ✓ | Oak, riparian woodland |
| Sharp-shinned Hawk | *Accipiter striatus* | Special Animal (Nesting) | ✓ | Oak, riparian woodland |
| Spotted Sandpiper | *Actitis macularia* | None | | Shorelines |
| White-throated Swift | *Aeronautes saxatilis* | None | ✓ | Nests in cliffs |
| Red-winged Blackbird | *Agelaius phoeniceus* | None | ✓ | Marshes, fields |
| Tricolored Blackbird | *Agelaius tricolor* | SSC (Nesting Colony) | | Marshes, fields |
| Mallard | *Anas platyrhynchos* | None | ✓ | Lakes, ponds, streams |
| American Pipit | *Anthus rubescens* | None | | Fields, beaches, etc. |
| Western Scrub Jay | *Aphelocoma californica* | None | ✓ | Oak, riparian woodlands |
| Golden Eagle | *Aquila chrysaetos* | Fully Protected[6] | | Open or mountainous areas |
| Great Egret | *Ardea alba* | None | | Water habitats, grasslands |
| Great Blue Heron | *Ardea herodias* | None | ✓ | Water habitats, grasslands |
| Long-eared Owl | *Asio otus* | SSC (Nesting) | | Riparian bottomlands with adjacent open lands |
| Oak Titmouse | *Baeolophus inornatus* | Special Animal (Nesting) | ✓ | Oak woodland |
| Cedar Waxwing | *Bombycella cedrorum* | None | | Wooded habitat with berry bushes; urban |
| Great Horned Owl | *Bubo virginianus* | None | ✓ | Woodland, grassland |
| Bufflehead | *Bucephala albeola* | None | ✓ | Ponds, lakes |
| Red-tailed Hawk | *Buteo jamaicensis* | None | ✓ | Open, semi-open country |
| Red-shouldered Hawk | *Buteo lineatus* | None | ✓ | Oak, riparian woodlands |
| Green Heron | *Butorides virescens* | None | | Marshes, riparian, ponds |
| Least Sandpiper | *Calidris minutilla* | None | ✓ | Pond margins, shorelines |
| California Quail | *Callipepla californica* | None | ✓ | Shrubby habitats |
| Anna's Hummingbird | *Calypte anna* | None | ✓ | Many habitats |
| Lesser Goldfinch | *Carduelis psaltria* | None | ✓ | Riparian, oak woodlands |

[5]Special Animal refers to all of the animal taxa inventoried by the CNDDB, regardless of their legal or protection status. Refer to discussion of Special Animals in Section 3.6.2.

[6] Fully Protected means no take may be allowed by a project. Refer to discussion in Section 3.6.2.

| Common Name | Scientific Name | Special Status[2] | Observed | Typical Habitat Type(s) |
|---|---|---|---|---|
| | | | | |
| American Goldfinch | *Carduelis tristis* | None | ✓ | Weedy fields, woodlands |
| House Finch | *Carpodacus mexicanus* | None | ✓ | Riparian, grasslands, chaparral, and woodlands |
| Purple Finch | *Carpodacus purpureus* | None | | Riparian and woodlands |
| Turkey Vulture | *Cathartes aura* | None | ✓ | Open country |
| Hermit Thrush | *Catharus guttatus* | None | ✓ | Woodland and brush |
| Canyon Wren | *Catherpes mexicanus* | None | ✓ | Cliffs, canyons, rocky outcrops near water |
| Belted Kingfisher | *Cerle alcyon* | None | ✓ | Riparian, lakes and streams |
| Wrentit | *Chamaea fasciata* | None | ✓ | Riparian, chaparral |
| Killdeer | *Charadrius vociferous* | None | ✓ | Mud flats, stream banks |
| Lark Sparrow | *Chondestes grammacus* | Special Animal (Nesting) | ✓ | Woodland edges |
| Northern Harrier | *Circus cyaneus* | SSC | ✓ | Nest on ground in tall reeds or grasses |
| Northern Flicker | *Colaptes auratus* | None | ✓ | Woodlands |
| Band-tailed Pigeon | *Columba fasciata* | None | | Woodlands, urban trees |
| Rock Dove | *Columba livia* | None | | Urban areas |
| Olive-sided Flycatcher | *Contopus cooperi* | SSC (Nesting) | ✓ | Riparian |
| Western Wood Pewee | *Contopus sordidulus* | None | ✓ | Riparian woodlands |
| American Crow | *Corvus brachyrhynchos* | None | ✓ | Many habitats, esp. urban |
| Stellar's Jay | *Cyanocitta stelleri* | None | | Woodlands |
| Yellow-rumped Warbler | *Dendroica coronata* | None | ✓ | Woodlands, brush, open country |
| Black-throated Gray Warbler | *Dendroica nigrescens* | None | | Oak, riparian woodlands |
| Townsend's Warbler | *Dendroica townsendii* | None | | Riparian, oak woodlands |
| Yellow Warbler | *Dendroica petechia brewsteri* | SSC (Nesting) | ✓ | Riparian woodlands |
| White-tailed Kite | *Elanus leucurus* | Fully Protected | | Nests in dense live oaks |
| Pacific-slope Flycatcher | *Empidonax difficilis* | None | ✓ | Riparian, oak woodlands |
| Southwestern Willow Flycatcher | *Empidonax traillii extimus* | FE | | Riparian woodlands |
| Brewer's Blackbird | *Euphagus cyanocephalus* | None | ✓ | Open habitats |
| Common Yellowthroat | *Geothlypis trichas* | None | ✓ | Marshes, streamsides |

| Common Name | Scientific Name | Special Status[2] | Observed | Typical Habitat Type(s) |
|---|---|---|---|---|
| | | | | |
| Prairie Falcon | *Falco mexicanus* | Special Animal (Nesting) | ✓ | Open country, nests on cliffs |
| American Kestrel | *Falco sparverius* | None | ✓ | Open, semi-open country |
| American Coot | *Fulica americana* | None | ✓ | Aquatic habitats |
| Barn Swallow | *Hirundo rustica* | None | | Riparian, grasslands, lakes |
| Yellow-breasted Chat | *Icteria virens* | SSC (Nesting) | | Riparian woodlands |
| Bullock's Oriole | *Icterus bullockii* | None | ✓ | Oak, riparian woodlands |
| Dark-eyed Junco | *Junco hyemalis* | None | ✓ | Oak woodland |
| Loggerhead Shrike | *Lanius ludovicianus* | SSC (Nesting) | | Nests in shrubs, trees near open areas |
| Acorn Woodpecker | *Melanerpes formicivorus* | None | ✓ | Oak woodland |
| Wild Turkey | *Meleagris gallopavo merriami* | None | | Woodlands |
| Song Sparrow | *Melospiza melodia* | None | ✓ | Oak, riparian woodland |
| Common Merganser | *Mergus merganser* | None | ✓ | Lakes, rivers, sloughs |
| Northern Mockingbird | *Mimus polyglottos* | None | | Riparian, chaparral and woodlands. Also urban |
| Brown-headed Cowbird | *Molothrus ater* | None | | Rural areas, ranches |
| Ash-throated Flycatcher | *Myiarchus cinerascens* | None | ✓ | Open, arid habitats |
| Western Screech Owl | *Otus kennicottii* | None | ✓ | Oak woodland |
| House Sparrow | *Passer domesticus* | None | | Urban |
| Savannah Sparrow | *Passerculus sandwichensis* | None | | Open habitats, marshes, grasslands |
| Cliff Swallow | *Petrochelidon pyrrhonota* | None | ✓ | Urban; open areas near water |
| Phainopepla | *Phainopepla nitens* | None | ✓ | Oak, riparian, scrub |
| Double-crested Cormorant | *Phalacrocorax auritus* | None | ✓ | Aquatic habitats |
| Black-headed Grosbeak | *Pheucticus melanocephalus* | None | ✓ | Woodlands |
| Yellow-billed Magpie | *Pica nuttalli* | None | | Oak savanna |
| Nuttall's woodpecker | *Picoides nuttallii* | Special Animal (Nesting) | ✓ | Chaparral mixed with scrub oak |
| Downy Woodpecker | *Picoides pubescens* | None | ✓ | Oak, riparian woodlands |
| Hairy Woodpecker | *Picoides villosus* | None | | Riparian and woodlands |
| California Towhee | *Pipilo crissalis* | None | ✓ | Brushy habitats |

| Common Name | Scientific Name | Special Status[2] | Observed | Typical Habitat Type(s) |
|---|---|---|---|---|
| | | | | |
| Spotted Towhee | *Pipilo erythrophthalmus* | None | ✓ | Dense brushy areas |
| Western Tanager | *Piranga ludoviciana* | None | ✓ | Oak, riparian woodlands |
| Pie-billed Grebe | *Podilymbus podiceps* | None | ✓ | Aquatic habitats |
| Chestnut-backed Chickadee | *Poecile hudsonica* | None | ✓ | Mixed woods |
| Blue-gray gnatcatcher | *Polioptila caerulea* | None | ✓ | Chaparral |
| Purple Martin | *Progne subis* | SSC (Nesting) | | Sycamore woodlands |
| Bushtit | *Psaltriparus minimus* | None | ✓ | Woodlands, chaparral |
| American Avocet | *Recurvirostra Americana* | None | ✓ | Ponds, marshes, lakeshores |
| Ruby-crowned Kinglet | *Regulus calendula* | None | ✓ | Oak, riparian woodlands |
| Black Phoebe | *Sayornis nigricans* | None | ✓ | Near water |
| Say's Phoebe | *Sayornis saya* | None | ✓ | Open country, grassland |
| Rufous Hummingbird | *Selasphorus rufus* | Special Animal (Nesting) | ✓ (Migrating) | Berry tangles, shrubs, nests in conifers in N. California. |
| Western Bluebird | *Sialia mexicana* | None | ✓ | Woodland near open areas |
| White-breasted Nuthatch | *Sitta carolinensis* | None | ✓ | Oak savannah, woodland |
| Red-breasted Sapsucker | *Sphyrapicus ruber* | Special Animal (Nesting) | ✓ (Wintering) | Deciduous or mixed forest |
| Western Meadowlark | *Sturnella neglecta* | None | ✓ | Open habitats, grasslands |
| European Starling | *Sturnus vulgaris* | None | ✓ | Agricultural, livestock areas |
| Tree Swallow | *Tachycineta bicolor* | None | | Oak, riparian woodlands, open areas near water |
| Violet-green Swallow | *Tachycineta thalassina* | None | ✓ | Oak, riparian woodlands, open areas near water |
| Bewick's Wren | *Thryomanes bewickii* | None | ✓ | Riparian woodland, scrub |
| California Thrasher | *Toxostoma redivivum* | None | ✓ | Chaparral, coastal scrub |
| House Wren | *Troglodytes aedon* | None | ✓ | Shrubby areas |
| Winter Wren | *Troglodytes troglodytes* | None | ✓ | Winter resident, moist woodlands, streamsides |
| American Robin | *Turdus migratorius* | None | ✓ | Streamsides, woodlands |
| Western Kingbird | *Tyrannus verticalis* | None | ✓ | Grasslands, savanna |
| Barn Owl | *Tyto alba* | None | | Agricultural, woodlands |
| Orange-crowned Warbler | *Vermivora celata* | None | ✓ | Oak, riparian woodlands |

| Common Name | Scientific Name | Special Status[2] | Observed | Typical Habitat Type(s) |
|---|---|---|---|---|
| | | | | |
| Warbling Vireo | *Vireo gilvus* | None | | Oak, riparian woodlands |
| Hutton's Vireo | *Vireo huttonii* | None | | Oak, riparian woodlands |
| Wilson's warbler | *Wilsonia pusilla* | None | ✓ | Oak, riparian woodlands |
| Yellow-headed Blackbird | *Xanthocephalus xanthocephalus* | SSC (Nesting) | | Freshwater emergent wetlands, winters in open habitats |
| Mourning Dove | *Zenaida macroura* | None | ✓ | Open and semi-open habitats |
| Golden-crowned Sparrow | *Zonotrichia atricapilla* | None | | Dense woodlands, brushy areas |
| White-crowned Sparrow | *Zonotrichia leucophrys* | None | ✓ | Oak, riparian woodlands |
| **Mammals – 28 species** | | | | |
| Pallid Bat | *Antrozous pallidus* | SSC | | Riparian, woodland, urban |
| Coyote | *Canus latrans* | None | ✓ | Open woodlands, prairies, brushy areas, wide ranging. |
| Beaver | *Castor canadensis* | None | ✓ | Streams, rivers, creeks |
| Opossum | *Didelphis marsupialis* | None | | Woodlands, streams |
| Merriam's Chipmunk | *Eutamias merriami* | None | ✓ | Brushy habitats |
| Feral Cat | *Felis catus* | None | ✓ | Varied |
| Bobcat | *Lynx rufus* | None | ✓ | Chaparral and woodlands |
| Striped Skunk | *Mephitis mephitis* | None | ✓ | Mixed woods, brush, semi-open country |
| California Vole | *Microtus californicus* | None | | Grassland meadows |
| Long-tailed Weasel | *Mustela frenata* | None | | Grasslands |
| California Myotis | *Myotis californicus* | None | | Tunnels, hollow trees, buildings, bridges. |
| Dusky-footed Woodrat | *Neotoma macrotis macrotis* | None | ✓ | Riparian, oak woodlands |
| Mule Deer | *Odocoileus hemionus* | None | ✓ | Many habitats |
| California Mouse | *Peromyscus californicus* | None | | Oak woodland, chaparral |
| Deer Mouse | *Peromyscus maniculatus* | None | ✓ | All dry land habitats |
| Mountain Lion | *Puma concolor* | Specially Protected Species* | ✓ | Mountains, woodlands, stream corridors |
| Raccoon | *Procyon lotor* | None | ✓ | Streams, lakes, rock cliffs, dens in trees |
| Western Harvest Mouse | *Reithodontomys megalotis* | None | | Grassland, dense vegetation near water |

| Common Name | Scientific Name | Special Status[2] | Observed | Typical Habitat Type(s) |
|---|---|---|---|---|
| | | | | |
| Ornate Shrew | *Sorex ornatus* | None | | Streamsides, woodlands |
| California Ground Squirrel | *Spermophilus beecheyi* | None | | Grasslands |
| Wild Boar | *Sus scrofa* | None | ✓ | Woodlands |
| Desert Cottontail | *Sylvilagus audubonii* | None | | Brushy habitats |
| Brush Rabbit | *Sylvilagus bachmani* | None | | Brushy habitats |
| American Badger | *Taxidea taxus* | SSC | | Open country |
| Valley Pocket Gopher | *Thomomys bottae* | None | ✓ | Variety of habitats |
| Gray Fox | *Urocyon cinereoargenteus* | None | ✓ | Chaparral, dry woodlands |
| Black Bear | *Ursus americanus* | None | ✓ | Woodlands, forests |
| Red Fox | *Vulpes fulva* | None | | Forest and open country |

*With the passage of Proposition 117 in 1990, mountain lions became a "specially protected species," making mountain lion hunting illegal in California. This status and other statutes prohibit the Department of Fish and Game from recommending a hunting season for lions, and it is illegal to take, injure, possess, transport, import, or sell any mountain lion or part of a mountain lion. Mountain lions may be killed only 1) if a depredation permit is issued to take a specific lion killing livestock or pets; 2) to preserve public safety; or 3) to protect listed bighorn sheep.

## 3.6 Special Status Plants and Animals

The CNDDB and the CNPS On-line Inventory of Rare and Endangered Plants of California contain records for 22 special status species (Tables 6 and 7) and one sensitive natural community (Table 8) within the designated search area. The search area includes the Twitchell Dam, Santa Maria, Tepesquet Canyon, Chimney Canyon, Huasna Peak, and Nipomo USGS 7.5 minute quadrangles. Additional special status species and sensitive natural community types were added to the lists. Those species and communities not listed in the CNDDB or CNPS are marked with an asterisk (*). The additional special status species are plants and animals that are on lower threat rank lists maintained by CNPS, are tracked by the CNDDB but not listed as California Species of Special Concern, or are considered of local concern in Santa Barbara County. Species of local concern are those that are locally rare due to declining habitat or populations, are at or near the geographic limit of their range, or represent a unique population. Information on local concern species was gathered from Sensitive Plants of Santa Barbara County (Wiskowski 1988), Regional Sensitive Plants of Santa Barbara County (Sandoval and Ferren 1997), Rare Plants of Santa Barbara County (Wilken 2007), and from our knowledge of the region. The California Consortium of Herbaria (CCH) database of accession records was also reviewed for historic and current records of special status plant species on and near the site.

Appropriate soil and habitat conditions are present in the survey area for three special status plants and 27 special status animals. Two special status plants and 12 special

status animals were detected during our site surveys in 2007 and 2008. For some avian species, observations were made of wintering or migrating individuals where nesting is not expected to occur in the survey area (a requirement of their listing status). Detailed information is provided in Sections 3.6.6 and 3.6.7 for potential special status species listed in Tables 6 and 7. A Rare Species Map is provided in Section 9.0. The current GIS data from the CNDDB for special status species occurrences reported near the survey area is included as Figure 5 in Section 10.0.

Eight sensitive natural communities are listed as habitats that are reported to occur in the region (Table 8). Four habitat types described in the survey area conform to the descriptions of CDFG sensitive natural communities. A Habitat Map is provided in Section 9.0.

### *3.6.1 Introduction to CNPS lists*

Plant species are considered rare when their distribution is confined to localized areas, when there is a threat to their habitat, when they are declining in abundance, or are threatened in a portion of their range. The listing categories range from species with a low threat (List 4) to species that are presumed extinct (List 1A). The 1074 plants of List 1B are rare throughout their range. All but a few species are endemic to California. All of them are judged to be vulnerable under present circumstances, or to have a high potential for becoming vulnerable. For an explanation of the CNPS listing scheme and CNDDB status codes, see Appendix A.

### *3.6.2 Introduction to CNDDB definitions*

"Special plants" is a broad term used to refer to all the plant taxa inventoried by the CNDDB, regardless of their legal or protection status. Special plants include vascular plants and high priority bryophytes (mosses, liverworts, and hornworts).

"Special Animals" is a general term that refers to all of the animal taxa inventoried by the CNDDB, regardless of their legal or protection status. These taxa may be listed or proposed for listing under the State and/or Federal Endangered Species Acts, but they may also be species deemed biologically rare, restricted in range, declining in abundance, or otherwise vulnerable.

Animals listed as California Species of Special Concern (SSC) are considered rare or declining in abundance. The Special Concern designation is intended to provide the Department of Fish and Game, consulting biologists, land planners and managers with lists of species that require special consideration during the planning process in order to avert continued population declines and potential costly listing under federal and state endangered species laws. For most animal taxa, the CNDDB is interested in information that indicates the presence of a resident population. For many birds, however, the CNDDB tracks only nesting locations. For birds, and other taxa where only a certain part of their range or life history are tracked, the area or life stage is indicated in the table.

“DFG: Fully Protected” is the State’s effort to identify and provide additional protection to those animals that are rare or face possible extinction. The Fish and Game Code Sections 4700 and 5050 dealing with Fully Protected species states that these species “…may not be taken or possessed at any time and no provision of this code ore any other law shall be construed to authorize the issuance of permits or licenses to take any ‘fully

protected' species, although take may be authorized for necessary scientific research." This language arguably makes the "Fully Protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003 the code sections dealing with fully protected species were amended to allow the Department to authorize take resulting from recovery activities for state-listed species.

### *3.6.3 Introduction to CESA*

California species listed under the California Endangered Species Act (CESA) fall into two categories: endangered or threatened.

> "Endangered species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease. Any species determined by the commission as "endangered" on or before January 1, 1985, is an "endangered species." California Code §2062.
>
> "Threatened species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as "rare" on or before January 1, 1985, is a "threatened species." California Code §2067.

Section 2080 of the Fish and Game Code prohibits "take" of any species that the Commission determines to be an endangered species or a threatened species. Take is defined in section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

CESA allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project caused losses of listed species populations and their essential habitats. The Department of Fish and Game is the responsible state agency for CESA.

### *3.6.4 Introduction to FESA*

The Federal Endangered Species Act (ESA) protects only plants and animals that have been officially listed as "endangered" or "threatened."

> The term "endangered species" means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man." ESA §3.6
>
> The term "threatened species" means any species which is likely to become an endangered species within the foreseeable future throughout all of a significant portion of its range." ESA §3.20.

Plants are protected only where federal action is involved or a violation of state law occurs. The U.S. Fish and Wildlife Service (FWS) has authority over wildlife (except for some marine mammals), freshwater fish (not anadramous fish), and plants. NOAA Fisheries has authority over Marine Species.

The Endangered Species Act makes it unlawful for anyone to "take" a listed animal, and this includes significantly modifying its habitat. This applies to private parties and private land; a landowner is not allowed to harm an endangered animal or its habitat on his property.

The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. ESA §3.19.

Take of federally listed species is allowed by issuance of an “incidental take” permit from the Secretary of the Department of Interior under ESA §10. Permits may be issued only after the landowner submits a "habitat conservation plan" (HCP), including proposed mitigation measures and an explanation of why alternatives were rejected. If FWS finds that the "take" will be incidental, will be satisfactorily mitigated, and will not appreciably reduce the species' chances for survival or recovery, it must issue the permit.

Federal agencies are allowed “incidental take” under ESA §7 with an incidental take statement from the FWS that specifies the proposed take is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species.

### *3.6.5 Special status species list*

Tables 6, 7, and 8 list all 47 special status species and the eight sensitive natural communities reported or expected to occur in the vicinity of the project site. Federal and state status, global and state rank, CNPS listing status (plants), and CDFG designation (animals) for each species are given. Typical blooming period, habitat preference, potential habitat on site, whether or not the species was observed at the site, and the effect of the proposed activity are also provided.

TABLE 6. SPECIAL STATUS PLANT LIST. Eleven special status plants species are reported from or could occur in the Twitchell Dam, Santa Maria, Tepesquet Canyon, Chimney Canyon, Huasna Peak, and Nipomo quadrangles. Two special status plants were detected in the survey area. Potential impacts are outlined in section 5.0, and mitigation recommendations are provided in section 6.0.

| | Common and Scientific Names | Fed/State Status Global/State Rank CNPS List | Blooming Period | Habitat Preference | Potential Habitat? | Observed on Site? | Effect of Proposed Activity |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | **Plants** | | | | | | |
| 1. | **Santa Margarita Manzanita** *Arctostaphylos pilosula* | None/none G2/S2.2 List 1B.2 | December - March | Shale outcrops, slopes, chaparral; 300-1100 m. s SCoRO Endemic to SLO County | No. Project site is outside the known range of this species. | No | Not Significant |
| 2. | **Sand Mesa Manzanita** *Arctostaphylos rudis* | None/none G2/S2.2 List 1B.2 | November - February | Sandy soils, chaparral. <100m. s CCo (Nipomo, Burton Mesa, Pt. Sal, sw SLO, nw SB Counties | No. Appropriate habitat and soil conditions are not present. | No | Not Significant |
| 3. | **Wells's Manzanita** *Arctostaphylos wellsii* | None/none G2/S2.1? List 1B.1 | December - May | Sandstone outcrops in chaparral, oak woodland. <400 m. s CCo (hills se of San Luis Obispo) | No. Project site is outside the known range of this species. | No | Not Significant |
| 4. | **Miles's Milk-vetch** *Astragalus didymocarpus* var. *milesianus* | None/none G5T2/S2.2 List 1B.2 | March - June | Clay or serpentine soils in coastal scrub, grassy areas near coast. 0-90 m. Endemic to SLO County | Yes. Appropriate conditions may be present in clay soils on coastal scrub hillsides. | No | Not Significant |
| 5. | **Prickly Cryptantha*** *Cryptantha echinella* | Santa Barbara County Local Concern | Spring | Open, gravelly or rocky soils, woodland, coniferous forest; 700-2800 m. SN, TR, GB, n DMtns. | Yes. Appropriate habitat is present in open grassy areas near woodlands. | Yes (Tentative ID) | Not Significant |
| 6. | **Dune Larkspur** *Delphinium parryi* ssp. *blochmaniae* | None/none G4T3/S2.2 List 1B.2 | April - May | Coastal dunes, chaparral, sand. 0-200 m. s CCo | No. Project site is outside the known range of this subspecies. Typically occurs in coastal dunes. | No | Not Significant |
| 7. | **Umbrella Larkspur** *Delphinium umbraculorum* | None/none G2G3/S2S3.3 List 1B.3 | April - June | Moist oak forest; 400-1600 m. SCoRO, WTR | No. Appropriate habitat is not present. | No | Not Significant |

| | Common and Scientific Names | Fed/State Status Global/State Rank CNPS List | Blooming Period | Habitat Preference | Potential Habitat? | Observed on Site? | Effect of Proposed Activity |
|---|---|---|---|---|---|---|---|
| 8. | **Blochman's Leafy Daisy** *Erigeron blochmaniae* | None/none G2/S2.2 List 1B.2 | July - August | Sand dunes and hills; <30 m. s CCo | No. Appropriate habitat is not present. | No | Not Significant |
| 9. | **Mesa Horkeli**a *Horkelia cuneata* ssp. *puberula* | None/none G4T2/S2.1 List 1B.1 | February - September | Dry, sandy coastal chaparral; gen 70-700 m. SCoRO, SCo. | No. Appropriate habitat is not present. | No | Not Significant |
| 10. | **San Luis Obispo County Lupine** *Lupinus ludovicianus* | None/none G2/S2.2 List 1B.2 | April - July | Open, grassy limestone in oak woodland; 50-500 m. Endemic to SLO County | No. Appropriate limestone soils are not present. | No | Not Significant |
| 11. | **Small Pondweed** *Potamogeton pusillus* | Santa Barbara County Local Concern | Spring | Shallow water, ponds, lakes, reservoirs, ditches, slow streams; <2700 m. NCo, KR, n SNF, SNH, GV, SnFrB, SCoR, SW, GB, Dmoj | Yes. Appropriate aquatic habitat is present. | Yes | Not Significant |

Abbreviations:

CCo: Central Coast
SCo: South Coast
SCoR: South Coast Ranges
SCoRO: Outer South Coast Ranges
SCoRI: Inner South Coast Ranges
SnFrB: San Francisco Bay
TR: Transverse Ranges
WTR: Western Transverse Ranges
SnJV: San Joaquin Valley
SLO: San Luis Obispo
SN: Sierra Nevada
SNF: Sierra Nevada Foothills
SnJt: San Jacinto Mtns
Teh: Tehachapi Mtn Area
CW: Central West
SW: South West
NC: North Coast
SNH: High Sierra Nevada
GB: Great Basin
DMoj: Mojave Desert
DMtns: Desert Mountains
KR: Klamath Ranges

TABLE 7. SPECIAL STATUS ANIMAL LIST. Thirty-six special status animal species are reported from or could occur in the Twitchell Dam, Santa Maria, Tepesquet Canyon, Chimney Canyon, Huasna Peak, and Nipomo quadrangles. Twelve special status animals were detected in the survey area. Potential impacts are outlined in section 5.0, and mitigation recommendations are provided in section 6.0.

| | Common and Scientific Names | Fed/State Status Global/State Rank DFG Rank | Nesting/ Breeding Period | Habitat Preference | Potential Habitat? | Observed on Site? | Effect of Proposed Activity |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | **Animals** | | | | | | |
| 12. | **Cooper's Hawk*** *Accipiter cooperii* | None/none G5S3 Special Animal (Nesting) | March 1 through August 31 | Oak woodland, riparian, open fields. Nests in dense trees, esp. coast live oak. | Yes. Appropriate breeding and wintering habitat is present in live oak woodland habitat. | Yes (Wintering) | Not Significant |
| 13. | **Sharp-shinned Hawk*** *Accipiter striatus* | None/none G5/S3 Special Animal (Nesting) | March 1 through August 31 | Riparian, coniferous, and deciduous woodlands near water. | No. Appropriate breeding habitat is not present. Wintering individuals observed. | Yes (Wintering) | Not Significant |
| 14. | **Southwestern Pond Turtle** *Actinemys marmorata pallida* | None/none G3G4T2T3Q/S2 SSC | April - August | Permanent or semi-permanent streams, ponds, lakes. | Yes. Appropriate aquatic and upland habitat is present. | Yes | Not Significant With Mitigation |
| 15. | **Tricolored Blackbird** *Agelaius tricolor* | None/none G2G3/S2 SSC (Nesting Colony) | March 1 through August 31 | Requires open water, protected nesting substrate, & foraging area with insect prey near nesting colony. | Yes. High quality nesting habitat is present in freshwater marsh habitat. Only red-winged blackbirds observed. | No | Not Significant With Pre-con Survey & Avoidance |
| 16. | **California Tiger Salamander** *Ambystoma californiense* | Threatened/none G2G3/S2S3 SSC | Rainy season | Needs underground refuges, ground squirrel burrows & vernal pools or other seasonal water for breeding. | No. Appropriate aquatic breeding habitat is not present. | No | Not Significant |
| 17. | **California (Silvery) Legless Lizard*** *Anniella pulchra* (*pulchra*) | None/none G3G4T3T4Q/S3 SSC | May - September | Sandy or loose loamy soils under coastal scrub or oak trees. Soil moisture essential. | Yes. Appropriate soil and habitat conditions are present in upland habitats. | No | Not Significant with Mitigation |
| 18. | **Pallid Bat** *Antrozous pallidus* | None/none G5/S3 SSC | Spring – Summer | Rock crevices, caves, tree hollows, mines, old buildings, and bridges. | Yes. Appropriate roosting habitat is present in oak tree cavities or in cliff crevices. | No | Not Significant With Mitigation |

| | Common and Scientific Names | Fed/State Status Global/State Rank DFG Rank | Nesting/ Breeding Period | Habitat Preference | Potential Habitat? | Observed on Site? | Effect of Proposed Activity |
|---|---|---|---|---|---|---|---|
| 19. | **Golden Eagle*** *Aquila chrysaetos* | None/none G5/S3 Fully Protected (Nesting and Wintering) | March 1 through August 31 | Nests in large, prominent trees in valley and foothill woodland. Requires adjacent food source. | Yes. Moderately appropriate nesting habitat is present on cliffs. | No | Not Significant |
| 20. | **Long-eared Owl*** *Asio otus* | None/none G5/S3 SSC (Nesting) | March 1 through August 31 | Riparian bottomlands with willows and cottonwoods, and adjacent oak woodlands. | Yes. Appropriate habitat is present for migrating and wintering, and less so for nesting. | No | Not Significant With Pre-con Survey & Avoidance |
| 21. | **Burrowing Owl** *Athene cunicularia* | None/none G4/S2 SSC (Nesting and Wintering) | March 1 through August 31 | Burrows in squirrel holes in open habitats with low vegetation. | No. Appropriate burrow habitat is not present. | No | Not Significant |
| 22. | **Oak Titmouse*** *Baeolophus inornatus* | None/none G5/S3? Special Animal (Nesting) | March 1 through August 31 | Nests in cavities in oak woodland habitat. Non-migratory. | Yes. Appropriate nesting habitat is present. | Yes | Not Significant With Pre-con Survey & Avoidance |
| 23. | **Arroyo Toad** *Bufo californicus* | Endangered/None G2G3/S2S3 SSC | Spring | Rivers with sandy banks, willows, cottonwoods, and sycamores. Prefers loose gravelly soils in drier portions of their range. | Yes. The project site is within the range of the Arroyo toad. This portion of the Cuyama River contains extremely silty sediment and flashy dam releases making the it poorly suited to the Arroyo toad life cycle. | No | Not Significant |
| 24. | **Lark Sparrow*** *Chondestes grammacus* | None/none G5/SNR Special Animal (Nesting) | March 1 through August 31 | Nests on the ground near edges of grasslands and tree or shrublands. | Yes. Appropriate nesting habitat is present. | Yes | Not Significant With Pre-con Survey & Avoidance |
| 25. | **Northern Harrier*** *Circus cyaneus* | None/none G5/S3 SSC (Nesting) | March 1 through August 31 | Nests on ground in shrubby areas, usually near water. Forages in open areas. | Yes. Appropriate wintering habitat is present in the vicinity. Nesting habitat is not present. | Yes | Not Significant |

| | Common and Scientific Names | Fed/State Status Global/State Rank DFG Rank | Nesting/ Breeding Period | Habitat Preference | Potential Habitat? | Observed on Site? | Effect of Proposed Activity |
|---|---|---|---|---|---|---|---|
| 26. | **Western Yellow-billed Cuckoo*** *Coccyzus americanus occidentalis* | Candidate/ Endangered G5T2Q/S1 Special Animal (Nesting) | March 1 through August 31 | Nests in riparian jungles of willow, cottonwood, w/ blackberry, nettles, or wild grape understory. Typically found in larger river systems. | No. Appropriate riparian forest habitat is not present. | No | Not Significant |
| 27. | **Olive-sided Flycatcher*** *Contopus cooperi* | None/none G4/S4 SSC (Nesting) | March 1 through August 31 | Nests in mixed conifer, montane hardwood-conifer forests in California and elsewhere in North America. | No. Appropriate nesting habitat is not present. Suitable migration stop-over site. | Yes (Migrating only) | Not Significant |
| 28. | **Monarch Butterfly** *Danaus plexippus* | None/none G5/S3 Special Animal | September - March (aggregations) | Roosts located in wind-protected tree groves with nectar and water nearby. | No. Appropriate wintering aggregation habitat is not present. | No | Not Significant |
| 29. | **Yellow Warbler*** *Dendroica petechia brewsteri* | None/none G5T3?/S2 SSC (Nesting) | March 1 through August 31 | Nests in riparian plant associations, including willows, cottonwoods, etc. | Yes. Appropriate nesting habitat is present in the riparian habitat. | No | Not Significant With Pre-con Survey & Avoidance |
| 30. | **White-tailed Kite*** *Elanus leucurus* | None/none G5/S3 Fully Protected | March 1 through August 31 | Nests in dense tree canopy near open foraging areas | No. Appropriate nesting habitat is not present. | No | Not Significant |
| 31. | **Southwestern Willow Flycatcher*** *Empidonax traillii extimus* | Endangered/ Endangered G5T1T2/S1 Special Animal (Nesting) | March 1 through August 31 | Riparian woodlands in Southern California. | Yes. Appropriate seasonal habitat is available, but prime nesting habitat is not present. | No | Not Significant With Pre-con Survey & Avoidance |
| 32. | **Prairie Falcon** *Falco mexicanus* | None/none G5/S3 SSC (Nesting) | March 1 through August 31 | Inhabits dry, open terrain. Nests on cliffs near open areas for hunting. | Yes. Appropriate nesting habitat is present on the eastern cliff face. | Yes | Not Significant |
| 33. | **Arroyo Chub*** *Gila orcuttii* | None/none G2/S2 SSC | n/a | Slow water stream sections with mud or sand bottoms. Native to coastal streams from Los Angeles Basin southward. | Yes. Introduced population is present in Santa Maria River and Cuyama River below the survey area. | No | Not Significant |

| | Common and Scientific Names | Fed/State Status Global/State Rank DFG Rank | Nesting/ Breeding Period | Habitat Preference | Potential Habitat? | Observed on Site? | Effect of Proposed Activity |
|---|---|---|---|---|---|---|---|
| 34. | **California Condor*** *Gymnogyps californianus* | Endangered/ Endangered G1/S1 Special Animal | January - June | Vast expanses of open savannah and grassland, rocky cliffs or canyons for nesting. | Yes. The survey area is within the range of the condor, and high cliffs could provide nesting habitat. | No | Not Significant |
| 35. | **Yellow-breasted Chat*** *Icteria virens* | None/none G5/S3 SSC (Nesting) | March 1 through August 31 | Summer resident. Inhabits riparian thickets of willow and brush. Nests within 10 feet of ground. | Yes. Appropriate nesting habitat is present. | No | Not Significant With Pre-con Survey & Avoidance |
| 36. | **Loggerhead Shrike*** *Lanius ludovicianus* | None/none G4/S4 SSC (Nesting) | March 1 through August 31 | Open areas with appropriate perches, near shrubby vegetation for nesting. | Yes. Appropriate foraging and nesting habitat is present. | No | Not Significant With Pre-con Survey & Avoidance |
| 37. | **Yuma myotis*** *Myotis yumanensis* | None/none G5/S4? Special Animal | Spring - Summer | Caves, mines, buildings, tree cavities, rock crevices, or under bridges. Feeds near open water. | Yes. Appropriate foraging and roosting habitat is present. | No | Not Significant With Mitigation |
| 38. | **Steelhead - Southern California ESU*** *Oncorhynchus mykiss irideus* | Threatened/none G5T2Q/S2 Special Animal | February - April | Fed listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek, San Diego County). | No. Appropriate habitat is not present for steelhead. | No | Not Significant |
| 39. | **Coast Horned Lizard** *Phrynosoma coronatum* (*frontale* population) | None/none G4G5/S3S4 SSC | May - September | Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. | Yes. Appropriate habitat is present in upland habitats. | Yes | Not Significant With Mitigation |
| 40. | **Nuttall's Woodpecker*** *Picoides nuttallii* | None/none G5/SNR Special Animal (Nesting) | March 1 through August 31 | Nests in standing snag or hollow tree in oak woodland and oak forest habitats. | Yes. Appropriate nesting habitat is present. | Yes | Not Significant With Pre-con Survey & Avoidance |
| 41. | **Mountain Lion*** *Puma concolor* | None/none None Specially Protected Species | Spring-Summer | Mountainous terrain with a variety of habitats and sufficient prey. | Yes. Appropriate habitat is present. | Yes | Not Significant With Avoidance |

| | Common and Scientific Names | Fed/State Status Global/State Rank DFG Rank | Nesting/ Breeding Period | Habitat Preference | Potential Habitat? | Observed on Site? | Effect of Proposed Activity |
|---|---|---|---|---|---|---|---|
| 42. | **California Red-legged Frog** *Rana draytonii* | Threatened/none G4T2T3/S2S3 SSC | January - March | Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation. | Yes. Appropriate habitat is present. | Yes | Not Significant With Mitigation |
| 43. | **Coast Patch Nosed Snake*** *Salvadora hexalepis virgultea* | None/none G5T3/S2S3 SSC | Spring | Brushy or shrubby vegetation in coastal Southern California. Requires small mammal burrows for refuge and overwintering. | Yes. Appropriate habitat is present in coastal scrub habitat. | No | Not Significant with Mitigation |
| 44. | **Western Spadefoot Toad** *Spea hammondii* | None/none G3?/S3? SSC | January – August | Vernal pools and other aquatic habitats in grassland and woodland habitats. | No. Appropriate aquatic habitat is not present. | No | Not Significant |
| 45. | **American Badger** *Taxidea taxus* | None/none G5/S4 SSC | February – May | Needs friable soils in open ground with abundant food source such as California ground squirrels. | Yes. Appropriate habitat is present. | No | Not Significant With Mitigation |
| 46. | **Two-striped Garter Snake** *Thamnophis hammondii* | None/none G2G3/S2 SSC | Spring | Coastal California from Salinas to Baja, sea level to 7000', aquatic, in or near permanent water, streams with rocky beds and riparian growth | Yes. Appropriate aquatic habitat is present. | No | Not Significant With Mitigation |
| 47. | **Least Bell's Vireo*** *Vireo bellii pusillus* | Endangered/ Endangered G5T2/S2 Special Animal (Nesting) | March 1 through August 31 | Riparian habitat, near water or dry streambed, <2000 ft. Nests in willows, mesquite, Baccharis. | Yes. Appropriate nesting habitat may be present in riparian woodland habitat. | No | Not Significant With Avoidance |

Habitat characteristics are from the Jepson Manual and the CDNNB.
*not listed in the CNDDB or CNPS for the search area, but possible for the location.

TABLE 8. SENSITIVE NATURAL COMMUNITIES. Eight sensitive natural communities are expected to occur in the region. Four sensitive natural communities occur within the survey area.

| | Common Name | Federal/State Status Global/State Rank | Potential Habitat? | Effect of Proposed Activity |
|---|---|---|---|---|
| | | | | |
| **Sensitive Natural Communities** | | | | |
| 1. | **Central Coast Arroyo Willow Riparian Forest*** | None/none G3/S3.2 | No. Arroyo willow riparian habitat within the survey area is not extensive enough to be classified as a Forest habitat type. | Not Significant |
| 2. | **Central Coast Cottonwood Willow Riparian Forest** | None/none G3/S3.2 | No. Cottonwood-willow habitat within the survey area is not extensive enough to be classified as a Forest habitat type. | Not Significant |
| 3. | **Central Coast Riparian Scrub** | None/none G3/S3 | Yes. Approximately 8 acres of riparian scrub habitat were mapped. | Not Significant |
| 4. | **Central Lucian Coastal Scrub*** | None/none G3/S3.3 | Yes. Some coastal sage scrub in the survey area is consistent with descriptions of this community type. | Not Significant |
| 5. | **Coastal and Valley Freshwater Marsh*** | None/none G3/S2.1 | Yes. Approximately 19 acres of freshwater marsh habitat was mapped. | Not Significant With Mitigation |
| 6. | **Southern Vernal Pool** | None/none G?/S? | No. Vernal pools do not occur within the survey area. | Not Significant |
| 7. | **Valley Needlegrass Grassland*** | None/none G1/S3.1 | No. Needlegrass is not a dominant component of the grassland habitat. | Not Significant |
| 8. | **Venturan Coastal Sage Scrub*** | None/none G3/S3.1 | Yes. Some coastal sage scrub in the survey area is consistent with descriptions of this community type. | Not Significant |

### *3.6.6 Special status plants that could occur in the survey area*

This section provides an explanation of the potential for occurrence of three special status plant species thought to be potentially compatible with conditions in the survey area. We discuss each species and describe habitat, range restrictions, known occurrences, and survey results. Local concern plant species were not mapped during our surveys in the spring of 2008.

**A. Miles' Milkvetch** (*Astragalus didymocarpus* var. *milesianus*)is a CNPS List 1B.2 subspecies known from Ventura, Santa Barbara and San Luis Obispo Counties. It is an annual species that occurs in clay soils in coastal scrub communities, or in grassland habitat near serpentine outcrops. It blooms from March to June. Most of the CNDDB occurrences are from old collections with poor location and habitat information. A 1935 collection from the mouth of the Cuyama River, 3 miles south of the survey area, is the closest locality record (CNDDB #4). Appropriate habitat is present in the survey area, however suitable clay soils may not be present. Coastal scrub habitat is present on upland areas surrounding the Cuyama River. Miles's milkvetch was not observed during floristic surveys conducted in the spring of 2008.

**B. Prickly Cryptantha** (*Cryptantha echinella*) is listed as a species of local concern (Wilken 2007) that reaches its western distribution limit in Santa Barbara County. It ranges through the Sierra Nevada Mountains and Transverse Mountains, occurring in sandy and gravelly soils in woodlands, shrublands, and coniferous forests. Plants tentatively identified as *C. echinella* were growing in sandy soils within annual grassland habitat on the west side of the Cuyama River. The project could affect some of the prickly cryptantha plants, but would not significantly affect the local population.

**C. Small Pondweed** (*Potamogeton pusillus*) is a wetland obligate listed as a species of local concern (Wilken 2007) due to declining acreage of sensitive wetland habitats in Santa Barbara County. Small pondweed is a common aquatic plant in the Cuyama River at the project site. It was observed to be very abundant at the south end of the survey area. The project would result in a temporary impact to the small pondweed occurrence, but would not significantly affect the species or reduce its presence in the area over the long term.

### *3.6.7 Special status animals that could occur in the survey area*

This section provides an explanation of the potential for occurrence of 27 special status animal species thought to be compatible with conditions in the survey area. We discuss each species and describe habitat, range restrictions, known occurrences, and survey results. Refer to Rare Species Map in Section 9.0 for locations of special status animal species.

**A. Cooper's Hawk** (*Accipiter cooperii*) is a Special Animal that frequents oak and riparian woodland habitats. It is a fall and winter migrant that nests regularly but in low numbers in San Luis Obispo and Santa Barbara Counties. There are no reports in the CNDDB of Cooper's hawks nesting within five miles of the survey

area. However, appropriate nesting and foraging habitat is present in oak and riparian woodlands. A single Cooper's hawk was observed in the fall of 2007, and wintering individuals are expected annually. Pre-construction nesting surveys are recommended prior to activities that affect oak and riparian woodland habitat during the nesting season (refer to section 6.5.4).

**B. Southwestern Pond Turtle** (*Actinemys marmorata pallida*) is a California Species of Special Concern that inhabits ponds and slow moving streams with adequate pools. Pond turtles live in both terrestrial and aquatic habitats. Southwestern pond turtles were observed throughout the length of the stream from the spillway to the southern reach of the Cuyama River within the boundaries of the project site. Mitigation recommendations are provided to reduce potential impacts to Southwestern pond turtles to a less than significant level (refer to section 6.5.2).

**C. Tri-colored Blackbird** (*Agelaius tricolor*) is a California Species of Special Concern that requires open water, protected nesting substrate, and foraging area with insect prey near the nesting colony. Suitable nesting habitat is present in freshwater marsh habitat within the survey area. The nearest reported nesting colony is located in the Sisquoc River approximately 6.6 miles to the south (CNDDB #233). Tri-colored blackbirds were not observed on site during surveys in 2007 and 2008. There is a low potential for a tricolored blackbird nesting colony to move into the survey area in the near future. Pre-construction nesting surveys are recommended prior to activities that affect freshwater marsh habitat during the nesting season (refer to Section 6.5.4).

**D. California (Silvery) Legless Lizard** (*Anniella pulchra pulchra*) is a California Species of Special Concern that inhabits friable soils in a variety of habitats from coastal dunes to oak woodlands and chaparral. Sandy soils in most upland areas within the survey area are suitable for legless lizards. The closest reported occurrence is located east of the Sisquoc River and Tepusquet Creek confluence, approximately 10.7 miles southeast (CNDDB #11). Legless lizards were not detected during our wildlife surveys, but are notoriously difficult to survey for and could occur in woodland and coastal scrub habitats. Pre-construction surveys are recommended prior to ground-breaking activities that affect oak woodland and coastal scrub habitat (refer to Section 6.5.3).

**E. Pallid Bat** (*Antrozous pallidus*) is a California Species of Special Concern. This is a large, long-eared bat occurring throughout the state from deserts to moist forests. *Antrozous pallidus* is primarily a crevice roosting species and selects roosts where they can retreat from view. They frequently occur in oak woodlands where they roost in tree cavities. These roosts are generally day or night roosts for one or a few bats. Communal wintering or maternity colonies are more common in rock crevices and caves. The nearest recorded occurrence is located approximately six miles south of the survey area at a bridge crossing over the Sisquoc River (CNDDB #12). Appropriate habitat is present for foraging and roosting pallid bats. Suitable roosting habitat for maternity colonies may be

present on rock crevices on nearby cliffs. Bats were observed during evening and night surveys, however, focused visual or acoustic bat surveys were not conducted as part of this biological report. The project is not expected to affect roosting pallid bats.

**F. Golden Eagle** (*Aquila chrysaetos*) is designated a Fully Protected species by CDFG. Fully Protected species may not be taken under any circumstances, and authorization for take may not be granted (refer to discussion in Section 3.6.2). The golden eagle is also protected under the federal Bald and Golden eagle Protection Act. They require large trees or cliffs for nesting and open areas with abundant prey for hunting. Golden eagles were not observed during our wildlife surveys in 2007 and 2008. Moderately suitable nesting habitat occurs on the large cliff face at the east side of the survey area. The project is not expected to affect golden eagles.

**G. Long-eared Owl** (*Asio otus*) is a California Species of Special Concern that frequents mature riparian woodlands and adjacent oak forests. They are presently considered very rare transients and winter migrants in Santa Barbara County, with sporadic and mostly old nesting records in some areas. Long-eared owl could potentially occur seasonally, but was not observed during our surveys.

**H. Oak Titmouse** (*Baeolophus inornatus*) is a Special Animal that is an oak woodland obligate, nesting in cavities in oak trees. It is a common species in oak woodlands on the central coast, but is tracked by the CDFG due to state-wide losses of oak woodland habitat. The oak titmouse nests in oak woodland habitat within the survey area. Pre-construction surveys are recommended prior to activities that affect oak trees (refer to Section 6.5.4).

**I. Arroyo Toad** (*Bufo californicus*) is a federally listed endangered species known from scattered localities ranging from Monterey County south to San Diego County. The arroyo toad was included in the USFWS official species list for the project site (refer to Appendix C). This species prefers sandy terraces of larger riparian corridors with willows, cottonwoods, and sycamores. It breeds in streams, utilizing adjacent stream terraces and adjacent uplands for cover. Juveniles and adults require friable soils to dig burrows. There are no known extant populations of Arroyo toad in San Luis Obispo County. A disjunct population is known to be present in the San Antonio River of Monterey County, with a gap in occupied habitat for over 100 miles south to the Sisquoc River in Santa Barbara County. The nearest recorded occurrence is approximately 6.8 miles south of the project, in the Sisquoc River (CNDDB #8). Arroyo toads are unlikely to inhabit the portion of the Cuyama River near Twitchell Dam due to the high levels of silt sedimentation from frequent water releases.

We conducted three day and five night surveys at the project site as part of a protocol survey for the California red-legged frog. These surveys were conducted during the Arroyo toad breeding season. The Arroyo toad was not detected acoustically or visually. We did identify adult and subadult California toads (*Bufo boreas halophilus*). Our conclusion is that the upland habitat near the

project site appears suitable for Arroyo toad, but the frequent water releases and fine silty deposits make the aquatic habitat unsuitable for breeding Arroyo toads.

**J. Lark Sparrow** (*Chondestes grammacus*) is a Special Animal tracked by the CNDDB due to a mild state-wide population decline. It remains a fairly common breeder in Santa Barbara and San Luis Obispo Counties, nesting on the ground in grassland habitats with adjacent oaks. Lark sparrows were observed in December 2007, and are expected to breed in upland areas within the survey area west of the Cuyama River. Pre-construction surveys are recommended prior to activities that affect upland habitat (refer to Section 6.5.4).

**K. Northern Harrier** (*Circus cyaneus*) is a California Species of Special Concern. They are birds of prey that hunt in open grasslands and fields. Northern harriers have a wide range spanning from Europe to Asia and throughout North America Locally northern harriers are expected to winter in the vicinity of the project, but do not nest in the area. A wintering northern harrier was observed flying over the site during March 2007 Surveys. The project is not expected to affect this species.

**L. Yellow Warbler** (*Dendroica petechia brewsteri*) is a California Species of Special Concern with a restricted breeding range in Central and Southern California. The status of this subspecies of yellow warbler is described by the CNDDB as "restricted range, rare". They frequent riparian habitats, nesting in sycamores, cottonwoods, willows, and other riparian trees. Yellow warbler is a regular spring and fall migrant that will breed in Santa Barbara and San Luis Obispo Counties. The nearest recorded occurrence is located in Santa Barbara County approximately 8.4 miles south southeast of the survey area in the Sisquoc River riparian habitat (CNDDB #72). The riparian habitat in the Cuyama River is suitable for nesting yellow warblers, and although we did not observed yellow warblers during our spring bird surveys we expect them to be present. Pre-construction surveys are recommended prior to activities that affect riparian habitat (refer to Section 6.5.4).

**M. Southwestern Willow Flycatcher** (*Empidonax traillii extimus*) is a federally listed endangered subspecies that nests in riparian woodlands of Southern California. The Southwestern willow flycatcher was included in the USFWS official species list for the project site (refer to Appendix C). It is a neotropical migrant that winters in Mexico, Central America, and northern South America. They can be observed throughout southern and central California as they migrate northward from April to June, and southward from July to September. Southwestern willow flycatchers observed from mid-June to mid-July that are vocalizing in riparian habitat are presumed to be breeding at that location. Southwestern willow flycatchers are riparian obligates, nesting in cottonwood-willow woodlands with slow-moving water and dense mid-level canopy vegetation. Some regional variation in breeding habitat is known. Males occupy a territory averaging 0.15 to 1.0 hectares (0.4-2.5 acres) in size. Streams with riparian vegetation less than 10 meters in width are not suitable habitat. Riparian

habitats with less than one to two acres of suitable nesting areas are not likely to attract breeding willow flycatchers[7].

The Santa Ynez River west of Buellton, approximately 25 miles south of the survey area, is the closest occurrence of nesting Southwestern willow flycatchers listed in the CNDDB (#1, 33, 39). These occurrences represent the northernmost documented coastal nesting localities for the Southwestern willow flycatcher, placing the project site outside the currently known nesting range.

Riparian habitat within the survey area consists primarily of dense willow thickets, but does contain small pockets of cottonwood-willow vegetation less than an acre in size each. Although the small areas of cottonwood-willow canopy appear superficially suitable for nesting willow flycatchers, they are too small and isolated from nearby nesting habitat.

We did not observe Southwestern willow flycatchers within the survey area in the spring of 2008. Focused bird surveys identified six flycatchers: Pacific slope flycatcher (*Empidonax difficilis*), olive-sided flycatcher (*Contopus cooperi*), Western wood pewee (*Contopus sordidulus*), ash-throated flycatcher (*Myiarchus cinereus*), black phoebe (*Sayornis nigricans*), and Say's phoebe (*Sayornis saya*). We expect willow flycatchers may use the Cuyama River riparian habitat occasionally while migrating, but do not nest within the survey area due to the small size and isolation of suitable nesting habitat. We do not expect the project to affect Southwestern willow flycatcher.

**N. Prairie Falcon** (*Falco mexicanus*) is a California Species of Special Concern that nests on rocky cliffs near open grassland habitat for hunting. It is known from appropriate habitat throughout Santa Barbara County, especially interior areas, but is generally uncommon throughout its range. Appropriate nesting and hunting habitat is present on cliffs within the survey area. A prairie falcon was observed near the site along the reservoir access road approximately one mile west of the dam in December of 2007. The project is not expected to affect this species.

**O. Arroyo Chub** (*Gila orcuttii*) is a California Species of Special Concern that occurs in slow-water streams with mud or silt bottoms, from the Los Angeles Basin south. An introduced population occurs in the Santa Maria River, and has been documented in the Cuyama River south of the project site during a previous Santa Barbara County Flood Control project (Padre Associates, date unknown). Arroyo chub were not found within the survey area, likely due to the influence of frequent water releases through the spring. The introduced population of Arroyo chub is not regulated as a Species of Special Concern.

**P. California Condor** (*Gymnogyps californianus*) is a federal and state listed endangered species. It was included in the USFWS official species list for the project site (refer to Appendix C). Condors require vast expanses of open

[7] Information obtained from a workshop on the Southwester willow flycatcher by Mark Sogge (USGS willow flycatcher expert) at the USFWS Albuquerque, NM field office, May 13-14, 2008, attended by Althouse and Meade, Inc.

savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in rocky walls provide nesting sites. The California condor may forage up to 100 miles from its roosting site. There are approximately 156 condors living in the wild. Moderately appropriate nesting sites may be present on the cliff face at the east side of the survey area. The project is not expected to affect this species.

**Q.** **Yellow-breasted Chat** (*Icteria virens*) is a California Species of Special Concern that nests in dense riparian habitat in western North America, with some birds migrating south to Mexico for the winter. There are no records in the CNDDB for nesting yellow-breasted chat in Santa Barbara and San Luis Obispo Counties. It is considered a rare breeder in the south coastal area of Santa Barbara County, but is a fairly common breeder in larger streams in the Santa Ynez, Buellton, and Lompoc areas. Riparian habitat within the survey area appears to be good nesting habitat for this species, however chats were not detected during focused spring bird surveys. Pre-construction surveys are recommended prior to activities that affect riparian habitat (refer to Section 6.5.4).

**R.** **Loggerhead Shrike** (*Lanius ludovicianus*) is a California Species of Special Concern. It requires open areas with appropriate perches for hunting, and shrubby trees or bushes for nesting. Appropriate nesting habitat is present in shrubby areas of coastal scrub and woodland habitats within the survey area. Shrikes were not observed during our focused bird surveys in the spring of 2008, but could occur. Pre-construction surveys are recommended prior to activities that affect coastal scrub and oak woodland habitats (refer to Section 6.5.4).

**S.** **Yuma Myotis** (*Myotis yumanensis)* is a Special Animal tracked by the California Department of Fish and Game. The Yuma myotis is a small bat widely distributed throughout western North America. It is the species of bat most commonly associated with man-made structures. Crevices are preferred roost areas including those found in cliffs, buildings and bridges. For foraging, it is more associated with water than any other species. Appropriate roosting habitat is present in cliffs within the survey area. The project is not expected to affect this species.

**T.** **Coast Horned Lizard** (*Phrynosoma coronatum, frontale* population) is a California Species of Special Concern that inhabits dry habitats from coastal dunes to inland deserts. Appropriate habitat for the coast horned lizard is present within the survey area. One adult coast horned lizard was observed in April 2008 during our wildlife surveys of the site. We expect the coast horned lizard is an uncommon resident that could be present in most upland areas. Pre-construction surveys are recommended prior to activities that affect upland habitats (refer to Section 6.5.3).

**U.** **Nuttall's Woodpecker** (*Picoides nuttallii*) is a Special Animal tracked by the CDFG due to statewide reduction in preferred oak woodland habitats. Nuttall's woodpeckers remain fairly common residents in oak woodland habitats

throughout Santa Barbara and San Luis Obispo Counties. They were observed regularly in oak habitats within the survey area, and are expected to nest on site in oak woodlands. Pre-construction surveys are recommended prior to activities that affect oak woodland habitat or individual oak trees (refer to Section 6.5.4).

**V. Mountain Lion** (*Puma concolor*) is a specially protected species in the state of California, protected by legislation passed in 1990 making it illegal to hunt or engage in an activity that results in take. The survey area is very good mountain lion habitat; tracks were observed in mud along the Cuyama River in 2008. The project is not expected to affect this species (refer to Section 5.5.6).

**W. California Red-legged Frog** (*Rana draytonii*) is a federally listed threatened species documented from sporadic occurrences throughout San Luis Obispo and Santa Barbara Counties. The California red-legged frog (CRF) was included in the USFWS official species list for the project site (refer to Appendix C). This species generally requires seasonal pools or streams that hold water until late summer for successful breeding. Juvenile CRF disperse into lesser quality habitat in the fall and winter. Seasonal migration between wintering and breeding habitat occurs in many populations.

In February 2008 we detected juvenile CRF at the southern end of the survey area. USFWS requested a full protocol level survey be conducted to provide more information on CRF range and abundance within the project area. (Althouse and Meade, Inc. 2008b). A total of seven individuals were observed within the study area from February to July of 2008. CRF were observed in four general locations of the Cuyama River within the survey area: one large adult was observed in a pool adjacent to the spillway, one adult was observed within the spillway, one adult was observed approximately one-half mile downstream from the spillway, and four juveniles were observed approximately one mile downstream from the spillway. Red-legged frog egg masses and larvae were not detected.

Our findings suggest breeding does not occur or is not successful at the project site due to frequent water releases through the spring. We suspect breeding is successful in lower reaches of the Cuyama River and in the Santa Maria River near the confluence with the Cuyama River, and young CRF move upstream in search of suitable habitat the winter following metamorphosis. This is consistent with our observation of four juveniles at the site in February 2008, and the lack of larvae detected throughout the duration of our survey. We also suspect post-breeding adult CRF move upstream into the project area in the late spring as water levels become reduced in lower reaches of the Cuyama River. No CRF were observed in May 2008, one adult was observed on June 11, and two adults were observed on June 30, 2008. No CRF were observed in July, when dam releases had ceased and water levels were much reduced, suggesting adult CRF move to other summering habitat during the dry season.

The project will require consultation with USFWS under Section 7 of the Endangered Species Act (refer to Section 6.5.1).

**X. Coast Patch-nosed Snake** (*Salvadora hexalepis virgultea*) is a California Species of Special Concern that inhabits chaparral and other brushy habitats in semi-arid regions from the Carrizo Plains of San Luis Obispo County south through the coastal mountains and plains into northern Baja, Mexico. Appropriate habitat is present in coastal scrub habitats within the survey area ; however there are no reports of the coast patch-nosed snake in the Santa Maria area. Pre-construction surveys are recommended prior to activities that affect upland habitats (refer to Section 6.5.3).

**Y. American Badger** (*Taxidea taxus*) is a California Species of Special Concern known from open grassland habitats throughout California. The nearest recorded occurrence is located approximately 2.5 miles north of the survey area on the north side of Twitchell Reservoir along Highway 166 (CNDDB #355). Moderately appropriate habitat for badgers is present near the project site, however no signs of badgers were observed during our surveys in 2007 and 2008. Pre-construction surveys are recommended prior to activities that affect upland habitats (refer to Section 6.5.6).

**Z. Two-striped Garter Snake** (*Thamnophis hammondii*) is a California Species of Special Concern. These snakes are more abundant along the coastal zone in creek bottoms and riparian corridors. Two-striped garter snakes feed primarily on aquatic organisms such as small fish and tadpoles. Appropriate habitat is present for the two-striped garter snake. The nearest recorded occurrence is located approximately 7.5 miles northeast of the survey area at the confluence of Pine Canyon Creek and Cuyama River in the Los Padres National Forest (CNDDB #56). A common garter snake species, the valley garter snake (*Thamnophis sirtalis fitchii*) was caught near the spillway in 2008. The two-striped garter snake was not observed during our wildlife surveys, but could be present in low numbers. Pre-construction surveys are recommended prior to activities that affect riparian habitat (refer to Section 6.5.3).

**AA. Least Bell's Vireo** (*Vireo bellii pusillus*) is listed as an endangered species under both the state and federal endangered species acts. It was included in the USFWS official species list for the project site (refer to Appendix C). Least Bell's vireos were formerly a common breeder in Santa Barbara County, but are now very local summer residents in remote areas of the interior region. Extant populations are focused along the Santa Ynez River basin between Lake Cachuma and Jameson Lake. A 1979 report is from the Sisquoc River, approximately 10 miles to the south (CNDDB #66). One singing male was detected in May 1993 "on the San Luis Obispo County side of the Santa Maria River just east of Santa Maria", and two birds were detected in August 1993 at Twitchell Reservoir (Lehman 1994).

The least Bell's vireo nests in low riparian vegetation in Southern California, preferring to place its nest on low branches of willows (*Salix* spp.), mule fat (*Baccharis salicifolia*), and mesquite bushes (*Prosopis* spp.) that extend into pathways. Appropriate nesting habitat is present within the survey area. We did not detect least Bell's vireos during our focused bird surveys in the spring of 2008,

but did not conduct a protocol level survey. Pre-construction surveys are recommended prior to activities that affect riparian habitat (refer to Section 6.5.4).

### *3.6.8 Special status species not expected to occur in the survey area*

The remaining 17 special status species listed in Tables 6 and 7 are not expected to occur within the survey area due to the absence of required soil type, lack of appropriate habitat, or because the project site is substantially outside the known range of the species.

### *3.6.9 Sensitive natural communities and special aquatic sites*

Four habitat types identified within the survey area conform to CDFG sensitive natural communities: Coastal and Valley Freshwater Marsh, Venturan Coastal Sage Scrub, Central Lucian Coastal Scrub, and Central Coast Riparian Scrub.

**A. Coastal and Valley Freshwater Marsh** is a Sensitive Natural Community that occurs occasionally along the coast and in coastal valleys near river mouths and around the margins of lakes and springs. The State Ranking (S2.1) means the community type is "Very Threatened", occurring over an estimated 2,000 to 10,000 acres statewide. Approximately 19 acres of freshwater marsh habitat were mapped.

**B. Venturan Coastal Sage Scrub** is a Sensitive Natural Community occurring from the southern Coast Ranges to cismontane Southern California and northern Baja California, below 3,000 feet (CNDDB 2008). The State Ranking (S3.1) means the community type is "Very Threatened", occurring over an estimated 10,000-50,000 acres statewide. Approximately 160 acres of coastal scrub habitat were mapped. No distinction was made between the Venturan and Central Lucian scrub types.

**C. Central Lucian Coastal Scrub** is a Sensitive Natural Community occurring on the ocean side of the Santa Lucia Range between Monterey and Point Conception, below 2,000 feet (CNDDB 2008). The State Ranking (S3.3) means the community type has "No Current Threats Known", occurring over an estimated 10,000-50,000 acres statewide. Approximately 160 acres of coastal scrub habitat were mapped. No distinction was made between the Central Lucian and Venturan scrub types.

**D. Central Coast Riparian Scrub** is a Sensitive Natural Community occurring along and at the mouths of most perennial and many intermittent streams of the South Coast Ranges, from the Bay Area south to the vicinity of Point Conception. The State Ranking (S3) means the community type occurs over 10,000 to 50,000 acres. No threat rank is assigned to this community. Approximately eight acres of riparian scrub habitat were mapped.

Wetland habitat is defined as a special aquatic site under USACE definitions. Wetlands are present within the survey area. A formal wetland delineation has been conducted (Althouse and Meade, Inc. 2008c). The wetland boundaries indicated on the Habitat Map

were determined by formal wetland delineation methods (refer to Habitat Map in Section 9.0). Federal jurisdictional wetlands are defined in the 1987 Army Corps of Engineers wetland determination methods as an area five feet in diameter dominated by wetland plants (obligate or facultative wetland species), which has hydrologic conditions that allow water to saturate the soil for several weeks per year, and contains hydric soils.

The State of California and the County of Santa Barbara use a broader definition of wetlands. Like the USACE definition, the definition of a wetland adopted by the State (Cowardin, et al., 1979) incorporates the three key parameters of hydrophytic vegetation, hydric soils, and hydrology:

> *Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For the purpose of this classification, wetlands must have one or more of the following attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; (3) the substrate is nonsoil and is saturated or covered with shallow water at some time during the growing season of each year* (Cowardin et al. 1979).

The key difference between the federal and state wetland definitions is that for state wetlands, under some circumstances, only one of the three criteria need be met. Santa Barbara County specifically, takes a stricter definition taking all areas where at least one criterion is met.

# 4.0 Discussion

## 4.1 General Discussion of Project Site Conditions

The survey area included in this report encompasses a broad area of upland habitats surrounding the proposed project site.. Previous soil excavation projects have stockpiled sediment in upland areas on the west side of the Cuyama River. Grassy meadows and sparse coastal scrub habitats occur on old stockpiles. The proposed project would stockpile sediment in an area of previous deposition now occupied by a grassland meadow.

The project would affect high quality wetland and riparian woodland habitats that are known to support a large diversity of common and special status wildlife. Effects on biological resources are expected to be temporary.

## 4.2 Regulatory Framework

### *4.2.1 CEQA Guidance*

The California Environmental Quality Act (CEQA) requires the lead agency to determine potential environmental effects of the project. The lead agency must also identify other involved agencies that become responsible or trustee agencies. The following section of the State CEQA Guidelines provides general direction for the evaluation of biological resource impacts as a part of the environmental review of proposed projects.

California Environmental Quality Act Guidelines Section 15065 states that a Lead Agency shall find that a project may have a significant effect on the environment and thereby require an Environmental Impact Report (EIR) be prepared for the project where the project has the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

A significant effect may also be identified by considerable cumulative environmental effects, even if the individual effect is limited.

The following definition of a significant effect is defined in Section 15382 of the CEQA Guidelines:

> *"Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.*

All of the plants constituting CNPS List 1B meet the definitions of Sec. 1901, Chapter 10 of the California Native Plant Protection Act (CNPPA) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA (CEQA Section 15065).

Rare plants protected under the CNPPA must be fully considered under CEQA (CEQA sections 15380, 15386). Proposed impacts that affect more than 10 percent of a local breeding population generally require mitigation at a minimum 2:1 ratio.

The California Department of Fish and Game recognizes that Lists 1A, 1B, and 2 of the CNPS Inventory consist of plants that may qualify for listing, and recommends they be addressed in CEQA projects.

### *4.2.2 Federal and state resource protections*

Environmental impact analysis and mitigation needs to take into account Federal and State biological resource regulations. The Federal Endangered Species Act and California Endangered Species Act formally list plant and animal species determined to be rare, threatened or endangered, or candidate species, and establish regulations for protecting these species and their habitats.

*Wetlands (refer to Section 3.6.7 for federal and state definitions)*:

In conjunction with adopting a wetlands policy on March 9, 1987 the California Fish and Game Commission assigned the CDFG the task of recommending a wetlands definition. The CDFG found the USFWS wetland definition and classification system to be the most biologically valid. The CDFG staff use this definition as a guide in identifying wetlands while conducting on-site inspections for the implementation of its Commission's wetlands policy.

Other federal statutes include the National Environmental Policy Act (NEPA), the Clean Water Act Section 404 (for protection of wetlands), Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, Executive Order 11990 (wetlands protection), and California Fish and Game code section 1601, 1602, and 1603 for Stream Alteration Agreements.

*Flora and fauna*:

Rare plants and animals listed under the Federal Endangered Species Act (FESA) are protected (refer to Section 3.6.4). The United States Fish and Wildlife Service is the agency that regulates activities affecting federally listed species.

Nesting birds are protected from disturbance by The Migratory Bird Treaty Act of 1918, (as regulated by the United States Fish and Wildlife Service) and by sections 3503, 3503.5, and 3800 of the California Department of Fish and Game code.

The Cuyama River is under the permitting jurisdiction of the U.S. Army Corps of Engineers, Clean Water Act section 404, the California Department of Fish and Game, code 1603, and the Regional Water Quality Control Board (RWQCB) Clean Water Act section 401. All work that affects the bed or banks of the river, including culverts and bridges, is likely to require USACE, RWQCB, and CDFG authorizations.

# 5.0 Potential Impacts

The Twitchell Dam Watercourse Project would excavate accumulated sediment from the main channel of the Cuyama River from the Twitchell Dam spillway to the southern boundary of the property. At the time this document was produced the southern boundary of the property had not been identified. Wallace Group engineers estimate approximately 58,600 cubic yards of sediment would be removed from the drainage. The spoils would be trucked to the southwest corner of the property and stockpiled in a grazed grassland meadow that has been the site of previous spoils deposition.

The project is in an early conceptual phase and is subject to future design changes. A conceptual plan sheet provided by Wallace Group, included in Section 8.0, was used to evaluate potential impacts to biological resources.

Sections 5.1 through 5.4 address potential impacts to biological resources from the proposed project. We include in our analysis impacts to both common and special status species, as well as to habitats that are not sensitive. This consideration contributes to understanding cumulative impacts to the environment that may result from the loss of common species and habitat.

### Thresholds of Significance

Santa Barbara County provides guidance regarding the significance of impacts to habitats in the Santa Barbara County Environmental Thresholds and Guidelines Manual (Santa Barbara County 1992, revised 2006). The following Impact Assessment Guidelines are from the Manual:

Class I Impact: Significant and Unavoidable
Class II Impact: Significant but Mitigable

Class III Impact: Less than Significant

The County of Santa Barbara Environmental Thresholds and Guidelines Manual and Appendix G of the State CEQA Guidelines documents are the primary references for determining if a project would have a significant effect on the environment. A significant effect is one which exceeds the following thresholds:

- Conflicts with adopted environmental plans and goals of the community where it is located.
- Substantially affects a rare or endangered species of animal, plant, or the habitat of the species.
- Interferes substantially with the movement of any resident or migratory fish or wildlife species.
- Substantially diminishes habitat for fish, wildlife, or plants.

## 5.1 Habitat Impacts

### *5.1.1 Freshwater marsh and riparian woodland*

The project would temporarily impact approximately five acres of freshwater marsh habitat, and ten acres of riparian woodland habitat. Excavation of the channel would extend to the southern boundary of the property. Since the location of the southern property boundary has not been confirmed, the conceptual plan sheet depicts excavation of the channel as extending to station 38+50. Additional habitat acreage could be affected depending upon the exact location of the southern property boundary. Freshwater marsh and riparian woodland habitats are Sensitive Natural Communities under the permitting jurisdiction of USACE, CDFG, and RWQCB.

Sedimentation below the dam functions to slow the water released from the spillway and spread it out north and east of the main channel, thus creating and sustaining the freshwater marsh habitat. Once the new channel is created, dam releases would be conveyed faster, and could potentially reduce the frequency of overflow onto the flood plain. A reduction in the amount of available water could result in a reduction in the total area of freshwater marsh habitat. We expect areas not capable of supporting freshwater marsh habitat would become riparian woodland and herbaceous wetland habitat. We do not expect reduced overflow onto the floodplain to affect the sustainability of riparian woodlands and wetland conditions.

The project would include a stream restoration component to mitigate for impacts to wetland and riparian habitats. We expect the newly created channel would quickly become established with native wetland and riparian plant species. By utilizing a diverse palate of native riparian trees and shrubs the created channel and riparian habitat could attract a wider variety of nesting and migrating birds, including special status species. In addition, the created channel would sustain better pool habitat than the current channel configuration, which would increase the habitat suitability for the California red-legged frog and the Southwestern pond turtle.

The proposed project would result in significant temporary impacts to freshwater marsh and riparian woodland habitats. An appropriately designed restoration project and

purchase of credits in an approved wetland mitigation bank would effectively mitigate the temporary impacts to a less than significant level (refer to Section 6.1.1).

### *5.1.2 Riparian scrub*

Riparian scrub habitat is limited to a narrow strip of land along the east side of the Cuyama River. The proposed project would not affect riparian scrub habitat.

### *5.1.3 Coast live oak woodland*

A temporary haul road would be constructed from the Cuyama River to the spoils deposition site that would pass through oak woodland habitat. The haul road would result in small areas of temporary disturbance to oak woodland understory vegetation.

The Kuehl Bill (Senate Bill 1334) requires that oak woodlands conversions be subject to CEQA. An oak woodland conversion is defined as removal of 30 percent or more of the canopy from an oak woodland and conversion of the land so it would not sustain oaks as a functioning biological system in the future. The project would not result in an oak woodland conversion. The temporary impact to oak woodland understory vegetation is a less than significant impact. Impacts to oak trees, including root zone encroachment, require mitigation (refer to Sections 5.2 and 6.2).

### *5.1.4 Annual grassland*

Approximately nine acres of non-native annual grassland habitat would be utilized for a four foot high stockpile of dredge spoils. The grassland habitat that would be impacted is dominated by introduced species typical of disturbed soils. We expect the stockpile would become vegetated with non-native grasses and scattered native shrubs within five years. Impacts to approximately nine acres of annual grassland habitat would be a less than significant impact.

### *5.1.5 Coastal scrub*

The proposed project may result in small areas of temporary disturbance to coastal scrub habitat from construction of a temporary haul road accessing the spoils deposition site from the Cuyama River. Impacts to coastal scrub habitat are expected to be less than significant.

### *5.1.6 Chaparral*

The project would not affect chaparral habitat; therefore no mitigation is required.

### *5.1.7 Cliff*

The project would not affect cliff habitat; therefore no mitigation is required.

### *5.1.8 Anthropogenic*

Impacts to anthropogenic habitat are not considered significant; therefore no mitigation is required.

## 5.2 Oak Tree Impacts

Mature coast live oak (*Quercus agrifolia*) trees occur at the project site. A temporary haul road would pass through oak woodland habitat. We do not expect any oak trees would be removed. Minor impacts to the root zone of some trees is likely to occur.

San Luis Obispo and Santa Barbara Counties require impacts to oak trees with a diameter at breast height (dbh) of 5 inches or greater to be mitigated. Diameter at breast (dbh) is measured at 4.5 feet from the ground or, if the trunk is split below 4 feet, at the narrowest point below the split. Impacts include any ground disturbance within the critical root zone (CRZ), measured as 1.5 times the diameter of the canopy, or any trimming of branches 4 inches or greater. Creation of a temporary haul road through a section of oak woodland habitat is likely to result in minor root zone impacts to several trees. Impacts and removals of oak trees can be mitigated to a less than significant level (refer to section 6.2).

## 5.3 Common Wildlife Impacts

### *5.3.1 Nesting habitat*

The project would result in a temporary reduction of riparian canopy nesting habitat. Impacts to or take of nesting birds could occur if vegetation removal/trimming is conducted during nesting season (March 1 through August 31). Take of common nesting birds is prohibited by federal and state code. Impacts to or take of common nesting birds can be avoided (refer to Section 6.3.1).

### *5.3.2 Reduction of wildlife movement corridors*

Numerous animal species occupy habitats near the project site as residents, migrants, or transients, and may use habitats in the survey area to facilitate movement to and from the reservoir. The project would temporarily degrade movement corridors through the project site, however wildlife would be expected to circumvent the construction area or move through the site at night when operations are not active. After completion of the project the project site would facilitate wildlife movement in a manner similar to or better than pre-project conditions due to enlargement of the stream channel and restoration of the banks.

### *5.3.3 Displacement and/or take*

Common wildlife species currently living near the project site or using the site as migrants or transients would be temporarily displaced from the project areas. Take of common species may occur.

## 5.4 Special Status Plant Impacts

A thorough floristic inventory identified two species of local concern in the survey area. No plants with state or federal status were identified or are expected to occur near the project site. The project would affect small pondweed, an aquatic plant that is abundant in the Cuyama River throughout the length of the project site. This plant is considered a local species of concern because it is a wetland obligate, and wetlands are considered a sensitive habitat type. We expect small pondweed to re-colonize the project site upon

completion of the excavation project. The project may also affect small areas of prickly cryptantha, a local species of concern that occurs in a grassy meadow west of the river. Temporary impacts to small pondweed and prickly cryptantha would be a less than significant impact.

## 5.5 Special Status Animal Impacts

Appropriate habitat was identified in the survey area for 27 special status animal species. We detected twelve special status animal species during our site surveys in 2007 and 2008 (refer to Table 7 in Section 3.6.5).

### *5.5.1 California red-legged frog*

The California red-legged frog is a federally listed threatened species that occurs at the project site. The project could result in take if appropriate protection and mitigation measures are not implemented. Take of a federally listed threatened species would be a significant impact. Construction of the project would temporarily impact red-legged frog habitat, but would result in improved habitat conditions for this species after completion. The project would include detailed mitigation measures to protect this species during construction (refer to Section 6.5.1).

### *5.5.2 Southwestern pond turtle*

The Southwestern Pond turtle is a California Species of Special Concern that occurs at the project site. The project could result in take if appropriate mitigation measures are not implemented. The potential for take can be reduced to a less than significant level (refer to Section 6.5.2).

### *5.5.3 Special status reptiles*

Four special status reptile species could occur in upland habitats within the survey area. Coast horned lizard was observed in one location, but could be present in low numbers in any upland area. California legless lizards, coast patch-nosed snakes, and two-striped garter snakes could potentially be present, but were not observed during our wildlife surveys. Potential impacts to special status reptiles can be reduced to a less than significant level through implementation of pre-construction surveys (refer to Section 6.5.3).

### *5.5.4 Special status birds*

Suitable nesting habitat is present in the project areas for nine special status birds: Cooper's hawk, yellow warbler, yellow-breasted chat, Nuttall's woodpecker, oak titmouse, lark sparrow, loggerhead shrike, tricolored blackbird, and least Bell's vireo. Removal of riparian and upland vegetation during the nesting season (March 1 through August 31) could potentially result in nest abandonment (ie: take) of special status birds. Pre-construction surveys and other protective measures may be implemented to reduce the potential for take to a less than significant level (refer to section 6.5.4).

### *5.5.5 Special status bats*

The proposed project is not expected to impact roosting pallid bats, or maternity colonies of any other species of bat; therefore no mitigation is required.

### *5.5.6 Special status mammals*

The American badger and mountain lion are two special status mammals that could occur near project areas. Badgers were not observed during our wildlife surveys, but could potentially take up residence in upland project areas. We observed mountain lion tracks along the Cuyama River, and expect they pass through the area to hunt on occasion. The project is not expected to affect mountain lions, but could affect badgers if a natal den occurs within the project areas. The potential for impacts to badgers can be reduced to a less than significant level through implementation of pre-construction surveys (refer to Section 6.5.6).

# 6.0 Mitigation Recommendations

We recommend the following biological resource (BR) mitigation measures to reduce project impacts to a less than significant level (refer to Sections 6.1 through 6.5). Because of the scope of the project, and the amount of habitat and number of special status species that could be affected, we expect the project will require additional environmental review under the National Environmental Policy Act (NEPA). In addition, the presence of the federally threatened California red-legged frog will require consultation with USFWS which is likely to result in additional mitigation and possibly habitat enhancement requirements.

## 6.1 Habitat Mitigations

### *6.1.1 Freshwater marsh and riparian woodland*

The project would require an individual permit from USACE under Section 404 of the Clean Water Act, authorization from the RWQCB under Section 401 of the Clean Water Act, and a Streambed Alteration Agreement under CDFG code 1600. To minimize impacts to jurisdictional habitats, the following mitigation recommendations are provided:

**BR-1.** **All work in the stream channel shall be completed during the dry season, from August 15 through October 15,** to protect water quality and minimize impacts to sensitive wildlife.

**BR-2.** **The applicant shall minimize vegetation removal within the stream channel to the least amount necessary to complete the excavation project.** The applicant shall work with the project biologist to establish ingress/egress areas for equipment. Heavy equipment shall be staged in upland areas on the south side of the stream where feasible.

**BR-3.** **An environmental monitor shall be on-site during all vegetation removal**. The monitor shall oversee collection of willow and cottonwood stakes and the salvage other plant material for use in the restoration project (refer to BR-5).

**BR-4.** **The project shall include a Stormwater Pollution Prevention Plan (SWPPP)** to adequately address temporary and permanent erosion control.

The following biological resource mitigation measures are recommended to offset temporary impacts to freshwater marsh and riparian woodland habitats:

**BR-5.** **A wetland and riparian mitigation, monitoring, and reporting plan (MMRP) shall be prepared** and approved by the County and other jurisdictional agencies, as appropriate. The MMRP shall include a planting plan, planting methods, performance criteria, a monitoring plan, and reporting obligations for on-site habitat restoration. Mitigation for temporary impacts to wetland and riparian habitat shall be completed at a two to one (2:1) ratio (acres restored to acres impacted).

**BR-6.** **Credits shall be purchased in an approved wetland mitigation bank** to offset any difference in the mitigation requirement that cannot be satisfied by on-site habitat restoration. The preferred mitigation bank would be within Santa Barbara or San Luis Obispo Counties.

### *6.1.2 Coast live oak woodland*

San Luis Obispo and Santa Barbara Counties do not currently require mitigation for impacts to oak woodland habitat. Impacts to oak woodland habitat are typically assessed as impacts to individual oak trees, which do require mitigation (refer to section 6.2).

### *6.1.3 Annual grassland*

The loss of annual grassland habitat is a less than significant impact and does not require mitigation to offset the loss of habitat. To ensure the stockpile is stabilized and any run-off does not reach the river, the project SWPPP shall detail the use of hydroseed applications, silt fences, and other soil stabilization techniques, as appropriate.

### *6.1.4 Coastal scrub*

Small areas of coastal scrub habitat could be affected by creation of the haul road to the stockpile site. Impacts to coastal scrub habitat should be mitigated by replanting disturbed areas with coastal scrub

**BR-7.** **Impacts to coastal scrub habitat shall be mitigated at a 2:1 ratio of on-site habitat creation.** The project environmental monitor shall calculate the area of impact, and shall provide the project manager with a brief restoration planting plan.

## 6.2 Oak Tree Mitigations

If project construction requires impacts or removal of native oak trees, or is conducted within 50 feet of oak canopies, the following standard mitigation recommendations shall be implemented, as appropriate.

**BR-8.** **Tree canopies and trunks within 50 feet of proposed disturbance zones should be mapped and numbered.** Tree assessments should be conducted by a certified arborist or qualified botanist and a licensed land surveyor. Data collected for each tree shall include diameter at breast height (4.5 feet) of each stem/trunk, canopy diameter, tree height, tree health, and habitat notes (cavities

for birds or bats), raptor nests, wood rat nests, and unique features. The tree map shall be used to determine impacts to trees from the project and will inform the mitigation plan.

**BR-9.** **Impacts to the oak canopy or critical root zones (CRZ) should be avoided where practicable.** Impacts include pruning, any ground disturbance (including vehicular travel) within the dripline or CRZ of the tree (whichever distance is greater), and trunk damage.

**BR-10.** **Impacts to oak trees shall be assessed by a licensed arborist or qualified botanist.** Impacts include pruning, any ground disturbance within the CRZ of the tree, and trunk damage.

**BR-11.** **A Tree Protection Report shall be prepared by a qualified professional** if project activities would require removal or encroachment within the CRZ. The tree report shall identify trees in the project area on an approved site plan, and shall indicate on the plan appropriate locations of protection fencing. The report shall also include an assessment of the condition of each tree, an impact analysis, mitigation recommendations regarding number and size of replacement trees, planting locations, and future maintenance and monitoring requirements.

**BR-12.** **Impacts to native oak trees shall be mitigated by planting additional trees on site.** Impacts to any oak tree with a dbh of five inches or greater shall require mitigation. Oaks removed shall be replaced in kind at a 10:1 ratio. Impacts to oaks shall be mitigated by planting additional oak trees, in kind, at a 5:1 ratio. Replacement trees shall be of one gallon size, of local origin, and of the same species as was impacted.

**BR-13.** **A mitigation, monitoring, and reporting plan (MMRP) shall be prepared by a qualified professional**, and approved by the lead agency prior to implementation. The plan shall specify the anticipated number of impacts and removals, and the number of mitigation trees to be planted. The plan will also include information on mitigation site options, planting density, methods, success criteria, and a monitoring and reporting program. Naturally recruited oak seedlings, if protected and maintained, may count as mitigation trees. Otherwise, seedlings shall be propagated from acorns collected on the property, kept in tree tubes or tall pots, and planted the following winter.

**BR-14.** **Replacement trees should be seasonally maintained (browse protection, weed reduction and irrigation, as needed) and monitored annually for at least 7 years.**

## 6.3 Common Wildlife Mitigations

### *6.3.1 Nesting habitat*

Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds

and their active nests including raptors and other migratory non-game birds (as listed under the Federal MBTA).

**BR-15.** **Within one week of ground disturbance or tree removal/trimming activities**, if work occurs between March 1 and August 31, nesting bird surveys shall be conducted. To avoid impacts to nesting birds, grading and construction activities that affect trees and grasslands shall not be conducted during the breeding season from March 1 to August 31. If construction activities must be conducted during this period, nesting bird surveys shall take place within one week of habitat disturbance. If surveys do not locate nesting birds, construction activities may be conducted. If nesting birds are located, no construction activities shall occur within 100 feet of nests until chicks are fledged. Construction activities shall observe a 300-foot buffer for occupied raptor nests. A 500-foot buffer shall be observed from occupied nests of all special status species. A pre-construction survey report shall be submitted to the lead agency immediately upon completion of the survey. The report shall detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements**.** A map of the project site and nest locations shall be included with the report.

### *6.3.2 Reduction of wildlife movement corridors*

Impacts to significant wildlife movement corridors are not anticipated from the proposed project; therefore no mitigation is recommended.

### *6.3.3 Displacement and/or take*

Wildlife expected to occur in the survey area includes common species such as gray fox, mule deer, coyote, bobcat, striped skunk, and Pacific chorus frog. Mitigations for impacts to common wildlife species are usually not required.

## 6.4 Special Status Plant Mitigations

The project is not expected to result in significant impacts to special status plants. Minor impacts to local concern plant species that would not affect the local population do not require mitigation.

## 6.5 Special Status Animal Mitigations

### *6.5.1 California red-legged frog*

The California red-legged frog, a federally listed threatened species, is known to occur in the project site. The project would require a formal consultation with the United States Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act through the permitting process with USACE. This process is a requirement during consideration of any federal permit (USACE) where the permitted action could affect a federally listed species. Upon receiving a permit application for a project which could affect federally listed species, USACE would submit a request to USFWS for a Biological Opinion which makes a determination if the project would have a significant effect on the species in question. The formal consultation period, which may include preparation of a Biological Opinion, can take up to 135 days.

As stated in the Endangered Species Act, "jeopardy occurs when an action is reasonably expected, directly or indirectly, to diminish a species' numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced." If USFWS determines the project would effectively protect red-legged frogs from incidental take, the Biological Opinion would make a determination of no jeopardy, and USACE would likely permit the project. If USFWS determines the project would adversely affect the California red-legged frog, but would not jeopardize its continued existence, they can issue an incidental take statement. The incidental take statement estimates the amount of take the project is expected to have, and provides protection and mitigation requirements the project must implement to minimize the take.

In order to provide USFWS with enough information to make a no jeopardy determination or to issue an incidental take statement, we recommend appending a detailed red-legged frog protection plan to the project description. The protection plan would include sufficient detail to reduce potential impacts to CRF to a less than significant level.

**BR-16.** **Prepare a California red-legged frog protection plan to be appended to the project description**. The protection plan shall include detailed methods for conducting pre-construction surveys, monitoring specifics such as endangered species handling permits, and post-construction habitat enhancements. Methods should also address the potential need for relocation efforts prior to start of work.

**BR-17.** **Incorporate all protective conditions specified in the USFWS Biological Opinion for the Project**.

### *6.5.2 Southwestern pond turtle*

The Southwestern pond turtle is a California Species of Special Concern that is known to occur at the project site. The following mitigation recommendations are provided to reduce the potential for take to a less than significant level.

**BR-18.** **Within 30 days of starting construction at the project site, a qualified biologist shall attempt to capture and relocate pond turtles** from the project site to a suitable downstream location. Relocation of pond turtles may require a memorandum of understanding (MOU) from CDFG.

**BR-19.** **A pre-construction survey for pond turtles and other sensitive wildlife** shall be conducted each morning prior to commencement of ground-breaking or vegetation removal activities using heavy equipment within 100 feet of the Cuyama River.

**BR-20.** **Grubbing, grading, and other ground disturbance activities conducted within 50 feet of the Cuyama River** shall be monitored by a qualified biologist. If pond turtles or other sensitive wildlife are found in the project areas, they shall be moved to an appropriate, safe, on-site location.

### *6.5.3 Special status reptiles*

The coast horned lizard is a California Species of Special Concern that is known to inhabit dry upland areas near the project site. Other sensitive reptiles may also be present. The following mitigation recommendations are provided to reduce the potential for take to a less than significant level.

**BR-21.** **A pre-construction survey for horned lizards and other sensitive reptiles** shall be conducted each morning prior to commencement of ground-breaking or vegetation removal activities in upland habitats. The project biologist shall determine appropriate survey techniques for species identified in this report as potentially occurring in the survey area. All sensitive wildlife encountered in the project area shall be captured and relocated to suitable off-site habitat.

### *6.5.4 Special status birds*

Numerous special status bird species could nest in trees, shrubs, or on the ground within the project area. Nesting bird surveys should be conducted according to BR-15. If special status birds are nesting within the survey area, the following additional mitigation recommendations should be implemented.

**BR-22.** Occupied nests of special status bird species shall be mapped by a qualified biologist working with a licensed land surveyor or accurate Global Positioning System (GPS). The mapped locations shall be overlaid on the grading plans with a 500-foot buffer indicated. Work shall not be allowed within the 500 foot buffer while the nest is in use. The buffer zone shall be delineated on the ground with orange construction fencing where it overlaps work areas.

**BR-23.** Occupied nests of special status bird species that are within 500 feet of project work areas shall be monitored bi-monthly through the nesting season to document nest success and check for project compliance with buffer zones. Once nests are deemed inactive and/or chicks have fledged and are no longer dependant on the nest, work may commence within the buffer zone.

### *6.5.5 Special status mammals*

**BR-24.** **A pre-construction survey shall be conducted within thirty days of beginning work on the project** to identify if badgers are using the site. The results of the survey shall be sent to the project manager and the lead agency.

If the pre-construction survey finds potential badger dens, they shall be inspected to determine whether they are occupied. The survey shall cover the entire project site, and shall examine both old and new dens. If potential badger dens are too long to completely inspect from the entrance, a fiber optic scope shall be used to examine the den to the end. Inactive dens may be excavated by hand with a shovel to prevent re-use of dens during construction. If badgers are found in dens on the property between February and July, nursing young may be present. To avoid disturbance and the possibility of direct take of adults and nursing young, and to prevent badgers from becoming trapped in burrows during construction activity, no grading shall occur within 100 feet of active

badger dens between February and July. Between July 1 and February 1 all potential badger dens shall be inspected to determine if badgers are present. During the winter badgers do not truly hibernate, but are inactive and asleep in their dens for several days at a time. Because they can be torpid during the winter, they are vulnerable to disturbances that may collapse their dens before they rouse and emerge. Therefore, surveys shall be conducted for badger dens throughout the year.

# 7.0 References

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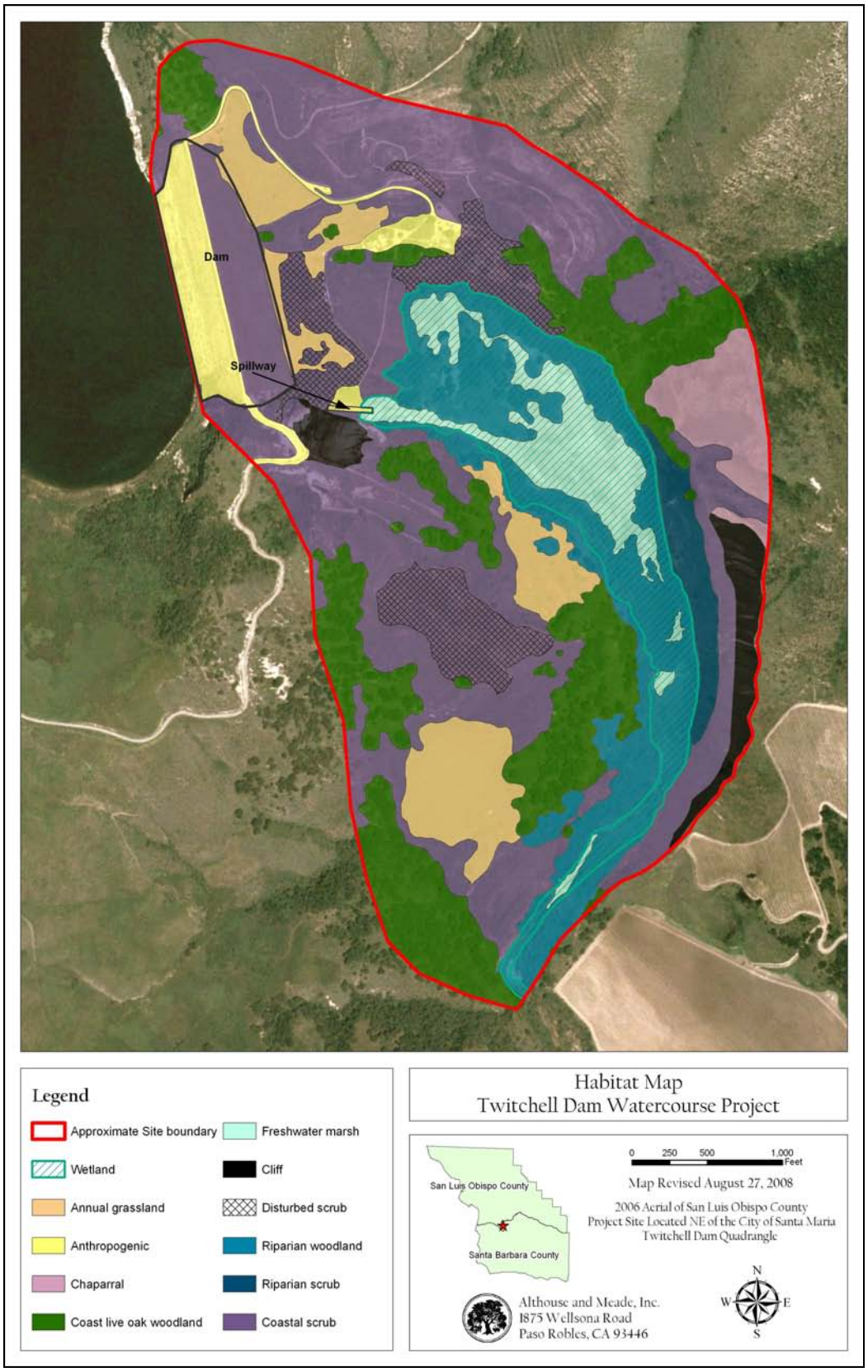
# 8.0 Site Plans

## Insert Site Plans

# 9.0 Habitat and Rare Species Maps

- **Habitat Map**
- **Rare Species Map**


Dam
Spillway
Legend
Approximate Site boundary
Freshwater marsh
Wetland
Cliff
Annual grassland
Disturbed scrub
Anthropogenic
Riparian woodland
Chaparral
Riparian scrub
Coast live oak woodland
Coastal scrub
Habitat Map
Twitchell Dam Watercourse Project
San Luis Obispo County
Santa Barbara County
0 250 500 1,000 Feet
Map Revised August 27, 2008
2006 Aerial of San Luis Obispo County
Project Site Located NE of the City of Santa Maria
Twitchell Dam Quadrangle
Althouse and Meade, Inc.
1875 Wellsona Road
Paso Robles, CA 93446
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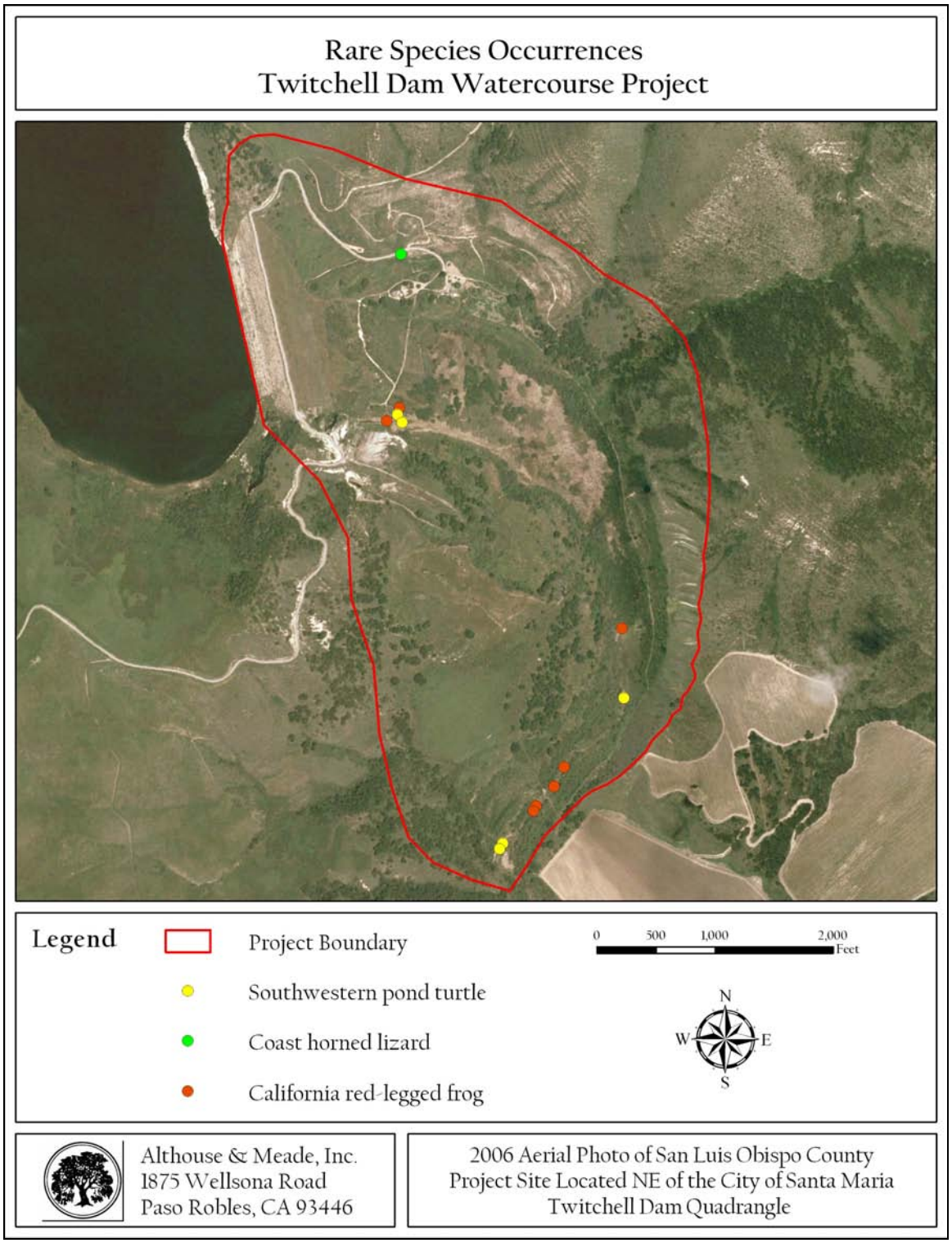
Rare Species Occurrences
Twitchell Dam Watercourse Project
Legend
Project Boundary
Southwestern pond turtle
Coast horned lizard
California red-legged frog
0
500
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Feet
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Althouse & Meade, Inc.
1875 Wellsona Road
Paso Robles, CA 93446
2006 Aerial Photo of San Luis Obispo County
Project Site Located NE of the City of Santa Maria
Twitchell Dam Quadrangle

# 10.0 Figures

- **Figure 1. Location Map**
- **Figure 2. USGS Topographic Map**
- **Figure 3. USDA Soils Map**
- **Figure 4. Aerial Photograph**
- **Figure 5. CNDDB GIS Map**

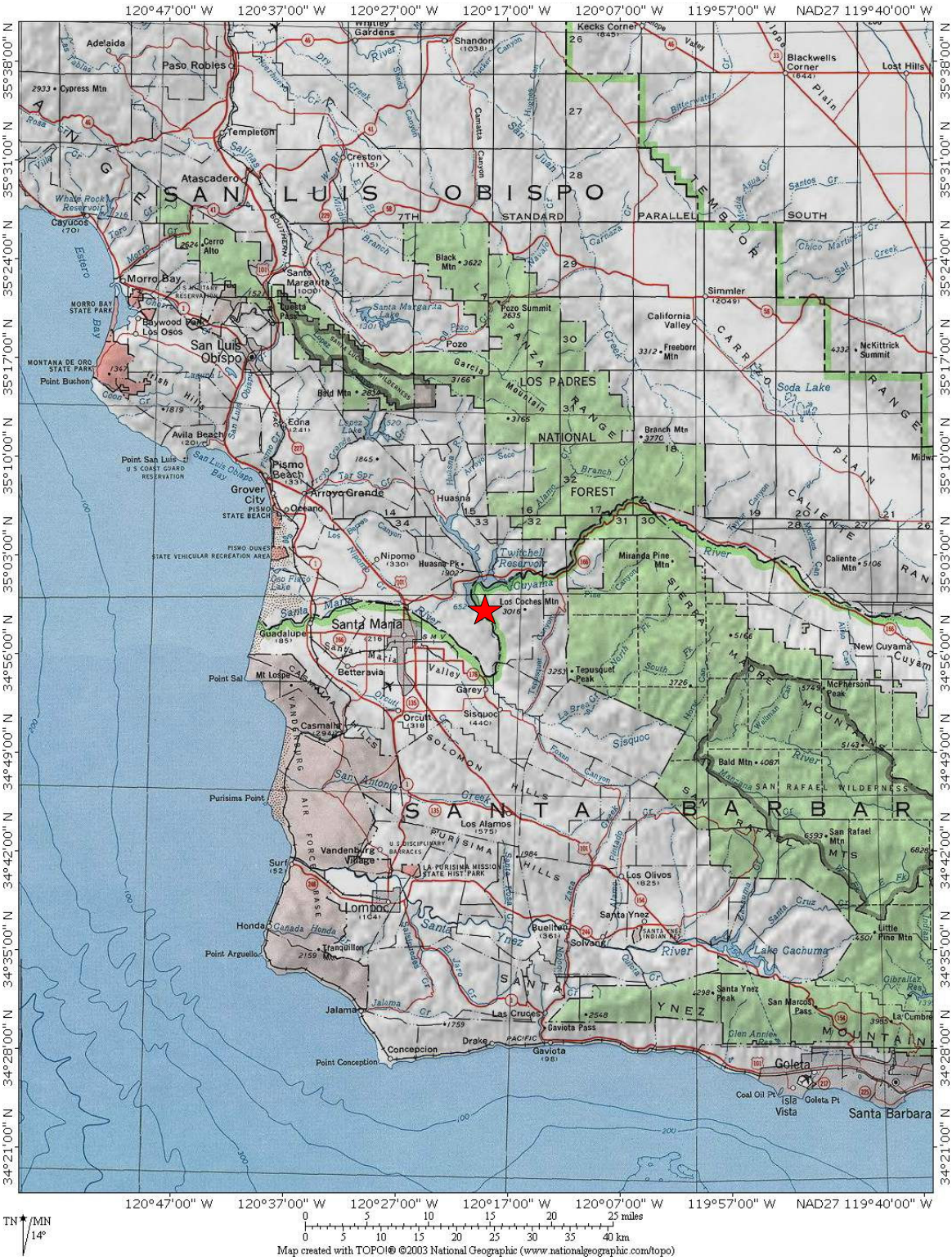


FIGURE 1. LOCATION MAP. The project site (red star) is located in the Twitchell Dam USGS 7.5 minute quadrangle. The site is situated east of the City of Santa Maria, straddling the boundary between San Luis Obispo and Santa Barbara Counties

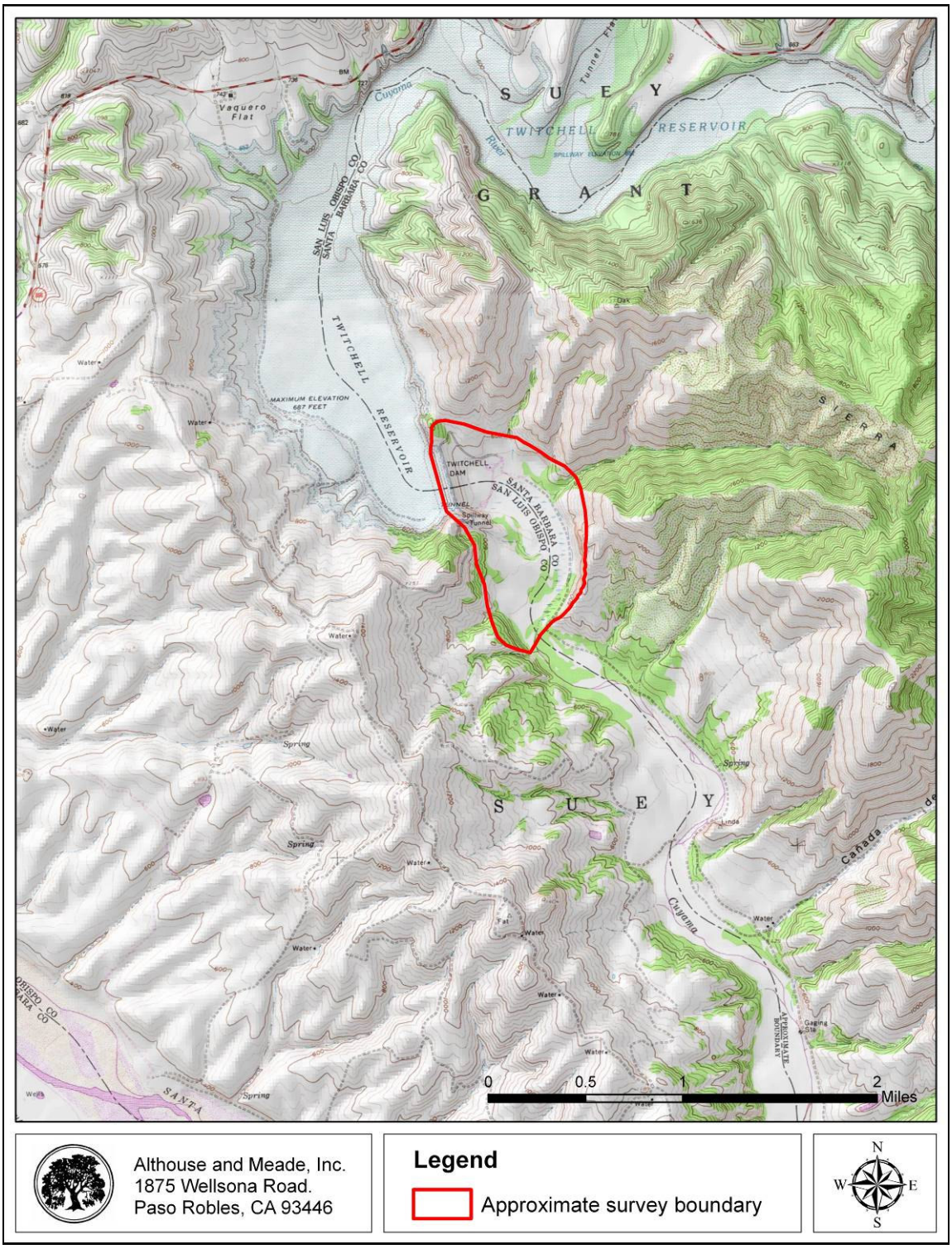


FIGURE 2. USGS TOPOGRAPHIC MAP. The 390 acre survey area, indicated in red on a USGS topographic map of the area, is located on the Cuyama River downstream from Twitchell Reservoir, along the boundary between San Luis Obispo and Santa Barbara Counties.

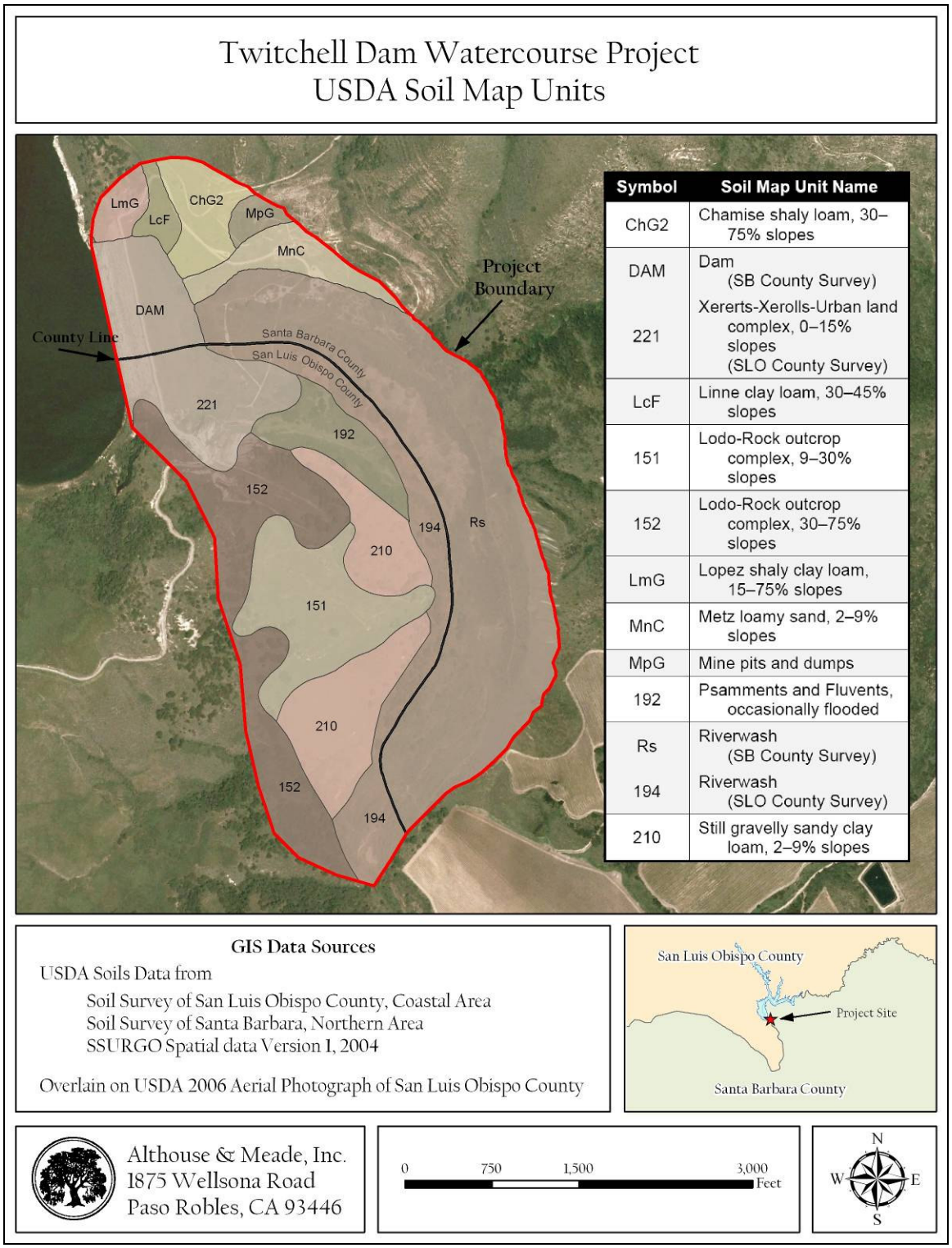


FIGURE 3. USDA SOILS MAP. The approximate boundaries of the survey area are indicated in red on the USDA Soil Survey of San Luis Obispo County, Coastal Area and the Soil Survey of Santa Barbara, Northern Area. Thirteen soil types are mapped.

FIGURE 4. AERIAL PHOTOGRAPH. The survey area consists of vertical cliffs and steep hills surrounding a valley floor where the Cuyama River flows south from the dam.. Approximate survey boundaries are indicated in red on a 2006 USDA-FSA Aerial Photograph.

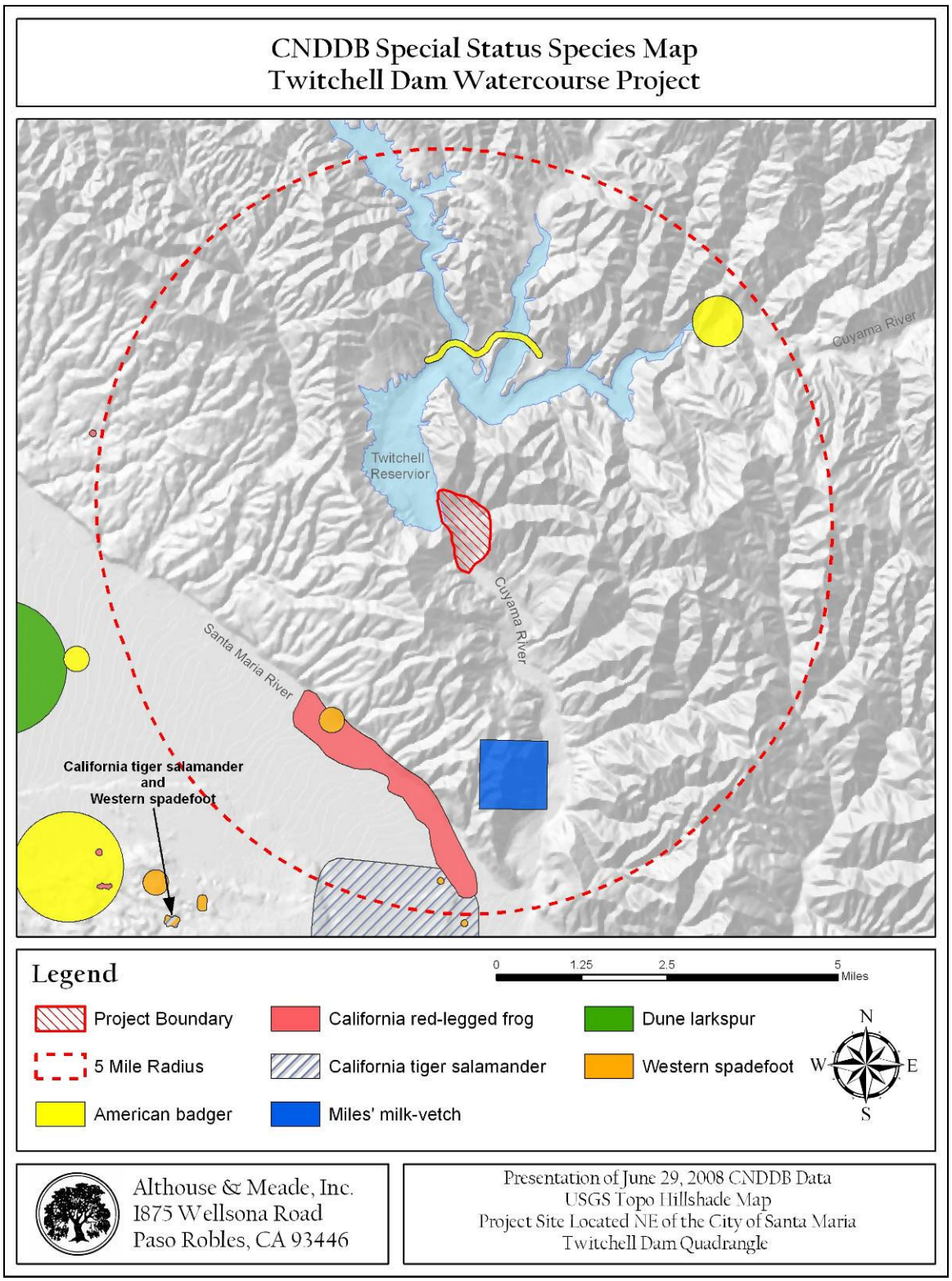


FIGURE 5. CNDDB GIS MAP. The current GIS data from the CNDDB for special status species mapped within five miles of the survey area is depicted on a USGS topographic hill-shade map. The approximate survey area is indicated by the red hatch in the center of the image, and a five-mile radius around the site is indicated by the dashed red line.

# 11.0 Photographs

Photo 1. View southeast of the Cuyama River below Twitchell Dam. The photograph was taken from on top of the dam on May 7, 2008. The spillway is visible at the center of the image.

Photo 2. View within the spillway during a water release on May 7, 2008.

Photo 3. Aerial view of the spillway and adjacent habitats and flooded wetlands. Photograph taken May 7, 2008 during a water release.

Photo 4. View north of the Cuyama River from the cliff top at the southeast corner of the survey area. The Cuyama River supports a mixed riparian woodland. Twitchell Dam is visible in the background (note arrow).

Photo 5. The east side of the Cuyama River extends to the base of an actively eroding cliff. The bare area is an access road that runs parallel to the Cuyama River the entire length of the survey area.

Photo 6. The west side of the Cuyama River is a mosaic of grassland, woodland, and shrubland habitats on sandy soils. Photograph taken February 27, 2008.

Photo 7. Coastal scrub habitat occurs on hillsides and terraces within the survey area. Photograph taken March 27, 2008.

Photo 8. A large grassland meadow grazed by cattle is located on the southwest side of the Cuyama River. This is the proposed spoils deposition site.

Photo 9. View northwest of the road crossing approximately one mile downstream of the spillway. At the south end of the project site the main channel becomes slightly less densely vegetated. Photograph taken May 7, 2008.

Photo 10. An adult Southwestern pond turtle, found in wetland shallows in the Cuyama River on May 7, 2008.

Photo 11. An adult coast horned lizard, found on the side of the road at the southeast base of Twitchell Dam on April 17, 2008.

# APPENDIX A – Status Codes

- **CNDDB Conservation Status Ranks** (CDFG Special Animals List, February 2008)
- **CNDDB Element Ranking for Plants** (CDFG Special Vascular Plants, Bryophytes, and Lichens List, January 2008)
- **CNPS Lists** (CDFG Special Vascular Plants, Bryophytes, and Lichens List, January 2008)

**CNDDB CONSERVATION STATUS RANKS:**

The CNDDB ranking codes are part of the "Heritage Methodology". It is a shorthand formula that provides information about the status of a taxon, both throughout its entire range and within California. We use the best information available to assign these ranks and they are changed and refined as new information becomes available. More detailed information about the conservation status ranking system can be found at: **http://www.natureserve.org/explorer/ranking.htm**

**CALIFORNIA ENDANGERED SPECIES ACT (CESA) LISTING CODES:** The listing status of each species is current as of the date of this list. The most current changes in listing status will be found in the list of "Endangered and Threatened Animals of California", which the CNDDB updates and issues quarterly (January, April, July, & October).

SE State-listed as Endangered
ST State-listed as Threatened
SCE State candidate for listing as Endangered
SCT State candidate for listing as Threatened
SCD State candidate for delisting

**ENDANGERED SPECIES ACT (ESA) LISTING CODES:** The listing status is current as of the date of this list. The most current changes in listing status will be found in the list of "Endangered and Threatened Animals of California", which the CNDDB updates and issues quarterly (January, April, July, & October). Federal listing actions are also available at: **http://www.epa.gov/fedrgstr/EPA-SPECIES/index.html**.
After careful consideration we have removed the USFWS Federal Species of Concern (FSC) designation from this list. The Federal Species of Concern list was not maintained on a statewide basis. The Sacramento field office, with jurisdiction over the central portion of California, maintained a list, but the Ventura, Carlsbad and Arcata offices did not. Therefore, species in the northern and southern parts of the state were not considered. Information on the list maintained by the Sacramento field office is available at: **http://sacramento.fws.gov/es/spp_concern.htm**

FE Federally listed as Endangered
FT Federally listed as Threatened
FPE Federally proposed for listing as Endangered
FPT Federally proposed for listing as Threatened
FPD Federally proposed for delisting
FC Federal candidate species (former Category 1 candidates)
SC Species of Concern – list established by National Marine Fisheries Service (NMFS) effective 15 April 2004

## ELEMENT RANKING

### GLOBAL RANKING

The *global rank* (G-rank) is a reflection of the overall condition of an element throughout its global range.

### SPECIES OR NATURAL COMMUNITY LEVEL

**G1** = Less than 6 viable element occurrences (Eos) OR less than 1,000 individuals OR less than 2,000 acres.
**G2** = 6-20 Eos OR 1,000-3,000 individuals OR 2,000-10,000 acres.
**G3** = 21-80 Eos OR 3,000-10,000 individuals OR 10,000-50,000 acres.
**G4** = Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat.
**G5** = Population or stand demonstrably secure to ineradicable due to being commonly found in the world.

### SUBSPECIES LEVEL

Subspecies receive a **T-rank** attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety. For example: *Chorizanthe robusta* var. *hartwegii*. This plant is ranked G2T1. The G-rank refers to the whole species range i.e., *Chorizanthe robusta*. The T-rank refers only to the global condition of var. *hartwegii*.

## STATE RANKING

The *state rank* (S-rank) is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank.

**S1** = Less than 6 Eos OR less than 1,000 individuals OR less than 2,000 acres
S1.1 = very threatened
S1.2 = threatened
S1.3 = no current threats known

**S2** = 6-20 Eos OR 1,000-3,000 individuals OR 2,000-10,000 acres
S2.1 = very threatened
S2.2 = threatened
S2.3 = no current threats known

**S3** = 21-80 Eos or 3,000-10,000 individuals OR 10,000-50,000 acres
S3.1 = very threatened
S3.2 = threatened
S3.3 = no current threats known

**S4** = Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat. NO THREAT RANK.

**S5** = Demonstrably secure to ineradicable in California. NO THREAT RANK.

**Notes:**

1. Other considerations used when ranking a species or natural community include the pattern of distribution of the element on the landscape, fragmentation of the population/stands, and historical extent as compared to its modern range. It is important to take a **bird's eye or aerial view** when ranking sensitive elements rather than simply counting element occurrences.

2. Uncertainty about the rank of an element is expressed in two major ways:

   By expressing the ranks as a **range** of values: e.g., S2S3 means the rank is somewhere between S2 and S3.

   By adding a ? to the rank: e.g., S2? This represents more certainty than S2S3, but less certainty than S2.

3. Other symbols:

   GH All sites are **historical**; the element has not been seen for at least 20 years, but suitable habitat still exists (SH = All California sites are historical).

   GX All sites are **extirpated**; this element is extinct in the wild (SX = All California sites are extirpated).

   GXC Extinct in the wild; exists in cultivation.

   G1Q The element is very rare, but there are **taxonomic questions** associated with it.

   T Rank applies to a subspecies or variety.

**The California Native Plant Society's (CNPS) Lists**

1A. Presumed extinct in California
1B. Rare or Endangered in California and elsewhere
2. Rare or Endangered in California, more common elsewhere
3. Plants for which we need more information - Review list
4. Plants of limited distribution - Watch list

**List 1A: Plants Presumed Extinct in California**

The plants of List 1A are presumed extinct because they have not been seen or collected in the wild in California for many years. Although most of them are restricted to California, a few are found in other states as well. In many cases, repeated attempts have been made to rediscover these plants by visiting known historical locations. Even after such diligent searching, we are constrained against saying that they are extinct, since for most of them rediscovery remains a distinct possibility. Note that care should be taken to distinguish between "extinct" and "extirpated." A plant is extirpated if it has been locally eliminated, but it may be doing well elsewhere in its range.

**List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere.**

The plants of List 1B are rare throughout their range. All but a few are endemic to California. All of them are judged to be vulnerable under present circumstances or to have a high potential for becoming so because of their limited or vulnerable habitat, their low numbers of individuals per population (even though they may be wide ranging), or their limited number of populations. Most of the plants of List 1B have declined significantly over the last century.

**List 2: Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere**

Except for being common beyond the boundaries of California, the plants of List 2 would have appeared on List 1B. From the federal perspective, plants common in other states or countries are not eligible for consideration under the provisions of the Endangered Species Act. Until 1979, a similar policy was followed in California. However, after the passage of the Native Plant Protection Act, plants were considered for protection without regard to their distribution outside the state.

**List 3: Plants About Which We Need More Information - A Review list**

The plants that comprise List 3 are united by one common theme--we lack the necessary information to assign them to one of the other lists or to reject them. Nearly all of the plants remaining on List 3 are taxonomically problematic.

**List 4: Plants of Limited Distribution - A Watch list**

The plants in this category are of limited distribution or infrequent throughout a broader area in California, and their vulnerability or susceptibility to threat appears low at this time. While we cannot call these plants "rare" from a statewide perspective, they are uncommon enough that their status should be monitored regularly. Should the degree of endangerment or rarity of a List 4 plant change, we will transfer it to a more appropriate list or deleted from consideration.

**Threat ranks**:

Recently, CNPS added a decimal threat rank to the List ranks to parallel that used by the CNDDB. This extension replaces the E (Endangerment) value from the R-E-D Code. CNPS ranks therefore read like this: 1B.1, 1B.2, etc.

## New Threat Code extensions and their meanings:

**.1** - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

**.2** – Fairly endangered in California (20-80% occurrences threatened)

**.3** – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Note that all List 1A (presumed extinct in California) and some List 3 (need more information- a review list) plants lacking any threat information receive no threat code extension. Also, these Threat Code guidelines represent a starting point in the assessment of threat level. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are also considered in setting the Threat Code.

# APPENDIX B – CNDDB Reports

- **Southwestern Pond Turtle** (*Actinemys marmorata pallida*)
- **Coast Horned Lizard** (*Phrynosoma coronatum — frontale* population)
- **California Red-legged Frog** (*Rana draytonii*)

## California Native Species Field Survey Form

Mail to:
*Natural Diversity Database*
*California Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95814*

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

**Date of Field Work:** 2 - 27 - 2008 (month (mm) - date (dd) - year (yyyy))

**Scientific Name:** Actinemys marmorata pallida

**Common Name:** Southwestern Pond Turtle

**Species Found?** ☑ yes ☐ no _____ If not, why?

Total No. Individuals 12 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ (Yes, Occ. #) ☑ no ☐ unk.

Collection? If yes: _____ (Number) _____ (Museum / Herbarium)

**Reporter:** Jason Dart and Audrey Woodruff
**Address:** Althouse and Meade, Inc.
1875 Wellsona Road Paso Robles, CA 93446

**Email Address:** audrey@alt-me.com
**Phone:** (805) 467-1041

**Plant Information**

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

**Animal Information**

Age Structure: 12 # adults _____ # juveniles _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

**Location** ***(please also attach or draw map on back)***

Cuyama River below Twitchell Dam, Santa Maria

County: San Luis Obispo and Santa Barbara Landowner / Mgr.: Bureau of Reclamation

Quad Name: Twitchell Dam Elevation: 465'-480'

T _____ R _____ _____ 1/4 of _____ 1/4 of Section _____ T _____ R _____ _____ 1/4 of _____ 1/4 of Section _____

UTM: Zone: _____ (10, 11) Datum: NAD27 _____ (NAD83, NAD27, WG584, other)

Source: USGS 7.5 (GPS, map & type, etc.) Point Accuracy: _____ Meters

UTM Coordinates: Approximate coordinates for the center of the Site are N34.97009 / W120.32439

**Habitat Description** *(plant communities, dominants, associates, substrates/soils, aspects/slope)*

The survey area consists of approximately one mile of the Cuyama River below Twitchell Dam. SWPT were usually found in open water areas, such as the dam spillway. In the freshwater marsh habitat on Site, cattails dominate. Cattail wetlands also support mosquito fern (Azolla filiculoides), watercress (Nasturtium officinale), and small pondweed (Potamogeton pusillus). Red and arroyo willow woodlands occupy slightly higher ground adjacent to freshwater marsh habitat at the Site.

Other rare species? California red-legged frog and coast horned lizard

**Site Information** Overall site quality: ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Current / surrounding land use: Dam facility, Cattle grazing

Visible disturbances / possible threats: Reservoir water release; cattle present, degrading water quality and increasing bank erosion.

Comments: Many individuals were observed during biological surveys of the Site on 2/27/2008, 5/7/2008, 6/30/2008, and 7/23/2008. SWPT were observed within the dam spillway, in freshwater marsh at the mouth of spillway, in riparian area –half-mile downstream, and in freshwater marsh one mile downstream at the southern extent of Site.

**Determination:** *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

**Photographs:** *(check one or more)*

| | Slide | Print |
|---|---|---|
| Plant / animal | ☐ | ☑ |
| Habitat | ☐ | ☑ |
| Diagnostic feature | ☐ | ☐ |

May we obtain duplicates at our expense? ☑ yes ☐ no

FG/WHDAB/1747 Rev.11/99

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95814*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 04/17/2008

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

## California Native Species Field Survey Form

Send Form

**Scientific Name:** *Phrynosoma coronatum (frontale population)*

**Common Name:** Coast horned Lizard

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Meg Perry/ Althouse and Meade, Inc.
**Address:** 1875 Wellsona Road
Paso Robles, CA, 93446
**E-mail Address:** meg@althouseandmeade.com
**Phone:** (805) 467-1041

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

1 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

***Location Description*** ***(please attach map AND/OR fill out your choice of coordinates, below)***

Observed on gravel road to the top of Twitchell Dam, Santa Barbara County, CA. Observation point was noted with GPS.

County: Santa Barbara Landowner / Mgr.: U.S. Gov't. -- Bureau of Reclamation
Quad Name: Twitchell Dam Elevation: ~500 ft.
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Trimble GeoExplorer series, GeoXT
**DATUM:** NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 1 meter meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑
**Coordinates:** 34.988106 N, 120.320025 W (NAD 83)

***Habitat Description*** *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

One adult coast horned lizard was observed running across a gravel road on a hill adjacent to the Twitchell Dam. Disturbed annual grassland and coastal scrub occur on either side of the road. Soils at the observation site are gravelly and sandy. Slope is approximately 20 percent; aspect is southeast.

Other rare taxa seen at THIS site on THIS date: n/a
(separate form preferred)

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☑ Fair ☐ Poor

Immediate AND surrounding land use: Twitchell Reservoir and watershed below; agricultural uses including vineyards and rangeland in vicinity.

Visible disturbances: Unpaved road through habitat; periodic water releases from Twitchell Reservoir

Threats: Temporary disturbance to habitat for repairs and improvements to dam and water control structures.

Comments: More horned lizards were expected on the subject site on drying slopes of the canyon surrounding the outlet of Twitchell Reservoir; however to date (May 28, 2008) only one adult has been observed on site.

***Determination:*** *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☑ Compared with photo / drawing in: CaliforniaHerps.com
- ☐ By another person (name): _____
- ☑ Other: Compare with description in Peterson Field Guide to Western Reptiles & Amphibs.

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☑ | ☑ |
| Habitat | ☐ | ☑ | ☑ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes ☑ no ☐

DFG/BDB/1747 Rev. 11/17/06

## California Native Species Field Survey Form

Mail to:
*Natural Diversity Database*
*California Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95814*

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

**Date of Field Work:** 2 - 27 - 2008 (month (mm) - date (dd) - year (yyyy))

**Scientific Name:** Rana draytonii
**Common Name:** California Red-legged Frog

**Species Found?** ☑ yes ☐ no _____ If not, why?
Total No. Individuals 7 Subsequent Visit? ☑ yes ☐ no
**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☑ no ☐ unk.
Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Jason Dart and Audrey Woodruff
**Address:** Althouse and Meade, Inc.
1875 Wellsona Road Paso Robles, CA 93446
**Email Address:** audrey@althouseandmeade.com
**Phone:** (805) 467-1041

**Plant Information**
Phenology: _____ % vegetative _____ % flowering _____ % fruiting

**Animal Information**
Age Structure: 4 # adults 3 # juveniles _____ # unknown
☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

**Location** ***(please also attach or draw map on back)***
Cuyama River below Twitchell Dam, Santa Maria

County: San Luis Obispo and Santa Barbara Landowner / Mgr.: Bureau of Reclamation
Quad Name: Twitchell Dam Elevation: 465'-480'
T _____ R _____ _____ 1/4 of _____ 1/4 of Section _____ T _____ R _____ _____ 1/4 of _____ 1/4 of Section _____
UTM: Zone: _____ (10, 11) Datum: NAD27 _____ (NAD83, NAD27, WGS84, other)
Source: USGS 7.5 (GPS, map & type, etc.) Point Accuracy: _____ Meters
UTM Coordinates Approximate coordinates for the center of the Site are N34.97009 / W120.32439

**Habitat Description** *(plant communities, dominants, associates, substrates/soils, aspects/slope)*
The survey area consists of approximately one mile of the Cuyama River below Twitchell Dam. Cattails dominate in areas where CRF were observed. Openings within the cattails support mosquito fern (Azolla filiculoides), watercress (Nasturtium officinale), and small pondweed (Potamogeton pusillus). Red and arroyo willow woodlands occupy slightly higher ground adjacent to freshwater marsh habitat at the Site.

Other rare species? Southwestern pond turtle and coast horned lizard

**Site Information** Overall site quality: ☐ Excellent ☐ Good ☑ Fair ☐ Poor
Current / surrounding land use: Dam facility, Cattle grazing
Visible disturbances / possible threats: Reservoir water release; bullfrogs present throughout stream; cattle present, degrading water quality and increasing bank erosion.
Comments: Four individuals (3 juveniles and one sub-adult) were found on February 27, 2008 during a general biological survey of the Site. USFWS was notified and requested a full protocol survey of the Site. One large adult female (sexed by size) was found on June 11, 2008 during a night survey. One adult and one sub-adult were observed on June 30, 2008 during a night survey.

**Determination:** *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

**Photographs:** *(check one or more)*

| | Slide | Print |
|---|---|---|
| Plant / animal | ☐ | ☑ |
| Habitat | ☐ | ☑ |
| Diagnostic feature | ☐ | ☑ |

May we obtain duplicates at our expense? ☑ yes ☐ no

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# APPENDIX C - USFWS Species List

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
2008-SL-0001

June 20, 2008

Jason Dart
Althouse and Meade, Inc.
1875 Wellsona Road
Paso Robles, California 93446

Subject: Species List for the Twitchell Dam Watercourse Project, Santa Barbara County, California

Dear Mr. Dart:

We are responding to your request, dated April 16, 2008, and received in our office on April 21, 2008, for information on federally listed threatened or endangered species that may be present in the vicinity of the proposed Twitchell Dam Watercourse Project. The proposed project consists of excavating accumulated sediments for approximately 1 mile of the Cuyama River extending south from the base of Twitchell Dam. We have enclosed a list of the federally listed species that may occur in this area.

The U.S. Fish and Wildlife Service's (Service) responsibilities include administering the Endangered Species Act of 1973, as amended (Act) including sections 7, 9, and 10. Section 9 of the Act prohibits the taking of any federally listed endangered or threatened species. Section 3(18) of the Act defines take to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to an attempt to engage in any such conduct. Service regulations (50 CFR 17.3) define harm to include significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harassment is defined by the Service as an intentional or negligent action that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. The Act provides for civil and criminal penalties for the unlawful taking of listed species.

Exemptions to the prohibitions against take may be obtained through coordination with the Service through interagency consultation for projects with Federal involvement pursuant to section 7 or through the issuance of an incidental take permit under section 10(a)(1)(B) of the Act. If the subject project is to be funded, authorized, or carried out by a Federal agency and may affect a listed species, the Federal agency must consult with the Service, pursuant to section 7(a)(2) of the Act. If a proposed project does not involve a Federal agency but may result in the take of a listed animal species, the project proponent should apply for an incidental take permit, pursuant to section 10(a)(1)(B) of the Act. Once you have determined if the proposed project

will have a lead Federal agency, we can provide you with more detailed information regarding the section 7 or 10(a)(1)(B) permitting process.

Only listed species receive protection under the Act; however, other sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We understand that you reviewed information in the California Department of Fish and Game's Natural Diversity Data Base, which indicated two records for California red-legged frogs (*Rana aurora draytonii*) within 5 miles of the site and 16 records of California red-legged frogs within 10 miles of the project site. We have included the California red-legged frog on our species list as well as other listed species that have the potential to be present within the project area.

If you have any questions regarding this letter please contact Della Snyder-Velto of my staff at (805) 644-1766 extension 357, or (626) 574-5254.

Sincerely,

Chris Dellith
Senior Biologist

Enclosure

**FEDERALLY LISTED SPECIESTHAT MAY OCCUR IN SANTA BARBARA COUNTY, CALIFORNIA, IN PROXIMITY TO TWITCHELL DAM**

| | | |
|---|---|---|
| Birds | | |
| California condor | *Gymnogyps californianus* | E, CH |
| Southwestern willow flycatcher | *Empidonax traillii extimus* | E |
| Least Bell's vireo | *Vireo bellii pusillus* | E, CH |
| Amphibians | | |
| California red-legged frog | *Rana aurora draytonii* | T |
| Arroyo toad | *Bufo californicus* | E |
| Fish | | |
| Steelhead trout | *Oncorhynchus mykiss* | ** |

**Key:**
E - Endangered T - Threatened CH - Critical habitat

** Species for which the National Marine Fisheries Service has responsibility. For more information, call the Santa Rosa Field Office at 707-575-6050 or go to http://swr.ucsd.edu/