

## **J. TERRESTRIAL BIOLOGICAL RESOURCES**

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## Introduction

This document provides additional information on special status plant and wildlife species and sensitive habitats that could occur within the Monterey Amendment project areas (Table 1, in back). These species and habitats were determined based on a review of the following sources:

- A California Natural Diversity Database (CNDDDB) query and United States Fish and Wildlife Service (USFWS) official species lists for the following 7.5 minute topographic quadrangle maps, including the Department facility and surrounding quads in an approximately 10-mile radius:
  - For Lake Perris – Riverside East, Sunnymead, El Casco, Steele Peak, Perris, Lakeview, Lake Elsinore, Romoland, and Winchester quads;
  - For Castaic Lake - Black Mountain, Liebre Mountain, Burnt Peak, Lake Hughes, Green Valley, Warm Springs Mountain, Whitaker Peak, Cobblestone Mountain, Piru, Val Verde, Newhall, and Mint Canyon quads;
  - For San Luis Reservoir – Mustang Peak, Crevison Peak, Howard Ranch, Ingomar, Pacheco Peak, Pacheco Pass, San Luis Dam, Volta, Three Sisters, Mariposa Peak, Los Banos Valley, and Ortigalita Peak NW quads; and
  - For the Kern Fan Element – Lokern, Buttonwillow, Rio Bravo, Rosedale, Stevens, Tupman, East Elk Hills, West Elk Hills, Fellows, Taft, Mouth of Kern and Millux quads;
- A CNDDDB query and USFWS official species lists of Plumas County; and
- A CNDDDB query for a 200-foot wide corridor along the Feather River, from Lake Oroville to where it joins the Sacramento River; and the Sacramento River from where it joins the Feather River to the Delta.

## South San Joaquin Valley

The Monterey Amendment resulted in the transfer or retirement of Table A amounts that ultimately resulted in a reduction of irrigation water for the following water districts in the southern San Joaquin Valley: Belridge WSD, Berrenda Mesa WD, Lost Hills WD, Wheeler Ridge-Maricopa WD, the Kings County WD, the Dudley Ridge WD and the Tulare Lake Basin WD. The Belridge WSD, Berrenda Mesa WD, Lost Hills WD, and Wheeler Ridge-Maricopa WD are located within the KCWA boundaries along western Kern County. The Kings County WD, the Dudley Ridge WD and the Tulare Lake Basin WD are located in Kings County, although a small portion of the Tulare Lake Basin WD is located in Tulare County.

## ***Sensitive Communities***

### **Northern Hardpan Vernal Pool**

Northern hardpan vernal pool habitat consists of shallow ephemeral water bodies found in depressions (up to several hectares in size) occurring in grasslands and open woodlands throughout intermountain valleys of California and Oregon. Northern hardpan vernal pools are formed by an indurated clay or cemented hardpan that retains water from surface runoff through winter and some portion of the spring, but typically dry down entirely by the early summer months. This habitat typically occurs in areas with a hummocky micro-relief. Characteristic plant species include downingia (*Downingia* spp.), quillwort (*Isoetes orcuttii*), America pillwort (*Pilularia*

*americana*), white brodiaea (*Triteleia hyacinthina*), spikerush (*Eleocharis* spp.), coyote thistle (*Eryngium* ssp.), popcornflower (*Plagiobothrys* spp.), speedwell (*Veronica peregrina*), annual hairgrass (*Deschampsia* sp.), and water starwort (*Callitriche* spp.) As these pools dry in the spring and early summer, the plants grow and bloom often forming concentric rings of similar vegetation. Due to their isolation in upland-dominated landscapes, many endemic plant species are common in vernal pools. Northern hardpan vernal pool habitat has been recorded approximately nine miles east of the Kings County WD.

### **Valley Saltbush Scrub**

Valley saltbush scrub is found in the southern and southwestern San Joaquin Valley on dissected alluvial fans with low relief. Soils are typically sandy to loamy without surface alkalinity. This vegetation community is dominated by gray-green or blue-gray shrubs of the Goosefoot family (*Chenopodiaceae*) and a low herbaceous annual understory. Characteristic shrubs include alkali saltbrush (*Atriplex polycarpa*), spinescale (*A. spinifera*), arrow saltbush (*A. phyllostegia*), alkali heath (*Frankenia salina*) and alkali goldenbush (*Haplopappus acradenius*). Understory species include recurved larkspur (*Delphinium recurvatum*), bird's eyes (*Gilia tricolor*), spikeweed (*Hemizonia pungens*), and cream cups (*Platystemon californicus*). Valley saltbrush scrub habitat has been recorded within the Dudley Ridge WD and the Belridge WSD.

### **Valley Sacaton Grassland**

Valley sacaton grassland habitat is largely vegetation by alkali sacaton (*Sporobolus airoides*), a tussock, or tuft forming grass. Additional species include saltgrass (*Distichlis spicata*), and low barley (*Hordeum depressum*). This habitat is found in areas with fine textured, poorly drained and usually alkaline soils, that have either seasonally high water tables or are flooded during the winter. Valley sacaton grassland is greatly reduced from its historically extensive range in the Tulare Lake Basin and along the San Joaquin Valley trough. Valley sacaton grassland habitat has been recorded in the Kings County WD.

## ***Special Status Plants***

### **Bakersfield Cactus (*Opuntia basilaris* var. *treleasei*)**

Bakersfield cactus is a state and federal endangered species and is listed as a CNPS 1B plant (rare, threatened or endangered in California and elsewhere). A recovery plan for this species is provided in *The Recovery Plan for the Upland Species of the San Joaquin Valley*. Bakersfield cactus is a perennial low growing cactus (Cactaceae). It typically spreads to form extensive thickets. It generally forms fleshy, flattened green beavertail-like pads (flattened stems) 3 to 4 inches wide by 5 to 7 inches long that produce showy magenta flowers. The eye-spots on the pads contain spines in addition to bristles. The species occurs on flood plains, ridges, bluffs and rolling hills in saltbush scrub plant communities, and occasionally in blue oak woodland or riparian woodland at elevations from 460 to 1,800 feet. Distribution is restricted to a limited area of central Kern County near Bakersfield. The most serious threats are residential development near Bakersfield and habitat conversion to agriculture. Bakersfield cactus has been recorded within the Wheeler Ridge-Maricopa WSD.

### **Brittlescale (*Atriplex depressa*)**

Brittlescale is a CNPS List 1B plant. A dicot in the family Chenopodiaceae, it is an annual herb that is native to California and is endemic to California. *Atriplex* spp. are herbs or shrubs, usually grayish or whitish. Brittlescale is found on alkaline or clay soils in alkali flats in largely grassland areas of the Sacramento Valley and San Joaquin Valley less than 650 feet in elevation. It has been recorded in the Kings County WD.

### **California Jewel-flower (*Caulanthus californicus*)**

The California jewel-flower is a state and federal endangered species and is listed as a CNPS List 1B plant. A recovery plan for this species is provided in *The Recovery Plan for the Upland Species of the San Joaquin Valley*. California jewel-flower is an annual herb in the mustard family (Brassicaceae), with flattened, sword-shaped fruits. Its stems are erect, up to about 1 foot tall, and produce several flowering branches. The leaves are wavy-margined and most are in a basal rosette. Known populations of California jewel-flower occur in nonnative grassland, upper sonoran subshrub scrub, and cismontane juniper woodland and scrub communities. Potential threats to remaining populations include competition from nonnative plants, pesticide effects on pollinators, small population size and development on private land in the Santa Barbara Canyon area. California jewel-flower has been recorded in the Berrenda Mesa WD and Belridge WSD.

### **Comanche Point Layia (*Layia leucopappa*)**

Comanche Point layia is a CNPS List 1B plant. It has glandular stems that grow up to 24 inches tall. The leaves are oblong, fleshy, and lobed. Comanche Point layia is distinguished from other members of the genus that have white ray flowers by the fleshy leaves and microscopic characteristics of the flower head and achenes. The typical flowering period for Comanche Point layia, an annual, is March to April. Comanche Point layia is endemic to Kern County. It occurred historically in three general areas of the extreme southern San Joaquin Valley and adjacent hills to the east: (1) the Comanche and Tejon Hills (including the type locality), (2) between Edison and Bena, and (3) on the Valley floor near the southern end of Kern Lake. The formerly extensive occurrences of Comanche Point layia on the Valley floor apparently have been eliminated by conversion to agriculture. Populations in the Comanche and Tejon Hills potentially are threatened by urban development and are subject to grazing. This species has been recorded in the Wheeler Ridge-Maricopa WSD.

### **Earlimart Orache (*Atriplex erecticaulis*)**

Earlimart orache is a CNPS List 1B plant. It grows at elevations below 100 meters in dry areas between vernal pools, but not actually in the pools or depressions, and along roadsides. This plant is endemic to California and known from Tulare, Kern and Kings counties in uncultivated areas. While its distribution is presently restricted, it was likely more broadly distributed before the implementation of current agricultural practices, which removed its habitat. This species has been recorded in Kings County WD.

### **Kern Mallow (*Eremalche kernensis*)**

Kern mallow is a federally endangered species and is listed as a CNPS List 1B plant. Recovery of this species is addressed in *The Recovery Plan for the Upland Species of the San Joaquin Valley*. Kern mallow is a small, annual herb belonging to the mallow family (Malvaceae). It has predominantly white to sometimes pale lavender, hollyhock-like flowers. The species typically

occurs in valley saltbush scrub communities, where it grows under and around spiny and common saltbushes and in patches with other herbaceous plants. Kern mallow is known from a single metapopulation consisting of intermittent occurrences within an area of approximately 40 square miles at the eastern base of the Temblor Range in the Lokern area of western Kern County. The distribution runs from the vicinity of McKittrick to near Buttonwillow. This species has been recorded in the Belridge WSD and Lost Hills WD.

#### **Lemmon's Jewel-flower (*Caulanthus coulteri* var. *lemmonii*)**

Lemmon's jewel-flower is a CNPS List 1B plant. This is an annual herb, with whitish or cream-colored, purple or dark veined flowers that bloom March to May. It is found in valley and foothill grassland and pinyon and juniper woodland habitats at elevations between 250 and 4,000 feet. Threats include loss of habitat, primarily through development. This species has been documented in the Wheeler Ridge-Maricopa WD.

#### **Lost Hills Crownscale (*Atriplex vallicola*)**

Lost Hills crownscale is a CNPS List 1B plant. This species is an annual that flowers from May to August. The short stems have few branches and alternate, egg-shaped leaves with entire margins. The individual flowers are inconspicuous because they are tiny and have no petals. Lost Hills crownscale typically grows in the dried beds of alkaline pools within scrub or annual grassland communities, although one population in southern Kern County occurs on exposed slopes rich in gypsum. Historical locations for Lost Hills crownscale were in Fresno, Kern, and San Luis Obispo counties. Two large centers of concentration remain today. One overlaps the Kern-Kings county boundary near the community of Lost Hills, and the other is on the Carrizo Plain in San Luis Obispo County. Much smaller populations are known from the Kerman Ecological Reserve in Fresno County, the Lokern-McKittrick area of Kern County, and southwestern Merced County. Other historically-known occurrences and much suitable valley-floor habitat have been destroyed by conversion to agriculture. This species has been recorded in the Lost Hills WD and Belridge WSD.

#### **Recurved Larkspur (*Delphinium recurvatum*)**

Recurved larkspur is a CNPS List 1B plant. This perennial herb in the buttercup (Ranunculaceae) family occurs in chenopod scrub and valley grassland on alkaline, poorly drained soils in scattered locations throughout the Central Valley and Central Coast. Recurved larkspur produces flowers with light blue sepals and white lower petals from March through June. Occurrences of recurved larkspur have been recorded in Kings County WD, Lost Hills WD and Belridge WSD.

#### **San Joaquin Woollythreads (*Lembertia congdonii*)**

San Joaquin woollythreads are a federally endangered and CNPS List 1B plant. It is an annual herb in the sunflower family (Asteraceae) that produces small yellow disk flowers from March to April. It is associated with the valley saltbrush scrub habitat, often found in drifted sand or clayey, alkaline soil. San Joaquin woollythreads have been documented in the Dudley Ridge WD, Lost Hills WD, and Belridge WSD.

### **Subtle Orache (*Atriplex subtilis*)**

Subtle orache is a CNPS List 1B species. It is a member of the goosefoot family that blooms from August to October. It inhabits valley and foothill grassland from elevations between 40 to 100 meters and is known from the southern San Joaquin Valley, from Merced County in the north to Kern County in the south. Subtle orache has been recorded in Kings County WD.

### **Tejon Poppy (*Eschscholzia lemmonii* ssp. *kernensis*)**

Tejon poppy is a CNPS List 1B plant. It is an annual herb that flowers from March to April. The deeply-divided leaves of Tejon poppy are mostly clustered at the base of the plant. Each flowering stem is taller than the leaves and bears a single, erect, hairless bud that develops into a showy orange flower with four petals. It grows on adobe clay soils in sparsely-vegetated grasslands between 250 and 600 meters in elevation. Tejon poppy is restricted to Kern County. It occurred historically in six areas in the low hills that surround the southern tip of the San Joaquin Valley, from Dry Bog Knoll (between Bakersfield and Woody) on the northeast to Elk Hills on the northwest. Tejon poppy has not been reported since 1969 but is assumed to remain in all areas where it was reported formerly because habitats have not been modified substantially. It has been recorded in the Wheeler Ridge Maricopa WD.

## ***Special Status Wildlife***

### **Invertebrates**

#### **Doyen's Trigonoscuta Dune Weevil (*Trigonoscuta* sp.)**

Doyen's trigonoscuta dune weevil is not a state or federally listed or species of concern, but is included on the CDFG Special Animals list. Little is known about the biology or habits of dune weevils of the genus *Trigonoscuta* other than they are restricted to sandy soils of unstabilized dunes or similar accumulations of sand. Flightless and nocturnal, weevils in this genus are associated with a wide variety of plant types; the larvae feed on the roots and the adults on the leaves. All *Trigonoscuta* species are associated with either coastal, desert, or other inland sand dunes. Most inland species of the genus are found in the southwestern deserts. The primary threats to this species are the random effects of environmental and population processes facing all small, single populations. Other threats include off-road vehicle use and road widening, sand stabilization, or other highway maintenance activities by Caltrans. It has been recorded in the Dudley Ridge WD.

#### **Molestan Blister Beetle (*Lytta molesta*)**

The Molestan blister beetle is not a state or federally listed or species of concern, but is included on the CDFG Special Animals list. It is a member of the family Meloidae. Beetles of this family are variable in form, but generally have a down-turned head, soft bodies, and leathery wings. Species of the genus *Lytta* are believed to be parasites of ground-nesting bees of the genus *Anthophora*. Adults eat the flowers and pollen of various flowers, including *Lupinus* sp. and *Erodium cicutarium*. Adult *Lytta* beetles are typically observed in March and April, in non-native grassland and vernal pool habitats at localities in the San Joaquin Valley from Contra Costa County south to Kern and Tulare counties. CNDDDB records indicate a distribution along the grassy plains and low foothills of the Sierra Nevada along the east side of the Central Valley, and throughout the Coast Ranges, from Kern County to Brentwood in Contra Costa County.

Little is known about the status of the molestan blister beetle due to the lack of definitive studies of its distribution. The specific habitat requirements for the molestan blister beetle would be the presence of beetle-type wildflowers for adults and anthophorid bee nests for larvae in a grassland setting; proximity to vernal pools may be important, but this may not be an essential requirement. This species has been recorded in the Lost Hills WD.

### **San Joaquin Dune Beetle (*Coelus gracilis*)**

The San Joaquin dune beetle is not a state or federally listed or species of concern, but is included on the CDFG Special Animals list. Little information exists on the feeding habitats of this species, though it is probably a detritivore, feeding on decomposing vegetation buried in the sand. The hot summer climate of the San Joaquin Valley prevents a majority of beetles from emerging from the sand, so active periods range from about November through April. Activity also coincides with the growth period of the winter ephemeral plants under which San Joaquin dune beetles reside. Historically, the range of the San Joaquin dune beetle extended from Antioch, Contra Costa County, in the north to the Kettleman Hills, Kings County in the south. They inhabited inland sand dunes within this range. Currently, this beetle is restricted to small isolated sand dunes (250 - 10,000 m<sup>2</sup>) along the western edge of the San Joaquin Valley. Although no direct evidence exists of a population decline of San Joaquin dune beetles, it is inferred from the widespread loss of sand dune communities in the Valley and apparent disappearance from near Antioch, Contra Costa County, California. This species has been recorded at the Dudley Ridge WD.

### **Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)**

Vernal pool fairy shrimp are federally listed as threatened. They are small (11 to 27 mm) crustaceans adapted to survive the annual flooding and drying of vernal pools. They grow for about two weeks, breed, and produce eggs that the females carry in an egg sac until they mature. As the vernal pool dries, the adults die, and the eggs become embedded in the mud at the bottom of the pool. These "resting" eggs are protected by thick outer coverings that resist cold, heat, and desiccation during the summer months. The egg bank in the soil may contain eggs from several years of breeding. Vernal pool fairy shrimp occur throughout most of the length of California's Central Valley, from the Millville Plains and Stillwater Plains in Shasta County to Pixley in Tulare County with disjunct populations in the Santa Rosa Plateau near Rancho Santa California in Riverside County. They are threatened by commercial and residential development; conversion of land to agricultural uses; habitat fragmentation (which leads to the loss of genetic variability and related problems of inbreeding); off-road vehicle use; disposal of garbage into their habitat; water, flood control, highway, and utility projects; changes in the hydrologic patterns of their vernal pool and swale habitat; inadequate regulatory mechanisms that protect sites inhabited by these species; overgrazing; and potential extinction by virtue of the small isolated nature of the remaining populations. This species has been recorded in the Kings County WD.

### **Vernal Pool Tadpole Shrimp (*Lepidurus packardii*)**

Vernal pool tadpole shrimp are federally listed as endangered. Vernal pool tadpole shrimp are small to moderate sized crustaceans adapted to survive in deeper or longer lasting vernal pools and other seasonal wetlands. Like the fairy shrimp, they grow over a period of a few weeks, breed, and produce eggs that the females carry in an egg sac until they mature. As the vernal pool dries, the adults die, and the eggs become embedded in the mud at the bottom of the pool.

These “resting” eggs are protected by thick outer coverings that resist cold, heat, and desiccation during the summer months. Vernal pool tadpole shrimp are found throughout the Central Valley. This species has been recorded in the Kings County WD.

## **Amphibians**

### **California Tiger Salamander (*Ambystoma californiense*)**

The California tiger salamander (CTS) is federally listed as threatened and a California species of special concern. CTS is most commonly found in annual grassland habitat, but also occurs in grassy understory of open valley-foothill hardwood habitats. The species occurs from near Petaluma, Sonoma County, east through the Central Valley to Yolo and Sacramento counties and south to Tulare County, and from the vicinity of San Francisco Bay south at least to Santa Barbara County. Adults spend most of the year in subterranean refugia, especially burrows of California ground squirrels (*Spermophilus beecheyi*) and occasionally man-made structures. The primary cause of decline of CTS populations is the loss and fragmentation of habitat from human activities and the encroachment of nonnative predators. All of the estimated seven genetic populations of this species have been significantly reduced because of urban and agricultural development, land conversion, and other human-caused factors. This species has been recorded in the Kings County WD.

### **Western Spadefoot (*Scaphiopus hammondi*)**

Western spadefoot is a California species of special concern. This species occurs primarily in grasslands, but occasional populations also occur in valley-foothill hardwood woodlands. Grasslands with shallow temporary pools are optimal habitats for this species. Breeding and egg laying occur in shallow temporary pools. They spend most of their time in underground burrows, which they construct themselves or that have been constructed by burrowing mammals. During the first rains of fall, this species initiates surface movements. Breeding activities normally conclude by the end of March. This species has been recorded in Belridge WSD and Kings County WD.

## **Reptiles**

### **Blunt-nosed Leopard Lizard (*Gambelia sila*)**

Blunt-nosed leopard lizard (BNLL) is a federal and state-listed endangered species and a state “fully protected” species. BNLL are endemic to the San Joaquin Valley and not found above 800 meters in elevation. BNLL are generally found in sparsely vegetated alkali and desert scrub habitats throughout scattered locations in the San Joaquin Valley and adjacent foothills. They do not excavate their burrows, seeking cover in mammal burrows, under shrubs, or under structures such as fence posts. In the southern San Joaquin Valley, extent populations of BNLL are known to occur on the Pixley National Wildlife Refuge, Liberty Farms, Allensworth, Kern National Wildlife Refuge, Antelope Plain, Buttonwillow, Elk Hills, and Tupman Essential Habitat Areas, on the Carrizo and Elkhorn Plains, north of Bakersfield around Poso Creek, and in western Ken County. This species has been recorded in Belridge WSD, Berrenda Mesa WD, Lost Hills WD, Wheeler-Ridge Maricopa WD, Dudley Ridge WD and Tulare Lake Basin WD.

### **San Joaquin Whipsnake (*Masticophis flagellum ruddocki*)**

The San Joaquin whipsnake is listed as a California species of special concern. The San Joaquin whipsnake's range extends from Colusa County in the Sacramento Valley southward to the Grapevine in the Kern County portion of the San Joaquin Valley and westward into the inner South Coast Ranges and the Carrizo Plain. The San Joaquin whipsnake occurs in open, dry, vegetative associations with little or no tree cover. In the western San Joaquin Valley, it occurs in valley grassland and saltbush scrub associations and is known to climb bushes for viewing prey and potential predators. The San Joaquin whipsnake requires one or more mammal associates as prey and uses burrows for refuge and probably for egg-laying sites. This species has been recorded in the Lost Hills WD.

### **Western Pond Turtle (*Emys (Clemmys) marmorata*)**

Western pond turtles, including both the northwestern (ssp. *marmorata*) and southwestern (ssp. *pallida*) subspecies, are California species of special concern. The drab brown or khaki-colored turtle lacks prominent markings on its carapace. Western pond turtles occur in a variety of permanent and intermittent aquatic habitats, such as ponds, marshes, rivers, streams, and ephemeral pools. Pond turtles require suitable basking and haul-out sites, such as emergent rocks or floating logs, and an upland nest site in the vicinity of the aquatic habitat, often within 200 meters. Western pond turtles range throughout the state of California, from southern coastal California and the Central Valley, east to the Cascade Range and Sierra Nevadas. They have been recorded in the Kings County WD.

## **Birds**

### **Burrowing Owl (*Athene cunicularia*)**

Burrowing owl is a California species of special concern. They are found in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Burrowing owls are subterranean nesters that are dependent on burrowing mammals (e.g., California ground squirrel) to create their burrows. It breeds from March through August. This species has been recorded in the Wheeler Ridge Maricopa WD, Belridge WSD, Berrenda Mesa WD, Lost Hills WD, Tulare Basin WD and Kings County WD.

### **Le Conte's Thrasher (*Toxostoma lecontei*)**

The Le Conte's thrasher is a California species of special concern. It is pale gray-brown on the upperparts and pale buff on the underparts. The long tail is dark brown to blackish, and contrasts with the pale body. The undertail coverts are buffy. The wings are short and rounded, typical of sedentary, terrestrial birds. The Le Conte's Thrasher inhabits desert flats, washes and alluvial fans with sandy and/or alkaline soil and scattered shrubs. Loss of habitat throughout its range is the main threat to the Le Conte's Thrasher. This species has been recorded in the Belridge WSD.

### **Mountain Plover (*Charadrius montanus*)**

The mountain plover is a California species of special concern. It is endemic to North America and nests in the High Plains of the West. After nesting, it migrates southwest-ward to spend the winter in California and the U.S./Mexico borderlands. One of the most important wintering sites is the Imperial Valley where up to 40 percent of the global population may spend the winter in

agricultural fields and pastures, especially those recently burned or grazed. Significant numbers of mountain plovers also winter in upland areas of the Sacramento-San Joaquin Delta, the western San Joaquin Valley, the Carrizo Plain and Antelope Valley, north of Los Angeles. This species has been recorded in the Berenda Mesa WD.

### **Swainson's Hawk (*Buteo swainsoni*)**

Swainson's hawk is a state-listed threatened species. It breeds in stands with few trees in juniper-sage flats, riparian areas, or oak savannah adjacent to suitable foraging habitat such as grasslands, alfalfa or grainfields with rodent populations. Threats to Swainson's hawk include development, resulting in the loss of foraging and nesting habitat. It breeds from March to October. This species has been recorded in the Kings County WD.

### **Tricolored Blackbird (*Agelaius tricolor*)**

The tricolored blackbird is a California species of special concern. Although tricolored blackbirds occur sparingly in northwestern Baja California and south central Oregon, they are primarily endemic to the Central Valley and coastal valleys of California. They are a highly gregarious bird, forming large flocks in both breeding and non-breeding seasons. Nests are built near or over water, and occasionally in agricultural fields. Recently, tricolored blackbirds have displayed tendencies toward increased nesting in patches of blackberry, willows, mustard, thistles, nettles, and even grasses. It breeds from April through July. This species has been recorded in the Wheeler Ridge Maricopa WD, Lost Hills WD and Dudley Ridge WD.

### **White-faced ibis (*Plegadis chihi*)**

The white-faced ibis is a California species of special concern. It is a medium-sized wading bird with an iridescent bronze-brown overall color, a thin band of white feathers around a bare red face, and a long, down curved bill. It breeds from Oregon, sporadically east to Minnesota, and south to southeastern New Mexico and Texas, and east to coastal Louisiana. It winters from southern California and the Gulf coast of Texas and Louisiana to El Salvador. Preferred habitats include salt and freshwater marshes in the west, and coastal marshes and brushy islands in Louisiana and Texas. This species has been recorded in the Tulare Basin WD and Lost Hills WD.

## **Mammals**

### **American Badger (*Taxidea taxus*)**

The American badger is a California species of special concern. The badger is a heavy-bodied, short-legged mammal with long fore claws, long yellowish gray to reddish brown fur, a short bushy tail and a white middorsal stripe that often extends down the back. They are most abundant in the drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Badgers are basically solitary, nocturnal creatures, foraging at night and then remaining underground during the daylight hours. Historically, badgers ranged throughout California except for the humid coastal forests of the northwestern state. This species has been recorded in the Wheeler Ridge Maricopa WD and Dudley Ridge WD.

### **Buena Vista Lake Shrew (*Sorex ornatus relictus*)**

The Buena Vista lake shrew is a federal-listed endangered species and a California species of special concern. Critical habitat for this species was designated on January 24, 2005, and is located just north of the Wheeler Ridge Maricopa WD. It is distinctly darker, grayish-black (not brown), slightly larger, and has a shorter tail than the other shrews that inhabit the same area. It historically inhabited wetlands around Buena Vista Lake and presumably throughout the Tulare Basin. The draining of the natural wetlands and lakes resulting in the decline of this species and its current status is largely unknown. The Buena Vista Lake shrew is a limited local endemic species that is restricted to areas of marshy wetland habitat. This species has been recorded in the Wheeler Ridge Maricopa WD.

### **Giant Kangaroo Rat (*Dipodomys ingens*)**

The giant kangaroo rat is state and federally listed as endangered. Its recovery is addressed in *The Recovery Plan for the Upland Species of the San Joaquin Valley*. The giant kangaroo rat is the largest of more than 20 species in the genus *Dipodomys*, which is in the family Heteromyidae. Adult giant kangaroo rats range from 4.6 to 6.4 ounces in weight and 12.2 to 13.7 inches in length. Giant kangaroo rats are distinguished from the similar San Joaquin kangaroo rats (*D. nitratoides*) by the number of toes on their hind feet. Giant kangaroo rats have five toes, San Joaquin kangaroo rats have four. Giant kangaroo rats prefer annual grassland on gentle slopes of generally less than 10 degrees, with friable, sandy-loam soils. However, most remaining populations are on poorer, marginal habitats which include shrub communities on a variety of soil types and on slopes up to about 22 degrees. The historical distribution of giant kangaroo rats encompassed a narrow band of gently sloping ground along the western edge of the San Joaquin Valley, with occasional colonies on steeper slopes and ridge tops, from the base of the Tehachapi Mountains, Kern County, in the south, to near Los Banos, Merced County, in the north. The population is currently fragmented into six major geographic units. The units located in the southern San Joaquin Valley are: the Kettleman Hills in Kings County; and western Kern County in the area of the Lokern, Elk Hills, and other uplands around McKittrick, Taft, and Maricopa. This species has been recorded in the Belridge WSD and Dudley Ridge WD.

### **Nelson's (San Joaquin) Antelope Squirrel (*Ammospermophilus nelsoni*)**

Nelson's (San Joaquin) antelope squirrel is a state-listed threatened species. This species is found in the western San Joaquin Valley on dry, sparsely vegetated loam soils from elevations of 200 to 1,200 feet above mean sea level. San Joaquin antelope squirrels dig their burrows or use the burrows of kangaroo rats. They typically occur in association with widely scattered shrubs, forbs, and grasses in broken terrain with gullies and washes. Antelope squirrels had been nearly eliminated from the floor of the Tulare basin, and existed mainly in marginal habitat in the mountainous areas bordering its western edge. Substantial populations were found only in and around Lokern and Elk Hills in western Kern County, and on the Carrizo and Elkhorn Plains in eastern San Luis Obispo County. This species has been recorded at the Dudley Ridge WD, Lost Hills WD, Berenda Mesa WD, Belridge WSD, and Wheeler Ridge Maricopa WD.

### **San Joaquin Kit Fox (*Vulpes macrotis mutica*)**

San Joaquin kit fox (SJKF) is listed as a federal-listed endangered and state-listed threatened species. SJKF typically occupy annual grasslands or grassy open stages within scattered shrubby vegetation throughout the semi-arid habitats of the San Joaquin Valley. This species

requires loose-textured soils for burrowing and a suitable prey base. SJKF dens usually range between 11 to 21 cm at the narrowest measurable horizontal breadth, and are typically higher than they are wide. However, SJKF dens can vary greatly in size and shape. Historically, SJKF were found throughout the San Joaquin Valley and western portions of the Sacramento Valley. Due to the loss of suitable habitat, the SJKF's range has been highly fragmented to remaining areas of natural habitat. This species' range includes portions of all seven water districts.

### **San Joaquin Pocket Mouse (*Perognathus inornatus inornatus*)**

The San Joaquin pocket mouse has no state or federal listing, but is included on the CDFG Special Animals list. This species is endemic to California's Central Valley. It constructs burrows in grassy and weedy areas where fine textured or sandy soils are present. Pocket mice are in the same family (Heteromyidae) as kangaroo rats, and many aspects of their biology and life history are similar. Like kangaroo rats, pocket mice are granivorous and nocturnal. During periods of intense weather or food shortage, pocket mice may enter an inactive state of torpor. This species has been recorded in the Wheeler Ridge Maricopa WD, Belridge WSD and Lost Hills WD.

### **Short-nosed Kangaroo Rat (*Dipodomys nitratoideus brevinasus*)**

The short-nosed kangaroo rat is California species of special concern. This species is one of three subspecies of the San Joaquin kangaroo rat. Typically, short-nosed kangaroo rats inhabit grasslands with scattered shrubs and desert-shrub associations on powdery soils. Their historic distribution is unknown, but they have been documented in arid grassland and shrubland associations along the western half of the San Joaquin Valley floor and hills on the western edge of the Valley floor from the Los Banos area, Merced County, south to the foothills of the Tehachapi Range and extending east and northward inland above the edges of the Valley floor to near Poso Creek, north of Bakersfield. They also occurred on the Carrizo Plain and the upper Cuyama Valley. The extent of its current distribution is also unknown. Populations are known from the Coalinga area, Fresno County, a few scattered locations in the Kettlemen and Lost Hills, Kings and Kern counties, the Lokern, Elk Hills, San Emigdio, and Wheeler Ridge regions of western Kern County, the Carrizo Plain Natural Area, and the Caliente Mountains at the edge of the Cuyama Valley. The extensive agricultural development of the 1960's and 1970's within its historic range is the main cause of the decline of the short-nosed kangaroo rat. This species has been recorded in the Belridge WD.

### **Tipton Kangaroo Rat (*Dipodomys nitratoideus nitratoideus*)**

The Tipton kangaroo rat is a federal and state-listed endangered species. It is one of three subspecies of the San Joaquin kangaroo rat, differing from the other two in range and size (the Tipton kangaroo rat is larger than the Fresno kangaroo rat and smaller than the short-nosed kangaroo rat). Historically this rat lived within the area of the Tulare Basin floor in the southern San Joaquin Valley, spreading east and south to the foothills of the Tehachapi Mountains in arid-land vegetative communities with level or nearly level terrain. The current range is restricted to scattered populations, west of Tipton, Pixley, and Earlimart and in areas in southern Kern County. This species has been recorded in the Wheeler Ridge Maricopa WD, and Lost Hills WD.

### **Tulare Grasshopper Mouse (*Onychomys torridus tularensis*)**

The Tulare grasshopper mouse is a California species of special concern. The Tulare grasshopper mouse, a subspecies of the southern grasshopper mouse, fits the general description of the genus *Onychomys* by having a stout body with a short, club-like tail. They are sharply bicolored with the head and upperparts pale brown to gray or pinkish-cinnamon and the underparts white. The tail is usually bicolored with a white tip. Typically, Tulare grasshopper mice inhabit arid shrubland communities in hot, arid grassland and shrubland associations, including blue oak woodlands, upper sonoran subshrub scrub community; alkali sink and mesquite associations on Valley Floor; and grasslands associations on the sloping margins of the San Joaquin Valley and Carrizo Plain region. Specific habitat requirements are unknown. Like most of the other sensitive species of the San Joaquin Valley, habitat reduction, fragmentation, and degradation are the principal causes of the decline of the Tulare grasshopper mouse. Historically, the Tulare grasshopper mouse ranged from western Merced and eastern San Benito counties east to Madera County and south to the Tehachapi Mountains. Currently, they are known to occur in these areas: along the western margin of the Tulare Basin, including western Kern County; Carrizo Plain Natural Area; along the Cuyama Valley side of the Caliente Mountains, San Luis Obispo County; and the Ciervo-Panoche Region, in Fresno and San Benito counties. This species has been recorded in the Tulare Lake Basin WD, Belridge WSD, and Wheeler Ridge Maricopa WD.

### **Kern Fan Element**

The Kern Fan Element, now known as the Kern Water Bank (KWB), was established in 1997, after approval of the Kern Water Bank Habitat Conservation Plan/Natural Community Conservation Plan in October of that year. The KWB consists of a water recharge and recovery operation, farming, and conservation bank and habitat conservation activities for 19,900 acres in Kern County.

Of the 19,000 acres, 5,900 are used for routine recharge activities, 960 acres will be in preserved for known populations of special status plants, 5,592 acres will revert to natural habitat, 530 acres will be preserved and managed for mitigation of DWR projects, 481 acres will be used for permanent water banking facilities, 3,170 acres for farming, and 3,267 acres for a conservation bank. At this time, 4,853 acres have been developed as permanent water recharge basins, and an additional 2,349 acres have been developed for recharge to relieve emergency flood conditions during El Nino weather events. Water recharge basins were constructed through the creation of approximately 63 miles of levees that were approximately three feet high along natural contour lines. 73 wells are currently on the site and more may be built or recovered in the future.

Prior to DWR's purchase of the KFE, approximately 17,068 acres of the property was under extensive cultivation. The remaining property was leased for oil recovery facilities and contained 1,515 acres of isolated sensitive native plant communities (valley saltbush scrub, Great Valley mesquite scrub and valley sacaton grassland) and 1,317 acres of non-native grassland. No wetland habitat was present in the project area except canals used to convey agricultural water.

In 1994, approximately 16,500 acres were undesignated, previously irrigated farmland. 288 acres were actively irrigated for agriculture. Approximately 2,690 acres were native or disturbed farmland, including open areas, and land maintained under dry farming for vegetation management. The additional 490 acres consisted of roads, canals, and oil and gas facilities on disturbed lands containing non-native vegetation.

## ***Sensitive Communities***

### **Great Valley Mesquite Scrub**

Great Valley mesquite scrub is primarily vegetated by honey mesquite (*Prosopis glandulosa torreyana*), a perennial deep-rooted shrub that requires a high water table. Additional vegetation includes alkali saltbush and introduced annual grasses, which are more abundant in good rainfall years. Honey mesquite cover is usually low with densities of two to three per acre. The soils are sandy loams, of alluvial origin, often with wind modified micro-topography. Climate conditions consist of moist, foggy winters and hot dry summers. Great Valley mesquite scrub habitat was historically extensive in the southern San Joaquin Valley from Bakersfield to the Inner South Coast Ranch at Tupman and Buena Vista Lake, but has been virtually extirpated by flood control, agricultural development and groundwater pumping. Recorded occurrences of this habitat type are located along the north, east and south boundaries of the KWB.

### **Valley Sacaton Grassland**

Valley sacaton grassland habitat is described above in the South San Joaquin Valley discussion. This habitat has been recorded approximately 1.5 miles south of the KWB.

## ***Special Status Plants***

### **Hoover's Woolly Star (*Eriastrum hooveri*)**

The Hoover's woolly star was delisted from the federal threatened species list on October 7, 2003 and is CNPS List 4 species (plants of limited distribution- Watch list). This annual herb blooms from March through July and is in the phlox (Polemoniaceae) family. Habitat for this plant has been better defined as alkali sinks, washes, on both north-and south-facing slopes and on ridge tops in the southern San Joaquin Valley and adjoining coastal ranges. Hoover's woolly star occurs within the KWB in small native plant communities located around historic oil field facilities. These areas are either designated as sensitive habitat areas, or compatible habitat, with one questionable occurrence in an area designated as a recharge basin, which had been established prior to DWR's purchase of the land. It was observed on approximately 620 acres of the KWB during the 1990-1991 DFG/DWR surveys.

### **Recurved Larkspur (*Delphinium recurvatum*)**

Recurved larkspur was described above under the South San Joaquin Valley discussion. This species was observed on the KWB during the 1990-1991 DFG/DWR surveys within the KWB. Plants occurred in small remnant native plant communities, located around historic oil field facilities. Most areas have been included in designated sensitive habitat areas, or in designated compatible habitat. Recurved larkspur was listed as a Group 1 species under the USFWS HCP.<sup>1</sup>

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<sup>1</sup> Group 1 species are those species, which, due to their rarity and smaller preferred habitats have a significant chance of both becoming established in the KWB and being listed during the life of the permit.

### **San Joaquin Woollythreads (*Lembertia congdonii*)**

San Joaquin woollythreads were described above under the South San Joaquin Valley discussion. This species has been found on approximately 160 acres at the KWB in small remnant native plant communities located around historic oil field facilities. Its location has been designated as sensitive habitat areas under the HCP. San Joaquin woollythreads were listed as a Group 1 species under the USFWS HCP.

### **Slough Thistle (*Cirsium crassicaule*)**

Slough thistle is a CNPS List 1B plant. The genus *Cirsium*, in the sunflower (Asteraceae) family, contains thistle like plants with more than one white, pink or purplish flowers per head. Slough thistle is an annual or biennial herb, one to three meters high, endemic to California and only found in Kern, Kings, and San Joaquin counties. It blooms from May to August and its habitat is sloughs, riverbanks, and marshy areas in chenopod and riparian scrub. Slough thistle has been found in mesic areas throughout Kern County, and one population has been recorded by DWR at the KWB. Slough thistle was listed as a Group 1 species under the USFWS HCP.

## ***Special Status Wildlife***

Wildlife monitoring has occurred at the KWB since 1996, in order to measure population trends of sensitive wildlife species, their competitors, and predators, as well as water associated bird species. Surveys were targeted for San Joaquin kit fox and Tipton kangaroo rat, and also documented other large and small mammals or birds encountered. Additional special status species that could be located on the KWB are described below.

### **Amphibians**

#### ***Western Spadefoot (*Scaphiopus hammondi*)***

Described above in the South San Joaquin Valley discussion, western spadefoot has been recorded within the KWB. The closest recorded occurrence in the CNDDDB is approximately 2.5 miles east of the KWB boundary. Western spadefoot was listed as a Group 1 species under the USFWS HCP.

### **Reptiles**

#### ***Blunt-nosed Leopard Lizard (*Gambelia sila*)***

Blunt-nosed leopard lizards were described above in the South San Joaquin Valley discussion. This species has been recorded within the KWB during the 1991 DWR surveys, associated with poor soils, sparse vegetation and areas of open ground. Blunt-nosed leopard lizard was listed as a Group 1 species under the USFWS HCP.

#### ***Western Pond Turtle (*Emys (Clemmys) marmorata*)***

Western pond turtles were described above in the South San Joaquin Valley discussion. They were observed during the 1991 DWR surveys on the north side of the Kern River in the KWB. Western pond turtle was listed as a Group 1 species under the USFWS HCP.

## **Birds**

### **Burrowing Owl (*Athene cunicularia*)**

Burrowing owls were described above in the South San Joaquin Valley discussion. This species has been observed throughout the KWB and there has been an increase in observations of this species in the KWB according to the 2004 Annual Wildlife Monitoring Report, prepared by Quad Knopf. The burrowing owl was listed as a Group 1 species under the USFWS HCP.

### **Double-crested Cormorant (*Phalacrocorax auritus*)**

The double-crested cormorant is California species of special concern. This cormorant is a yearlong resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. They feed on fish, crustaceans and amphibians and prefers hunting in waters less than 30 feet deep with rocky or gravel bottoms. The birds rests in the daytime and roost overnight beside the water on offshore rocks, islands, steep cliffs, dead branches of trees, wharfs, jetties, or even transmission lines. Perching sites must be barren of vegetation, and the birds must visit the perches periodically in the day to dry its plumage. Many nesting colonies in California have been abandoned after human disturbance and habitat destruction. It breeds from April to July or August. The double-crested cormorant is associated with both fresh and marine bodies of water, such as lakes, ponds, coastal bays and shorelines, and was observed at the KWB during the Kern Audubon Society Christmas Bird Count in December, 2002. It was listed as a Group 2 species under the USFWS HCP.<sup>2</sup>

### **Loggerhead Shrike (*Lanius ludovicianus*)**

The loggerhead shrike is a California species of special concern. This bird has a stout, hooked, all-dark bill, a bluish-gray head and back, a broad black mask extending above eye and thinly across top of bill, a gray to whitish rump, a black tail with white tip and large white patches in black wings. The breeding range of loggerhead shrikes extends from southern Canada to southern Mexico. Loggerhead shrikes prefer open habitat characterized by grasses interspersed with shrubs or low trees, although they occur in a wide variety of habitats such as prairies, grazed grasslands, fencerows of agricultural fields, riparian areas, open woodlands, suburban areas, mowed roadsides, and golf courses. They prefer "edge" habitats and frequently nest along roadsides and hedgerows in agricultural areas. Loggerhead shrikes forage primarily on mice and small birds in the winter and grasshoppers, beetles and other large insects in the summer. It breeds from March to August. This bird was observed during the 1990 DFG/DWR surveys of the KWB. It was listed as a Group 1 species under the USFWS HCP.

### **Northern Harrier (*Circus cyaneus*)**

Northern harrier is a California species of special concern. This bird is a slim, medium-sized hawk with long, broad wings, long legs and tails and a characteristic facial ruff that gives them an owl-like appearance. The adult female is dark brown above and buffy below, with some streaking on the underparts and a barred tail. The adult male is pale gray above and white below with reddish spots on the underparts. The wingtips are edged with black. Harriers occur throughout the state except for the Sierra Nevada and the Cascade Range. Loss of wetland and

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<sup>2</sup> Group 2 species are those species which, due to a larger current population or larger or incompatible (compared to that found at the KWB) preferred habitat, are relatively unlikely to both be listed and become established at the KWB during the life of the permit.

grassland habitats has reduced the harrier population in California. Breeding usually occurs between April and September in shrubby vegetation within marshes although nesting may also occur in grasslands or other dry habitats away from water. Harriers forage primarily on small mammals that inhabit a variety of wet and dry habitats. This bird was observed in the KWB during the Kern Audubon Society Christmas Bird Count in December 2002. The northern harrier was listed as a Group 2 species under the USFWS HCP.

### **Tricolored Blackbird (*Agelaius tricolor*)**

Tricolored blackbirds were discussed above under the South San Joaquin Valley. There are two recorded occurrences of this species in the CNDDDB within half a mile. Tricolored blackbirds were listed as a Group 1 species under the USFWS HCP.

## **Mammals**

### **American Badger (*Taxidea taxus*)**

The American badger was described above under the South San Joaquin Valley discussion and has been recorded within the KWB. This species was listed as a Group 1 species under the USFWS HCP.

### **Buena Vista Lake Shrew (*Sorex ornatus relictus*)**

The Buena Vista lake shrew was described above under the South San Joaquin Valley discussion. It has been recorded at the Kern Fan Water Recharge Area, which is adjacent to the KWB. Critical habitat was designated on January 24, 2005 but excluded the KWB. This species was listed as a Group 1 species under the USFWS HCP.

### **Nelson's (San Joaquin) Antelope Squirrel (*Ammospermophilus nelsoni*)**

A description of the San Joaquin antelope squirrel was provided above under the South San Joaquin Valley discussion. This species has been documented in the KWB.

### **San Joaquin Kit Fox (*Vulpes macrotis mutica*)**

The San Joaquin kit fox was described above in the South San Joaquin Valley discussion. This species has been regularly surveyed for since 1996 and has been documented within the KWB.

### **Tipton Kangaroo Rat (*Dipodomys nitratooides nitratooides*)**

The Tipton kangaroo rat was described above in the South San Joaquin Valley discussion. This species has been regularly surveyed for since 1996 and has been documented within the KWB.

## **Castaic Lake**

Castaic Lake is located in southern California at the confluence of Castaic Creek and Elizabeth Lake Canyon Creek, approximately 45 miles northwest of the City of Los Angeles. This facility consists of two bodies of water - the lagoon, or lower lake is for non-power boating or canoeing,

and the upper lake is used for sailing, power boating, and water and jet skiing. Castaic Lake has approximately 29 miles of shoreline.

Vegetation communities surrounding Castaic Lake include coastal scrub, chamise-redshank chaparral, and mixed chaparral. Due to the steep topography, fluctuating water levels and minimal shoreline, little aquatic vegetation is associated with the lake margin. Castaic Lagoon, surrounded by coastal scrub habitat, is located below Castaic Dam, and has gentler slopes and constant water levels, which allows for the establishment of vegetation. In addition, the lagoon has maintained public beaches and campgrounds vegetated with grasses, shrubs and trees, such as pines and eucalyptus. No sensitive habitats are known to occur within the lake margin of Castaic Lake that would be affected by the proposed project. Castaic Lake provides habitat for a variety of waterfowl, and foraging habitat for raptors. The upland surrounding the lake provides habitat for those species adapted to the arid conditions of southern California, similar to the species found at Lake Perris.

### ***Sensitive Communities***

No sensitive communities are known to occur in the vicinity of Castaic Lake.

### ***Special Status Plants***

No special status plants are known to occur in the vicinity of Castaic Lake.

### ***Special Status Wildlife***

#### **Reptiles**

##### **Western Pond Turtle (*Emys (Clemmys) marmorata*)**

Western pond turtles were described above in the South San Joaquin Valley discussion. Western pond turtles have not been observed at Castaic Lake, but they are likely to occur there since they have been reported upstream in Castaic Creek.

#### **Birds**

##### **Bald Eagle (*Haliaeetus leucocephalus*)**

The bald eagle is a federal-listed threatened species, proposed for delisting, and is a state-listed endangered and fully protected species. In 1995, the bald eagle was reclassified from federally endangered to threatened. Bald eagle nesting and wintering habitat is afforded protection under both federal and State ESAs. In California, bald eagles breed almost exclusively within Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity counties. Wintering activity occurs throughout the state except for the desert regions east of the Los Angeles Basin. Suitable nesting and foraging habitat is usually associated with large bodies of water including reservoirs, natural lakes, or rivers and nesting almost never occurs more than 3 kilometers (2 miles) from water. It breeds from February to June. This species has been observed wintering at Castaic Lake.

## Mammals

### **Western Mastiff Bat (*Eumops perotis californicus*)**

The western mastiff bat is a California species of special concern. The largest bat occurring in the United States, this species weighs from 60 to 70 grams (2.1 to 2.5 ounces), and has a wingspan of 53 to 58 centimeters (21 to 23 inches). It has been recorded at locations throughout much of the Central Valley and adjacent foothills, along the coast from Sonoma County south to San Diego County, and throughout the southern portion of the state from Kern and San Bernardino Counties south into Baja California. Western mastiff bats roost in cliff-face crevices and other high perches such as large trees and bridges that can provide them enough vertical distance to become airborne. Western mastiff bats forage over a wide variety of habitat types such as grasslands, deserts, woodlands and forests. Factors that limit the suitability of habitat for this species include the presence of suitable roost sites and large bodies of surface water for drinking. The western mastiff bat has been recorded near Lake Piru, which is approximately seven miles west of Castaic Lake. Given the presence of this large body of water, the bats could use Castaic Lake as foraging habitat.

## **Lake Perris**

Lake Perris is located in Riverside County, approximately 13 miles southeast of the City of Riverside and 65 miles east of the City of Los Angeles. Vegetation communities surrounding Lake Perris include riparian vegetation on the northeast and eastern border, and sage scrub habitat along the northern and southern borders. The eastern border has a significant stand of riparian vegetation, containing willows (*Salix* sp.) and mulefat (*Baccharis salicifolia*). Beyond the riparian stand is annual grassland habitat. The immediate northern shoreline is maintained as part of the Lake Perris State Recreation Area (SRA), containing grassy lawns and shade trees such as pepper, eucalyptus, cypress, palm and pine trees. The Russell Mountains, located beyond the tended areas to the north, contains primarily sage scrub habitat, dominated by brittlebush (*Encelia farniosa*). The Bernasconi Hills, located to the south is primarily sage scrub habitat, dominated by California sagebrush (*Artemisia californica*).

The riparian habitat located along the northeastern side of Lake Perris consists of a band approximately 2.2 miles long and can best be described as southern willow scrub. Riparian habitats throughout the state have been greatly reduced and have been identified as rare communities by CDFG. The riparian habitat at Lake Perris is dominated by several willow species (*Salix* sp.) growing thick as to prevent much understory growth. The limited understory present contains mulefat and stinging nettles (*Urtica holosencea*). The soils commonly found at this habitat are loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows. Southern willow scrub was formerly extensive along the rivers of coastal southern California, but has been greatly reduced by urban expansion, flood control and channel "improvements."

Terrestrial wildlife at Lake Perris is associated with the aquatic habitat, the riparian habitat on the northeast and eastern shore and the upland habitats. Creation of the reservoir provided a large body of water in the generally arid region of southern California, which now provides habitat for large numbers of waterfowl, such as western grebes (*Aechmophoru occidentalis*), Canada geese (*Branta canadensis*), mallards (*Anas platyrhynchos*) and American coots (*Fulica americana*). The upland habitat surrounding the lake supports wildlife species adapted to arid, rocky conditions such as lizards and snakes, and birds and mammals that do not need permanent water or much vegetated cover. The riparian zone provides contrasting conditions to

the arid uplands, providing shade, shelter, food and perch sites for a number of bird species, many of which migrate through the area. It also provides nesting habitat for waterfowl.

The vegetation communities at Lake Perris are the same under current conditions as they were in 1994. The riparian vegetation community has remained stable and healthy and now provides habitat for least Bell's vireo, a federal and state-listed endangered species. Efforts to improve the habitat include tamarisk and *Arundo* removal. A thorough assessment of the habitat has never occurred, but should if changes in water levels would be significant.

### ***Sensitive Communities***

No sensitive communities are known to occur in the vicinity of Lake Perris.

### ***Special Status Plants***

No special status plants are known to occur in the vicinity of Lake Perris.

### ***Special Status Wildlife***

#### **Reptiles**

##### ***Western Pond Turtle (*Emys (Clemmys) marmorata*)***

Western pond turtles were described above in the South San Joaquin Valley discussion. They have not been recorded at Lake Perris, but have been recorded in the San Jacinto River. According to the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP),<sup>3</sup> it is potential habitat as the western pond turtle has been found at other lakes in the area. Lake Perris is one of several potential conservation areas according to the MSHCP.

#### **Birds**

##### ***Bald Eagle (*Haliaeetus leucocephalus*)***

The bald eagle was described above under the Castaic Lake discussion. This bird has been observed wintering at the Lake Perris State Recreation Area. The closest recorded CNDDDB occurrence is approximately 10 miles west at Lake Matthews. Lake Perris was included in the Western Riverside MSHCP as a conservation area for this species.

##### ***Cooper's Hawk (*Accipiter cooperii*)***

The Cooper's hawk is California species of special concern. Cooper's hawk are medium-sized raptors with blue-gray upperparts and reddish barred underparts, have short, rounded wings and proportionately long, banded tails. Historically, the Cooper's hawk nested throughout most of California, primarily in riparian zones from valley river bottoms up to an elevation of

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<sup>3</sup> The County of Riverside Transportation and Land Management Agency has prepared the Western Riverside MSHCP which serves as an HCP pursuant to Section 10(a)(1)(B) of the 1973 FESA, as well as a Natural Communities Conservation Plan (NCCP) under the California NCCP Act of 2001. This plan, similar in function to the Kern Water Bank HCP/NCCP, covers an area of 1.26 million acres in western Riverside County, including Lake Perris.

approximately 6,500 feet. During the winter months, Cooper's hawks primarily inhabit the bottomlands and foothills of California. Cooper's hawks in California demonstrate a preference for lowland riparian forests where nest stands typically include scattered stands of live or blue oaks. It breeds from March through August. The closest recorded CNDDDB occurrence is approximately eight miles west. Lake Perris was included in the MSHCP as a conservation area.

#### **Double-crested Cormorant (*Phalacrocorax auritus*)**

The double-crested cormorant was described under the Kern Fan Element discussion. This species has been observed at Lake Perris.

#### **Golden Eagle (*Aquila chrysaetos*)**

The golden eagle is a California species of special concern and a state fully protected species. Habitat for golden eagles includes rolling foothills, mountain areas, sage-juniper flats, and desert areas. Grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats are primary foraging habitats for this species. It nests on cliffs of all heights and in large trees in open areas. The breeding season for golden eagle is from January through July. Golden eagles have been observed at Lake Perris State Recreation Area and there is a recorded occurrence approximately eight miles south of Lake Perris.

#### **Lawrence's Goldfinch (*Carduelis lawrencei*)**

Lawrence's goldfinch is not a federal or state-listed species, but it is listed on the CDFG Special Animals List. This species breeds in central California (west of the Sierra Nevadas) south to northern Baja California, often nesting in dense foliage in conifers 1 to 12 meters above ground. It winters in north-central California, central Arizona, southwestern New Mexico and (at least formerly) extreme western Texas south to northern Baja California, northern Sonora, and southern Arizona. They use oak woodland, chaparral, riparian woodland, pinyon-juniper associations and weedy areas in arid regions but usually near water. The closest recorded occurrence is approximately seven miles northwest from Lake Perris.

#### **Least Bell's Vireo (*Vireo bellii pusillus*)**

Least Bell's vireo is a federal and state-listed endangered species. This small songbird is relatively nondescript, colored gray above and white below, with one or two faint pale wing bars on otherwise dark wings and indistinct spectacles. Its nesting habitat consists of cottonwood-willow forest, oak woodland, shrubby thickets, and dry washes with willow thickets at the edges, in arid areas, but often near water. They prefer dense cover within one to two meters of the ground and a dense stratified canopy. Peak egg laying occurs from May to June. Wintering habitat consists of open woodland and brush. The species was historically found throughout California and northern Baja. Its range has been restricted to southern California south of the Tehachapi Mountains and northwestern Baja California. Least Bell's vireo has been observed at Lake Perris State Recreation Area during surveys of the riparian habitat located on the east margin of the lake.

### **Loggerhead Shrike (*Lanius ludovicianus*)**

The loggerhead shrike was described above in the Kern Fan Element discussion. The closest recorded occurrence for this species is approximately five miles west of Lake Perris.

### **Northern Harrier (*Circus cyaneus*)**

Northern harrier was described above in the Kern Fan Element discussion. It has been observed at the Lake Perris State Recreation Area and could use the riparian area to nest.

### **Osprey (*Pandion haliaetus*)**

Osprey is a California species of special concern. This almost eagle-sized bird is dark brown above, and white underneath, with a white head and prominent dark brown eye stripe. Inhabiting every continent except Antarctica, osprey can be found near large bodies of water that support fish and have forest habitats nearby. They build nests in exposed locations, often in the tops of old trees, or in snags in beaver swamps. In California, breeding populations are found in the Cascade and Sierra mountain ranges and wintering populations can be found throughout the state. It breeds from March to September. Although there is no evidence of breeding populations at Lake Perris, this species has been observed there.

### **Southwestern Willow Flycatcher (*Empidonax traillii extimus*)**

Southwestern willow flycatcher (SWWF) is a federal and state-listed endangered species. This almost sparrow sized bird is greenish or brownish gray above, with a white throat that contrasts with a pale olive breast, and pale yellow belly. The SWWF is insectivorous and catches insects in mid-flight. The habitat of the SWWF is extensive willow thickets. Breeding populations are found only in isolated meadows of the Sierra Nevada, and along the Kern, Santa Margarita, San Luis Rey, and Santa Ynez Rivers in southern California. SWWF breed from June to August. Loss and degradation of riparian habitat is the principal reason for the decline of SWWF populations and the decrease in geographic range of the species. Threats to SWWF include livestock grazing and nest parasitism by brown-headed cowbirds. The closest recorded occurrence is approximately nine miles north of Lake Perris.

### **White-tailed Kite (*Elanus leucurus*)**

White-tailed (or black-shouldered) kite is a state fully protected species. This mostly white bird, with black shoulders, is a common to uncommon resident in coastal and valley lowlands throughout California. Nests are usually constructed of loosely piled sticks placed near the tops of dense oak, willow, or other tree stands. Kites forage over grasslands, marshes, agricultural areas, and wetlands where they prey mostly on small mammals. It breeds from February to October. White-tailed kites have been observed at the Lake Perris State Recreation Area, but the closest CNDDDB recorded occurrence is approximately 10 miles west of Lake Perris.

### **Yellow Warbler (*Dendroica petechia brewsteri*)**

Yellow warbler is a California species of special concern. This short-tailed and plump small bird (total body length of five inches) is primarily yellow with yellowish-olive wings, back, and tail and a prominent dark eye. The historical breeding distribution of the yellow warbler included riparian habitat throughout the western portion of the state, from Modoc west to Del Norte counties and south to San Diego County along the coast excluding the deserts of southeastern California.

Currently, the California yellow warbler nests throughout its historical range, but has been greatly reduced in the Sacramento and San Joaquin valleys, southern coastal area, and San Francisco, Marin, and Siskiyou counties. Preferred foraging and nesting habitat is streamside thickets of tangled, thick underbrush interspersed among alders, cottonwoods, and willows. It breeds from April to August. Yellow warblers have been observed at the Lake Perris State Recreation Area and could use the riparian habitat to nest. The closest recorded CNDDDB occurrence is approximately 8.5 miles north of Lake Perris.

## **Mammals**

### **Western Mastiff Bat (*Eumops perotis californicus*)**

The western mastiff bat was described above under the Castaic Lake discussion. This bat has been recorded approximately 10 miles southwest of Lake Perris.

### **Stephens' Kangaroo Rat (*Dipodomys stephensi*)**

Stephens' kangaroo rat is a federal-listed endangered and state-listed threatened species. This species is associated with sparsely vegetated habitats and frequently found in close association with dirt roads, previously and currently disturbed areas, and/ or sites with a high percentage of bare ground. It is primarily found in annual grassland or sparse sage scrub habitats where perennial cover is less than 30 percent. Certain non-native grasses (e.g. *Bromus diandrus*) can exclude this species from otherwise suitable habitat. As a fossorial (burrowing) animal, the Stephens' kangaroo rat typically is found in sandy and sandy loam soils with a low clay to gravel content. The geographic distribution of the Stephens' kangaroo rat includes the San Jacinto Valley and adjacent areas of western Riverside, southwestern San Bernardino, and northwestern San Diego counties. Lake Perris is identified as a core recovery area for this species, which has been documented just north of the lake, along its northern edge.

### **Yuma Myotis (*Myotis yumanensis*)**

Yuma myotis is not a federal or state-listed species, but it is listed on the CDFG Special Animals List. This small bat has short fur, shaded tan or brown on top, while their underparts are whitish or buffy. They are similar to the little brown myotis (*M. lucifugus*) and the two species have been known to interbreed. The range of this species extends north to British Columbia, Canada, through the western United States (as far east as Oklahoma) and south into central Mexico. It is more closely associated with water than most other North American bats and can be found in a wide variety of upland and lowland habitats, including riparian, desert scrub, moist woodlands and forests. Nursery colonies usually are in buildings, caves and mines, and under bridges. Little information regarding its habitat in California is available, but this bat has been observed at the Lake Perris State Recreation Area.

## **San Luis Reservoir**

The San Luis Reservoir is located in western Merced County, just east of the Merced/Santa Clara County line. Vegetation habitats surrounding the San Luis Reservoir and the O'Neill Forebay include annual grassland, coastal sage scrub and riparian habitats. Terrestrial wildlife at the San Luis Reservoir and O'Neill Forebay is associated with the aquatic habitat, the riparian habitat and the surrounding upland habitats. Although development has significantly changed the habitats that were historically present, the San Luis Reservoir State Recreation Area

supports a variety of wildlife species including jackrabbits, ground squirrels, raccoons, opossums, skunks, feral pigs, and various snakes. It provides wintering habitat for migratory birds including golden eagles, white-tailed kites, the occasional bald eagle, geese and several species of ducks.

### ***Sensitive Communities***

No sensitive communities are known to occur in the vicinity of the San Luis Reservoir.

### ***Special Status Plants***

No special status plants are known to occur in the vicinity of the San Luis Reservoir.

### ***Special Status Wildlife***

#### **Amphibians**

##### **California Red-legged Frog (*Rana aurora draytonii*)**

The California red-legged frog (CRLF) is a federal-listed threatened species and a California species of special concern. The San Luis Reservoir is located within the critical habitat designation, finalized in 2001. A recovery plan for this species was published in 2002. This large brown to reddish-brown frog historically occurred over much of the state from the Sierra Nevada foothills to the Coast. CRLF inhabit ponds, slow moving creeks, and streams with deep pools that are lined with dense emergent marsh or shrubby riparian vegetation. Submerged root masses and undercut banks are important habitat features for this species. However, this species is capable of inhabiting a wide variety of perennial aquatic habitats as long as there is sufficient cover, and bullfrogs or non-native predatory fish are not present. CRLF is known to survive in ephemeral streams, although only if deep pools with vegetative cover persist through the dry season. Factors that have contributed to the decline of CRLF include destruction of riparian habitat due to development, agriculture, or flood control practices, and the introduction of exotic predators such as bullfrogs, crayfish, and a variety of non-native fishes. CRLF have been recorded in the streams that feed into the reservoir.

#### **Reptiles**

##### **Western Pond Turtle (*Emys (Clemmys) marmorata*)**

Western pond turtles were described above in the South San Joaquin Valley discussion. They have been documented approximately two miles west of the San Luis Reservoir.

#### **Birds**

##### **Bald Eagle (*Haliaeetus leucocephalus*)**

The bald eagle was described above in the Castaic Lake discussion. The closest recorded occurrence of this bird is approximately 40 miles northwest at Lake Del Valle.

### **Osprey (*Pandion haliaetus*)**

Osprey are described above under the Lake Perris discussion. This species has been recorded approximately 40 miles west of the San Luis Reservoir.

### **Tricolored Blackbird (*Agelaius tricolor*)**

Tricolored blackbirds were described above under the South San Joaquin Valley discussion. This bird has been recorded along the southeastern edge of the San Luis Reservoir.

### **White-tailed Kite (*Elanus leucurus*)**

White-tailed kites were described above in the Lake Perris discussion. The closest recorded occurrence is approximately 25 miles west of the San Luis Reservoir.

## **Mammals**

### **San Joaquin Kit Fox (*Vulpes macrotis mutica*)**

The San Joaquin kit fox was described above in the South San Joaquin Valley discussion. This species' range follows the eastern edge of the San Luis Reservoir.

### **Western Mastiff Bat (*Eumops perotis californicus*)**

The western mastiff bat was described above under the Castaic Lake discussion. This bat has been recorded approximately 35 miles southeast of the San Luis Reservoir.

### **Yuma Myotis (*Myotis yumanensis*)**

Yuma myotis was described above under the Lake Perris discussion. This species has been recorded approximately three miles south of the San Luis Reservoir.

## **Lake Oroville**

Lake Oroville, with a maximum surface area of 15,000 acres is located on the Feather River, in Butte County, approximately 75 miles north of Sacramento. The reservoir is fed by the North, Middle, and South Forks of the Feather River and was formed in 1964 by the construction of the Oroville Dam. Other facilities associated with the lake include the Thermalito Forebay, the Thermalito Afterbay, the Feather River Hatchery, and the Feather River Low Flow Channel. Vegetation at the lake is limited due to loss of soil from wave action and periodic inundation followed by severe desiccation.

## **Sensitive Communities**

No sensitive communities are known to occur in the vicinity of Lake Oroville.

## **Special Status Plants**

### **Brandegee's Clarkia (*Clarkia biloba* ssp. *brandegeae*)**

Brandegee's clarkia is a CNPS List 1B plant. It is a member of the evening primrose (Onagraceae) family and blooms from May to July. This annual herbaceous plant grows less than one meter tall, has linear to lanceolate leaves, and lavender-colored petals. It grows in chaparral cismontane woodlands often along roadcuts at elevations between 225 and 915 meters. This species is threatened by road maintenance and fire suppression. This species has been recorded along the banks of Lake Oroville, with several occurrences along the South Fork of the Feather River, after it enters Lake Oroville.

### **Cut-leaved Ragwort (*Senecio eurycephalus* var. *lewisrosei*)**

Cut-leaved ragwort is a CNPS List 1B plant. This herbaceous perennial belongs to the sunflower (Asteraceae) family and blooms from March to July. The plant occurs in Butte and Plumas counties at elevations ranging from 285 to 1,890 meters above mean sea level. It grows in chaparral, cismontane woodland, and lower montane coniferous forest habitats with serpentinite soil. It is threatened by mining and road maintenance. This species has been recorded along the West Branch of the Feather River, after it enters Lake Oroville.

### **Mildred's Clarkia (*Clarkia mildrediae* ssp. *mildrediae*)**

Mildred's clarkia is a CNPS List 1B plant. This herbaceous annual belongs to the evening primrose (Onagraceae) family and blooms from May to August. The plant occurs in Butte and Plumas counties at elevations ranging from 245 to 1,710 meters above mean sea level. It grows in cismontane woodland to lower montane coniferous forest habitats with sandy or granitic soils. It is threatened by roadway construction. This species has been recorded along the North Fork of the Feather River, after it enters Lake Oroville.

### **Mosquin's Clarkia (*Clarkia mosquinii*)**

Mosquin's clarkia is a CNPS List 1B plant. This herbaceous annual belongs to the evening primrose (Onagraceae) family and blooms from May to July. The plant occurs in Butte and Plumas counties at elevations ranging from 185 to 1,170 meters above mean sea level. It grows in cismontane woodland to lower montane coniferous forest habitats with rocky soil, or along roadsides. It is threatened by roadway construction. This species has been recorded along the South and Middle Forks of the Feather River, after they enter Lake Oroville.

### **White-stemmed Clarkia (*Clarkia gracilis* ssp. *albicaulis*)**

White-stemmed clarkia is a CNPS List 1B plant. This herbaceous annual belongs to the evening primrose (Onagraceae) family and blooms from May to July. The plant occurs in Butte, Lake, and Tehama counties at elevations ranging from 245 to 1,085 meters above mean sea level. It grows in chaparral cismontane woodland habitats, usually with serpentinite soil. This plant is known from fewer than twenty occurrences and is threatened by urbanization. This species has been recorded along the North and Middle Forks of the Feather River, after they enter Lake Oroville.

## **Birds**

### **Bald Eagle (*Haliaeetus leucocephalus*)**

The bald eagle was described above in the Castaic Lake discussion. This species has been recorded along the North and Middle Forks of the Feather River, after they enter Lake Oroville.

### **Northern Goshawk (*Accipiter gentilis*)**

The northern goshawk is a California species of special concern. It is largest of the three accipiters at 19 to 26 inches in length and a wingspan of 40 to 48 inches. The female is significantly larger than the male. The northern goshawk inhabits old-growth forests throughout the United States, Canada, and northern Mexico. Nesting begins in late March or early April, with two to four bluish-white eggs laid in April that are incubated by both sexes for about 30 days. This species has been recorded along the South Fork of the Feather River, after it enters Lake Oroville.

## **Sacramento River**

The lower Sacramento River, from where it meets the Feather River to where it enters the Sacramento/San Joaquin Delta, is predominantly channelized, leveed, and bordered by agricultural lands. Aquatic habitat in the lower Sacramento River is characterized primarily by slow-water glides and pools, is depositional in nature, and has reduced water clarity and habitat diversity, relative to the upper portion of the river. The American River joins the Sacramento River in the City of Sacramento. As with the Feather River, the Sacramento River supports a fragmented and narrow riparian forest.

## ***Sensitive Communities***

### **Coastal Brackish Marsh**

Coastal brackish marsh is dominated by perennial, emergent, herbaceous monocots up to two meters tall. Cover is often complete and dense. This community is similar to both salt marshes and freshwater marshes with some plant characteristics from each. Salinity may vary considerably, and may increase at high tide or during seasons of low freshwater runoff or both. This community usually intergrades with coastal salt marshes toward the ocean and occasionally with freshwater marshes at the mouths of rivers, especially in the Sacramento-San Joaquin River Delta. This community is usually at the interior edges of coastal bays and estuaries or in coastal lagoons. Characteristic species include Harford's sedge (*Carex harfordii*), slough sedge (*Carex obnupta*), *Carex* spp., saltgrass (*Distichlis spicata* var. *spicata*), *Juncus* spp., pickleweed (*Salicornia* spp.), *Scirpus* spp., and broad-leaved cattail (*Typha latifolia*). This community has been recorded within the Delta near the confluence of the Sacramento and San Joaquin Rivers.

### **Elderberry Savanna**

Elderberry savanna is an open, winter-deciduous shrub savanna dominated by blue elderberry (*Sambucus mexicana*), usually with an understory of introduced annual grasses and forbs. This community rapidly succeeds to Great Valley Mixed Riparian Forest without grazing, flooding, or fire. Old stands of this community are frequently overrun by wild grape (*Vitis californica*). The distribution of this community is scattered among surviving stands of riparian vegetation

throughout the Sacramento and northern San Joaquin valleys. The elderberry savanna occurs some distance from the active channel but still be subject to flooding during high water. This community has been recorded just west of the confluence of the Sacramento and American rivers.

### **Great Valley Cottonwood Riparian Forest**

The Great Valley cottonwood riparian forest has a diverse, and typically dense mixture of tall mature cottonwood (*Populus fremontii*) and willows (*Salix* spp.), as well as California sycamore (*Platanus racemosa*), box elder (*Acer negundo* var. *californicum*), black walnut (*Juglans hindsii*), and white alder (*Alnus rhombifolia*). The understory includes shrub species such as California button bush (*Cephalanthus occidentalis*), Himalayan blackberry (*Rubus discolor*), poison oak (*Toxicodendron diversilobum*), wild grape and California Dutchman's pipe (*Aristolochia debilis*). Perennial grasses such as creeping wild rye (*Leymus triticoides*), and sedges may form dense pockets in the understory. Openings within this community may also support elderberry savanna. The Great Valley cottonwood riparian forest may occur some distance from the active channel but may still be subject to over bank flooding. This community has been recorded just west of the confluence of the Sacramento and American rivers.

### **Great Valley Mixed Riparian Forest**

Great Valley mixed riparian forest is a tall, dense, winter-deciduous, broad-leafed riparian forest. The tree canopy usually is fairly well closed and moderately to densely stocked with several species including box elder, black walnut, sycamore, cottonwood, Goodding's black willow (*Salix gooddingii*), red willow (*Salix laevigata*), and shining willow (*Salix lasiandra*). Understories consist of these taxa plus shade-tolerant shrubs like California button bush and Oregon ash (*Fraxinus latifolia*). This community is found on relatively fine-textured alluvium somewhat back from active river channels and is subject to overbank flooding. It occurs in the floodplains of low-gradient, depositional streams of the Great Valley, usually below about 500 feet mean sea level. Formerly very extensive in the Sacramento and northern San Joaquin valleys, this forest largely has been cleared for agriculture, flood control, and urban expansion. This habitat has been recorded along the Sacramento River, just west of its confluence with the Feather River.

## ***Special Status Plants***

### ***Carquinez Goldenbush (Isocoma arguta)***

Carquinez goldenbush is a CNPS List 1B plant. This perennial herb is a member of the sunflower (Asteraceae) family, and occurs in valley and foothill grasslands with alkaline substrates. The flowering period for this species is August to December, and it occurs at elevations ranging from 1 to 20 meters. It is threatened by development and agriculture. This species has been recorded within the Delta near the confluence of the Sacramento and San Joaquin Rivers.

### ***Delta Mugwort (Limosella subulata)***

Delta mudwort is a CNPS List 2 plant (rare, threatened, or endangered in California, but more common elsewhere). It is a perennial rhizomatous herbaceous plant in the figwort (Scrophulariaceae) family found on mud banks of the Sacramento/San Joaquin River Delta in marshy or scrubby riparian associations, often with Mason's lilaeopsis. Its blooming period is

from May through August and its elevation range is zero to four meters. Threats to Delta mudwort include habitat destruction. This species has been recorded along the Sacramento River, in various locations starting approximately 11 miles upstream from the confluence of the Sacramento and San Joaquin Rivers.

#### **Delta Tule Pea (*Lathyrus jepsonii* var. *jepsonii*)**

Delta tule pea is a CNPS List 1B plant. It is a perennial herbaceous plant in the legume (Fabaceae) family found in freshwater and brackish marshes and seasonal wetlands with cattails, Suisun Marsh aster, and rushes (*Juncus* spp). Most of its distribution is restricted to the Sacramento/San Joaquin River Delta at elevations of zero to four meters. Its blooming period is from May through September. The Delta tule pea is threatened by agriculture, water diversions, and erosion. This species has been recorded along the Sacramento River, in various locations starting approximately 18 miles upstream from the confluence of the Sacramento and San Joaquin rivers.

#### **Mason's Lilaepsis (*Lilaepsis masonii*)**

Mason's lilaepsis is a state-listed rare and CNPS List 1B plant. It is a member of the carrot (Apiaceae) family, and occurs in tidal freshwater and brackish marshes and riparian scrub habitats, with muddy or silty soil formed through river deposition or riverbank erosion. Endemic (restricted) to California, Mason's lilaepsis is known to occur in six counties. It occurs at elevations ranging from 0 to 10 meters, and the flowering period is April through November. Threats to the continued existence of this species include erosion, channel stabilization, developing flood control projects, recreation, agriculture, shading resulting from marsh succession and competition with non-native plants. This species has been recorded along the Sacramento River, in various locations starting approximately 16 miles upstream from the confluence of the Sacramento and San Joaquin Rivers.

#### **Northern California Black Walnut (*Juglans hindsii*)**

Northern California black walnut is CNPS List 1B plant. It is a member of the walnut (Juglandaceae) family and is a perennial deciduous tree that occurs in riparian forests and woodlands. Its blooming period is from April through May and it occurs at elevations ranging from 0 to 440 meters above mean sea level. Threats include hybridization with orchard trees, urbanization, and conversion to agriculture. This species has been recorded along the Sacramento River from just south of the town of Freeport to the Delta.

#### **Rose Mallow (*Hibiscus lasiocarpus*)**

Rose mallow is a CNPS List 2 plant. It is perennial rhizomatous emergent herb in the mallow (Malvaceae) family, and occurs in freshwater marshes and swamps, preferring moist freshwater-soaked riverbanks and low peat islands in sloughs. It blooms from June through September, at elevations ranging from 0 to 150 meters. Threats include development, agriculture, recreation, and channelization of the Sacramento River and its tributaries. This species has been recorded along the Sacramento River, in various locations starting approximately 12 miles upstream from the confluence of the Sacramento and San Joaquin rivers.

### **San Joaquin Spearscale (*Atriplex joaquiniana*)**

San Joaquin spearscale is a CNPS List 1B plant. It is a member of the goosefoot (Chenopodiaceae) family, and occurs in chenopod scrub, meadows and seeps, playas, and valley and foothill grasslands with alkaline soils. It is an annual herb, blooming from April to October that occurs at elevations ranging from 0 to 835 meters. Threats include agriculture and competition between non-native plants. This species has been recorded along the Sacramento River, in various locations starting approximately 12 miles upstream from the confluence of the Sacramento and San Joaquin rivers.

### **Suisun Marsh Aster (*Aster lentus*)**

Suisun Marsh aster is a CNPS List 1B plant. It is a perennial rhizomatous herb in the sunflower (Asteraceae) family that blooms May through November. A species endemic to the Sacramento/San Joaquin River Delta, the Suisun Marsh aster is most often seen along sloughs with reeds, bulrush, blackberry and cattails in brackish and freshwater marshes and swamps. Threats to this plant include marsh habitat alteration and loss. Elevations range from 0 to 3 meters. This species has been recorded along the Sacramento River, in various locations starting just east of the town of Franklin.

## ***Special Status Wildlife***

### **Invertebrates**

#### **Antioch Dunes Anthicid Beetle (*Anthicus antiochensis*)**

Antioch Dunes anthicid beetle is not a federal or state-listed species, but it is listed on the CDFG Special Animals List. Habitat for this species includes interior sand dunes and sand bars. It is commonly collected in pitfall traps in bare, unvegetated sand. This species is apparently extirpated from the type locality at Antioch Dunes. Stabilization of the dunes in the 1950s may have eliminated the loose, sandy substrate preferred by this species. In the early 1990s it was collected along the Sacramento River in Glenn, Tehama, Shasta, and Solano counties, and from one site at Nicolaus on the Feather River in Sutter County. This species has been recorded just west of the confluence of the Deep Water Channel and the Sacramento River.

#### **Sacramento Anthicid Beetle (*Anthicus sacramento*)**

Sacramento anthicid beetle is not a federal or state-listed species, but it is listed on the CDFG Special Animals List. Habitat for this species includes interior sand dunes and sand bars, but has also been found in dredge spoil heaps. It is found along the Sacramento and San Joaquin rivers, from Shasta to San Joaquin counties, and at one site along the Feather River in Nicolaus. This species may once have been more widely distributed in loose sands along the Sacramento River, but man-made alterations to the riverbank have probably reduced its preferred habitat. However, dredging of the river channel has also created suitable habitat by depositing loose dredge material along the banks. This species has been recorded in three locations along the Sacramento River: (1) just before its confluence with the Deep Water Channel; (2) just west of the confluence of the Deep Water Channel and the Sacramento River and (3) approximately 2.5 miles south of the confluence of the Deep Water Channel and the Sacramento River.

### **Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)**

Valley elderberry longhorn beetle (VELB) is a federal-listed threatened species that occurs throughout the year in riparian woodlands and other Central Valley habitats containing elderberry shrubs (*Sambucus* spp.), upon which the VELB are completely dependent for all stages of their life cycle. The females lay their eggs in crevices in the bark. After hatching, the larvae burrow into the stems of the tree where they will feed on the interior wood for the next one to two years. The larvae then form pupae from which the adults emerge. The adults then bore their way out of the stems, leaving a distinctive oval shaped hole. As the larvae and adults are rarely seen, these bore holes are often the only evidence of this species' presence. After emergence from the stems, the adults remain in association with the elderberries, where they will feed on the elderberry foliage and eventually reproduce. All elderberry shrubs within the known range of the VELB, which have one or more stems with diameters of one inch or greater at ground level, are considered potential habitat for this species. This species or its habitat has been documented along the Sacramento River.

### **Reptiles**

#### **Western Pond Turtle (*Emys (Clemmys) marmorata*)**

Western pond turtles were described above in the South San Joaquin Valley discussion. Although not documented in the CNDDDB, this species has been observed along the Sacramento River.

### **Birds**

#### **Bank Swallow (*Riparia riparia*)**

The bank swallow is a state-listed threatened species. The bird builds nests in deep burrows that it digs perpendicularly into nearly vertical earthen banks along streams, coastal bluffs, and sand and gravel pits. In California, it relies on naturally eroding habitats of major lowland river systems. The species is colonial and migratory, breeding in California from April to August in the Central Valley and wintering in South America. The bank swallow once bred throughout the lowlands of the state with major populations on the broad river valleys of central California. The current population is restricted to portions of the upper Sacramento River, primarily between Redding and Colusa, about four or five central and north coast colonies, and scattered colonies in northern and northeastern California. This species has been recorded along the Sacramento River, upstream from its confluence with the Feather River.

#### **Burrowing Owl (*Athene cunicularia*)**

Burrowing owls were described above in the South San Joaquin Valley discussion. This species has been recorded along the Sacramento River just north of the Town of Freeport.

#### **Great Blue Heron (*Ardea herodias*)**

The great blue heron is not a federal or state-listed species, but it is listed on the CDFG Special Animals List. This heron is a colonial nester in tall trees, cliff sides, and sequestered spots on marshes. The rookery sites are close in proximity to foraging habitat, such as marshes, lake margins, tide-flats, rivers and streams, and wet meadows. It breeds from February through July. This species is commonly observed along the Sacramento River and a rookery has been

recorded along the Sacramento River, at a location approximately seven miles upstream from the confluence of the Sacramento and San Joaquin Rivers.

### **Great Egret (*Ardea albus*)**

Great egret is not a federal or state-listed species, but it is listed on the CDFG Special Animals List. It is a common yearlong resident throughout California, except for high mountains and deserts. It requires groves of trees suitable for nesting and roosting, relatively isolated from human activities, near aquatic foraging areas. Nests are built of sticks and stems of marsh plants and usually occur near water, at a height of 6 to 12 meters above ground and are sheltered from prevailing winds. The nesting season is between March and July. This species is commonly observed along the Sacramento River and a rookery has been recorded within a mile of the river, approximately five miles south of its confluence with the Feather River.

### **Swainson's Hawk (*Buteo swainsoni*)**

Swainson's hawk was described above under the South San Joaquin Valley discussion. Recorded nest sites are all along the Sacramento River.

### **Tricolored Blackbird (*Agelaius tricolor*)**

Tricolored blackbirds were described above under the South San Joaquin Valley discussion. This species has been recorded along the Sacramento River, near its confluence with the Feather River.

### **Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)**

The western yellow-billed cuckoo is a state-listed endangered species and a federal-listed candidate species. Historically, the yellow-billed cuckoo bred throughout much of North America. They breed from mid- to late-May to July in dense willow and cottonwood stands in river floodplains. The greatest threat to the species is loss of riparian habitat. It has been estimated that 90% of the cuckoo's stream-side habitat has been lost. Habitat loss in the west is attributed to agriculture, dams and river flow management, overgrazing and competition from exotic plants such as tamarisk. This species has been recorded along the Sacramento River, near the Town of Clarksburg.

## **Feather River**

### ***Sensitive Communities***

#### **Great Valley Mixed Riparian Forest**

The Great Valley mixed riparian forest habitat was described above under the Sacramento River discussion. It is located along the Feather River, in a couple of different locations, the largest of which is approximately eight miles south of Marysville/Yuba City.

## ***Special Status Plants***

### **Hartweg's Golden Sunburst (*Pseudobahia bahiifolia*)**

Hartweg's golden sunburst is a federal and state-listed endangered species and a CNPS 1B plant. It is an herbaceous annual in the sunflower (Asteraceae) family that blooms in March and April. The plant is known to occur mostly in the San Joaquin Valley at elevations ranging from 15 to 150 meters above mean sea level. It grows in valley and foothill grasslands and woodland habitats with clay soils. It is seriously threatened by development, agriculture, overgrazing, and trampling. CNDDDB contains one record of this plant from 1848 in the vicinity of the Yuba and Feather River confluence.

### **Pink Creamsacs (*Castilleja rubicundula* ssp. *rubicundula*)**

Pink creamsacs is a CNPS List 1B plant. This annual herb belongs to the Scrophulariaceae (Figwort) family. It occurs in open areas of chaparral, in cismontane woodland, meadows and seeps and on serpentinite substrate in valley and foothill grasslands. It is found at elevations between 20 and 900 meters and blooms from April to June. This species has been recorded at the Thermalito Diversion Pool.

### **Veiny Monardella (*Mondardella douglasii* ssp. *venosa*)**

Veiny monardella is a CNPS List 1B plant. This herbaceous annual belongs to the mint (Lamiaceae) family and blooms from May to July. It occurs in valley and foothill grasslands and woodland habitats at elevations ranging from 60 to 410 meters above mean sea level. It is threatened by development of wastewater treatment plants. There is one record for veiny monardella from 1854 near Corduas Farm, on the north bank of the Yuba River near the confluence of the Yuba and Feather rivers.

## ***Special Status Wildlife***

### **Invertebrates**

#### ***Sacramento Valley Tiger Beetle (*Cicindela hirticollis abrupta*)***

Sacramento Valley tiger beetle is not a federal or state-listed species, but it is listed on the CDFG Special Animals List. It is a littoral-riparian species that inhabits fine-grained sandy shorelines of lakes and rivers. Since the 1970's, this beetle has been known only from the shoreline and sand bars of the Feather River near the town of Nicolaus in Sutter County. This species can be distinguished from related subspecies by the maculation patten on its elytra.

#### ***Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)***

The valley elderberry longhorn beetle was described above under the Sacramento River discussion. This species has been recorded along the Feather River in several locations – at Star Bend, in the Oroville Wildlife Area, and approximately two miles south of the Feather River/Honcut Creek confluence.

## **Reptiles**

### **Giant Garter Snake (*Thamnophis gigas*)**

The giant garter snake (GGS) is a federal and state-listed threatened species. Habitat requirements for GGS include adequate water during the snake's active season (early spring through mid-fall) to provide food and cover; emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat during the active season; grassy banks and openings in waterside vegetation for basking; and higher elevation uplands for cover and refuge from flood waters during the snake's winter dormant season. Permanent freshwater marshes, agricultural canals, ditches and drains associated with rice fields, streams, and sloughs, particularly with mud bottoms provide habitat. To avoid inundation in the winter, giant garter snake (GGS) overwinter in upland, non-marsh sites in small mammal burrows or under debris in close proximity to summer habitat. This species has been recorded along the Feather River approximately three miles north of its confluence with the Sacramento River.

### **Western Pond Turtle (*Emys (Clemmys) marmorata*)**

Western pond turtles were described above in the South San Joaquin Valley discussion. This species has been documented in the Feather River, just south of the Oroville Dam and just north of the Feather River/Bear River confluence.

## **Birds**

### **Bank Swallow (*Riparia riparia*)**

Bank swallows were described above under the Sacramento River discussion. This species has been recorded at more than 25 locations along the Feather River.

### **Osprey (*Pandion haliaetus*)**

Osprey were described above under the Lake Perris discussion. They have been recorded along the Thermalito Diversion Pool.

### **Swainson's Hawk (*Buteo swainsoni*)**

Swainson's hawk was described above under the South San Joaquin Valley discussion. This species has been recorded at more than 25 locations along the Feather River.

### **Tricolored Blackbird (*Agelaius tricolor*)**

Tricolored blackbirds were described above under the South San Joaquin Valley discussion. This species has been recorded along the Sacramento River, near its confluence with the Feather River.

### **Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)**

Western yellow-billed cuckoo was described above under the Sacramento River discussion. This species has been recorded in four locations along the Feather River – two near Marysville and two near the Feather River/Bear River confluence.

## **Mammals**

### **Silver-haired Bat (*Lasionycteris noctivagans*)**

Silver-haired bat is not a federal or state-listed species, but it is listed on the CDFG Special Animals List. It is a medium sized bat that is nearly black, with silvery-tipped hairs on its back. It is a solitary, tree roosting species of deciduous and coniferous forests. In summer, it roosts in protected spots such as under bark or in dead trees, woodpecker holes, or bird nests. This species migrates south during the winter and hibernates in trees, crevices, buildings, and other protected places. This species has been recorded along the Feather River, south of the Thermilato Diversion Pool.

## **Plumas County**

Plumas County is located in northeastern California, where the Sierra Nevada and Cascade mountain ranges meet. It boasts more than 100 lakes, 1,000 miles of rivers and streams with over a million acres of national forest, including portions of the Plumas National Forest and Lassen Volcanic National Park.

The various lakes throughout Plumas County, which include Bucks, Almanor, Davis, and Frenchman's Reservoir, provide numerous activities such as water-skiing, swimming, and canoeing. Feather River is designated as a National Wild & Scenic River through Plumas County.

The CNDDDB was queried for all of Plumas County, but only species and habitats that occur along streams are discussed below.

### ***Sensitive communities***

No sensitive communities are known to occur along stream habitats in Plumas County.

### ***Special Status Plants***

#### **Cut-leaved Ragwort (*Senecio eurycephalus* var. *lewisrosei*)**

Cut-leaved ragwort was described above under the Sacramento River discussion. This species has been recorded along the North Fork of the Feather River in western Plumas County.

#### **Mildred's Clarkia (*Clarkia mildrediae* ssp. *mildrediae*)**

Mildred's clarkia was described above under the Sacramento River discussion. This species has been recorded along the North Fork of the Feather River in western Plumas County.

#### **Mingan moonwort (*Botrychium minganense*)**

The mingan moonwort is a CNPS List 2 plant. It is found in montane coniferous forests between elevations of 1,500 and 2,055 meters along creek banks, mesic woods, meadows, and sand dunes. This perennial fern consists of an upright stem that terminates in a cluster of tiny ball-like structures, resembling a bunch of grapes (hence the nickname "grapefern"). Fern-like leaf blades of a dull green color measure approximately 10 centimeters long and 2.5 centimeters

wide. Leaflets are fan-shaped. It is located throughout northern North America, extending south to the western mountains of southern California and northern Arizona, and to Minnesota, Wisconsin, and Michigan. This species has been recorded in five locations in Plumas County, but the locations are suppressed.

#### **Mosquin's Clarkia (*Clarkia mosquinii*)**

Mosquin's clarkia was described above under the Sacramento River discussion. This species has been recorded along the Fall River at the western Plumas County line.

#### **Northwestern moonwort (*Botrychium pinnatum*)**

The northwestern moonwort is a CNPS List 2 plant. It is found in creek banks, meadows, seeps, and the shrubby slopes of montane coniferous forests between elevations of 1,770 and 2,010 meters. This perennial fern has bright green, deeply-lobed leaves which measure approximately 8 centimeters long and 5 centimeters wide, and are doubly-pinnate. Its range is the Klamath Mountain Range and the High Cascade Range, and extends as far north as Alaska and east to Colorado. This species has been recorded at one location in Plumas County, but it is suppressed.

#### **Nuttall's pondweed (*Potamogeton epihydrus* ssp. *nuttallii*)**

Nuttall's pondweed is a CNPS List 2 plant. It is found in shallow freshwater marshes and swamps, as well as ponds, lakes, streams, and irrigation ditches. This monocot favors elevations between 370 and 2,110 meters. It is a perennial rhizomatous herb that is less than 170 centimeters in height, with submersed, sessile leaves that are from 5 to 25 centimeters in length and less than 1 centimeter in width. Leaves are ribbon-like and linear, with a rounded tip and a long petiole. The range of this native Californian plant is the outer northern coastal mountain ranges of California, the high Sierra Nevada, and the Modoc Plateau. Outside California, it is found in areas throughout Oregon and Washington to southeastern Alaska, and extends eastward as far as Colorado. It has been recorded in one location in eastern Plumas County.

#### **Sheldon's sedge (*Carex sheldonii*)**

Sheldon's sedge is a CNPS List 2 plant. It is found along creeks, wet meadows, marshes, swamps, and montane coniferous forests between elevations of 1,065 to 1,755 meters. It is a perennial herb with a three-sided stem, and parallel-veined leaf blades which measure approximately three to six centimeters wide and are notably hairy. Its range is the northern portion of the high Sierra Nevada Mountain Range and the Modoc Plateau. It has been recorded in 14 locations throughout Plumas County.

#### **Western Goblin (*Botrychium montanum*)**

The western goblin is a CNPS List 2 plant. It is found along creek banks where the soil is very moist and very high in organic matter, in dark, old growth montane coniferous forests between elevations of 1,500 and 1,830 meters. It also grows in meadows and seeps with high mineral contents. This rhizomatous herb is gray-green and usually 4 to 12.5 centimeters in height, with oblong, pointed leaves that have 2 to 4 teeth or lobes at the blade tip. Its range is the northern portion of California, through Oregon and Washington to southeastern Alaska, and extends eastward as far as Idaho and Montana. It has been recorded at Milkhouse Flat in Plumas County.

### **Yellow Willowherb (*Epilobium luteum*)**

The yellow willowherb is a CNPS List 2 plant. Yellow willowherb is an upright, bushy wildflower with slender stalks and numerous finely toothed alternate leaves each about three inches long. Its leaf shape is lanceolate (narrow, pointed at each end) to ovate (egg-shaped). The 4-petaled creamy-yellow flowers grow singly from the upper leaf axils on a plant that grows from 6 to 28 inches high. The native range of yellow willowherb is from Alaska south to Vancouver Island, Oregon, Washington, and parts of California. It is found in lower montane forests along streams and seeps between 1,500 and 1,750 meters in elevation. This species has been recorded along a U.S. Forest Service road in southern Plumas County.

## ***Special Status Wildlife***

### **Amphibians**

#### **California Red-legged Frog (*Rana aurora draytonii*)**

The California red-legged frog was described under the San Luis Reservoir discussion. They have been recorded in Plumas County, approximately 4.5 miles southeast of Janesville in Plumas National Forest.

#### **Cascades Frog (*Rana cascadae*)**

The Cascades frog is a California species of special concern. This moderate-sized brown, red-brown, or slightly greenish brown frog has prominent dorsolateral folds and a distinct light jaw stripe. In California, this species was distributed from the Shasta-Trinity region eastward toward the Modoc Plateau and southward to the Lassen region and the upper Feather River system. It occurs and reproduces in both ephemeral and permanent ponds or streams but probably cannot survive in ephemeral situations where at least some of the substrate does not remain saturated. This species has been recorded at 10 locations in northwestern Plumas County.

#### **Foothill yellow-legged Frog (*Rana boylei*)**

The foothill yellow-legged frog is a California species of concern. It is a moderate-sized, variably colored frog, but usually dark to light gray, brown, green, or yellow with a somewhat mottled appearance. The underside surfaces of the legs and lower belly are yellow or orangish-yellow. Historically, this species was known to occur in most Pacific drainages from the Santiam River system in Oregon (Mehama, Marion County) to the San Gabriel River system (Los Angeles County) in California. It requires shallow, flowing water, apparently preferring small to moderate-sized streams situations with at least some cobble-sized substrate. It needs at least 15 weeks to attain metamorphosis. This species has been recorded in Slate Creek, three miles southeast of Little Grass Valley Reservoir and in Spanish Creek, 200 meters north of Forest Road 24N30.

#### **Mountain Yellow-legged Frog (*Rana muscosa*)**

The mountain yellow-legged frog is federally-listed as endangered for the populations in the San Gabriel, San Jacinto, and San Bernardino Mountains, and a California species of special concern. This moderate-sized, highly variably colored frog has a dorsal pattern that ranges from discrete dark spots that can be few and large to smaller and more numerous ones with a mixture of size and shapes. The belly and undersurfaces of the high limbs are yellow, which ranges in hue from pale lemon yellow to an intense sun yellow. This near endemic to California is distributed more or less continuously in the Sierra Nevada from the vicinity of La Porte (southern Plumas County) southward to Taylor and French Joe Meadows (southern Tulare County). This species inhabits ponds, lakes, and streams at moderate to high elevations. This species has been recorded at 12 locations throughout Plumas County.

## **Birds**

### **Bald Eagle (*Haliaeetus leucocephalus*)**

The bald eagle was described above in the Castaic Lake discussion. There are over 20 occurrences of this species throughout Plumas County.

### **Bank Swallow (*Riparia riparia*)**

Bank swallows were described above under the Sacramento River discussion. This species has been recorded in Lights and Indian Creeks.

### **Osprey (*Pandion haliaetus*)**

Osprey were described above under the Lake Perris discussion. This species has been recorded at over 30 locations throughout Plumas County.

### **Willow Flycatcher (*Empidonax trailii*)**

The willow flycatcher is state-listed endangered species. It is found in extensive swampy thickets of low, dense willows on the edge of wet meadows. It also occurs in upland pastures, abandoned orchards, wooded lakeshores, ponds, and along streams and floodplains. Standing only 15 centimeters in height, this species features dull gray-green feathers above and whitish-yellow feathers below, with two dull white wing bars and an almost undetectable narrow white eye ring on each side. Its range starts at the northern boundaries of British Columbia, Alberta, North Dakota, New York, and Maine, and extends south to central California, Nevada, Arkansas, and Virginia. It favors elevations between 2,000 and 8,000 meters. Winters are spent in the tropics. It breeds from June to August, and requires dense willow thickets for nesting and roosting. A small clutch of three to four eggs are incubated for an average of 13 days by the female in a nest built the fork of a small shrub. This species has been recorded 12 locations throughout Plumas County.

## **Mammals**

### **American Badger (*Taxidea taxus*)**

The American badger was described above under the South San Joaquin Valley discussion. This species has been recorded in four locations throughout Plumas County.

**TABLE 1**

**SPECIAL-STATUS SPECIES WITH KNOWN OCCURRENCES NEAR THE PROPOSED PROJECT, BY FACILITY OR REGION**

Species Name	Status <sup>(1)</sup> Federal/State/CNPS		Habitat	So. San Joaquin Valley	Kern Fan Element	Castaic Lake	Lake Perris	San Luis Reservoir	Lake Oroville	Sacramento River	Feather River	Plumas County
	1994	2006										
<b>Plants</b>												
Bakersfield cactus <i>Opuntia basilaris</i> var. <i>treleasei</i>		E/E/1B	Flood plains, ridges, bluffs and rolling hills in saltbush scrub plant communities.	X								
Brittlescale <i>Atriplex depressa</i>		-/-1B	Alkaline or clay soils in alkali flats.	X								
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>brandegeae</i>	-/-	-/-1B	Chaparral cismontane woodland often in roadcuts.						X			
California jewel- flower <i>Caulanthus</i> <i>californicus</i>		E/E/1B	Nonnative grasslands, upper sonoran subshrub scrub, and cismontane juniper woodland and scrub communities	X								
Comanche Point Layia <i>Layia leucopappa</i>		-/-1B	Sparsely-vegetated microhabitats in nonnative grassland	X								
Carquinez goldenbush <i>Isocoma arguta</i>	C2/-1B	-/-1B	Valley and foothill grassland with alkaline soils.							X		
Cut-leaved ragwort <i>Senecio</i> <i>eurycephalus</i> var. <i>lewisrosei</i>	-/-1B	-/-1B	Chaparral, cismontane woodland in lower montane coniferous forest with serpentinite soil.						X		X	X
Delta mudwort <i>Limosella subulata</i>	-/-2	-/-2	Freshwater and brackish marshes and swamps.							X		
Delta tule pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	C2/-1B	-/-1B	Freshwater and brackish marshes and swamps.							X		
Earlimart orache <i>Atriplex</i> <i>erecticaulis</i>		-/-1B	In dry areas between vernal pools and along roadsides	X								

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**SPECIAL-STATUS SPECIES WITH KNOWN OCCURRENCES NEAR THE PROPOSED PROJECT, BY FACILITY OR REGION**

Species Name	Status <sup>(1)</sup> Federal/State/CNPS		Habitat	So. San Joaquin Valley	Kern Fan Element	Castaic Lake	Lake Perris	San Luis Reservoir	Lake Oroville	Sacramento River	Feather River	Plumas County
	1994	2006										
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	E/E/1B	E/E/1B	Cismontane woodland, valley and foothill grassland with clay soils.	X							X	
Hoover's wolly-star (eriastrum) <i>Eriastrum hooveri</i>	T/-/4	D/-/4	Alkali sinks, washes. Usually on silty to sandy soils.		X							
Kern mallow <i>Eremalche kernensis</i>		E/-/1B	Valley saltbush scrub	X								
Lemmon's jewel-flower <i>Caulanthus coulteri</i> var. <i>lemmonii</i>		-/-/1B	Valley and foothill grassland and pinyon and juniper woodland habitats	X								
Lost Hills crownscale <i>Atriplex vallicola</i>		-/-/1B	Dried beds of alkaline pools within scrub or annual grassland communities	X								
Mason's lilaeopsis <i>Lilaeopsis masonii</i>	C2/R/1B	-/R/1B	Freshwater or brackish marshes, swamps, or riparian scrub.							X		
Midred's clarkia <i>Clarkia mildrediae</i> ssp. <i>mildrediae</i>	-/-/4	-/-/1B	Cismontane woodland, lower montane coniferous forest with sandy usually granitic soils.						X		X	X
Mingan moonwort <i>Botrychium minganense</i>		-/-/2	Creek banks, mesic woods meadows and sand dunes									X
Mosquin's clarkia <i>Clarkia mosquinii</i>	C2/-/1B	-/-/1B	Cismontane woodland in lower montane coniferous forest with rocky soils, and along roadsides.						X		X	X

**TABLE 1**

**SPECIAL-STATUS SPECIES WITH KNOWN OCCURRENCES NEAR THE PROPOSED PROJECT, BY FACILITY OR REGION**

Species Name	Status <sup>(1)</sup> Federal/State/CNPS		Habitat	So. San Joaquin Valley	Kern Fan Element	Castaic Lake	Lake Perris	San Luis Reservoir	Lake Oroville	Sacramento River	Feather River	Plumas County
	1994	2006										
Northern California black walnut <i>Juglans hindsii</i>	C2/-/1B	-/-/1B	Riparian forests and woodlands.							X		
Northwestern moonwort <i>Botrychium pinnatum</i>		-/-/2	Creek banks, meadows, seeps and shrubby slopes of montane coniferous forests									X
Nuttall's ponweed <i>Potamogeton epiphydrus</i> ssp. <i>nuttallii</i>		-/-/2	Shallow freshwater marshes, and swamps, ponds, lakes, streams and irrigation ditches									X
Pink creamsacs <i>Castilleja rubicundula</i> ssp. <i>rubicundula</i>		-/-/1B	Open areas of chaparral, in cismontane woodlands, meadows and seeps on sepetinite substrate								X	
Recurved larkspur <i>Delphinium recurvatum</i>	C2/-/1B	-/-/1B	Chenopod scrub and valley grassland with alkaline soils.	X	X							
Rose mallow <i>Hibiscus lasiocarpus</i>	C2/-/2	-/-/2	Freshwater marshes and swamps.							X		
San Joaquin spearscale <i>Atriplex joaquiniana</i>	C2/-/1B	-/-/1B	Chenopod scrub, meadows and seeps, playas, valley and foothill grasslands with alkaline soil.							X		
San Joaquin woollythreads <i>Monolopia (Lembertia) congdoni</i>	E/-/1B	E/-/1B	Alkaline or loamy plains, sandy soils.	X	X							
Sheldon's sedge <i>Carex sheldonii</i>		-/-/2	Creeks, wet meadows, marshes, swamps, and montane coniferous forests									X

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Species Name	Status <sup>(1)</sup> Federal/State/CNPS		Habitat	So. San Joaquin Valley	Kern Fan Element	Castaic Lake	Lake Perris	San Luis Reservoir	Lake Oroville	Sacramento River	Feather River	Plumas County
	1994	2006										
Slough thistle <i>Cirsium crassicaule</i>	C2/-/1B	SC/-/1B	Sloughs, riverbanks, and marshy areas.		X							
Subtle orache <i>Atriplex subtilis</i>		-/-/1B	Valley and foothill grassland	X								
Suisun marsh aster <i>Aster lentus</i>	C2/-/1B	-/-/1B	Freshwater and brackish marshes and swamps.							X		
Tejon poppy <i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>		-/-/1B	Adobe clay soils in sparsely- vegetated grasslands	X								
Veiny monardella <i>Monardella douglasii</i> var. <i>venosa</i>	C2/-/1B	-/-/1B	Cismontane woodland, valley and foothill grasslands with heavy clay soils.								X	
Western goblin <i>Botrychium montanum</i>		-/-/2	Moist creek banks with high organic matter									X
White-stemmed clarkia <i>Clarkia gracilis</i> ssp. <i>albicaulis</i>	-/-/1B	-/-/1B	Chaparral cismontane woodland, sometimes with serpentinite soil.						X			
Yellow willowherb <i>Epilobium luteum</i>		-/-/2	Along streams and seeps in lower montane forests									X
<b>Invertebrates</b>												
Antioch Dunes anthicid beetle <i>Anthicus antiochensis</i>	C2/-	-/SAL	Found in loose sand of sand bars and sand dunes.							X		

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Species Name	Status <sup>(1)</sup> Federal/State/CNPS		Habitat	So. San Joaquin Valley	Kern Fan Element	Castaic Lake	Lake Perris	San Luis Reservoir	Lake Oroville	Sacramento River	Feather River	Plumas County
	1994	2006										
Doyen's trigonoscuta dune weevil <i>Trigonoscuta</i> sp.		-/SAL	Sand dunes	X								
Molestan blister beetle <i>Lytta molesta</i>		-/SAL	Non-native grassland; vernal pools	X								
Sacramento anthicid beetle <i>Anthicus sacramento</i>	C2/-	-/-	Found in sand slip-faces among willows; associated with riparian and other aquatic habitats.							X		
Sacramento Valley tiger beetle <i>Cicindela hirticollis abrupta</i>	C2/-	-/-	Found in association with fine-grained sands along river shorelines and sand bars.								X	
San Joaquin dune beetle <i>Coelus gracilis</i>		-/SAL	Sand dunes	X								
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T/-	T/-	Riparian and oak savanna habitats with elderberry shrubs; its hold plant is elderberry ( <i>Sambucus</i> sp.).	X						X	X	
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>		T/-	Vernal pool and seasonal wetland habitats	X								
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>		E/-	Vernal pools and seasonal wetland habitats	X								

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Species Name	Status <sup>(1)</sup> Federal/State/CNPS		Habitat	So. San Joaquin Valley	Kern Fan Element	Castaic Lake	Lake Perris	San Luis Reservoir	Lake Oroville	Sacramento River	Feather River	Plumas County
	1994	2006										
<b>Amphibians</b>												
California red-legged frog <i>Rana aurora draytonii</i>	C2/CSC	T/CSC	Slow-flowing portions of perennial streams, ephemeral streams, and hillside seeps that maintain pool environments (including ponds) or saturated soils throughout the summer months.					X				X
California tiger salamander <i>Ambystoma californiense</i>		T/CSC	Annual grassland habitat; understory of open valley-foothill hardwood habitats	X								
Cascades frog <i>Rana cascadae</i>		-/SCS	Ephemeral and permanent ponds and streams									X
Foothill yellow-legged frog <i>Rana boylei</i>		-/CSC	Small to moderate sized streams with cobble sized substrate									X
Mountain yellow-legged frog <i>Rana muscosa</i>		E/CSC	Ponds, lakes and streams at moderate to high elevations									X
Western spadefoot <i>Scaphiopus hammondi</i>	C2/CSC	-/CSC	Primarily grassland habitats, requires vernal pools for breeding and egg-laying.	X	X							
<b>Reptiles</b>												
Blunt-nosed leopard lizard <i>Gambelia sila</i>	E/E, FP	E/E, FP	Sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief.	X	X			X				

TABLE 1

SPECIAL-STATUS SPECIES WITH KNOWN OCCURRENCES NEAR THE PROPOSED PROJECT, BY FACILITY OR REGION

Species Name	Status <sup>(1)</sup> Federal/State/CNPS		Habitat	So. San Joaquin Valley	Kern Fan Element	Castaic Lake	Lake Perris	San Luis Reservoir	Lake Oroville	Sacramento River	Feather River	Plumas County
	1994	2006										
Giant garter snake <i>Thamnophis gigas</i>	PE/E	T/T	Sloughs, canals, low gradient streams and freshwater marsh habitats where there is a prey base of small fish and amphibians; also found in irrigation ditches and rice fields; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter.								X	
San Joaquin whipsnake <i>Masticophis flagellum ruddocki</i>		-/CSC	Open, dry vegetative associations with little or no tree cover. Valley grassland and saltbush scrub.	X								
Western pond turtle <i>Clemmys marmorata</i> (includes both subspecies)	C2/CSC	-/CSC	Permanent or nearly permanent bodies of water; requires basking sites, and suitable nesting sites.	X	X	X	X			X	X	
<b>Birds</b>												
Bald eagle <i>Haliaeetus leucocephalus</i>	E/E	PD,T/ E, FP	Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. General habitats include ocean shore, lake margins, and rivers for both nesting and wintering.			X	X	X	X			X
Bank swallow <i>Riparia riparia</i>	-/T	-/T	Require fine-textured or sandy banks or cliffs to dig horizontal nesting tunnels along large rivers.							X	X	X

**TABLE 1**

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	1994	2006										
Burrowing owl <i>Athene cunicularia</i>	C2/CSC	-,BCC/ CSC	Subterranean nester, dependant upon burrowing mammals, Burrow sites typically in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	X	X					X		
California thrasher <i>Toxostoma redivivum</i>	-/-	-/-	Lowland and coastal chaparral, riparian thickets							X		
Cooper's hawk <i>Accipiter cooperii</i>	-/CSC	-/CSC	Nests in riparian growths of deciduous trees, as in canyon bottoms of river floodplains, within open, interrupted or marginal woodland.				X					
Double-crested cormorant <i>Phalacrocorax auritus</i>	-/CSC	-/CSC	Fresh, brackish, and salt water, along coastal regions and inland lakes		X		X					
Golden eagle <i>Aquila chrysaetos</i>	--/CSC	-,BCC/ CSC,FP	Found in open country with rolling foothills, mountain areas, sage-juniper flats, and desert habitats. Nests sites are often on rock ledges of cliffs or large trees.				X					
Great blue heron <i>Ardea herodias</i>	-/-	-/-	Estuaries and coastal areas with tree groves for nesting.							X		
Great egret <i>Ardea albus</i>	-/-	-/-	Nests and roosts in mixed colonies in low trees. Forages in shallow water or in grassy marshes.							X		

**TABLE 1**

**SPECIAL-STATUS SPECIES WITH KNOWN OCCURRENCES NEAR THE PROPOSED PROJECT, BY FACILITY OR REGION**

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	1994	2006										
Lawrence's goldfinch <i>Carduelis lawrencei</i>	-/-	-,BCC/ -	Oak and riparian woodland, chaparral, pinion/juniper woodland, and weedy areas near water.				X					
Le Conte's thrasher <i>Toxostoma lecontei</i>		-/CSC	Desert flats, washes and alluvial fans with sand and/or alkaline soil and scatter shrubs	X								
Least bell's vireo <i>Vireo bellii pusillus</i>	E/E	E,BCC/E	Summer resident of southern California, in low riparian habitat in the vicinity of water or in dry river bottoms; nests placed along margins of bushes or on twigs projecting into pathways, usually on willow, baccharis, or mesquite.				X					
Loggerhead Shrike <i>Lanius ludovicianus</i>	C2/CSC	-,BCC/ CSC	Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting. Typically nests in broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub, and wash.		X		X					
Mountain Plover <i>Charadrius montanus</i>		-/CSC	Winters in agricultural fields and pastures	X								
Northern Goshawk <i>Accipiter gentiles</i>		-/CSC	Old growth forests						X			

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	1994	2006										
Northern Harrier <i>Circus cyaneus</i>	-/CSC	-/CSC	Breeds in shrubby vegetation within marshes, or grasslands.		X		X					
Osprey <i>Pandion haliaetus</i>	-/CSC	-/CSC	Large bodies of water supporting fish. Nest in exposed locations, often in the tops of trees or in snags in beaver swamps.				X				X	X
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	PE/E	E/E	Riparian woodlands in southern California.				X					
Swainson's hawk <i>Buteo swainsoni</i>	-/T	-,BCC/T	Breeds in stands with few trees in Juniper-sage flats, riparian areas and oak savannahs. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	X						X	X	
Tricolored blackbird <i>Agelaius tricolor</i>	C2/CSC	-,BCC/CSC	Marshes with dense stands of cattails, blackberries, or dense stands of tall herbs such as thistles.	X	X					X	X	

**TABLE 1**

**SPECIAL-STATUS SPECIES WITH KNOWN OCCURRENCES NEAR THE PROPOSED PROJECT, BY FACILITY OR REGION**

Species Name	Status <sup>(1)</sup> Federal/State/CNPS		Habitat	So. San Joaquin Valley	Kern Fan Element	Castaic Lake	Lake Perris	San Luis Reservoir	Lake Oroville	Sacramento River	Feather River	Plumas County
	1994	2006										
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	-/E	C,BCC/E	Requires dense, large tracts of riparian woodlands with well developed understories for breeding. Occurs in deciduous trees and shrubs, especially willows which are required for roost and nest sites. During the breeding season, associated with moist habitats along slow-moving watercourses where humidity is high.							X	X	X
White-faced ibis <i>Plegadis chihi</i>		-/CSC	Salt and freshwater marshes; flooded agricultural fields	X								
White-tailed (black shouldered) kite <i>Elanus leucurus</i>	-/*	-/FP	Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching. General nesting habitat is rolling foothill/valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.				X					
Willow flycatcher <i>Empidonax traillii</i>		-/E	Dense willow thickets for nesting									X
Yellow headed blackbird <i>Xanthocephalus xanthocephalus</i>	-/-	-/-	Nests in colonies in emergent marsh, such as tules and cattails. Forages in marshes, agricultural fields, and pastures.	X								

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	1994	2006										
Yellow warbler <i>Dendroica petechia brewsteri</i>	-/CSC	-/CSC	Nests in riparian habitat, often in willows, cottonwoods, aspens, sycamores and alders. Also nests in montane shrubbery in open conifer forests.				X					
<b>Mammals</b>												
American badger <i>Taxidea taxus</i>	-/CSC	-/SA (CSC in 2006)	Need friable soils and open, uncultivated ground in drier open stages of most shrub, forest, and herbaceous habitats.	X	X			X X				X
Buena Vista Lake shrew <i>Sorex ornatus relictus</i>	C1/CSC	E/CSC	Marshlands and riparian areas in the Tulare Basin. Prefers moist soil. Uses stumps, logs and litter for cover.	X	X							
Giant kangaroo rat <i>Dipodomys ingens</i>		E/E	Annual grassland on gentle slopes of generally less than 10 degrees, with friable, sandy-loam soils	X								
Western mastiff bat <i>Eumops perotis californicus</i>	C2/CSC	-/CSC	Roosts in crevices in cliff faces, high buildings, trees and tunnels; uses many open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.			X	X					

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	1994	2006										
Nelson's (San Joaquin) antelope squirrel <i>Ammospermophilu s nelsoni</i>	C2/T	-/T	Western San Joaquin Valley on dry, sparsely vegetated loam soils. Need widely scattered shrubs, forbs and grasses in broken terrain with gullies and washes	X	X							
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E/T	E/T	Needs loose-textured sandy soils for burrowing, and suitable prey base, in annual grasslands or grassy open stages with scattered shrubby vegetation.	X	X							
San Joaquin pocket mouse <i>Perognathus inornatus inornatus</i>		-/SAL	Fine textured or sandy soils	X								
Short-nosed kangaroo rat <i>Dipodomys nitratoides brevinasus</i>		/CSC	Arid grasslands with scattered shrubs and desert- shrub associations	X								
Silver-haired bat <i>Lasionycteris noctivagans</i>	-/-	-/-	Deciduous and coniferous forests. In summer roosts under bark or in dead trees, woodpecker holes, or bird nests. In winter hibernates in trees, crevices, buildings, and other protected places.								X	

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	1994	2006										
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	E/T	E/T	Open grasslands and sparse coastal sage scrub. Typical habitat consists of native and non-native annual herbs and grasses.				X					
Tipton kangaroo rat <i>Dipodomys nitratoides nitratoides</i>	E/E	E/E	Needs soft friable soils which escape seasonal flooding within saltbrush scrub and sink scrub communities in the Tulare Lake Basin of the southern San Joaquin Valley.	X	X							
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>		-/CSC	Arid shrub land communities in hot, arid grassland and shrub land associations	X								
Yuma myotis <i>Myotis yumanensis</i>	C2/-/	-/	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution in closely tied to the bodies of water. Maternity colonies in caves, mines, buildings or crevices.				X					
<b>Natural Communities</b>												
Coastal brackish marsh			Dominated by perennial, emergent, herbaceous monocots to 2 m tall. Cover is often complete and dense. Similar to coastal salt marshes, but brackish from freshwater input.							X		

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	1994	2006										
Elderberry savanna			An open, winter deciduous shrub savanna dominated by elderberry shrubs ( <i>Sambucus</i> spp.). The understory is usually forbs and nonnative annual grasses.							X		
Great Valley cottonwood riparian forest			A dense, broad-leaved, winter deciduous riparian forest dominated by Fremont cottonwood ( <i>Populus fremontii</i> ) and one or more species of willow. The understory vegetation is dense and including seedlings and saplings of shade tolerant species.							X		
Great Valley Mesquite Scrub			Primarily vegetated by honey mesquite ( <i>Prosopis glandulosa torreyana</i> ), a perennial deep-rooted shrub that requires a high water table. Climate conditions consist of moist, foggy winters and hot dry summers.		X							
Great Valley mixed riparian forest			Dense mixture of tall mature cottonwood ( <i>Populus fremontii</i> ) and willows ( <i>Salix</i> spp.), California sycamore ( <i>Platanus racemosa</i> ), box elder, black walnut and white alder ( <i>Alnus rhombifolia</i> ).							X	X	

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	1994	2006										
Northern hardpan vernal pool			Consists of shallow ephemeral water bodies found in depressions (up to several hectares in size) occurring in grasslands and open woodlands throughout intermountain valleys of California, and Oregon.	X								
Valley Sacaton Grassland			Vegetation dominated by alkali sacaton ( <i>Sporobolus airoides</i> ), a tussock, or tuft forming grass. This habitat is found in areas with fine textured, poorly drained and usually alkaline soils, that have either seasonally high water tables or are flooded during the winter.	X	X							
Valley saltbrush scrub			Valley saltbush scrub is found in the southern and southwestern San Joaquin Valley on dissected alluvial fans with low relief. Community is dominated by shrubs of the Goosefoot family (Chenopodiaceae) and a low herbaceous annual understory.	X								

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	1994	2006										
Notes 1. Status explanation												
Federal												
E	Listed as endangered under the Federal Endangered Species Act.											
T	Listed as threatened under the Federal Endangered Species Act.											
PE	Proposed as endangered under the Federal Endangered Species Act.											
C1	Category 1 Candidate for which the USFWS has on file sufficient information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species. Proposed rules not yet issued because this action is precluded at present by other listing activity.											
C2	Category 2 Candidate for which information now in the possession of the USFWS indicated that proposing to list and endangered or threatened is possibly appropriate, but for which persuasive data on biological vulnerability and threat are not currently available to support proposed rules.											
SC	Federal Species of Concern. The USFWS decided to no longer maintain C2 and C3 lists, and species formerly categorized as such were informally termed "Species of Concern." The Sacramento Fish & Wildlife Office maintains a list of <i>Species of Concern</i> . These species receive no legal protection and the use of the term does not mean that they will eventually be proposed for listing. In 2006, the USFWS stopped maintaining a Federal Species of Concern list.											
D	Delisted – Delisted species are monitored for five years after being delisted.											
BCC	US Fish and Wildlife Service, Bird of Conservation Concern											
MNBMC	US Fish and Wildlife Service, Migratory Nongame Bird of Management Concern											
-	No listing											
State												
E	Listed as endangered under the California Endangered Species Act.											
T	Listed as threatened under the California Endangered Species Act.											
CSC	California Special Concern Species – categorized as such because of declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.											
FP	Fully Protected – Fully protected species may not be taken or possessed without a permit from the Fish and Game Commission.											
*	Taxa listed with an asterisk (*) fall into one or more of the following categories – (1) Taxa that are biologically rare, very restricted in distribution, or declining throughout their range; (2) population(s) in California that are peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California; and (3) taxa closely associated with a habitat that is declining in California (e.g. wetlands, riparian, old growth forest).											
SAL	Taxa found on the 2006 Special Animals List											
-	No listing.											
Other – California Native Plant Society												
1A	Presumed Extinct in California											
1B	Rare, threatened or endangered in California and elsewhere											
2	Rare, threatened, or endangered in California, but more common elsewhere.											
4	Plants of limited distribution.											
Sources:												
USFWS List of Candidate Fauna from California and Nevada as of 31 August 1994 (59 FR 58982)												
Endangered and Threatened Wildlife and Plants 50 CFR 17.11 and 17.12, August 20, 1994.												
State and Federal Endangered Animals for California and Listing Dates, Department of Fish and Game, Revised January 1994.												
California Department of Fish and Game Natural Diversity Data Base Special Animals, December 1992 (The 1994 version could not be located).												