

Table E-1. Special-Status Plant Species with Documented Occurrences in the City of Modesto General Plan Area (Based on occurrences within the Avena, Brush Lake, Ceres, Denair, Escalon, Oakdale, Salida, Riverbank, and Waterford 7.5 minute USGS quadrangles and Federal and State-listed species documented within Stanislaus County, April 2015)

Common and Scientific Name	Status^a: Federal/State/CNPS	Distribution	Preferred Habitats	Blooming Period	Potential for Occurrence in the General Plan Area^b
Large-flowered fiddleneck <i>Amsinckia grandiflora</i>	E/E/1B.1	Alameda, Contra Costa, San Joaquin, Stanislaus (USFWS list only).	Cismontane woodland, valley and foothill grassland.	April-May	Low
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	-/-/1B.2	Merced, Solano, and Yolo Counties. Historically more widespread.	Grassy flats and vernal pool margins, on alkali soils, below 200 feet.	March-June	Moderate
Heartscale <i>Atriplex cordulata</i>	-/-/1B.2	Alameda, Butte, Contra Costa, Colusa, Fresno, Glenn, Kern, Madera, Merced, San Luis Obispo, Solano, and Stanislaus counties. Western Central Valley and valleys of adjacent foothills.	Alkali grassland, alkali meadow, and alkali scrub, 0-1,837 feet.	April-October	Moderate
Crownscale <i>Atriplex coronata</i> var. <i>coronata</i>	-/-/4.2	Alameda, Contra Costa, Fresno, Glenn, Kings, Kern, Merced, Monterey, San Joaquin, San Luis Obispo, Solano, and Stanislaus counties. Southern Sacramento Valley, San Joaquin valley, eastern south coast inner range.	Chenopod scrub, valley and foothill grassland, vernal pools, on fine alkaline soils, 3-1,935 feet.	March-October	Moderate
Brittlescale <i>Atriplex depressa</i>	-/-/1B.2	Alameda, Contra Costa, Colusa, Fresno, Glenn, Kern, Merced, Solano, Stanislaus, Tulare, and Yolo counties. Western Central Valley and valleys of adjacent foothills on west side of Central Valley.	Alkali grassland, alkali meadow, alkali scrub, chenopod scrub, playas, and valley and foothill grasslands on alkaline or clay soils, 3-1,050 feet.	April-October	Moderate
Lesser saltscale <i>Atriplex minuscula</i>	-/-/1B.1	Alameda, Butte, Fresno, Kern, Madera, Merced, Tulare counties.	Alkali grassland, alkali meadow, alkali scrub, and saltbush scrub, between 50 and 650 feet.	May-October	High
Vernal pool (persistent-fruited) saltscale <i>Atriplex persistens</i>	-/-/1B.2	Colusa, Glenn, Madera, Merced, Solano, and Tulare counties.	Dry beds of vernal pools, on alkaline soils, between 33 and 380 feet.	June-October	Moderate

Table E-1. Continued

Common and Scientific Name	Status ^a : Federal/State/CNPS	Distribution	Preferred Habitats	Blooming Period	Potential for Occurrence in the General Plan Area ^b
subtle orache <i>Atriplex subtilis</i>	-/-/1B.2	Butte, Fresno, Kings, Kern, Madera, Merced, Stanislaus, and Tulare counties.	Alkaline soils, valley and foothill grassland between 130 and 330 feet.	June-October	Moderate
Big tarplant <i>Blepharizonia plumosa</i>	-/-/1B.1	Alameda, Contra Costa, San Joaquin, and Stanislaus counties.	Valley and foothill grassland, 100- 1,650 feet.	July-October	Moderate
Chinese Camp brodiaea <i>Brodiaea pallida</i>	T/E/1B.1	Calaveras, Tuolumne, Stanislaus County) USFWS county list only).	Vernal streambeds and serpentine substrates in cismontane woodland and valley and foothill grassland.	May-June	Low. No serpentine habitats are known in the area and this species is known from only two occurrences near Chinese Camp.
Round-leaved filaree <i>California macrophylla</i> [<i>Erodium macrophyllum</i>]	-/-/1B.1	Throughout the Sacramento Valley and northern San Joaquin Valley, central-western California, south coast, and northern Channel Island.	Open sites, cismontane woodland, valley and foothill grassland, dry grasslands, and shrubland, 50-4,000 feet.	March-May	Moderate
Sharsmith's harebell (Mt. Hamilton harebell) <i>Campanula sharsmithiae</i>	-/-/1B.2	Santa Clara and Stanislaus counties. Endemic to the Mt. Hamilton range	Barren, rocky serpentinite areas in chaparral, 1,600-3,000 feet.	April-June	None—no serpentine known in the area
Succulent owl's-clover <i>Castilleja campestris</i> ssp. <i>succulenta</i>	T/E/1B.2	Fresno, Madera, Merced, Mariposa, San Joaquin, and Stanislaus counties.	Vernal pools between 165 and 2,500 feet.	April-May	Moderate
California jewel-flower <i>Caulanthus californicus</i>	E/E/1B.1	Historically common in western San Joaquin Valley and interior foothills, currently at scattered locations in Fresno, Kern, San Luis Obispo and Santa Barbara counties.	Sandy or loamy soils in annual grassland, chenopod scrub, pinyon-juniper woodland.	February-May	Moderate
Lemmon's jewel-flower <i>Caulanthus coulteri</i> var. <i>lemmonii</i>	-/-/1B.2	Western Central Valley and valleys of adjacent foothills on west side of Central Valley.	Pinyon and juniper woodland, and valley and foothill grassland, between 250 and 4,000 feet.	March-May	Low

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Parry's rough tarplant <i>Centromadia parryi</i> ssp. <i>rudis</i>	-/-/4.2	Butte, Colusa, Glenn, Lake, Merced, Sacramento, San Joaquin, Solano, Sutter, and Yolo counties.	Alkaline, vernal mesic areas, seeps, and roadsides in vernal pools and valley and foothill grassland.	May-October	Low
Hoover's spurge <i>Chamaesyce hooveri</i> [<i>Euphorbia hooveri</i>]	T/-/1B.2	Central Valley from Butte County to Tulare County.	Below the high-water marks of large northern hardpan and volcanic vernal pools, vernal pools in valley grassland, freshwater wetlands, and wetland-riparian areas below 80-800 feet.	July-October	Moderate
Mt. Hamilton thistle <i>Cirsium fontinale</i> var. <i>campylon</i>	-/-/1B.2	Mt. Hamilton Range, eastern San Francisco Bay area: Alameda, Santa Clara, and Stanislaus counties.	Freshwater seeps and streams on serpentine outcrops, chaparral, cismontane woodland, valley and foothill grassland, 1000-3,000 feet	February-October	None—no serpentine known in the area
Beaked clarkia <i>Clarkia rostrata</i>	-/-/1B.3	Merced, Mariposa, and Stanislaus Counties. Central Sierra Nevada Foothills, San Joaquin Valley, Hell Hollow, and Merced River drainage:	Cismontane woodland, Valley and foothill grassland, 200-1,500 feet.	April-May	Moderate
Small-flowered morning glory <i>Convolvulus simulans</i>	-/-/4.2	San Joaquin Valley, central western and southwestern California, southern Channel Islands; Baja California	Chaparral openings, coastal scrub, valley and foothill grassland, on clay soils in serpentine seeps, 100-2,300 feet.	March-July	None—no serpentine known in the area
Mt. Hamilton coreopsis <i>Coreopsis hamiltonii</i>	-/-/1B.2	Eastern San Francisco Bay, Santa Clara, and Stanislaus counties.	Steep shale talus slopes of cismontane woodland between 1,800-4,200 feet.	March-May	None—no talus slopes in the area
Hoover's cryptantha <i>Cryptantha hooveri</i>	-/-/1A	Northern and central San Joaquin Valley. Alameda, Contra Costa, Kern, Madera, Merced, San Joaquin, and Stanislaus counties.	Coarse, sandy, soil, inland dunes in valley and foothill grassland between 30 and 500 feet.	April-May	Moderate

Table E-1. Continued

Common and Scientific Name	Status ^a : Federal/State/CNPS	Distribution	Preferred Habitats	Blooming Period	Potential for Occurrence in the General Plan Area ^b
Recurved larkspur <i>Delphinium recurvatum</i>	-/-/1B.2	Central Valley from Colusa* to Kern Counties.	Alkaline soils in valley and foothill grassland, saltbush scrub, cismontane woodland; below 2,500 feet.	March-June	Moderate
Dwarf downingia <i>Downingia pusilla</i>	-/-/2B.2	Central Valley extending from Amador to San Joaquin Counties.	Vernal pools and valley and foothill grasslands below 1,500 feet.	March-May	Moderate
Santa Clara Valley dudleya <i>Dudleya abramsii</i> ssp. <i>setchellii</i> [<i>Dudleya setchellii</i>]	E/-/1B.1	Santa Clara County, Stanislaus County (USFWS County list only).	Rocky, serpentine substrates in cismontane woodland and valley and foothill grassland, 200- 1,500 feet.	April-October	Low- no serpentine known in the area
Tracy's eriastrum <i>Eriastrum tracyi</i>	-/CR/3.2	Colusa, Fresno, Glenn, Lake, Santa Clara, Shasta, Stanislaus, Tehama, Trinity, and Tulare counties.	Chaparral and cismontane woodland between 1,000-5,400 feet.	May-July	Low
Delta button-celery <i>Eryngium racemosum</i>	-/E/1B.1	San Joaquin River delta, floodplains, and adjacent Sierra Nevada foothills: Calaveras, Merced, San Joaquin*, and Stanislaus Counties	Riparian scrub, seasonally inundated depressions along floodplains on clay soils, below 100 feet.	June-October	High
Spiny-sepaled button-celery <i>Eryngium spinosepalum</i>	-/-/1B.2	Fresno, Madera, Stanislaus, Tulare, and Tuolumne counties.	Valley and foothill grasslands and vernal pools, between 260 and 2,000 feet.	April-June	Moderate
Diamond-petaled California poppy <i>Eschscholzia rhombipetala</i>	-/-/1B.1	Interior foothills of south Coast Ranges from Contra Costa County to Stanislaus County. Carrizo Plain in San Luis Obispo County.	Grassland, chenopod scrub, on clay soils, where grass cover is sparse enough to allow growth of low annuals below 3,200 feet.	March-April	Moderate
Talus fritillary <i>Fritillaria falcata</i>	-/-/1B.2	South inner coast ranges. Alameda, Monterey, San Benito, Santa Clara, and Stanislaus counties.	Chaparral, oak woodland, closed-cone coniferous forest, on serpentine talus between 1,000-5,000 feet.	March-May	None—no serpentine known in the area

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Legenere <i>Legenere limosa</i>	-/-/1B.1	Primarily located in the lower Sacramento Valley, also from north Coast Ranges, northern San Joaquin Valley, and Santa Cruz Mountains.	Deep, seasonally wet habitats such as vernal pools, ditches, marsh edges, and river banks, below 500 feet.	May-June	Moderate
Red-flowered lotus <i>Lotus [Acmispon] rubriflorus</i>	-/-/1B.1	Inner north Coast Ranges and San Francisco Bay Area, Colusa, Stanislaus, and Tehama Counties.	Cismontane woodland, valley and foothill grassland, on sterile red soils and volcanic mudflow deposits between 650- 1,400 feet.	April-June	Low
Showy madia <i>Madia radiata</i>	-/-/1B.1	Contra Costa, Fresno, Kings, Kern, Monterey, Santa Barbara, San Benito, San Joaquin, and San Luis Obispo counties.	Cismontane woodland, valley and foothill grassland, between 80 and 3,000 feet.	March-May	Moderate
Merced monardella <i>Monardella leucocephala</i>	-/-/1A	Presumed extirpated, last seen in 1941, historically known from northern San Joaquin Valley.	Moist, sub-alkaline soils associated with low elevation grassland, in sandy depressions and riverbeds valley and foothill grassland, 115-330 feet.	May-August	Low
San Joaquin woolythreads <i>Monolopia [Lembertia] congdonii</i>	E/-/1B.2	Carrizo Plain and western San Joaquin valley from San Benito County to Kern County.	Chenopod scrub, valley and foothill grassland, on flats in alkaline or loamy soils.	February-May	Moderate
Little mousetail <i>Myosurus minimus</i> ssp. <i>apus</i>	-/-/3.1	Central Valley, South Coast: Alameda, Butte, Contra Costa, Colusa, Kern, Riverside, San Bernardino, San Diego, Solano, Stanislaus, Tulare, and Yolo counties.	Alkaline vernal pools and marshes, valley and foothill grassland between 65- 2,100 feet.	March-June	Moderate
Colusa grass <i>Neostapfia colusana</i>	T/E/1B.1	Colusa, Glenn, Merced, Solano, Stanislaus, and Yolo counties.	Vernal pools on adobe soils.	May-August	Moderate

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California adder's tongue <i>Ophioglossum californicum</i>	-/-/4.2	Northern and central Sierra Nevada foothills, central and southern coast, Amador, Butte, Merced, Monterey, Mariposa, Orange, San Bernardino*, San Diego, Stanislaus, and Tuolumne Counties, Baja California.	Vernal pool margins, moist areas in valley and foothill grassland and chaparral, 200-1,000 feet.	December-June	Moderate
San Joaquin Valley orcutt grass <i>Orcuttia inaequalis</i>	T/E/1B.1	Fresno, Madera, Merced, Stanislaus,* and Tulare counties.	Vernal pools from 100 to 2,500 feet.	April-September	Moderate
Hairy orcutt grass <i>Orcuttia pilosa</i>	E/E/1B.1	Butte, Glenn, Madera, Merced, Stanislaus, and Tehama counties.	Vernal pools from 150 to 650 feet.	May-September	Low
Mount Diablo phacelia <i>Phacelia phacelioides</i>	-/-/1B.2	Contra Costa, San Benito, Santa Clara, and Stanislaus counties.	Rocky substrates in chaparral and cismontane woodland from 1,600-4,500 feet.	April-May	None—no suitable habitat known in the area
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	E/E/1B.1	Fresno, Madera, Merced, Stanislaus, Sutter, and Yuba counties.	Woodland, valley and foothill grassland on clay soils, between 50 and 500 feet.	March-April	Moderate
Delta woolly-marbles <i>Psilocarphus brevissimus</i> var. <i>multiflorus</i>	-/-/4.2	Deltaic central valley and San Francisco bay area, Alameda, Napa, Santa Clara, San Joaquin, Solano, Stanislaus, and Yolo counties.	Vernal pools, from 30-1,650 feet.	May-June	Moderate
Prairie wedge grass <i>Sphenopolis obtusata</i>	-/-/2B.2	Amador, Fresno, Inyo, Mono, Riverside, San Bernardino, San Diego, Stanislaus, and Tulare counties.	Mesic areas in cismontane woodland, meadows and seeps, between 984 and 6500 feet.	April-July	Low
Greene's tuctoria <i>Tuctoria greenei</i>	E/R/1B.1	Butte, Fresno, Glenn, Madera, Merced, Shasta, San Joaquin, Stanislaus, Tehama, and Tulare counties.	Vernal pools between 100 and 3,500 feet.	May-September	Moderate

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Red Hills (=California) vervain <i>Verbena californica</i>	T/T/1B.1	Tuolumne County, Stanislaus County (USFWS county list only).	Serpentine substrates and seeps in valley grassland, foothill wetland, and wetland-riparian areas between 800 and 1,300 feet.	March-September	Low

Sources: CNDDDB 2006; CNPS 2006

Notes:

- * = Extirpated from this county.
- CNDDDB = California Natural Diversity Database.
- CNPS = California Native Plant Society.

^aStatus explanations:

Federal

- E = listed as endangered under the federal Endangered Species Act.
- T = listed as threatened under the federal Endangered Species Act.
- = No status definition.

State

- E = listed as endangered under the California Endangered Species Act.
- R = listed as rare under the California Native Plant Protection Act and California Endangered Species Act.
- = No status definition.

California Native Plant Society (CNPS)

- 1A = Rank 1A species: presumed extirpated in California and either rare or extinct elsewhere
- 1B = Rank 1B species: rare, threatened, or endangered in California and elsewhere
- 2A = Rank 2A species: presumed extirpated in California, but common elsewhere
- 2B = Rank 2B species: rare, threatened, or endangered in California, but more common elsewhere
- 3 = Rank 3 species: plants about which more information is needed—a review list
- 4 = Rank 4 species: plants of limited distribution—a watch list

CNPS Code Extensions:

- .1 = seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 = fairly threatened in California (20- 80% of occurrences threatened)
- .3 = not very threatened in California (<20% of occurrences threatened or not current threats known)

^bDefinitions of levels of occurrence likelihood:

- High: Known occurrence of plant within 5 miles of the project from Natural Diversity Data Base, California Native Plant Society Inventory, or other documents; and suitable habitat and microhabitat conditions present.
- Moderate: Known occurrence of plant in Stanislaus County, but more than 5 miles from the project, from Natural Diversity Data Base, California Native Plant Society

Common and Scientific Name	Status ^a : Federal/State/ CNPS	Distribution	Preferred Habitats	Blooming Period	Potential for Occurrence in the General Plan Area ^b
		Inventory, or other documents; or suitable habitat conditions present, but suitable microhabitat conditions unlikely to be present or of poor quality.			<p>Low: Plant not known to occur in the region from the Natural Diversity Data Base, California Native Plant Society Inventory, or other documents in the vicinity of the project, or plant is known only historically from the region; and habitat conditions of poor quality.</p> <p>None: Plant not known to occur in the region from the Natural Diversity Data Base, California Native Plant Society Inventory, or other documents in the vicinity of the project; and suitable habitat not present in any condition.</p>

Table E-2. Special-Status Wildlife Species with Potential to Occur in the City of Modesto General Plan Area

Common and Scientific Name	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Invertebrates				
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	E/SSI	Disjunct occurrences in Solano, Stanislaus, Merced, Tehama, Ventura, Butte, and Glenn Counties	Large, turbid vernal pools in annual grasslands. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	None. Required large pools are not known to occur within the General Plan Area. Species is known to occur in pools located on Mapes Ranch, west of the General Plan Area.
Moestan blister beetle <i>Lytta moesta</i>	--/SSI	Historical distribution Fresno, Kern, Madera, Santa Cruz, Stanislaus, and Tulare counties.	Vernal pool grasslands within the Central Valley. Thought to depend on dried vernal pool habitat and solitary vernal pool bees as hosts.	None. Documented occurrences in the vicinity of the General Plan Area are considered extirpated. In addition, suitable vernal pool habitat to support this species is extremely limited within the General Plan Area.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T/SSI	Riparian and wetland habitats below 3,000 feet throughout the Central Valley	Riparian and oak savanna habitats with blue elderberry shrubs; elderberries are the host plant	Moderate. May occur in riparian habitat that supports elderberry shrubs.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T/SSI	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County	Common in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	High. Known to occur within the General Plan Area.
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	E/SSI	Shasta County south to Merced County	Vernal pools and ephemeral stock ponds with clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	High. Known to occur within the General Plan Area.
Fish				
Steelhead, Central Valley DPS <i>Oncorhynchus mykiss irideus</i>	T/--	The Central Valley ESU includes all naturally spawned populations (and their progeny) in the Sacramento and San Joaquin Rivers and their tributaries, excluding San Francisco and San Pablo bays and their tributaries.	Preferred spawning habitat for steelhead is in cool to cold perennial streams with high dissolved oxygen levels and fast flowing water. Abundant riffle areas for spawning and deeper pools with sufficient riparian cover for rearing are necessary for successful breeding.	High. Known to occur in the Stanislaus and Tuolumne Rivers below the Goodwin and La Grange Dams. No spawning habitat present within the General Plan Area, but the river sections present are a migration corridor.
Chinook salmon, Central Valley fall/late fall-run ESU <i>Oncorhynchus tshawytscha</i>	--/SSC	Populations spawning in the Sacramento and San Joaquin Rivers and their tributaries.	Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	High. Known to occur in the Stanislaus and Tuolumne Rivers and Dry Creek. No spawning habitat is present, but the General Plan Area is within the migration corridor.

Common and Scientific Name	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	--/SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the Sacramento Delta, Suisun Bay and associated marshes.	Occurs in slow-moving river sections and dead end sloughs. Requires flooded vegetation for spawning and foraging for young. Splittail are primarily freshwater fish, but are tolerant of moderate salinity and can live in water where salinity levels reach of 10-18 parts per thousand.	Low. Known in the San Joaquin River, but sampling in the Stanislaus and Tuolumne Rivers has not documented this species. Spawning and foraging habitat typical of this species is not present within the General Plan Area; however, this species may disperse through the General Plan Area.
Kern brook lamprey <i>Entosphenus (=Lampetra) hubbsi</i>	--/SSC	San Joaquin River system and Kern River.	Gravel-bottomed areas for spawning and muddy-bottomed areas where Ammocoetes can burrow and feed.	None. Out of the known range of this species.
Hardhead <i>Mylopharodon conocephalus</i>	--/SSC	Low to mid-elevation streams in the Sacramento-San Joaquin drainage.	Clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Not found where exotic Centrarchids predominate.	High. Known to occur in the Stanislaus and Tuolumne Rivers.
Amphibians				
California red-legged frog <i>Rana draytonii</i>	T/SSC	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Associated with quiet perennial to intermittent ponds, stream pools, and wetlands. Prefers pond shorelines with extensive vegetation for breeding. Disperses through upland habitats after rains.	None. General Plan is out of the known range for this species.
California tiger salamander <i>Ambystoma californiense</i>	T/T	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, from Yolo County south to Tulare County. Also in the coastal valleys and foothills, from Sonoma County south to Santa Barbara County; Sonoma and Santa Barbara populations are listed as Federal Endangered.	Inhabits grassland, oak woodland, ruderal, and seasonal pool habitats. Seasonal ponds and vernal pools are crucial to breeding. Adults utilize mammal burrows as estivation habitat.	None. Considered extirpated in the vicinity of the General Plan Area, and extremely limited suitable habitat is present within the General Plan Area.
Foothill yellow-legged frog <i>Rana boylei</i>	--/SSC	Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet	Found in or near rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.	None. No suitable habitat occurs within the General Plan Area.
Western spadefoot <i>Spea hammondi</i>	--/SSC	Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Shallow temporary pools formed by winter rains are essential for breeding and egg-laying.	Low. May occur in grassland areas with vernal pools and seasonal wetlands.

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Reptiles				
Blainville's (coast) horned lizard <i>Phrynosoma blainvillii</i>	--/SSC	Sacramento Valley, including foothills, south to southern California; Coast Ranges south of San Francisco Bay; below 4,000 feet in northern California	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Prefers friable, rocky, or shallow sandy soils for burial; open areas for sunning; bushes for cover; and an abundant supply of ants and other insects.	Low. Not known to occur within General Plan Area, and limited suitable habitat available.
Giant garter snake <i>Thamnophis gigas</i>	T/T	Central Valley from the vicinity of Burrel in Fresno County north to near Chico in Butte County; has been extirpated from areas south of Fresno	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.	None. General Plan Area is within a gap in the range of the species. No giant garter snake populations are known to occur within Stanislaus County.
Silvery legless lizard <i>Anniella pulchra pulchra</i>	--/SSC	Along the Coast, Transverse, and Peninsular Ranges from Contra Costa County to San Diego County with extremely spotty occurrences in the San Joaquin Valley	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with high moisture content.	None. Considered extinct in Stanislaus County and no known extant records in the vicinity of the General Plan Area.
(Northern) Western pond turtle <i>Actinemys [Emys] marmorata</i>	--/SSC	Occurs along the northern coast of California east to the Sierra Nevada and south through the Delta and Central Valley.	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	Moderate. May occur in areas with suitable aquatic habitat located such as riparian areas within General Plan Area
Birds				
American peregrine falcon <i>Falco peregrinus anatum</i>	--/FP	Permanent resident along the north and south Coast Ranges. May summer in the Cascade and Klamath Ranges and through the Sierra Nevada to Madera County. Winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Range.	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large prey populations.	Low. Does not nest within the General Plan Area. May be an occasional winter visitor.

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Bald eagle <i>Haliaeetus leucocephalus</i>	--/E, FP	Nests in northern California, near reservoirs along the Central Coast Ranges, and in the Lake Tahoe Basin. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean.	Low. Does not nest within the General Plan Area. May be an occasional winter visitor.
Golden eagle <i>Aquila chrysaetos</i>	--/SSC, FP	Foothills and mountains throughout California. Uncommon nonbreeding visitor to lowlands such as the Central Valley	Nest on cliffs and escarpments or in tall trees overlooking open country. Forages in annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals.	Low. Does not nest within the General Plan Areas. May occasionally forage in grassland and pastures within the General Plan Area.
Lesser sandhill crane <i>Grus canadensis canadensis</i>	--/SSC	Breeds in southern Alaska. Winters in the Central Valley and Imperial Valley.	Winters in plains and valleys near bodies of fresh, shallow water including flooded agricultural fields.	Low. Does not nest in the Central Valley. May occur during winter months in suitable agricultural fields within the General Plan Area.
Greater sandhill crane <i>Grus canadensis tabida</i>	--/T, FP	Breeds in Siskiyou, Modoc, Lassen, Plumas, and Sierra Counties. Winters in the Central Valley, southern Imperial County, Lake Havasu National Wildlife Refuge, and the Colorado River Indian Reserve	Summers in open terrain near shallow lakes or freshwater marshes. Winters in plains and valleys near bodies of fresh, shallow water, shallow water including flooded agricultural fields.	Low. Does not nest in the Central Valley. Only occurs during winter months in suitable agricultural fields within the General Plan Area.
Loggerhead shrike <i>Lanius ludovicianus</i>	--/SSC	Resident and winter visitor in lowlands and foothills throughout California. Rare on coastal slope north of Mendocino County, occurring only in winter	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches and fairly dense shrubs and brush for nesting.	High. May nest in suitable open habitats with shrubs within the General Plan Area.
Northern harrier <i>Circus cyaneus</i>	--/SSC	Occurs throughout lowland California. Has been recorded in fall at high elevations	Nests and forages in grassland habitats, usually in association with coastal salt and freshwater marshes. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. May also occur in alkali desert sinks.	Moderate. May nest in grasslands, pastures, and fresh marsh areas located within General Plan Area.
Short-eared owl <i>Asio flammeus</i>	--/SSC	Breeds regularly in northeastern California and in Suisun Marsh and lower Sacramento Valley. Also breeds in portions of the Central Coast Range and eastern Sierra Mountains. Winters widely in lowlands throughout California.	Swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	Low. May winter in pastures and/or marshes located within General Plan Area; however, there are no recent documented occurrences of breeding in this region of the Central Valley.
Song sparrow- "Modesto" population <i>Melospiza melodia</i>	--/SSC	Restricted to the Sacramento and extreme northern San Joaquin Valleys from Colusa County south to northern Stanislaus County.	Associated with woody riparian habitat and freshwater marshes.	None. Though collected in the General Plan Area in the early 1900's, these may have been vagrants and none have been documented in the vicinity in recent years. General Plan Area outside of known range.

Common and Scientific Name	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Swainson's hawk <i>Buteo swainsoni</i>	--/T	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley. Highest nesting densities occur in Yolo County.	Breeds in stands with few trees in juniper-sage flats, riparian areas, eucalyptus stands, and oak savannah. Requires adjacent suitable foraging areas such as grasslands or grain fields supporting rodent populations.	High. Known to nest within General Plan Area
Tricolored blackbird <i>Agelaius tricolor</i>	--/E*, SSC	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Habitat must be large enough to support 50 pairs with open water habitat in the vicinity.	Moderate. May nest in areas with suitable marsh habitat.
Burrowing owl <i>Athene cucularia</i>	--/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Moderate. May nest and winter in suitable grassland and agricultural habitats within the General Plan Area.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	T/E	In California, breeding distribution is now thought to be restricted to isolated sites in the Sacramento, Amargosa, Kern, Santa Ana, and Colorado River valleys.	Nests in riparian forests along the broad, lower flood-bottoms of larger river systems. Nests in dense vegetation including willow, and often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	None. May be extirpated from General Plan Area, and dense habitat typical of this species is not present within the General Plan Area. Last known occurrence in Stanislaus Co. was in 1973.
White-tailed kite <i>Elanus leucurus</i>	--/FP	Lowland areas west of Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging	Moderate. May nest in large trees near areas with suitable foraging habitat.
Yellow-breasted chat <i>Icteria virens</i>	--/SSC	Nests locally in coastal mountains and Sierra Nevada foothills, east of the Cascades in northern California, and along the Colorado River.	Nests in dense riparian habitats dominated by willows, alders, Oregon ash, tall weeds, blackberry, wild grape; forage and nest within 10 feet of ground.	Low. Mainly found in the foothills but may occur in riparian habitat within the General Plan Area.
Mammals				
Western mastiff bat <i>Eumops perotis californicus</i>	--/SSC	Occurs along the western Sierra primarily at low to mid elevations and widely distributed throughout the southern coast ranges. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders.	Found in a wide variety of habitats from desert scrub to montane conifer. Roosts and breeds in deep, narrow rock crevices, but may also use crevices in trees, buildings, and tunnels. Roost entrances must have vertical faces and be high enough to drop off to take flight.	None. General Plan Area is outside of known range. No suitable habitat occurs within the General Plan Area.

Common and Scientific Name	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--/C,SSC	This species is associated with a wide variety of habitats from deserts to mid-elevation mixed coniferous-deciduous forest.	Roost in limestone caves, lava tubes, mines, buildings, etc. Will only roost in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to disturbance.	Low. May roost in riparian areas located within the General Plan Area. Night roost documented at southeast edge of General Plan Area.
Pallid bat <i>Antrozous pallidus</i>	--/SSC	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include old ranch buildings, rocky outcrops, and caves within sandstone outcroppings. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Moderate. May roost within the General Plan Area in less disturbed areas.
Western red bat <i>Lasiurus cinereus</i>	--/SSC	Occurs throughout much of California from Shasta County to Mexico border, west of the Sierra Nevada and Cascade Range crests.	This species is typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores).	Moderate. May roost in riparian habitats and suitable trees adjacent to open fields within the General Plan Area.
Riparian (San Joaquin Valley) woodrat <i>Neotoma fuscipes riparia</i>	E/SSC	Historical distribution along the San Joaquin, Stanislaus, and Tuolumne Rivers. Current distribution limited to Caswell State Park and the confluence area of the San Joaquin and Stanislaus Rivers in San Joaquin, Stanislaus, and Merced Counties.	Riparian habitats with multi-storied riparian habitat including dense shrub cover, willow thickets, and an oak overstory. Need areas with mix of brush and trees, and suitable nesting sites in trees, snags, or logs.	None. Known to occur in riparian habitat along the Stanislaus River west of the General Plan Area. However, riparian habitat within the General Plan Area is not typical of occupied habitat, and there are large spaces of unsuitable habitat between occupied habitat and the General Plan Area.
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	E/E	Limited to San Joaquin County at Caswell State Park near the confluence of the Stanislaus and San Joaquin Rivers and Paradise Cut area on Union Pacific right-of-way lands	Native valley riparian habitats with large clumps of dense shrubs, low-growing vines, and some tall shrubs and trees including willows, wild rose, and blackberry.	None. Known to occur in riparian habitat along the Stanislaus River west of the General Plan Area. However, riparian habitat within the General Plan Area is not typical of occupied habitat, and there are large spaces of unsuitable habitat between occupied habitat and the General Plan Area
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E/T	Principally occurs in the San Joaquin Valley and adjacent open foothills to the west; from Kern County north to Contra Costa County. Restricted to the western foothills of the San Joaquin Valley in the northern portion of the range and records become sparse in this area.	Annual grasslands or grassy open stages with scattered shrubby vegetation including saltbush scrub, grassland, oak, savanna, and freshwater scrub. Need loose-textured sandy soils for burrowing, suitable prey base, and short grass habitats.	None. General Plan Area is outside of known range. Records for San Joaquin kit fox in Stanislaus Co. include areas west of I-5 and extreme eastern county near La Grange.

Common and Scientific Name	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
American badger <i>Taxidea taxus</i>	--/SSC	Throughout most of California.	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	None. General Plan Area is out of its current known range, and this species is not found in regularly disturbed agricultural lands.

Status explanations:

Federal

- E = listed as endangered under the federal Endangered Species Act.
- T = listed as threatened under the federal Endangered Species Act.
- C = candidate species under the federal Endangered Species Act.
- = no listing

State

- E = listed as endangered under the California Endangered Species Act.
- T = listed as threatened under the California Endangered Species Act.
- C = candidate species under the California Endangered Species Act.
- FP = fully protected under the California Fish and Game Code.
- SSC = species of special concern in California.
- SSI = special-status invertebrate in California.
- = no listing.

* California Fish and Game Commission emergency listing December 3, 2014. Status of endangered December 29, 2014 through June 30, 2015.