

2.3.5 THREATENED AND ENDANGERED SPECIES

REGULATORY SETTING

The following discussion describes the plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution in the Sacramento region and may require specialized habitat conditions. Listed and special-status species are defined as:

- Listed or proposed for listing under the state or federal Endangered Species Acts;
- Protected under other regulations (e.g. Migratory Bird Treaty Act);
- CDFG Species of Special Concern;
- Listed as species of concern by CNPS or USFWS; or,
- Receive consideration during environmental review under CEQA.

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under CEQA, Section 1600 of the CDFG Code, or Section 404 of the Clean Water Act (CWA).

AFFECTED ENVIRONMENT

A list of special-status species and sensitive habitats known to occur within the region was compiled from a review of the California Natural Diversity Database (CNDDDB) occurrence records within 16 km (10 miles) of the project area, a review of the United States Fish & Wildlife Service (USFWS) lists for special-status species occurring within the Florin quadrangle, and California Native Plant Society (CNPS) literature (**Table 2.3.5-1**). The locations of special-status species occurrences in the project vicinity are shown in **Figure 2.3.5-1**, which is from a search of the CNDDDB. **Table 2.3.5-1** includes the common name and scientific name for each species, regulatory status (federal, state, local, CNPS), habitat descriptions, and potential for occurrence within the project area. The following set of criteria has been used to determine each species' potential for occurrence on the site:

- Present: Species and/or habitats are known to occur on the site, based on CNDDDB records, and/or were observed to occur on the site during the field survey(s).
- High: Species and/or habitats are known to occur on or near the site vicinity (based on CNDDDB records within 8 km (5 mi), and/or based on professional expertise specific to the site or species) and there is suitable habitat on the site.
- Low: Species and/or habitats are known to occur in the site vicinity, and there is marginal habitat on the site, OR species are not known to occur in the site vicinity; however, there is suitable habitat on site.
- No: Species and/or habitats are not known to occur on or in the site vicinity and there is no suitable habitat for the species on site, OR species were surveyed for during the appropriate season with negative results for the species.

**TABLE 2.3.5-1
REGIONAL SPECIAL-STATUS SPECIES AND HABITATS OF CONCERN**

Species Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Habitats			
Northern Hardpan Vernal Pools	--; --; --; --	These pools occur on old, acidic, iron-silica cemented soils including Corning, Redding, and San Joaquin soil series. Topography is typified by hogwallows and mima mounds which occur on aggregations most commonly on old alluvial fans ringing California's Central Valley.	Present
Plants			
Boggs Lake hedge- hyssop <i>Gratiola heterosepala</i>	--; CE; --; 1B	Found on the margin of vernal pools.	High
Delta Tule Pea <i>Lathyrus jepsonii</i> var. <i>Jepsonii</i>	--; --; --; 1B	Found in freshwater and brackish marshes and swamps.	No
Dwarf downingia <i>Downingia pusilla</i>	--; --; --; 2	Found in vernal pools.	High
Legenere <i>Legenere limosa</i>	FSC; --; --; 1B	Found in vernal pools.	High
Northern California black walnut <i>Juglans hindsii</i>	FSC; --; --; 1B	Found in riparian forests and riparian woodlands.	Present
Rose Mallow <i>Hibiscus lasiocarpus</i>	--; --; --; 2	Perennial marshes, ponds, and wet banks.	No
Sanford's arrowhead <i>Sagittaria sanfordii</i>	FSC; --; --; 1B	Ditches and other freshwater perennial features.	No
Sacramento Orcutt grass <i>Orcuttia viscida</i>	FE; CE; --; 1B	Large, deep vernal pools.	Low

2.3 BIOLOGICAL ENVIRONMENT

Species Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Slender Orcutt grass <i>Orcuttia tenuis</i>	FT; CE; --; 1B	Vernal pools.	Low
Wildlife			
Invertebrates			
Antioch dunes anthicid beetle <i>Anthicus antiochensis</i>	FSC; --; --; --	Found on loose sand on sand bars and sand dunes.	No
California linderiella <i>Linderiella occidentalis</i>	FSC; --; --; --	Vernal pools, some seasonal wetlands.	High
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	FSC; --; --; --	Vernal pools and swales.	High
Sacramento anthicid beetle <i>Anthicus sacramento</i>	FSC; --; --; --	Found in sand slip-faces among willows.	No
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT; --; --; --	Associated with its' host plant the elderberry shrub (<i>Sambucus</i> spp.).	Low
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT; --; --; --	Vernal pools, some seasonal wetlands.	High
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE; --; --; --	Vernal pools, some seasonal wetlands.	High
Amphibians/Reptiles			
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC; CSC; --; --	Found in open or scrub dry grasslands, wooded grasslands, and riparian habitats with low rocks to serve as basking areas.	No
California red-legged frog <i>Rana aurora draytonii</i>	FT; CSC; --; --	Requires a permanent water source and is typically found along quiet slow moving streams, ponds, or marsh communities with emergent vegetation.	No

2.3 BIOLOGICAL ENVIRONMENT

Species Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
California tiger salamander <i>Ambystoma californiense</i>	FPT; CSC; --, --	Valley and foothill grasslands with suitable breeding pools.	Low
Giant garter snake <i>Thamnophis gigas</i>	FT; CT; --; --	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	Low
Northwestern pond turtle <i>Emmys marmorata marmorata</i>	FSC; CSC; --; --	Permanent water bodies with basking sites such as logs and rocks.	No
Western spadefoot toad <i>Spea hammondi</i>	FSC; CSC; --; --	Grasslands with suitable long lasting rain pools for breeding.	Low
Fish			
Chinook salmon, winter-run <i>Oncorhynchus tshawytscha</i>	FE; CE; --; --	River and stream tributaries to the Sacramento River Basin.	No
Chinook salmon, Central Valley fall/late fall-run (Critical Habitat) <i>Oncorhynchus tshawytscha</i>	FC; CSC; --; --	River and stream tributaries to the Sacramento River Basin.	No
Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT; --; --; --	River and stream tributaries to the Sacramento River Basin.	No
Delta smelt (Critical Habitat) <i>Hypomesus transpacificus</i>	FT; CT; --; --	River and stream tributaries to the Sacramento River Basin.	No
Green sturgeon <i>Acipenser medirostris</i>	FC; CSC; --; --	River and stream tributaries to the Sacramento River Basin.	No
Kern brook lamprey <i>Lampetra hubbsi</i>	FSC; CSC; --; --	Found in the lower reaches of the Merced, Kaweah, Kings, and San Joaquin Rivers.	No
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC; CSC; --; --	River and stream tributaries to the Sacramento River Basin.	No

2.3 BIOLOGICAL ENVIRONMENT

Species Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Pacific lamprey <i>Lampetra tridentata</i>	FSC; --; --; --	Found in rivers throughout California. Species is anadromous.	No
River lamprey <i>Lampetra ayresi</i>	FSC; CSC; --; --	Found in rivers throughout California. Species is anadromous.	No
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FSC; CSC; --; --	River and stream tributaries to the Sacramento River Basin.	No
Birds			
Aleutian Canada goose <i>Branta canadensis leucopareia</i>	FD (FSC); CSC; -- (Wintering)	Winter resident of agricultural lands.	No
American peregrine falcon <i>Falco peregrinus anatum</i>	FD (FSC); CE; -- ; -- (Nesting)	Nests on high cliffs, banks, dunes or mounds in woodland, forest, and coastal habitats, near a permanent water source.	No
Bald eagle <i>Haliaeetus leucocephalus</i>	FT; CE; --; --	Large bodies of open water with suitable wintering trees (large trees).	No
Bank swallow <i>Riparia riparia</i>	--; CT; --; --	Require fine-textured or sandy banks or cliffs to dig horizontal nesting tunnels along large rivers.	No
Double-crested cormorant <i>Phalacrocorax auritus</i>	--; CSC; --; --	Found along coast, inland lakes, in fresh, salt, and estuarine waters.	No
Ferruginous hawk <i>Buteo regalis</i>	FSC; CSC; --; -- (Wintering)	A winter resident common to open grassland habitats in California, but also found in various woodlands and brushy forests.	Low
Greater sandhill crane <i>Grus Canadensis tabida</i>	--; CT fully protected; --; -- (Nesting & Wintering)	Nests in wet meadows interspersed with emergent marsh habitat. Winters in agricultural croplands and irrigated pastures.	No

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Species Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC; --; --; -- (nesting)	Nests in open oak or other arid woodland and chaparral habitats near water.	No
Lewis' woodpecker <i>Melanerpes lewis</i>	FSC; --; --; -- (Nesting)	Open, deciduous, and conifer habitats with a brushy under story, and scattered snags and live trees for nesting and perching.	No
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	--; CE; --; -- (Nesting)	Nests in shrubby riparian vegetation with saturated soil conditions or near a water source.	No
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC; CSC; --; -- (Nesting)	Open habitats with scattered shrubs, trees, posts, fences and utility lines for perches.	Low
Long-billed curlew <i>Numenius americanus</i>	FSC; CSC; --; -- (Nesting)	Frequent wet meadow habitats, large coastal estuaries, upland herbaceous areas including croplands. Nest built in grass lined depressions on open ground.	No
Marbled godwit <i>Limosa fedoa</i>	FSC; --; --; --	Winter visitant, found on estuarine mudflats, sandy beaches, open shores, saline emergent wetlands, and adjacent wet upland fields.	No
Mountain plover <i>Charadrius montanus</i>	FSC; CSC; --; -- (Wintering)	Open and flat valley grasslands and short-grass prairies.	Low
Nuttall's woodpecker <i>Picoides nuttallii</i>	--; --; SLC; --	Permanent resident of low elevation riparian deciduous and oak woodland habitats.	No
Oak titmouse <i>Baeolophus inornatus</i>	--; -- ; SLC; --	Occurs in montane hardwood and hardwood-conifer woodlands, and montane and valley foothill riparian habitats in cismontane California.	No
Rufous hummingbird <i>Selasphorus rufus</i>	FSC; --; --; --	Found in a valley foothill hardwood, valley foothill hardwood-conifer, riparian, and various chaparral habitats during northward and southward migrations; in montane riparian, aspen and high mountain meadows during southward migration.	No
Swainson's hawk <i>Buteo swainsoni</i>	FSC; CT; --; -- (Nesting)	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat (agricultural fields, grasslands, etc.).	High
Tricolored blackbird <i>Agelaius tricolor</i>	FSC; CSC; --; -- (Nesting colony)	Freshwater marsh with emergent vegetation.	No

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Species Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Vaux's swift <i>Chaetura vauxi</i>	FSC; CSC; --; -- (Nesting)	Nests within large hollow cavities in live trees or snags in coniferous forest habitats.	No
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC; CSC; --; -- (Burrow sites)	Grasslands with friable soil for burrowing.	Low
White-faced ibis <i>Plegadis chihi</i>	FSC; CSC; --; -- (Rookery site)	Inhabits large freshwater emergent wetlands. The nesting colony typically occurs hidden within dense stands of vegetation such as reeds or willows.	No
White-tailed kite <i>Elanus leucurus</i>	FSC; CFP; --; --	Yearlong resident in valley and coastal lowlands and is rarely found away from agricultural areas.	High
Other raptors (hawks, owls and vultures) and nesting birds.	MBTA and §3503.5 Department of Fish and Game Code	Nests in a variety of communities including cismontane woodland, mixed coniferous forest, chaparral, montane meadow, riparian, and urban communities.	High
Mammals			
Long-legged myotis bat <i>Myotis volans</i>	FSC; --; --; --	Woodland and forest communities above approximately 1,219 meters (4,000 feet) above MSL. Roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves.	No
Pacific western big-eared bat <i>Corynorhinus townsendii townsendii</i>	FSC; CSC; --; --	Typically occurs in mesic habitats, and requires caves, crevices, mines, tunnels, buildings or structures for roosting.	Low
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	FE; CE; --; --	Found in riparian communities with dense vegetation. Distribution limited to areas along the Stanislaus and San Joaquin Rivers.	No
Riparian woodrat <i>Neotoma fuscipes riparia</i>	FE; CSC; --; --	Found in riparian communities with dense vegetation. Found along rivers in the northern San Joaquin Valley.	No
San Joaquin pocket mouse <i>Perognathus inornatus</i>	FSC; --; --; --	Annual grassland and scrub habitats with fine-textured soil conditions, confined to the San Joaquin and Sacramento Valleys of California.	No

2.3 BIOLOGICAL ENVIRONMENT

Species Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Small-footed myotis bat <i>Myotis ciliolabrum</i>	FSC; --; --; --	Occurs in a wide variety of habitats, primarily in relatively arid wooded and brushy uplands near water, roosting in caves, buildings, mines, and crevices.	Low
Yuma myotis bat <i>Myotis yumanensis</i>	FSC; CSC; --; --	Reside in open forests and woodland habitats with sources of water over which to feed. Roost in colonies within buildings, mines, caves, and crevices.	Low

Federally Listed Species:

FE = federal endangered

FT = federal threatened

FSC = federal species of concern

FC = candidate

PT = proposed threatened

FPD = proposed for delisting

FD = delisted

California State Listed Species:

CE = California state endangered

CT = California state threatened

CR = California state rare

CSC = California Species of Special Concern

CFP = California Fully Protected

CNPS* List Categories:

1A = plants presumed extinct in California

1B = plants rare, threatened, or endangered in California and elsewhere

2 = plants rare, threatened, or endangered in California, but common elsewhere

3 = plants about which we need more information

4 = plants of limited distribution

Other Special-status Listing:

SLC = species of local or regional concern or conservation significance

Source: Foothill Associates

SENSITIVE SPECIES POTENTIALLY IN THE PROJECT AREA

Special-status species were considered for this analysis based on field survey results, a review of the CNDDDB database (Figure 2.3.5-1), a review of the USFWS lists for special-status species occurring in the region, and CNPS literature. Only those federal or state threatened or endangered species that are known to occur, or that may potentially occur, in the project area based on the analysis in Table 2.3.5-1 are discussed further in the document.

Only those threatened or endangered species that are known to be present or that have a high or low potential for occurrence will be discussed further following Table 2.3.5-2.

TABLE 2.3.5-2
FEDERAL OR STATE THREATENED OR ENDANGERED SPECIES WITH POTENTIAL TO OCCUR WITHIN THE PROJECT AREA

Species Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Plants			
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	--; CE; --; 1B	Found on the margin of vernal pools.	Low
Sacramento Orcutt grass <i>Orcuttia viscida</i>	FE; CE; --; 1B	Large, deep vernal pools.	Low
Slender Orcutt grass <i>Orcuttia tenuis</i>	FT; CE; --; 1B	Large, deep vernal pools.	Low
Wildlife			
Invertebrates			
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT; --; --; --	Associated with its host plant the elderberry shrub (<i>Sambucus</i> spp.).	Low
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT; --; --; --	Vernal pools, some seasonal wetlands.	High
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE; --; --; --	Vernal pools, some seasonal wetlands.	High

2.3 BIOLOGICAL ENVIRONMENT

Species Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Amphibians/Reptiles			
Giant garter snake <i>Thamnophis gigas</i>	FT; CT; --; --	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	Low
Birds			
Swainson's hawk <i>Buteo swainsoni</i>	FSC; CT; --; -- (Nesting)	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat (agricultural fields, grasslands, etc.).	High
White-tailed kite <i>Elanus leucurus</i>	FSC; fully protected; --; --	Yearlong resident in valley and coastal lowlands and is rarely found away from agricultural areas.	High
Mammals			

Federally Listed Species:

FE = federal endangered

FT = federal threatened

FSC = federal species of concern

FC = candidate

PT = proposed threatened

FPD = proposed for delisting

FD = delisted

California State Listed Species:

CE = California state endangered

CT = California state threatened

CR = California state rare

CSC = California Species of Special Concern

CNPS* List Categories:

1A = plants presumed extinct in California

1B = plants rare, threatened, or endangered in California and elsewhere

2 = plants rare, threatened, or endangered in California, but common elsewhere

3 = plants about which we need more information

4 = plants of limited distribution

Other Special-status Listing:

SLC = species of local or regional concern or conservation significance

Source: Foothill Associates

The following discussions present the extent of known and potential habitat for federal or state threatened or endangered species within the project area, potential impacts to these species from the development of the proposed project, recommended measures to avoid, minimize, and mitigate for project related impacts, and a discussion of the cumulative effects the project would have on the continued existence of these species.

SPECIAL STATUS PLANTS

AFFECTED ENVIRONMENT: BOGGS LAKE HEDGE-HYSSOP

Survey Results

Boggs Lake hedge-hyssop is listed as an endangered species by the State of California. This species is an annual herbaceous plant that blooms from April to August and is typically found in shallow water along the margin of vernal pools (Hickman 1993 and CNPS 2003). There are several records of this species occurring within 8.0 km (5.0 miles) of the project area (CNDDDB 2004). Surveys for this species and other vernal pool plant species were conducted during May of 2002 and again in May of 2004. This species was not identified within the study area during these focused botanical surveys.

IMPACTS

No Build Alternative

Under the No Build alternative, because the project would not be implemented, there would be no impacts to this special status plant species.

Build Alternatives (2A and 3A)

Permanent Impacts

Impact 2.3.5-1 Because Boggs Lake hedge-hyssop was not identified in the project area during focused botanical surveys, no impacts to this species are anticipated at this time. Though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools; therefore any impacts to the vernal pools would affect this species.

MITIGATION MEASURES

Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.

2.3 BIOLOGICAL ENVIRONMENT

AFFECTED ENVIRONMENT: SACRAMENTO ORCUTT GRASS

Survey Results

Sacramento Orcutt grass is listed as an endangered species by the state and federal government. This species is an annual herb that blooms from April to July and is typically found in large, deep vernal pools (CNPS 2003 and USFWS 2003). This species is known to occur within 16 km (10 miles) of the project area (CNDDDB 2004). This species was not identified within the study area during focused botanical surveys conducted in May 2002 and May 2004.

IMPACTS

No Build Alternative

Under the No Build alternative, because the project would not be implemented, there would be no impacts to this special status plant species.

Build Alternatives (2A and 3A)

Permanent Impacts

Impact 2.3.5-2 Because Sacramento Orcutt grass was not identified in the project area during focused botanical surveys, no impacts to this species are anticipated at this time. Though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools; therefore any impacts to the vernal pools would affect this species.

MITIGATION MEASURES

Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.

AFFECTED ENVIRONMENT: SLENDER ORCUTT GRASS

Survey Results

Slender Orcutt grass is listed as an endangered species by the state and as threatened species by the federal government. This species is an annual herb that blooms from May to October and is typically found in vernal pools on remnant alluvial fans and high stream terraces (CNPS 2003 and USFWS 2003). This species is known to occur within 16 km (10 miles) of the project area (CNDDDB 2004). This species was not identified within the study area during focused botanical surveys conducted in May 2002 and May 2004.

IMPACTS

No Build Alternative

Under the No Build alternative, because the project would not be implemented, there would be no impacts to this special status plant species.

Build Alternatives (2A and 3A)

Permanent Impacts

Impact 2.3.5-3 Because Slender Orcutt grass was not identified in the project area during focused botanical surveys, no impacts to this species are anticipated at this time. Though the species was not observed within the study area, the vernal pools within the study area constitute potential, though marginal, habitat for this species. This species is dependent on the hydrology and soils associated with the vernal pools; therefore any impacts to the vernal pools would affect this species.

MITIGATION MEASURES

Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.

SPECIAL STATUS ANIMAL SPECIES

AFFECTED ENVIRONMENT: VERNAL POOL FAIRY SHRIMP

Survey Results

The vernal pool fairy shrimp is listed by the federal government as a threatened species. This species is found in a variety of vernal pool types in central California. There are several records of this species occurring within 8.0 km (5.0 miles) of the project area (CNDDDB 2004). No surveys have been conducted for this species, though based on the suitability of the vernal pool habitat within the project area its presence is inferred.

IMPACTS

No Build Alternative

Under the No Build alternative, because the project would not be implemented, there would be no impacts to this special status animal species.

2.3 BIOLOGICAL ENVIRONMENT

Build Alternatives (2A and 3A)

Permanent Impacts

Impact 2.3.5-4 Impacts to the vernal pool fairy shrimp habitat identified within the project area are summarized in **Table 2.3.5-3**. Impacts to vernal pool habitat would be the same for all the alternatives and options identified. Both of the options identified for East Stockton Boulevard would result in impacts to the larger vernal pool and to the smaller and long, linear vernal pool. Impacts to the vernal pools would likely result in the pools no longer being viable habitat for listed invertebrate species.

TABLE 2.3.5-3
SUMMARY OF IMPACTS TO VERNAL POOL FAIRY SHRIMP HABITAT

Alternative	Option(s)	Impact Hectares (Acres)
2A	E. Stockton Blvd. Option 1	0.097 (0.24)
	E. Stockton Blvd. Option 2	0.097 (0.24)
3A	E. Stockton Blvd. Option 1 W. Stockton Blvd. Option 1	0.097 (0.24)
	E. Stockton Blvd. Option 1 W. Stockton Blvd. Option 2	0.097 (0.24)
	E. Stockton Blvd. Option 2 W. Stockton Blvd. Option 1	0.097 (0.24)
	E. Stockton Blvd. Option 2 W. Stockton Blvd. Option 2	0.097 (0.24)

MITIGATION MEASURES

Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.

AFFECTED ENVIRONMENT: DISCUSSION OF VERNAL POOL TADPOLE SHRIMP

Survey Results

The vernal pool tadpole shrimp is listed by the federal government as an endangered species. This species is found in a variety of vernal pool types in central California. There are several records of this species occurring within 8.0 km (5.0 miles) of the project area (CNDDDB 2003).

No surveys have been conducted for this species, though based on the suitability of the vernal pool habitat within the project area, its presence is inferred.

IMPACTS

No Build Alternative

Under the No Build alternative, because the project would not be implemented, there would be no impacts to this special status animal species.

Build Alternatives (2A and 3A)

Permanent Impacts

Impact 2.3.5-5 Impacts to the vernal pool tadpole shrimp habitat identified within the project area are summarized in **Table 2.3.5-4**. Impacts to vernal pool habitat would be the same for all the alternatives and options identified. Both of the options identified for East Stockton Boulevard would result in impacts to the larger vernal pool and to the smaller and long, linear vernal pool. Impacts to the vernal pools would likely result in the pools no longer being viable habitat for listed invertebrate species.

**TABLE 2.3.5-4
SUMMARY OF IMPACTS TO VERNAL POOL TADPOLE SHRIMP HABITAT**

Alternative	Option(s)	Impact Hectares (Acres)
2A	E. Stockton Blvd. Option 1	0.097 (0.24)
	E. Stockton Blvd. Option 2	0.097 (0.24)
3A	E. Stockton Blvd. Option 1 W. Stockton Blvd. Option 1	0.097 (0.24)
	E. Stockton Blvd. Option 1 W. Stockton Blvd. Option 2	0.097 (0.24)
	E. Stockton Blvd. Option 2 W. Stockton Blvd. Option 1	0.097 (0.24)
	E. Stockton Blvd. Option 2 W. Stockton Blvd. Option 2	0.097 (0.24)

MITIGATION MEASURES

Compensatory mitigation recommended for impacts to wetlands and vernal pools, **MM 2.3.1-1** and **MM 2.3.2-1**, would preserve and create potential habitat for this species within the region.

2.3 BIOLOGICAL ENVIRONMENT

AFFECTED ENVIRONMENT: VALLEY ELDERBERRY LONGHORN BEETLE

Survey Results

The valley elderberry longhorn beetle (VELB) is listed by the federal government as a threatened species. This species' entire life cycle revolves around its host plant, the elderberry shrub (*Sambucus* spp.). They are typically associated with stems that are 1.0 inch or greater in diameter at ground level (USFWS 1999). Surveys of the project site revealed the presence of one elderberry shrub (*Sambucus mexicana*) within the project area (illustrated in previously-referenced **Figure 2.3.1-1** in Natural Communities Section). A subsequent protocol survey revealed one large stem at ground level that was approximately 20 cm (8 inches) in diameter. No exit holes (indicating the presence of VELBs living within the shrub) were observed in association with this shrub. This shrub was observed in non-riparian habitat. The following table summarizes these results.

**TABLE 2.3.5-5
VALLEY ELDERBERRY LONGHORN BEETLE HABITAT SURVEY RESULTS**

Elderberry Stem Size Classes			Exit Holes?
≥2.5cm and ≥7.6cm (≥1" and <3")	≥7.6cm and ≥12.7cm (≥3" and <5")	≥12.7cm (≥5")	
0	0	1	No

IMPACTS

No Build Alternative

Under the No Build alternative, because the project would not be implemented, there would be no impacts to this special status animal species.

Build Alternatives (2A and 3A)

Permanent Impacts

Impact 2.3.5-6 The proposed realignment of East Stockton Boulevard, under both build alternatives (Alternative 2A and 3A), would remove one (1) elderberry shrub located in the northeast quadrant of the project area. While surveys have not identified the presence of the VELB in this elderberry shrub, the removal of the shrub represents the removal of potential, although marginal quality, habitat for the VELB.

MITIGATION MEASURES

Compensatory mitigation measures will conform to the measures established in the FHWA Policy on Mitigation for Valley Elderberry Longhorn Beetle (FHWA 2003). The following is a summary of those measures.

MM 2.3.5-6a If the elderberry shrub cannot be avoided by the proposed project, then it will be transplanted to a conservation area approved by the USFWS. A qualified monitor will be on-site for the duration of the transplanting of the elderberry shrub to insure that no unauthorized take of VELB occurs. Transplantation should be conducted between November and mid-February. The conservation area receiving the transplant must be at least 548 square meters (1,800 square feet) in size. As many as five (5) additional elderberry plantings and up to five (5) associated native species plantings may also be planted within this area. The transplanted shrub shall receive supplemental watering through the first summer.

MM 2.3.5-6b In addition to the transplanting requirements, each elderberry stem measuring 2.5 cm (1.0 inch) or greater in diameter at ground level must be replaced in the conservation area with elderberry seedlings or cuttings at the ratios presented in the table below. In addition, native species will be planted in the conservation area at the ratios presented in **Table 2.3.5-6**.

**TABLE 2.3.5-6
VALLEY ELDERBERRY LONGHORN BEETLE MITIGATION SUMMARY**

Size Class	Count	Elderberry Seedling Ratio (non-riparian, no exit holes)	Associated Native Plant Ratio (non-riparian, no exit holes)	Number of Elderberry Mitigation Seedlings	Number of Associated Native Plant Seedlings
≥2.5cm and ≥7.6cm (≥1" and <3")	0	1:1	1:1	0	0
≥7.6cm and ≥12.7cm (≥3" and <5")	0	2:1	1:1	0	0
≥12.7cm (≥5")	1	3:1	1:1	3	1
TOTAL	1			3	1

AFFECTED ENVIRONMENT: GIANT GARTER SNAKE

Survey Results

Giant garter snakes are listed as a state and federally threatened species. They inhabit open water canals and streams, where they forage on small fish and frogs. Grassy banks and emergent vegetation are used for basking and high ground with burrows or crevices that protected from winter flooding is used for hibernacula (winter retreats). According to the CNDDDB, giant garter snakes have been observed within 0.8 km (0.5 mile) of the project area and are known to inhabit Laguna Creek. Because Whitehouse Creek is a seasonal wetland feature and is completely dry during the summer months within the project area, it is unlikely that this species occurs within this feature. In addition, Whitehouse Creek west of SR 99 continues south to Laguna Creek via a subsurface drainage pipe. The southern tip of the study area extends into Laguna Creek, which

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does represent potential habitat for this species. However, none of the project alternatives have any road modifications or construction occurring within 152 meters (500 feet) of Laguna Creek.

IMPACTS

No Build Alternative

Under the No Build alternative, because the project would not be implemented, there would be no impacts to this special status animal species.

Build Alternatives (2A and 3A)

Permanent Impacts

No direct impacts to the giant garter snake or its habitat are anticipated to occur with the development of the proposed project. Any indirect impacts, such as impacts to water quality from construction activities, etc., will be mitigated through the implementation of a Caltrans-approved SWPPP to insure that water quality downstream of the project area is not adversely impacted during and after construction of the proposed project. No impacts to giant garter snakes are anticipated occur as a result of the development of this project.

AFFECTED ENVIRONMENT: SWAINSON'S HAWK

Survey Results

Swainson's hawks are listed by the state as a threatened species and are recognized as a species of concern by the federal government. This species is a spring and summer resident in central California, where it nests in riparian areas and solitary tree stands in the vicinity of open grasslands and agricultural lands. This species has been reported as occurring within 1.6 km (1.0 mile) of the project area. The trees and agricultural portions of the project area represent potential nesting and foraging habitat for this species, respectively. No Swainson's hawk nests or other raptor nests were observed during visits to the site.

CDFG will be consulted with prior to construction regarding potential impacts to the state threatened Swainson's hawk. If prior to construction it is determined that take of Swainson's hawk is unavoidable a CDFG Section 2081 permit shall be obtained by the project proponent.

IMPACTS

No Build Alternative

Under the No Build alternative, because the project would not be implemented, there would be no impacts to this special status animal species.

Build Alternatives (2A and 3A)

Permanent Impacts

Impact 2.3.5-7 Though no nesting habitat was identified within the project area, the agricultural/non-native grassland areas do provide potential foraging habitat for Swainson’s hawks. The implementation of the project could result in the loss of potential foraging habitat for Swainson’s hawks. A summary of the potential impacts (i.e. removal of potential foraging habitat) to Swainson’s hawk foraging habitat for each alternative is summarized in **Table 2.3.5-9**.

Additionally, while there are no identified Swainson’s hawk nests located within the project area, large trees are present in and near the project area that could be used as nesting sites. Though it is unlikely, it is possible that a Swainson’s hawk could enter the project area and nest prior to the start of construction.

**TABLE 2.3.5-9
SUMMARY OF IMPACTS TO POTENTIAL FORAGING HABITAT FOR SWAINSON’S HAWK**

Alternative	Option(s)	Impact Hectares (Acres)
2A	E. Stockton Blvd. Option 1	4.43 (10.94)
	E. Stockton Blvd. Option 2	5.04 (12.45)
3A	E. Stockton Blvd. Option 1	5.67
	W. Stockton Blvd. Option 1	(14.01)
	E. Stockton Blvd. Option 1	5.34
	W. Stockton Blvd. Option 2	(13.19)
	E. Stockton Blvd. Option 2	6.28
	W. Stockton Blvd. Option 1	(15.52)
	E. Stockton Blvd. Option 2	5.95
	W. Stockton Blvd. Option 2	(14.70)

MITIGATION MEASURES

Avoidance and Minimization Efforts

MM 2.3.5-7a If project construction is scheduled to occur between March 1 and September 15 (the Swainson’s hawk nesting period), a qualified biologist will conduct two surveys for actively nesting Swainson’s hawks within the project area, as well as within a 1.6 km (1.0 mile) radius of the project area, prior to the start of construction. The surveys shall take place at least

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one week apart, with the second taking place two days prior to the start of construction. If active Swainson's hawk nests are found within 1.6 km (1.0 mile) radius of the construction site, the City of Elk Grove shall consult with the DF&G and the City shall retain a qualified biologist. Clearing and construction shall be postponed or halted within 76 meters (250 feet) of the nests (or another buffer acceptable by DF&G) until additional nesting attempts no longer occur. If a nest tree is found on the project site prior to construction and is proposed for removal, then appropriate permits from DF&G shall be obtained and mitigation implemented pursuant to DF&G guidelines. Complete avoidance of nesting Swainson's hawks will be assumed if project work occurs outside of the nesting time period (March 1 to September 15), or if no active nests are identified within 1.6 km (1.0 mile) of the project area. If project construction is to occur within 1.6 km (1.0 mile) of an active nest, a qualified biologist will monitor the nest for the possibility of abandonment. If an identified active nest becomes abandoned as a result of the implementation of the project, and if nestling(s) are still alive, the project proponent will fund the recovery and hacking of the nestling(s). If construction will occur over the course of more than a single breeding season, this mitigation shall be applied prior to the start of each breeding season for every year during which construction takes place.

Compensatory Mitigation

MM 2.3.5-7b

While the avoidance mitigation described above would reduce the potential impacts to Swainson's hawk nesting sites, implementation of the project would contribute to the loss of potential foraging habitat in the area, and compensatory mitigation is required to mitigate this loss. Mitigation for impacts to Swainson's hawk foraging habitat shall follow CDFG's 1994 *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California* (CDFG 1994). The City of Elk Grove will mitigate for the loss of Swainson's hawk foraging habitat by purchasing credits at a CDFG-approved mitigation bank at a replacement ratio of 1:1 for suitable foraging habitats. The City will further mitigate for impacts to Swainson's hawk habitat by purchasing credits at a CDFG-approved mitigation bank at a ratio of 0.5:1 specifically for the management of habitat for prey production. These mitigation lands will be managed and monitored in perpetuity by the trustees of the mitigation bank. The City will also comply with any additional measures required by CDFG.

The money to fund the above-outlined compensatory mitigation requirements will be generated by contributing to a fund established by the City of Elk Grove specifically for Swainson's hawk mitigation. The specifics of this fund program are outlined in Elk Grove City Ordinance No. 35-2003, which amends Chapter 16.130 of the Elk Grove Municipal Code. Monies from this fund will in turn be used for the specific acquisition of lands, in fee simple or through a conservation easement (City of Elk Grove, 2003).

A summary of required mitigation acreages for each alternative is presented below in **Table 2.3.5-10**.

TABLE 2.3.5-10
SUMMARY OF MITIGATION FOR IMPACTS TO FORAGING HABITAT FOR SWAINSON'S HAWK

Alternative	Option(s)	Impact Hectares (Acres)	Mitigation Hectares (Acres) [1.5:1]
2A	E. Stockton Blvd. Option 1	4.43 (10.94)	6.65 (16.41)
	E. Stockton Blvd. Option 2	5.04 (12.45)	7.56 (18.68)
3A	E. Stockton Blvd. Option 1 W. Stockton Blvd. Option 1	5.67 (14.01)	8.50 (21.02)
	E. Stockton Blvd. Option 1 W. Stockton Blvd. Option 2	5.34 (13.19)	8.01 (19.79)
	E. Stockton Blvd. Option 2 W. Stockton Blvd. Option 1	6.28 (15.52)	9.42 (23.38)
	E. Stockton Blvd. Option 2 W. Stockton Blvd. Option 2	5.95 (14.70)	8.93 (22.05)

AFFECTED ENVIRONMENT: WHITE-TAILED KITE

Survey Results

White-tailed kites are recognized by the state as a fully protected species and by the federal government as a species of concern. This species forages in agricultural areas and nests in dense oak, willow, or other tree stands. This species is known to occur within 8.0 km (5.0 miles) of the project area. The project area represents potential foraging habitat but does not provide suitable nesting habitat. This species was not observed during surveys of the project area, however the agricultural/non-native grassland portions of the project site represent potential foraging habitat for this species.

IMPACTS

No Build Alternative

Under the No Build alternative, because the project would not be implemented, there would be no impacts to this special status animal species.

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Build Alternatives (2A and 3A)

Permanent Impacts

Impact 2.3.5-8 While the project area does not offer suitable nesting habitat for the white-tailed kite, the agricultural/non-native grassland areas within the project area provide potential foraging habitat for white-tailed kites. This potential foraging habitat could be impacted by implementation of the project. A summary of the potential impacts (i.e. removal of potential foraging habitat) to white-tailed kite foraging habitat for each alternative is summarized in **Table 2.3.5-9** above.

MITIGATION MEASURES

Compensatory Mitigation

Because the white-tailed kite utilizes the same foraging habitat as the Swainson's hawk, mitigation measure **MM 2.3.5-7a** and **MM 2.3.5-7b**, which requires compensatory mitigation for the loss of Swainson's hawk foraging habitat due to the project, would serve as mitigation for the loss of foraging habitat for the white-tailed kite, as well.

CEQA FINDINGS

Impacts to threatened and endangered species may be considered significant if the project would:

- Directly result in the harm of a candidate, sensitive, or special status species identified by local or regional plans, policies, or regulations, or by CDFG or USFWS.
- Modify natural a natural community in such a way that it would result in a substantial adverse effect on candidate, sensitive, or special status species identified by local or regional plans, policies, or regulations, or by CDFG or USFWS.

Project impacts to vernal pools would result in potential impacts to several species that rely on this habitat for survival. The VELB could be impacted by the removal of an elderberry bush from the project site. Several raptor species could be impacted through the loss of foraging habitat. These impacts are **potentially significant impacts** unless mitigated.

Mitigation measures **MM 2.3.1-1** and **MM 2.3.2-1**, recommended for wetlands and vernal pools, would preserve and create potential habitat for vernal pool species. **MM 2.3.5-6a** and **MM 2.3.5-6b** would transplant the elderberry bush and plant additional individuals after construction. **MM 2.3.5-7a** and **MM 2.3.5-7b** would prevent direct impacts to raptor species and their nests and purchase habitat credits to compensate for the loss of foraging and nesting habitat onsite. Implementation of the proposed mitigation measures would reduce impacts to threatened and endangered species to a **less than significant impact**.