Appendix B

List of Regionally Occurring Special Status Species

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- **Unlikely:** The project site and/or surrounding area do not support suitable habitat for a particular species, or the project site is outside of the species known range.

- **Low:** The project site and/or immediate area only provide limited amounts and low quality habitat for a particular species. In addition, the known range for a particular species may be outside of the immediate project area.

- **Medium:** The project site and/or immediate area provide suitable habitat for a particular species.

- **High:** The project site and/or immediate area provide ideal habitat conditions for a particular species and/or known populations occur in immediate area and/or within the project site.

APPENDIX B
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Status Federal/ State/CNPS	Suitable Habitat	Potential for Occurrence within Project Area
Plants			
Astragalus tener var. *ferrisiae* Ferris' milk-vetch	--/1B.1	Found in alkaline flats, and vernally moist meadow habitat. Blooms March–June. Found at elevations between 0 and 196 feet.	**Unlikely.** No suitable habitat present within project site.
Astragalus tener var. *tener* Alkali milk-vetch	--/1B.2	Found in alkaline soils in mesic playas, vernally most meadow habitat, and vernal pools. Blooms March–June. Found at elevations between 0 and 196 feet.	**Unlikely.** No suitable habitat present within project site.
Atriplex cordulata var. *cordulata* Heartscale	--/1B.2	Found in saline or alkaline soils, in chenopod scrub, meadows, seeps, and grasslands. Blooms April–October. Found at elevations between 0 and 1,850 feet.	**Unlikely.** No suitable habitat present within project site.
Atriplex depressa Brittlescale	--/1B.2	Found in alkaline, clay soils within chenopod scrub, meadow and seep, playa, grassland, and vernal pool habitats. Blooms April–October. Found at elevations between 0 and 1,100 feet.	**Unlikely.** No suitable habitat present within project site.
Cordylanthus palmatus Palmate-bracted salty bird's-beak	FE/SE/1B.1	Found in alkaline soils in chenopod scrub, and grassland habitats. Blooms May–October. Found at elevations between 15 and 525 feet.	**Unlikely.** No suitable habitat present within project site.
Downingia pusilla Dwarf downingia	--/2B.2	Found in grassland (mesic) and vernal pools. Blooms March–May. Found at elevations between 15 and 1,475 feet.	**Unlikely.** No suitable habitat present within project site.
Extriplex joaquinana San Joaquin spearscale	--/1B.2	Found in alkaline soils in chenopod scrub, meadow and seep, playa, and grassland habitats. Blooms April–October. Found at elevations 0 to 2,800 feet.	**Unlikely.** No suitable habitat present within project site.

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Fritillaria agrestis Stinkbells	--/4.2	Found in clay, sometimes serpentinite soils in chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland. Found at elevations between 32 to 5,101 feet.	**Unlikely.** No suitable habitat present within project site.
Gratiola heterosepala Boggs Lake hedge-hyssop	--/SE, 1B.2	Found in clay soils in marshes and swamps, and vernal pools. Blooms April–August. Found at elevations 25 to 8,000 feet.	**Unlikely.** No suitable habitat present within project site.
Hibiscus lasiocarpos var. *occidentalis* Woolly rose-mallow	--/1B.2	Found in marshes and swamps, and often in riprap on the sides of levees. Blooms June–September. Found at elevations between 0 to 400 feet.	**Unlikely.** No suitable habitat present within project site.
Legenere limosa Legenere	--/1B.1	Found in vernal pools. Blooms April–June. Found at elevations between 0 and 2,900 feet.	**Unlikely.** No suitable habitat present within project site.
Lepidium latipes var. *heckardii* Heckard's pepper-grass	--/1B.2	Found in alkaline soils in vernal pool margins, salt marsh edges, and grasslands. Blooms March–May. Found at elevations between 0 and 675 feet.	**Unlikely.** No suitable habitat present within project site.
Puccinellia simplex California alkali grass	--/1B.2	Found in alkaline, vernally mesic sinks, flats, and lake margins in chenopod scrub, meadows, and seeps, valley, and foothill grassland, and vernal pools. Blooms March–May. Found at elevations between 6 and 3,051 feet.	**Unlikely.** No suitable habitat present within project site.
Sagittaria sanfordii Sanford's arrowhead	--/1B.2	Found in freshwater marshes and swamps. Blooms May–November. Found at elevations between 0 and 2,150 feet.	**Unlikely.** No suitable habitat present within project site.
Symphyotrichum lentum Suisun Marsh aster	--/1B.2	Found in freshwater and brackish marshes and swamps. Blooms April–November. Found at elevations 0 to 25 feet.	**Unlikely.** No suitable habitat present within project site.
Trifolium hydrophilum Saline clover	--/1B.2	Found in marshes and swamps, mesic and alkaline grasslands, and vernal pools. Blooms April–June. Found at elevations 0 to 1,000 feet.	**Unlikely.** No suitable habitat present within project site.
Invert			
Branchinecta lynchi Vernal pool fairy shrimp	FT/--	Lifecycle restricted to vernal pools.	**Unlikely.** No suitable habitat present within project site.

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Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT/--	Found only in the Central Valley of California, in association with blue elderberry (Sambucus nigra ssp. caerulea). Prefers to lay eggs in elderberries, 2-8 inches in diameter, some preference shown for "stressed" elderberries.	**Unlikely.** No suitable habitat (*Sambucus nigra* spp. *caerulea*) present within project site.
Lepidurus packardi Vernal pool tadpole shrimp	FE/--	Lifecycle restricted to vernal pools.	**Unlikely.** No suitable habitat present within project site.
Linderiella occidentalis California linderiella	--/SAL	Lifecycle restricted to vernal pools.	**Unlikely.** No suitable habitat present within project site.
Cicindela hiricollis abrupta Sacramento Valley tiger beetle	--/SAL	Little is known about this species life history.	**Unlikely.** No suitable habitat present within project site.
Bombus crotchii Crotch bumble bee	--/SAL	Little is known about this species life history.	**Unlikely.** No suitable habitat present within project site.
Bombus occidentalis Western bumble bee	--/SAL	Little is known about this species life history.	**Unlikely.** No suitable habitat present within project site.
Myrmosula pacifica Antioch multilid wasp	--/SAL	Little is known about this species life history.	**Unlikely.** No suitable habitat present within project site.
Birds			
Accipiter cooperi Cooper's hawk	--/WL	Found in woodland chiefly of open, interrupted or marginal type. Nests mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains. Also nests in live oaks. Forages in broken woodland habitat edges.	**Unlikely.** No suitable nesting or foraging habitat present within or adjacent to the project site.
Agelaius tricolor Tricolored blackbird	--/CC	Nests near freshwater, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, and tall herb; forages in grassland and cropland habitats.	**Unlikely.** No suitable nesting habitat present within or adjacent to the project site.
Ardea alba Great egret	--/--	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	**Unlikely.** No suitable nesting or foraging habitat present within or adjacent to the project site.
Ardea herodias Great blue heron	--/SAL	Colonial nester in tall trees, cliff sides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes lake margins, tide-flats, rivers and streams, and wet meadows.	**Low.** No suitable nesting habitat present within or adjacent to the project site. Suitable foraging habitat present in East Drainage Canal immediately adjacent to the project site. This species was not observed during the reconnaissance survey.

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Athene cunicularia Burrowing owl	--/SSC	Forages in open plains, grasslands, and prairies; typically nests in abandoned small mammal burrows.	**Medium.** Suitable habitat present within project site. Additionally, burrowing owls have been observed along the East Drainage Canal immediately adjacent to the project site.[1] This species was not observed during the reconnaissance survey.
Buteo swainsoni Swainson's hawk	--/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**Medium.** Low-quality, limited nesting habitat is present in redwood trees located approximately 500 feet north of the project site. Species requires nesting trees be located within easy fly distance between foraging areas and nest sites. Habitats within 0.5-mile of the project site are primarily urban. Grassland within the project site provides limited, low quality habitat. High quality habitat is located in agricultural and open areas north of the community of Natomas, and east of the project site along the Sacramento River, however the site could still be used as foraging habitat. The closest recorded Swainson's hawk occurrence is located approximately one mile southwest of the project site but is presumed possibly extirpated by CDFW.
Charadrius alexandrinus nivosus Western snowy plover	FT/SSC	Nests and forages in barren to sparsely vegetated beaches and dry mud or sand flats on margins of rivers, lakes, and ponds.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.
Charadrius montanus Mountain plover	--/SSC	Short grasslands, agricultural fields, and sagebrush areas, avoids high and dense cover. Forages on the ground. Feeds on large insects, especially grasshoppers. Does not nest in California.	**Low.** Foraging habitat for this species present within the project site, however project site is isolated from other potential foraging areas. No CNDDB records of this species in the vicinity of the project site[2].This species was not observed during the reconnaissance survey.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT/SE	Densely foliaged, valley foothill, desert, deciduous riparian thickets or forest habitats with dense, low-level or understory foliage which abut on slow-moving watercourses, backwaters, or seeps.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.

1 California Natural Diversity Database (CNDDB), 2016.

2 California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed: November 30, 2015. Data set expires May 3, 2016.

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Egretta thula Snowy egret	--/SAL	Forages in shallow water or along shores of wetlands or aquatic habitats. Nests in dense marshes and low trees.	**Low.** No suitable nesting habitat present within or adjacent to the project site. Suitable foraging habitat present in East Drainage Canal immediately adjacent to the project site. This species was not observed during the reconnaissance survey.
Elanus leucurus White-tailed kite	--/FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Low.** Low-quality, limited nesting habitat is present in within redwood trees located approximately 500 feet north of the project site. Species rarely found away from agricultural areas. Habitats within 0.5-mile of the project site are primarily urban. Grassland within the project site provides limited, low quality habitat. Higher quality habitat is located in agricultural and open areas north of the community of Natomas, and east of the project site along the Sacramento River. The closest record of occurrence is located approximately two miles northeast near Dry Creek.
Falco columbarius Merlin	--/WL	Forages primarily along coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stages. Does not breed in California.	**Low.** Project site is outside the nesting range of this species. Suitable foraging habitat present within the project area.
Melospiza melodia Song sparrow ("Modesto" population)	--/SSC	Nest in emergent freshwater marshes dominated by tule (*Scirpus* spp., *Schoenoplectus* spp.) and cattail (*Typha* spp.) as well as riparian willow (*Salix* spp.) thickets. Also nest in riparian forests of valley oak (*Quercus lobata*) with a sufficient understory of blackberry (*Rubus* spp.), along vegetated irrigation canals and levees, and in recently planted valley oak restoration sites.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.
Nycticorax nycticoras Black-crowned night heron	--/SAL	Forages during night and twilight hours in shallow water. Nests in dense-foliaged trees, dense, fresh or brackish emergent wetlands, or dense shrubbery or vine tangles, usually near aquatic or emergent feeding areas.	**Low.** No suitable nesting habitat present within or adjacent to the project site. Suitable foraging habitat present in East Drainage Canal immediately adjacent to the project site. This species was not observed during the reconnaissance survey.
Plegadis chihi White-faced ibis	--/--	Forages in fresh emergent wetland, shallow water, muddy ground of wet meadows, and irrigated flooded pastures and croplands. Nests in dense, fresh emergent wetland. Not known to breed in the Central Valley.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.

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Species	Status Federal/ State/CNPS	Suitable Habitat	Potential for Occurrence within Project Area
Progne subis Purple martin	--/SSC	Found in valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats. Nests exclusively under bridges in Sacramento.	**Low.** No suitable nesting habitat present within or adjacent to the project site. Truxel Road bridge over the East Drainage Canal does not contain weep holes likely to support purple martins. However, multiple purple martin occurrences have been recorded in CNDDB within five miles of the project site[3].
Riparia riparia Bank swallow	--/ST	Colonial nester; nest primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.
Vireo bellii pusillus Least Bell's vireo	FE/SE	Nests in lowland, willow-dominated, dense riparian habitat through the Sacramento and San Joaquin Valleys.	**Unlikely.** No suitable foraging or breeding habitat present within or adjacent to the project site.
Reptiles			
Emys marmorata Western pond turtle	--/SSC	Found in permanent or nearly permanent water in a wide variety of habitat types, including permanent ponds, lakes, streams, irrigation ditches, or permanent pools along intermittent streams. Species requires basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks.	**Medium**. No suitable habitat present within project site. Suitable habitat present adjacent to the project site in the East Drainage Canal; however, no western pond turtle populations are known to occur within five miles of the project site.[4]
Spea hammondii Western spadefoot	--/SSC	Found seasonally in grasslands, prairies, chaparral, and woodlands, in and around wet sites. Breeds in shallow, temporary pools formed by winter rains. Takes refuge in burrows.	**Unlikely**. No suitable foraging or breeding habitat present within or adjacent to the project site. There are no recorded occurrences in the Natomas Basin.[5]
Thamnophis gigas Giant garter snake	FT/ST	Found in marshes, sloughs, and irrigation canals/ditches, less with slow-moving creeks, and absent from larger rivers. Species is extremely aquatic and is rarely found away from water, and forages in water for food. Young are born in secluded sites, such as loose bark of rotting logs, dense vegetation, or crevices of rocky shorelines. Species basks on emergent vegetation such as cattails or tules. Takes refuge in mammal burrows, or piles of vegetation.	**High.** Suitable habitat present in the East Drainage Canal adjacent to the project site.

[3] California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed: November 30, 2015. Data set expires May 3, 2016.

[4] California Natural Diversity Database (CNDDB), 2015. Results of electronic records search (version 5.1.1). Sacramento: California Department of Fish and Wildlife, Wildlife Habitat Data Analysis Branch. Available: https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx. Accessed: November 30, 2015. Data set expires May 3, 2016.

[5] Sacramento and Sutter Counties, and Natomas Basin Conservation, 2003 (April). Natomas Basin Habitat Conservation Plan. Prepared for U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. Sacramento, CA.

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Mammals			
Antrozous pallidus Pallid bat	--/SSC	Roosts in caves, crevices, mines, hollow trees, and buildings. Found in a wide variety of habitats, including grasslands, shrub lands, woodlands, and forests. Prefers open, dry habitats with rocky areas for roosting.	**Unlikely**. No suitable foraging or breeding habitat present within or adjacent to the project site.
Lasionycteris noctivagans Silver-haired bat	--/--	Roosts in trees, buildings, rock crevices, caves, and under bark. Species may be found anywhere in California including forests, woodland, and grassland habitats. Forages above streams, ponds, and open brushy areas.	**Unlikely**. No suitable foraging or breeding habitat present within or adjacent to the project site.
Lasiurus blissevillii Western red bat	--/SSC	Roosts in mixed conifer forests, prefers habitat edges and mosaics with trees that are protected from above and open below, forages within grasslands, shrub lands, open woodlands and forests, and croplands.	**Unlikely**. No suitable foraging or breeding habitat present within or adjacent to the project site.
Lasiurus cinerecus Hoary bat		Roosts in dense foliage of medium to large trees. Preferred sites are hidden from above, with few branches below.	**Unlikely**. No suitable roosting habitat present within or adjacent to the project site.
Taxidea taxus American badger	--/SSC	Most abundant in drier open stage of most shrub, forest, and herbaceous habitats, with friable soils. Use dense vegetation and rocky areas for cover and den sites. Prefer forest interspersed with meadows or alpine fell-fields.	**Unlikely**. No suitable foraging or breeding habitat present within or adjacent to the project site.
Natural Plant Communities			
Elderberry Savanna		Natural Community	**Not present.**
Great Valley Cottonwood Riparian Forest		Natural Community	**Not present.**
Great Valley Mixed Riparian Forest		Natural Community	**Not present.**
Northern Claypan Vernal Pool		Natural Community	**Not present.**
Northern Hardpan Vernal Pool		Natural Community	**Not present.**
Fish			
Archoplites interruptus Sacramento perch	--/SSC	Historically found in the sloughs, slow-moving rivers, and lakes of the central valley. Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	**Unlikely**. No suitable habitat present within or adjacent to the project site.

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Ochorhynchus mykiss irideus Steelhead – Central Valley DPS	FT/--	This ESU enters the Sacramento and San Joaquin Rivers and their tributaries from July to May; spawning from December to April. Young move to rearing areas in and through the Sacramento and San Joaquin Rivers, Delta, and San Pablo and San Francisco Bays.	**Unlikely**. No suitable habitat present within or adjacent to the project site.
Oncorhynchus tshawytscha Chinook salmon – Central Valley spring-run ESU	FT/ST	This ESU enters the Sacramento and San Joaquin Rivers and tributaries March to July; spawning from late August to early October. Young move to rearing areas in and through the Sacramento and San Joaquin Rivers, Delta, and San Pablo and San Francisco Bays.	**Unlikely**. No suitable habitat present within or adjacent to the project site.
Oncorhynchus tshawytscha Chinook salmon – Sacramento River winter-run ESU	FE/SE	This ESU enters the Sacramento River December to May; spawning peaks May and June. Upstream movement occurs more quickly than in spring run population. Young move to rearing areas in and through the Sacramento River, Delta, and San Pablo and San Francisco.	**Unlikely**. No suitable habitat present within or adjacent to the project site.
Pogonichthys macrolepidotus Sacramento splittail	--/SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the delta, Suisun Bay & associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning & foraging for young.	**Unlikely**. No suitable habitat present within or adjacent to the project site.
Spirinchus thaelichthys Longfin smelt	FC/ST	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	**Unlikely**. No suitable habitat present within or adjacent to the project site.
Thaleichthys pacificus Eulachon – Southern DPS	FT/--	Moves in from ocean in to natal stream to spawn from late winter to mid-spring.	**Unlikely**. No suitable habitat present within or adjacent to the project site.

STATUS CODES:

Federal
FE = Endangered
FT = Threatened
FC = Candidate

State
CE = Endangered
CT = Threatened
FP = Fully Protected
CC = State Candidate Species
SSC = (CA) Department of Fish and Wildlife Species of Special Concern