

APPENDIX E

MOORE BIOLOGICAL CONSULTANTS

December 12, 2019

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Subject: "LODI POLICE TRAINING FACILITY PROJECT", LODI, SAN
JOAQUIN COUNTY, CALIFORNIA: BIOLOGICAL ASSESSMENT

Dear Daniel:

Thank you for asking Moore Biological Consultants to assist with the Lodi Police Training Facility Project in Lodi, San Joaquin County, California (Figures 1 and 2). The purpose of this assessment is to describe existing biological resources in the project site, identify potentially significant impacts to biological resources from the project, and provide recommendations for how to reduce those impacts to a less-than-significant level. The work involved reviewing databases, aerial photographs, and documents, and conducting a field survey to document vegetation communities, potentially jurisdictional Waters of the U.S. and/or wetlands, and potentially suitable habitat for or presence of special-status species. This report details the methodology and results of our investigation.

Project Overview

The project involves construction of a police training facility for the City of Lodi Police Department. The facility will be located in the White Slough Water Pollution Control Facility (WPCF). The site is within City-owned agricultural lands in the northwest part of the White Slough WPCF. The purpose of the project is to

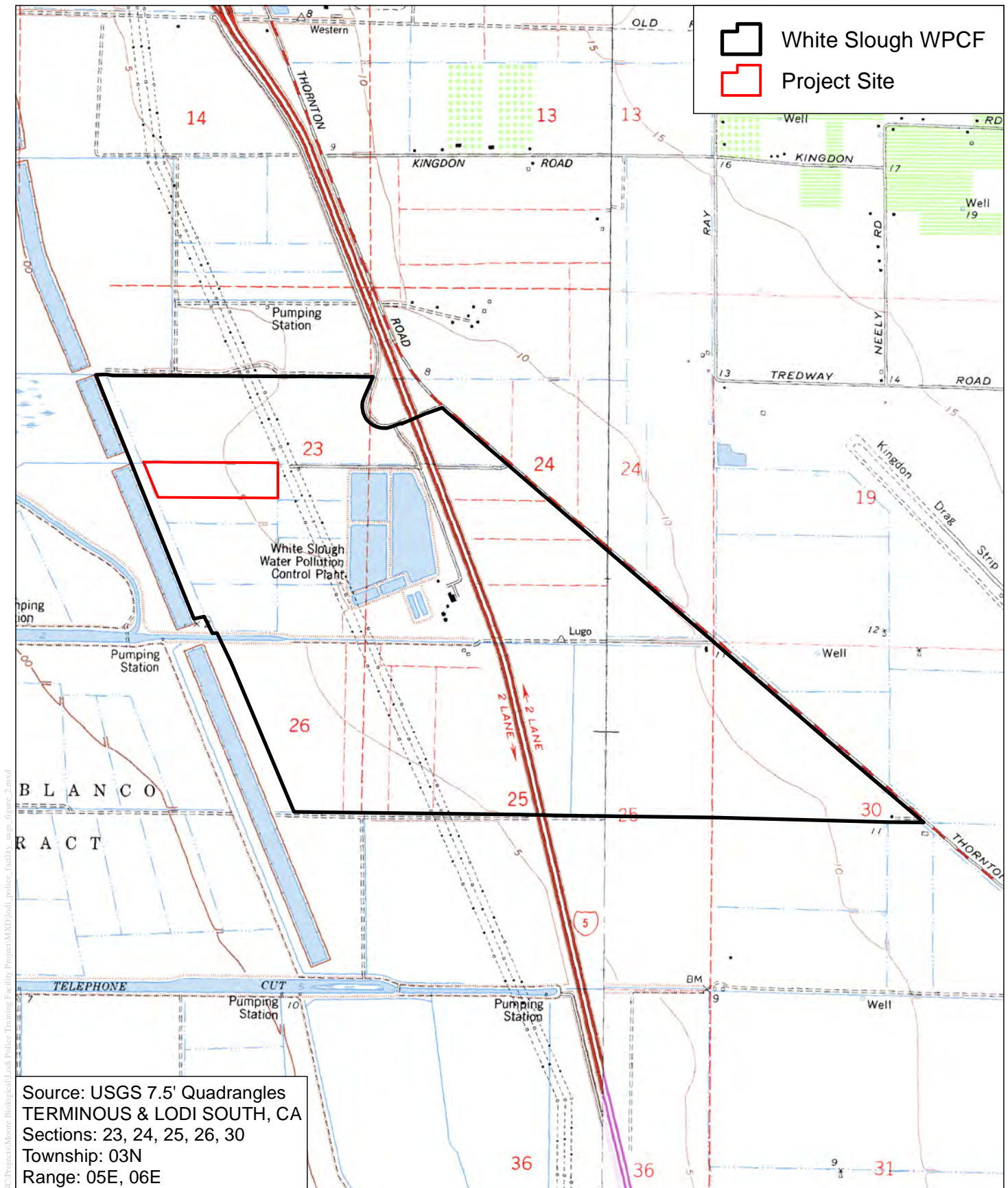


Figure 2

Moore Biological
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0 1,000 2,000
 Feet

Map Date: 12/12/2019



USGS

Lodi Police Training Facility Project

City of Lodi, San Joaquin County, CA

provide a long-term training facility in order to properly train and certify members of the Department.

The project involves construction of a classroom, shooting range, a defensive driving course, detonation area and bunker, and other accommodations. A complete project description and Conceptual Site Layout are included in Attachment A.

Methods

Prior to the field surveys, we conducted a search of California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB, 2019). The CNDDDB search was conducted on the USGS 7.5-minute Lodi South and Terminous topographic quadrangles, encompassing approximately 120+/- square miles surrounding the site (Attachment B). The United States Fish and Wildlife Service (USFWS) IPaC Trust Resource Report of Federally Threatened and Endangered species that may occur in or be affected by projects in the project vicinity was also reviewed (Attachment B). This information was used to identify special-status wildlife and plant species that have been previously documented in the vicinity or have the potential to occur based on suitable habitat and geographical distribution. Additionally, the CNDDDB depicts the locations of sensitive habitats. The USFWS on-line-maps of designated critical habitat in the area were also downloaded.

Field surveys were conducted on June 24, 2019 and September 11, 2019. The survey area included the agricultural field that makes up the body of the site, a band of ruderal grassland just west of the field, as well as adjacent areas that may be subject to construction disturbance. The survey consisted of driving and walking throughout the site making observations of habitat conditions and noting surrounding land uses, habitat types, and plant and wildlife species. The fieldwork included an assessment of potentially jurisdictional Waters of the U.S. and wetlands as defined by the U.S. Army Corps of Engineers (ACOE, 1987;

2008) and a search for special-status species and suitable habitat for special-status species (e.g., blue elderberry shrubs, vernal pools). Trees in and near the site were assessed for the potential use by nesting raptors, especially Swainson's hawk (*Buteo swainsoni*). The grasslands in the site and adjacent areas visible from the site were searched for burrowing owls (*Athene cunicularia*) or ground squirrel burrows with evidence of past occupancy.

Results

GENERAL SETTING: The project site is located approximately 6.5 miles southwest of Lodi, in Lodi, San Joaquin County, California (Figure 1). The site is in Section 23 within Township 3 North and Range 5 East of the USGS 7.5-minute Terminous topographic quadrangle (Figure 2). The site is essentially flat and is at an elevation of approximately 5 feet above mean sea level. The site consist of a trapezoidal-shaped agricultural field that has been farmed for decades, most recently in a hay crop, and a band of fallow, ruderal grassland to the west of the field (Figure 3 and photographs in Attachment C).

Surrounding land use in this part of San Joaquin County is primarily agricultural. The project site is located in the northwest part of the White Slough WPCF. A recently constructed treatment pond is located adjacent to the south edge of the project site. Agricultural fields surround the remaining sides of the site, which are separated from the site by farm roads (Figure 3). Surrounding agricultural parcels are mainly farmed in wheat and hay; a few nearby fields appear fallow.

VEGETATION: The vegetation within and adjacent to the site is best described as highly disturbed ruderal grassland vegetation, consisting almost entirely of non-native grasses and weeds. Oats (*Avena* sp.), soft chess brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), foxtail barley (*Hordeum murinum*), and perennial ryegrass (*Lolium perenne*) are some of the most common grasses observed within and adjacent to the project site. Other grassland species such as yellow star-thistle (*Centaurea solstitialis*), black mustard (*Brassica nigra*),



| | | |
|--|---|---|
| <p>Figure 3</p> <p>Moore Biological Consultants</p> | <p>Map Date: 12/12/2019 Aerial Source: DigitalGlobe (12/2018)</p> | <p>AERIAL</p> |
| | | <p>Lodi Police Training Facility Project</p> <p>City of Lodi, San Joaquin County, CA</p> |

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Italian thistle (*Carduus pycnocephalus*), morning glory (*Convolvulus arvensis*), common sunflower (*Helianthus annuus*), prickly lettuce (*Lactuca serriola*), Canadian horseweed (*Erigeron canadensis*), and filaree (*Erodium* spp.) are intermixed with the grasses. Table 1 is a list of the plant species observed in the site.

There are no trees or shrubs in or immediately adjacent to the project site. There are a few large trees viewable from the site, the closest being approximately 1,350 feet west of the site, along an unnamed delta slough. These trees appear to be part of a well-developed riparian corridor containing typical riparian forest species such as willows (*Salix* sp.), cottonwoods (*Populus fremontii*), and black walnut (*Juglans californica*). There is also a notable band of trees approximately 2,000 feet south of the site, just north of Dredger Cut. Most of these trees are cottonwoods and willows. No blue elderberry (*Sambucus mexicana*) shrubs were observed within or adjacent to the project site.

WILDLIFE: A variety of bird species were observed in the site. Great egret (*Ardea alba*), turkey vulture (*Cathartes aura*), Swainson's hawk (*Buteo swainsoni*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), California scrub jay (*Aphelocoma californica*), European starling (*Sturnus vulgaris*), Brewer's blackbird (*Euphagus cyanocephalus*), and house finch (*Carpodacus mexicanus*) are representative bird species observed in and near the site (Table 2). All of these are species commonly found in agricultural areas in the greater project vicinity.

Although not in close proximity to the site, the large trees viewable from the site are suitable for nesting raptors, including Swainson's hawks. The project site also provides foraging habitat for raptors and other birds. Given the presence of trees near the site, it is likely one or more pairs of raptors and a variety of songbirds nest in and/or near the site during most years. It is possible that ground-nesting songbirds such as killdeer (*Charadrius vociferus*) and red-winged blackbird (*Agelaius phoeniceus*) nest in the grassland habitats in and adjacent to the site.

TABLE 1
PLANT SPECIES OBSERVED IN THE SITE

| | |
|--------------------------------|---------------------|
| <i>Amsinckia menziesii</i> | rancher's fireweed |
| <i>Avena</i> sp. | oat |
| <i>Brassica nigra</i> | black mustard |
| <i>Bromus diandrus</i> | ripgut brome |
| <i>Bromus hordeaceus</i> | soft chess brome |
| <i>Carduus pycnocephalus</i> | Italian thistle |
| <i>Centaurea solstitialis</i> | yellow star-thistle |
| <i>Cichorium intybus</i> | chicory |
| <i>Cirsium vulgare</i> | bull thistle |
| <i>Convolvulus arvensis</i> | morning glory |
| <i>Cynodon dactylon</i> | Bermuda grass |
| <i>Datura stramonium</i> | jimsonweed |
| <i>Epilobium brachycarpum</i> | willowherb |
| <i>Eremocarpus setigerus</i> | dove weed |
| <i>Erigeron bonariensis</i> | asthmaweed |
| <i>Erigeron canadensis</i> | Canadian horseweed |
| <i>Erodium botrys</i> | filaree |
| <i>Helianthus annuus</i> | common sunflower |
| <i>Hordeum murinum</i> | foxtail barley |
| <i>Lactuca serriola</i> | prickly lettuce |
| <i>Lepidium draba</i> | whitetop |
| <i>Lolium perenne</i> | perennial ryegrass |
| <i>Malva neglecta</i> | common mallow |
| <i>Medicago sativa</i> | alfalfa |
| <i>Phalaris aquatica</i> | harding grass |
| <i>Polypogon monspeliensis</i> | rabbit's foot grass |
| <i>Raphanus sativus</i> | wild radish |
| <i>Rumex crispus</i> | curly dock |
| <i>Salsola iberica</i> | Russian thistle |
| <i>Sonchus asper</i> | prickly sow thistle |
| <i>Sorghum halepense</i> | Johnsongrass |
| <i>Tribulus terrestris</i> | puncture vine |
| <i>Trifolium hirtum</i> | rose clover |
| <i>Vicia sativa</i> | common vetch |

TABLE 2
WILDLIFE SPECIES DOCUMENTED IN THE SITE

Birds

| | |
|--------------------------|-------------------------------|
| Double-crested cormorant | <i>Phalacrocorax auritus</i> |
| Great blue heron | <i>Ardea herodias</i> |
| Great egret | <i>Casmerodius albus</i> |
| Turkey vulture | <i>Cathartes aura</i> |
| White-tailed kite | <i>Elanus leucurus</i> |
| Swainson's hawk | <i>Buteo swainsoni</i> |
| Red-tailed hawk | <i>Buteo jamaicensis</i> |
| Rock dove | <i>Columba livia</i> |
| Mourning dove | <i>Zenaida macroura</i> |
| Western kingbird | <i>Tyrannus verticalis</i> |
| California scrub jay | <i>Aphelocoma californica</i> |
| American crow | <i>Corvus brachyrhynchos</i> |
| American robin | <i>Turdus migratorius</i> |
| Northern mockingbird | <i>Mimus polyglottos</i> |
| European starling | <i>Sturnus vulgaris</i> |
| White-crowned sparrow | <i>Zonotrichia leucophrys</i> |
| Red-winged blackbird | <i>Agelaius phoeniceus</i> |
| Tricolored blackbird | <i>Agelaius tricolor</i> |
| Brewer's blackbird | <i>Euphagus cyanocephalus</i> |
| House sparrow | <i>Passer domesticus</i> |
| House finch | <i>Carpodacus mexicanus</i> |

Mammals

| | |
|----------------------------|------------------------------|
| California ground squirrel | <i>Spermophilus beecheyi</i> |
| Desert cottontail | <i>Sylvilagus audubonii</i> |

Reptiles and Amphibians

| | |
|----------------------|--------------------------------|
| Western fence lizard | <i>Sceloporus occidentalis</i> |
|----------------------|--------------------------------|

A variety of mammals are likely to occur in the project site. However, California ground squirrel (*Otospermophilus beecheyi*) and desert cottontail (*Sylvilagus audubonii*) were the only mammals observed in the site during the surveys. Other species such as raccoon (*Procyon lotor*), Coyote (*Canis latrans*), black-tailed hare (*Lepus californicus*), striped skunk (*Mephitis mephitis*), and Virginia opossum (*Didelphis virginiana*) are expected to occur in the greater project vicinity and may occur in the site. A number of species of small rodents including mice (*Mus musculus*, *Reithrodontomys megalotis*, and *Peromyscus maniculatus*) and voles (*Microtus californicus*) also likely occur.

Based on habitat types present, only a few amphibian and reptile species are expected to use habitats in the site. Western fence lizard (*Sceloporus occidentalis*) was the only reptile or amphibian observed in the site. Other species such as Pacific chorus frog (*Pseudacris regilla*), gopher snake (*Pituophis melanoleucus*), common king snake (*Lampropeltis getulus*), and common garter snake (*Thamnophis sirtalis*) may also occur at the site on occasion.

WATERS OF THE U.S. AND WETLANDS: Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, their tributaries, and adjacent wetlands. State and federal agencies regulate these habitats and Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into any waters of the U.S., including wetlands. ACOE, CDFW, and the California Regional Water Quality Control Board (RWQCB) have jurisdiction over modifications to riverbanks, lakes, stream channels and other wetland features.

“Waters of the U.S.”, as defined in 33 CFR 328.4, encompasses Territorial Seas, Tidal Waters, and Non-Tidal Waters; Non-Tidal Waters includes interstate and intrastate rivers and streams, as well as their tributaries. The limit of federal jurisdiction of Non-Tidal Waters of the U.S. extends to the “ordinary high water mark”. The ordinary high water mark is established by physical characteristics

such as a natural water line impressed on the bank, presence of shelves, destruction of terrestrial vegetation, or the presence of litter and debris.

Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE *Wetlands Delineation Manual* and Regional Supplement (ACOE, 1987; 2008). Jurisdictional wetlands are usually adjacent to or hydrologically associated with Waters of the U.S. Isolated wetlands are outside federal jurisdiction, but may still be regulated by state agencies including CDFW and RWQCB.

Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

No potentially jurisdictional Waters of the U.S. or wetlands were observed within the footprint of the proposed project. The project site is a field that has been farmed in hay for decades and a narrow band of upland grassland. No areas meeting the technical and regulatory criteria of jurisdictional Waters of the U.S. or wetlands were observed in the site.

SPECIAL-STATUS SPECIES: Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species. Both FESA and CESA prohibit unauthorized “take” (i.e., killing) of listed species, with take broadly defined in both acts to include activities such as harassment, pursuit and possession.

Special-status wildlife species also includes species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The federal Migratory Bird Treaty Act and Fish and Game Code of California protect special-status bird species year-round, as well as their eggs and nests during the nesting season. Fish and Game Code of California also provides protection for mammals and fish.

Special-status plants are those which are designated rare, threatened, or endangered and candidate species for listing by the USFWS. Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act Guidelines, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2019). Finally, special-status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on CNPS List 3.

Table 3 provides a summary of the listing status and habitat requirements of special-status plant and wildlife species that have been documented in the greater project vicinity or for which there is potentially suitable habitat in the project area. This table also includes an assessment of the likelihood of occurrence of each of these species in the site. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

SPECIAL-STATUS PLANTS: Species of special-status plants identified in the CNDDDB (2019) search include woolly rose mallow (*Hibiscus lasiocarpus* var. *occidentalis*), delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), Mason's lilaeopsis (*Lilaeopsis masonii*), delta mudwort (*Limosella subulata*), side-flowering skullcap (*Scutellaria laterifolia*), and Suisun marsh aster (*Symphotrichum lentum*) (Table 3

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

| Common Name | Scientific Name | Federal Status ¹ | State Status ² | CNPS List ³ | Habitat | Potential for Occurrence in the Project Site |
|---------------------------|---|-----------------------------|---------------------------|------------------------|---|---|
| PLANTS | | | | | | |
| Large-flowered fiddleneck | <i>Amsinckia grandiflora</i> | E | E | 1B | Cismontane woodland, valley and foothill grassland. | Unlikely: the agricultural field and ruderal grasslands in the site are highly disturbed and do not provide suitable habitat for large-flowered fiddleneck. There are no occurrences of this species recorded in the CNDDDB (2019) search area. |
| Wooly rose-mallow | <i>Hibiscus lasiocarpus</i> | None | None | 2 | Freshwater marshes and swamps. | Unlikely: the site does not provide suitable marsh or swamp habitat for this species. Wooly rose-mallow is widespread in delta waterways west and southwest of the site, including a population in Highline Canal, approximately 0.25 miles southwest of the project site (CNDDDB, 2019). |
| Delta tule pea | <i>Lathyrus jepsonii</i> var. <i>jepsonii</i> | None | None | 1B | Marshes and swamps. | Unlikely: the site does not contain suitable habitat for Delta tule pea. The nearest occurrence of Delta tule pea in the CNDDDB (2019) search area is approximately 4.5 miles southwest of the site. |
| Mason's lilaeopsis | <i>Lilaeopsis masonii</i> | None | R | 1B | Marshes, swamps and riparian scrub. | Unlikely: the site does not provide suitable marsh or swamp habitat for this species. The nearest occurrence of this species in the CNDDDB (2019) search area is in Bishop Cut, approximately 1.5 miles southwest of the project site. |
| Delta mudwort | <i>Limosella subulata</i> | None | None | 2 | Marshes and swamps. | Unlikely: the site does not provide suitable marsh or swamp habitat for Delta mudwort. The nearest occurrence of this species in the CNDDDB (2019) search area is approximately 5.5 miles west of the project site. |
| Side-flowering skullcap | <i>Scutellaria laterifolia</i> | None | None | 2 | Marshes and swamps. | Unlikely: the site does not provide suitable marsh or swamp habitat for this species. The nearest occurrence of this species in the CNDDDB (2019) search area is approximately 6 miles northwest of the site on Bouldin Island. |

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

| Common Name | Scientific Name | Federal Status ¹ | State Status ² | CNPS List ³ | Habitat | Potential for Occurrence in the Project Site |
|-----------------------|--|-----------------------------|---------------------------|------------------------|---|--|
| Suisun marsh aster | <i>Symphotrichum lentum</i> | None | None | 1B | Marshes and swamps. | Unlikely: the site does not provide suitable marsh or swamp habitat for this species. Suisun marsh aster is widespread in the delta west and southwest of the site; the nearest occurrence of this species in the CNDDDB (2019) search area is in White Slough, approximately 4 miles southwest of the site. |
| WILDLIFE | | | | | | |
| Birds | | | | | | |
| Swainson's hawk | <i>Buteo swainsoni</i> | None | T | N/A | Breeds in stands of tall trees in open areas. Requires adjacent suitable foraging habitats such as grasslands or alfalfa fields supporting rodents. | High: the site provides suitable foraging habitat and trees relatively close to the site provide suitable nesting habitat for this species. There are many records of nesting Swainson's hawks near and within the project vicinity; the nearest occurrence of nesting Swainson's hawks in the CNDDDB (2019) search area is immediately southwest of the project site. |
| Burrowing owl | <i>Athene cunicularia</i> | None | SC | N/A | Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. | Low: numerous ground squirrels and their burrows were observed in the site. However, no burrowing owls or evidence of owl occupancy were observed in or near the site. The nearest occurrence of nesting burrowing owls in the CNDDDB (2019) search area is approximately 4 miles southeast of the site. |
| Tricolored blackbird | <i>Agelaius tricolor</i> | None | T | N/A | Open water and protected nesting substrate, usually cattails and riparian scrub with surrounding foraging habitat. | Low: the agricultural field and grasslands in the site provide suitable foraging habitat for tricolored blackbird and the delta waterways to the west provide suitable nesting habitat for this species. The nearest occurrence of nesting tricolored blackbirds in the CNDDDB (2019) search area is approximately 5.5 miles northeast of the site. |
| California black rail | <i>Laterallus jamaicensis coturniculus</i> | None | T | N/A | Mainly inhabits salt marshes bordering larger bays | Unlikely: the site does not provide suitable marsh and swamp habitat for California black rail. The nearest occurrence of California black rail in the CNDDDB (2019) search area is just northwest of the site. |

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

| Common Name | Scientific Name | Federal Status ¹ | State Status ² | CNPS List ³ | Habitat | Potential for Occurrence in the Project Site |
|--|-------------------------------------|-----------------------------|---------------------------|------------------------|---|---|
| White-tailed kite | <i>Elanus leucurus</i> | None | None | FP | Herbaceous lowlands with variable tree growth and dense population of voles. | Low: the agricultural field and grasslands in the site provide suitable foraging habitat for white-tailed kites and trees in relatively close proximity to the site are suitable for nesting. White-tailed kites are reported in the CNDDDB (2019) along the north side of White Slough, just west of Interstate 5, approximately 0.5 miles southeast of the site. |
| Song sparrow ("Modesto Population") | <i>Melospiza melodia</i> | None | SC | N/A | Brackish water marshes. Inhabits cattails, tules, and tangles bordering sloughs. | Unlikely: the site does not provide suitable habitat for song sparrow; the delta waterways further west provide suitable habitat for this species. The nearest occurrence of song sparrow in the CNDDDB (2019) search area is adjacent to the project site. |
| Mammals Riparian brush rabbit | <i>Sylvilagus bachmani riparius</i> | E | E | N/A | Riparian thickets in Stanislaus and southern San Joaquin Counties. | Unlikely: the site does not provide suitable habitat for riparian brush rabbit. There are no occurrences of this species recorded in the CNDDDB (2019) within the search area. |
| Reptiles & Amphibians Giant garter snake | <i>Thamnophis gigas</i> | T | T | N/A | Freshwater marsh and low gradient streams. Uses drainage canals and irrigation ditches, primarily for dispersal or migration. | Unlikely: the site does not provide aquatic habitat required by this species and the intensively cultivated field that comprises the body of the site provides poor quality aestivation habitat. The nearest occurrence of this species in the CNDDDB (2019) search area is a 35-year old record mapped in the White Slough Wildlife Area; the exact location of this occurrence is not known. Although considered unlikely, this species could occasionally move through the project site. |
| California tiger salamander | <i>Ambystoma californiense</i> | T | T | N/A | Seasonal water bodies without fish (i.e., vernal pools and stock ponds) and grassland/ woodland habitats with summer refugia (i.e., burrows). | Unlikely: the site does not provide suitable habitat for California tiger salamander. This species occurs in the transitional bands between the valley floor and foothills and there are no California tiger salamander occurrences recorded in the CNDDDB (2019) in the search area. The project site is not in designated critical habitat for this species (USFWS, 2005a). |

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

| Common Name | Scientific Name | Federal Status ¹ | State Status ² | CNPS List ³ | Habitat | Potential for Occurrence in the Project Site |
|--------------------------------|------------------------------------|-----------------------------|---------------------------|------------------------|--|---|
| California red-legged frog | <i>Rana aurora draytonii</i> | T | SC | N/A | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. | Unlikely: the site does not provide suitable habitat for California red-legged frog, which is also presumed extinct on the floor of the Central Valley of California. There are no occurrences of this species recorded in the CNDDDB (2019) within the search area. The project site is not within designated critical habitat for California red-legged frog (USFWS, 2006). |
| Pacific pond turtle | <i>Emys marmorata</i> | None | SC | N/A | Ponds, marshes, streams, and ditches with emergent aquatic vegetation and basking areas. | Unlikely: the site does not provide suitable habitat for Pacific pond turtle. The nearest documented occurrence of this species in the CNDDDB (2019) search area is approximately 0.25 miles north of the project site. |
| Fish | | | | | | |
| Steelhead – Central Valley DPS | <i>Oncorhynchus mykiss irideus</i> | T | None | N/A | Riffle and pool complexes with adequate spawning substrates within Central Valley drainages. | Unlikely: this species occurs in the San Joaquin River and other Delta waterways a few miles west of the site on a seasonal basis, but has rarely been documented at juvenile fish monitoring stations in the project vicinity. The closest occurrence of this species in the CNDDDB (2019) search area is approximately 4.5 miles southwest of the site. The San Joaquin River and other Delta waterways west and southwest of the site are designated critical habitat for Central Valley steelhead (NOAA, 2005). |
| Delta smelt | <i>Hypomesus transpacificus</i> | T | T | N/A | Shallow lower delta waterways with submersed aquatic plants and other suitable refugia. | Unlikely: Delta smelt occur in the mainstem San Joaquin River and other Delta waterways a few miles west of the site on a seasonal basis, but have rarely been documented at juvenile fish monitoring stations in the project vicinity. The closest documented occurrence of delta smelt in the CNDDDB (2019) search area is approximately 5 miles northwest of the site, in Little Potato Slough. The site is in designated critical habitat for delta smelt (USFWS, 1994). |

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

| Common Name | Scientific Name | Federal Status ¹ | State Status ² | CNPS List ³ | Habitat | Potential for Occurrence in the Project Site |
|-----------------------------------|--|-----------------------------|---------------------------|------------------------|---|--|
| Longfin smelt | <i>Spirinchus thaleichthys</i> | None | SC | N/A | Brackish estuarine habitats | Unlikely: this species occurs in Delta waterways on a seasonal basis and may occur in the greater project vicinity on occasion. The nearest occurrence of the longfin smelt in the CNDDDB (2019) search area is approximately 5.5 miles northwest of the site, in Little Potato Slough. |
| Invertebrates | | | | | | |
| Vernal pool fairy shrimp | <i>Branchinecta lynchi</i> | T | None | N/A | Vernal pools | Unlikely: there are no vernal pools in or adjacent to the site. There are no occurrences of vernal pool fairy shrimp in the CNDDDB (2019) search area. The site is not within designated critical habitat for this species (USFWS, 2005a). |
| Vernal pool tadpole shrimp | <i>Lepidurus packardii</i> | E | None | N/A | Vernal pools | Unlikely: there are no vernal pools in or adjacent to the site. The nearest occurrence of vernal pool tadpole shrimp in the CNDDDB (2019) search area is approximately 7 miles northeast of the site. The site is not within designated critical habitat for vernal pool tadpole shrimp or other listed branchiopods (USFWS, 2005a). |
| Valley elderberry longhorn beetle | <i>Desmocerus californicus dimorphus</i> | T | None | N/A | Elderberry shrubs, usually in Central Valley riparian habitats. | Unlikely: there are no blue elderberry shrubs in or adjacent to the site. There are no occurrences of valley elderberry longhorn beetle in the CNDDDB (2019) search area. The site is not within designated critical habitat for this species (USFWS, 1980). |
| San Bruno elfin butterfly | <i>Callophrys mossii bayensis</i> | E | None | N/A | Rocky outcrops and cliffs in coastal scrub habitats. | Unlikely: the site does not provide suitable habitat for this species. There are no occurrences of San Bruno elfin butterfly in the CNDDDB (2019) search area. |

¹ T= Threatened; E = Endangered.

² T = Threatened; E = Endangered; R = Rare; FP = Fully Protected Species; SC = State of California Species of Special Concern.

³ CNPS List 1B includes species that are rare, threatened, or endangered in California and elsewhere; List 2 includes plants that are rare, threatened or endangered in California but are more common elsewhere.

and Attachment B). Although not within the CNDDDB (2019) search area, large-flowered fiddleneck (*Amsinckia grandiflora*) is in the USFWS IPaC Trust Resource Report (Attachment B).

Special-status plants generally occur in relatively undisturbed areas in vegetation communities such as vernal pools, marshes and swamps, seasonal wetlands, riparian scrub, chenopod scrub, and areas with unusual soils. None of these vegetation communities occur in the site. The intensively cultivated field and strip of ruderal grasslands in the site are highly disturbed and do not provide suitable habitat for any of the plants in Table 3 or any other special-status plants. Due to lack of suitable habitat, no special-status plant species are expected to occur in the site.

SPECIAL-STATUS WILDLIFE: The potential for intensive use of habitats within the project site by special-status wildlife species is generally low. Special-status wildlife species that have been recorded in greater project vicinity in the CNDDDB (2019) include Swainson's hawk, burrowing owl, tricolored blackbird (*Agelaius tricolor*), white-tailed kite (*Elanus leucurus*), California black rail (*Laterallus jamaicensis coturniculus*), song sparrow ("Modesto population"), giant garter snake (*Thamnophis gigas*), Pacific pond turtle (*Emys marmorata*), Central Valley steelhead (*Oncorhynchus mykiss*), delta smelt (*Hypomesus transpacificus*), longfin smelt (*Spirinchus thaleichthys*), and vernal pool tadpole shrimp (*Lepidurus packardii*). Although not included in the CNDDDB within the search area, riparian brush rabbit (*Sylvilagus bachmani riparius*), California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana aurora draytonii*), vernal pool fairy shrimp (*Branchinecta lynchi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and San Bruno elfin butterfly (*Callophrys mossii bayensis*) were added to Table 3 because they are included in the USFWS IPaC Trust Resource Report (Attachment B).

The project site and surrounding areas may have provided habitat for several of the special-status wildlife species listed in Table 3 at some time in the past.

However, farming, development, construction and maintenance of roads and utilities, and operation of the WPCF have substantially modified natural habitats within the greater project vicinity, including those within the site. Of the wildlife species identified in the CNDDDB, Swainson's hawk, burrowing owl, white-tailed kite, and tricolored blackbird are the only species with potential to occur in the project site on more than a transitory or very occasional basis. These birds are discussed further below because the project could result in the conversion of habitat to the new facilities and they could be disturbed by noise if they nested in or near the project site during construction. Although considered unlikely to be present in the project site, Pacific pond turtle and giant garter snake are also discussed further below, as they are known to occur in the general vicinity.

SWAINSON'S HAWK: The Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species. The Migratory Bird Treaty Act and Fish and Game Code of California protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15).

Swainson's hawk are found in the Central Valley primarily during their breeding season, a population is known to winter in the San Joaquin Valley.

Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their breeding territories by late August.

The CNDDDB (2019) contains several records of nesting Swainson's hawk in the greater project vicinity. There are several records of nesting Swainson's hawks within a mile of the project site and the closest record is immediately southwest of the project site. There are suitable nest trees along riparian corridors to the

west and south of the project site, and the annual cropland and grasslands in the region provide suitable foraging habitat for this species. A pair of Swainson's hawks was observed nesting a lone cottonwood tree approximately 0.40 miles south of the site, just north of Dredger Cut, during the June 24, 2019 survey (see photographs in Attachment C). The adult Swainson's hawks were observed perched in the tree a few feet above the nest, which contained at least one chick. Swainson's hawks used this same nest in 2018, with two chicks successfully fledging.

The project site is in an area that is known to be heavily utilized by foraging and nesting Swainson's hawks and there are likely more nesting territories in trees in the general vicinity of the site. Numerous Swainson's hawks were observed foraging in the project site during construction just south of the site in Summer 2018. However, there are no trees within or immediately adjacent to the site that could be used by nesting Swainson's hawks.

The project will participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (HCP) (SJCOG, 2000). Standard Incidental Take Minimization Measures (ITMMs) under the HCP outline protective measures for Swainson's hawk. In the event that construction commences during the nesting season (i.e., if construction starts between March 1 and August 31) and Swainson's hawks are nesting in or adjacent to the site, a construction setback from the nest tree would be required until nesting is complete. The setback is calculated as twice the diameter of the dripline of the nest tree as measured from under the nest, and is usually less than 100 feet.

BURROWING OWL: The Migratory Bird Treaty Act and Fish and Game Code of California protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Burrowing owls are a year-long resident in a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation; burrowing owls that nest in the Central Valley may winter elsewhere.

The primary habitat requirement of the burrowing owl is small mammal burrows for nesting. The owl usually nests in abandoned ground squirrel burrows, although they have been known to dig their own burrows in softer soils. In urban areas, burrowing owls often utilize artificial burrows including pipes, culverts, and piles of concrete pieces. This semi-colonial owl breeds from March through August, and is most active while hunting during dawn and dusk. The nearest record of nesting burrowing owls in the CNDDDB (2019) search area is approximately 4 miles southeast of the site.

The intensity of development and agriculture within and surrounding the site reduces the likelihood of burrowing owls using the site for nesting. Several ground squirrels and ground squirrel burrows were observed along the edges of the farm field. Careful inspection of all burrows in and adjacent to the site showed no evidence of burrowing owl occupancy and no burrowing owls were observed during the field surveys. This species is not widespread in this part of the San Joaquin County, but could potentially move into the area and utilize ground squirrel burrows in the site for nesting.

Standard ITMMs under the HCP outline protective measures for burrowing owl. If construction is scheduled to commence outside the nesting season (i.e., if construction starts between September 1 and January 31) and burrowing owls are present on-site, they can be passively relocated. In the event that construction commences during the nesting season and burrowing owls are present on-site, a 250-foot construction setback from the natal burrow would be required until nesting is complete.

WHITE-TAILED KITE: White-tailed kite is a State of California Species of Concern, but is not a listed species at the state or federal level. The Migratory Bird Treaty Act and Fish and Game Code protect white-tailed kite year-round, as well as their nests during nesting season; nesting for this species peaks from May to August. White-tailed kites can be found in a variety of habitats across California including grasslands, open woodlands, riparian areas, marshes and cultivated

fields. Populations of white-tailed kites are concentrated in the Central Valley, but their range spans west of the Sierra Nevada's to the California coastline.

Nesting usually commences in the early-spring, concurrent with other resident Central Valley raptors, and most young fledge by early-July. The nearest occurrence of white-tailed kite in the CNDDDB (2019) search area is approximately 0.5 miles southeast of the project site. While there are no trees within or immediately adjacent to the site that could be used by nesting white-tailed kites, large trees in the general vicinity of the site may be suitable for nesting. White-tailed kite likely forages in the site on occasion. A white-tailed kite was observed foraging in an adjacent field during one of the field surveys.

Standard ITMMs under the HCP outline protective measures for white-tailed kite. In the event that construction commences during the nesting season (February 15 to September 15) and white-tailed kites are present on-site, a 100-foot construction setback from the nesting area shall be established and maintained during the nesting season until the young have fledged.

TRICOLORED BLACKBIRD: The tricolored blackbird is a State of California Species of Concern and is also protected by the federal Migratory Bird Treaty Act and Fish and Game Code of California. Tricolors are colonial nesters requiring very dense stands of emergent wetland vegetation and/or dense thickets of wild rose or blackberries adjacent to open water for nesting. This species is endemic to California. The nearest occurrence of tricolored blackbird in the CNDDDB (2019) search area is approximately 5.5 miles northeast of the site.

The site does not contain the expansive patches of tules, cattails, or other emergent wetland vegetation required for nesting, but White Slough, Dredger Cut, other nearby sloughs, and Delta waterways further west of the site provide suitable nesting habitat for tricolored blackbird. Although the extent of foraging by tricolored blackbirds in this area is not known, the grassland areas in and adjacent to the project site may potentially be used for foraging by this species.

Standard ITMMs under the HCP outline protective measures for tricolored blackbird. In the event that construction commences during the nesting season and tricolored blackbirds are nesting in or near the site, a 500-foot construction setback from the nesting area shall be established and maintained during the nesting season until the young have fledged.

GIANT GARTER SNAKE: The giant garter snake is listed as threatened both under FESA and CESA. Critical habitat has not been designated for this species. Giant garter snake is endemic to the Sacramento and San Joaquin valleys where it is found in lowland areas (USFWS; 2017). Historically, this species was found throughout the Central Valley from Butte County in the north to Kern County in the south. Currently, giant garter snake is only known to occur in 9 discrete populations in the Sacramento and San Joaquin valleys in Butte, Colusa, Contra Costa, Fresno, Glenn, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter, and Yolo counties (USFWS, 2017).

The giant garter snake is one of the most aquatic of garter snakes and is usually found in streams, marshes, and sloughs with mud bottoms. This species prefers slow moving waters with emergent herbaceous wetland vegetation for cover and foraging, and grassy banks and openings for basking (Hansen, 1988). Giant garter snakes feed primarily on small fishes, tadpoles, and frogs. Since they are aquatic hunters, they must have access to permanent, though not necessarily extensive, water.

Giant garter snake is apparently absent from large rivers, other water bodies that support introduced populations of large predatory fish, and from wetlands with sand, gravel or rock substrates (Rossman and Stewart, 1987; Brode 1988; G. Hansen, 1988). Historically, oxbows, overflow areas, and backwater sloughs or channels could have provided suitable habitat. Riparian woodlands do not typically provide suitable habitat because of excessive shade, lack of basking sites, and the absence of prey populations.

Essential habitat components of giant garter snake consist of: (1) adequate water during the snake's active season (early-spring through mid-fall) to provide food and cover; (2) emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat during the active season; (3) grassy banks and openings in waterside vegetation for basking; and (4) higher elevation uplands for cover and refuge from flood waters during the snake's dormant season in the winter; giant garter snakes inhabit small mammal burrows and other soil crevices for aestivation.

The project site does not provide the aquatic habitat required by giant garter snake due to its intermittent nature. Additionally, the grasslands and croplands in the site are highly disturbed. Neither of these uplands habitat types provide high quality aestivation habitat for giant garter snake. The nearest occurrence of giant garter snake in the CNDDDB (2019) search area is approximately 5.5 miles northwest of the project site.

Pursuant to the HCP, aquatic habitats such as the sloughs to the west of the site are considered “potential habitat” for giant garter snake, triggering an automatic “no construction” buffer extending 200 feet from the centerline of the aquatic habitats, unless a buffer reduction is granted by SJCOG. In January 2017, the city of Lodi secured a buffer reduction for the pond project just south of the site from 200 feet to 0 feet. Securing a similar setback from SJCOG for giant garter snake is recommended for the proposed project. Standard ITMMs related to preconstruction surveys for giant garter snake will still be required.

PACIFIC POND TURTLE: The Pacific pond turtle is a state species of concern, but is not a listed species at the state or federal level. Pacific pond turtles are associated with permanent or nearly permanent bodies of water with adequate basking sites such as logs, rocks or open mud banks. The nearest documented occurrence of this species in the CNDDDB (2019) search area is approximately 0.25 miles north of the project site.

Although the project site itself does not provide suitable habitat for Pacific pond turtle, this species is known to occur in nearby waterways, including some of the sloughs to the west of the site. The project site and intensively cultivated fields surrounding the site provide very poor quality nesting habitat for this species, which prefers sandy substrates for nesting.

Pursuant to the HCP, aquatic habitats such as the sloughs to the west of the site are considered “potential habitat” for Pacific pond turtle, triggering an automatic “no construction” buffer extending 300 feet from the centerline of the aquatic habitats, unless a buffer reduction is granted by SJCOG. In January 2017, the city of Lodi secured a buffer reduction for the pond project just south of the site from 300 feet to 0 feet, concurrent with the GGS buffer reduction request. Securing a similar setback from SJCOG for Pacific pond turtle is recommended for the proposed project. Standard ITMMs related to preconstruction surveys for western pond turtle will still be required, and temporary construction setbacks from nests will be implemented in the event active nests are located.

OTHER SPECIAL-STATUS SPECIES: The site does not provide suitable aquatic habitat for any type of fish, California tiger salamander, or California red-legged frog. The site lacks riparian habitat vegetation to support riparian brush rabbit and this species is not known from the area. There are no blue elderberry shrubs in the site, precluding the potential occurrence of valley elderberry longhorn beetle. There are no vernal pools or seasonal wetlands in the site for vernal pool branchiopods (i.e., fairy and tadpole shrimp). Finally, the site does not provide suitable habitat to support San Bruno elfin butterfly.

CRITICAL HABITAT: The site is not within designated critical habitat for California red-legged frog (USFWS, 2006), California tiger salamander (USFWS, 2005a), federally listed vernal pool shrimp or plants (USFWS, 2005b), delta smelt (USFWS, 1994), valley elderberry longhorn beetle (USFWS, 1980), or Central Valley steelhead (NOAA, 2005) (Attachment D). The site is within designated critical habitat for delta smelt, as the habitat extends far inland from the

waterways where this fish actually occurs. The project will not adversely impact delta smelt critical habitat.

Conclusions and Recommendations

- The site consists of an intensively cultivated field and a narrow band of ruderal grassland. On-site habitats are biologically unremarkable.
- No potentially jurisdictional Waters of the U.S. or wetlands were observed in or immediately adjacent to the site.
- No sensitive natural communities were observed in the site.
- Due to a lack of suitable habitat, it is unlikely that special-status plants occur in the site.
- With the exception of Swainson's hawk, burrowing owl, white-tailed kite, tricolored blackbird, no special-status wildlife species are expected to occur in or near the site on more than a very occasional or transitory basis. Although considered unlikely, Pacific pond turtle and giant garter snake could occasionally move on to the site.
- The site does not contain riparian thicket required by riparian brush rabbit and this species is not known from the area. The site does not provide habitat for California tiger salamander or California red-legged frog and will have no effect on these special-status amphibians. As there are no blue elderberry shrubs in the site, the project will have no effect on valley elderberry longhorn beetle. Due to a lack of vernal pools or seasonal wetlands in the site, the project will have no effect on vernal pool fairy shrimp, longhorn fairy shrimp, or vernal pool tadpole shrimp. As the project will not involve work in rivers or streams and will not change regional drainage patterns, it will have no effect on special-status fish.

- The site is within designated critical habitat for delta smelt, but will not adversely impact delta smelt critical habitat. The project site is not within areas that are designated as critical habitat of any other federally listed species.
- Standard Take Avoidance measures outlined in the HCP for nesting Swainson's hawks and burrowing owl will be required. These will include pre-construction surveys for nesting Swainson's hawks within 0.5 miles of the site for construction activities between March 1 and September 15 and pre-construction surveys for nesting burrowing owls within 250 feet of the site for construction activities between February 1 through August 31. If active nests are found, temporal restrictions on construction that are specified in the HCP will be required.
- Pursuant to the HCP, aquatic habitats such as the sloughs to the west of the site are considered "potential habitat" for garter snake and Pacific pond turtle, triggering automatic "no construction" buffers extending 200 and 300 feet from the centerline of the aquatic habitats, respectively, unless a buffer reduction is granted by SJCOG. In January 2017, the city of Lodi secured buffer reductions for the pond project just south of the site to "0 feet" for both species. Securing similar setbacks from SJCOG for garter snake and Pacific pond turtle is recommended for the proposed project.
- Trees, shrubs, and grasslands in and near the site could be used by tricolored blackbird, white-tailed kite, and other birds protected by the MBTA and/or Fish and Game Code of California, such as white-tailed kite, loggerhead shrike, and red-winged blackbird. If the project participates in the HCP, standard Take Avoidance measures outlined in the HCP for nesting birds will be required within 14 days of the start of construction. If active nests are found, restrictions on construction that are specified in the HCP will be required. These setbacks vary by species.

- If construction commences during the general avian nesting season (March 1 through July 31), a pre-construction survey for nesting birds protected by the MBTA and/or Fish and Game Code of California will be required. If active nests are found, work in the vicinity of the nest will be delayed until the young fledge.

Thank you, again, for asking Moore Biological Consultants to assist with the project. Please call me at (209) 745-1159 with any questions.

Sincerely,



Diane S. Moore, M.S.
Principal Biologist

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Attachment A

Detailed Project Description

& Conceptual Site Plan

PROJECT TITLE: City of Lodi – Police Training Facility Project

PROJECT LOCATION: The Project is located at the White Slough Water Pollution Control Facility (WPCF) in unincorporated northern San Joaquin County, approximately 6.5 miles west of the City of Lodi. The WPCF is located in a primarily agricultural area, adjacent to Interstate 5 and 1.2 miles south of Highway 12. The WPCF address is 12751 North Thornton Road, Lodi, California, and consists of 1,026.27 acres of land, including the treatment facilities, the existing recycled water storage facilities, the newly built western expansion ponds (Proposition 84 Ponds), and surrounding City-owned agricultural fields. The project location is adjacent north of the Proposition 84 Ponds within the facilities agricultural land (APN: 055-150-29). The City of Lodi General Plan designates the WPCF as “Industrial” and the surrounding City-owned agricultural fields where the expansion pond is proposed as “Public/Quasi-Public”.

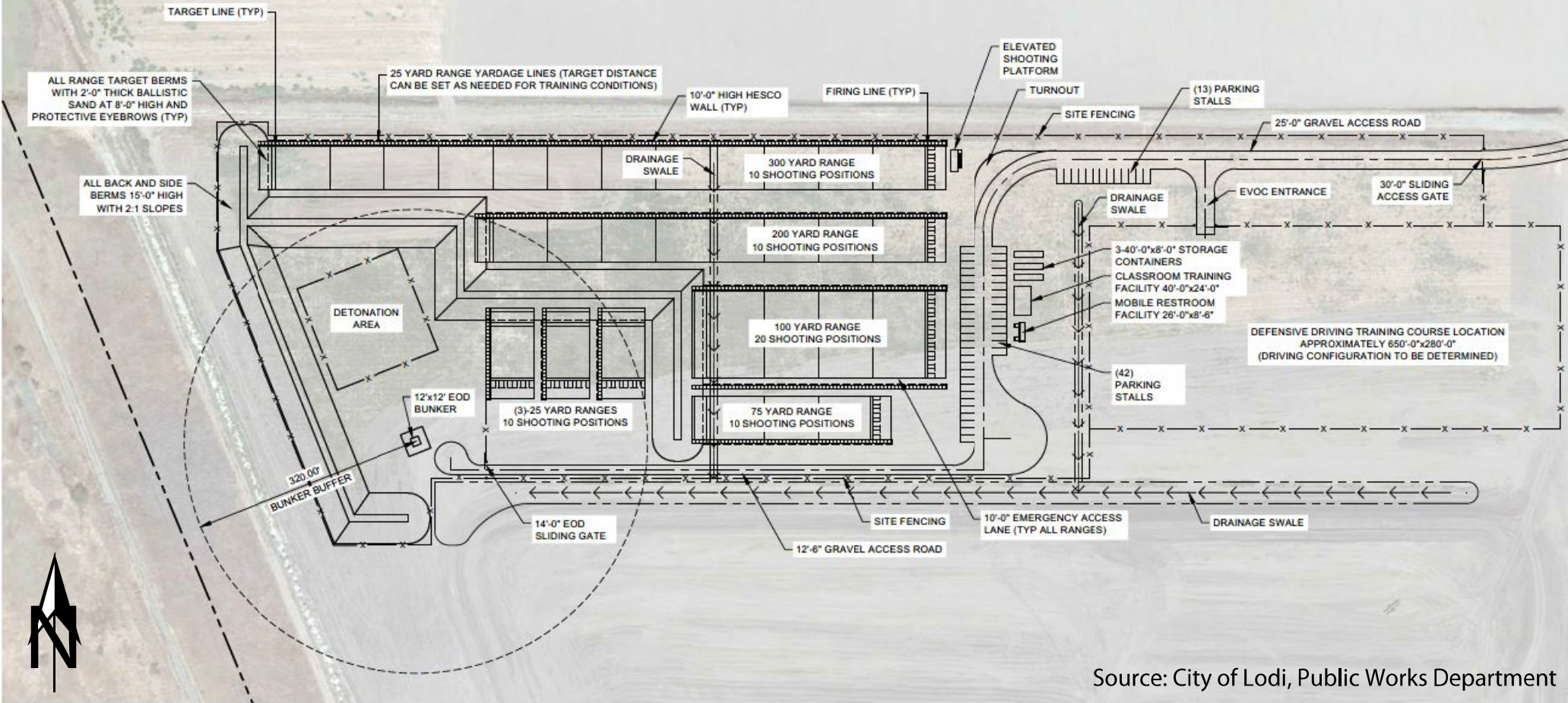
PROJECT DESCRIPTION: The City of Lodi (City) is proposing to provide the City of Lodi Police Department (Department) with a police training facility. The City of Lodi Police Department currently uses other City and Agency facilities for training; the purpose of this project is to provide the necessary long-term police training facility required in order to properly train and certify the Department on a long-term, consistent basis. The training facility proposes to include a classroom training facility, short, medium, and long-range shooting ranges, a defensive driving training course, a detonation area and bunker, as well as a mobile restroom, storage containers, parking stalls, an emergency access lane, target berms, improvements to the existing gravel road, lighting for night time use of the facility, and site fencing with access through sliding gates. Other associated facility improvements include hardscape, limited greenscape, and landscaping.

The proposed project is still in the design phase (15 to 25 Percent Design). The project conceptual design draft items as of July 2019, include, but are not limited to, the following:

- (3) 25-yard shooting ranges
- (1) 75-yard shooting range
- (1) 100-yard shooting range
- (1) 200-yard shooting range
- (1) 300-yard shooting range
- (3) 40'x8' Storage containers
- (1) 40'x24' training classroom
- Detonation area
- 12'x12' Bunker
- 55 parking stalls
- Emergency access lane
- Existing road improvements
- Site fencing/access gates
- Night lighting
- Hardscape/greenscape
- Landscaping

The proposed training facility will be located north of the newly built storage ponds. The proposed project is located within the study area(s) for the White Slough Water Pollution Control Facility Storage Expansion and Surface, Agricultural, and Groundwater Supply Improvement Project (Prop 84 Ponds) Initial Study/Mitigated Negative Declaration, adopted on March 15, 2017.

Figure 3 - Conceptual Design



Source: City of Lodi, Public Works Department

Attachment B

CNDDB Summary Report and Exhibits & USFWS IPaC Trust Report



Selected Elements by Scientific Name

California Department of Fish and Wildlife

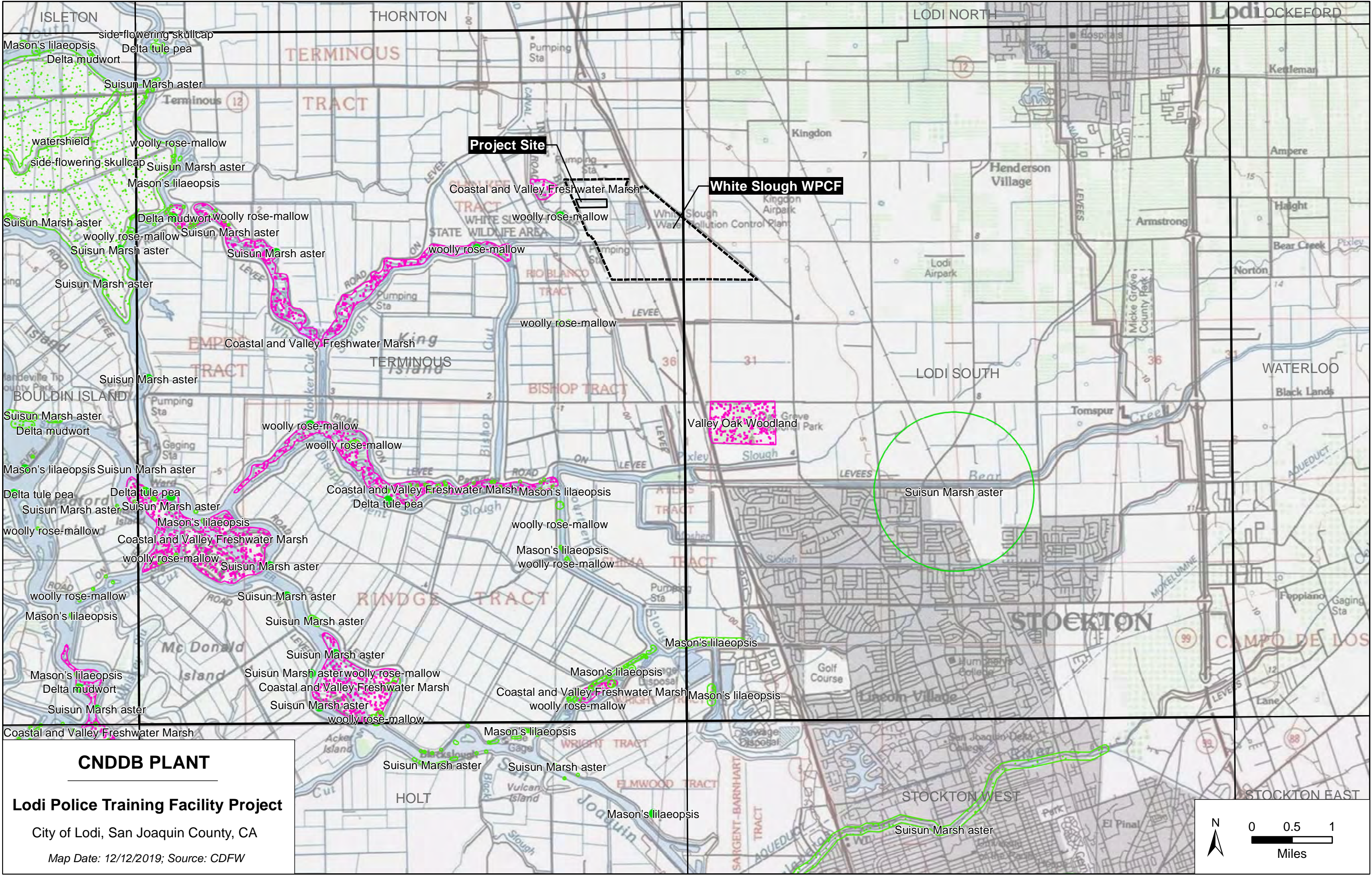
California Natural Diversity Database

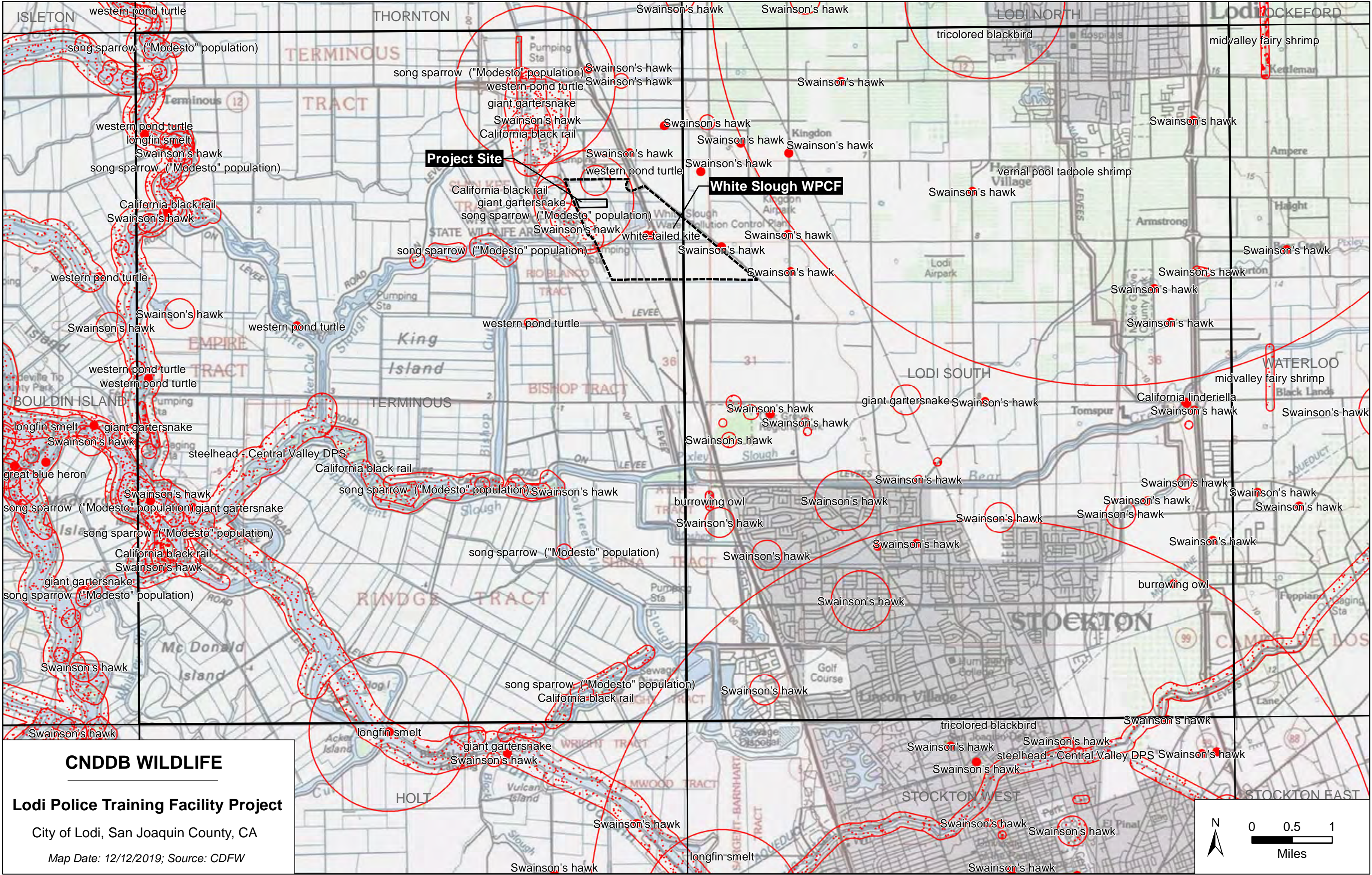


Query Criteria: Quad IS (Terminous (3812114) OR Lodi South (3812113))

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|--|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <i>Agelaius tricolor</i> tricolored blackbird | ABPBXB0020 | None | Threatened | G2G3 | S1S2 | SSC |
| <i>Athene cunicularia</i> burrowing owl | ABNSB10010 | None | None | G4 | S3 | SSC |
| <i>Buteo swainsoni</i> Swainson's hawk | ABNKC19070 | None | Threatened | G5 | S3 | |
| <i>Coastal and Valley Freshwater Marsh</i> Coastal and Valley Freshwater Marsh | CTT52410CA | None | None | G3 | S2.1 | |
| <i>Elanus leucurus</i> white-tailed kite | ABNKC06010 | None | None | G5 | S3S4 | FP |
| <i>Emys marmorata</i> western pond turtle | ARAAD02030 | None | None | G3G4 | S3 | SSC |
| <i>Hibiscus lasiocarpus var. occidentalis</i> woolly rose-mallow | PDMAL0H0R3 | None | None | G5T3 | S3 | 1B.2 |
| <i>Hypomesus transpacificus</i> Delta smelt | AFCHB01040 | Threatened | Endangered | G1 | S1 | |
| <i>Laterallus jamaicensis coturniculus</i> California black rail | ABNME03041 | None | Threatened | G3G4T1 | S1 | FP |
| <i>Lathyrus jepsonii var. jepsonii</i> Delta tule pea | PDFAB250D2 | None | None | G5T2 | S2 | 1B.2 |
| <i>Lepidurus packardii</i> vernal pool tadpole shrimp | ICBRA10010 | Endangered | None | G4 | S3S4 | |
| <i>Lilaeopsis masonii</i> Mason's lilaeopsis | PDAP119030 | None | Rare | G2 | S2 | 1B.1 |
| <i>Limosella australis</i> Delta mudwort | PDSCR10030 | None | None | G4G5 | S2 | 2B.1 |
| <i>Linderiella occidentalis</i> California linderiella | ICBRA06010 | None | None | G2G3 | S2S3 | |
| <i>Melospiza melodia</i> song sparrow ("Modesto" population) | ABPBXA3010 | None | None | G5 | S3? | SSC |
| <i>Oncorhynchus mykiss irideus pop. 11</i> steelhead - Central Valley DPS | AFCHA0209K | Threatened | None | G5T2Q | S2 | |
| <i>Scutellaria lateriflora</i> side-flowering skullcap | PDLAM1U0Q0 | None | None | G5 | S2 | 2B.2 |
| <i>Spirinchus thaleichthys</i> longfin smelt | AFCHB03010 | Candidate | Threatened | G5 | S1 | |
| <i>Symphyotrichum lentum</i> Suisun Marsh aster | PDASTE8470 | None | None | G2 | S2 | 1B.2 |
| <i>Thamnophis gigas</i> giant gartersnake | ARADB36150 | Threatened | Threatened | G2 | S2 | |
| <i>Valley Oak Woodland</i> Valley Oak Woodland | CTT71130CA | None | None | G3 | S2.1 | |

Record Count: 21





IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Joaquin County, California



Local offices

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

San Francisco Bay-Delta Fish And Wildlife

☎ (916) 930-5603

📠 (916) 930-5654

650 Capitol Mall

Suite 8-300

Sacramento, CA 95814

[http://kim_squires@fws.gov](mailto:kim_squires@fws.gov)

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Riparian Brush Rabbit *Sylvilagus bachmani riparius*
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/6189>

Endangered

Reptiles

NAME

STATUS

Giant Garter Snake *Thamnophis gigas*
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/4482>

Threatened

Amphibians

NAME

STATUS

California Red-legged Frog *Rana draytonii*
 There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/2891>

Threatened

California Tiger Salamander *Ambystoma californiense*
 There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/2076>

Threatened

Fishes

NAME

STATUS

Delta Smelt *Hypomesus transpacificus*
 There is **final** critical habitat for this species. Your location overlaps the critical habitat.
<https://ecos.fws.gov/ecp/species/321>

Threatened

Insects

NAME

STATUS

San Bruno Elfin Butterfly *Callophrys mossii bayensis*
 There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/3394>

Endangered

Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*
 There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/7850>

Threatened

Crustaceans

| NAME | STATUS |
|--|------------|
| Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498 | Threatened |
| Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2246 | Endangered |

Flowering Plants

| NAME | STATUS |
|---|------------|
| Large-flowered Fiddleneck <i>Amsinckia grandiflora</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5558 | Endangered |

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

| NAME | TYPE |
|---|-------|
| Delta Smelt <i>Hypomesus transpacificus</i> https://ecos.fws.gov/ecp/species/321#crithab | Final |

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A
BREEDING SEASON IS INDICATED
FOR A BIRD ON YOUR LIST, THE
BIRD MAY BREED IN YOUR
PROJECT AREA SOMETIME WITHIN
THE TIMEFRAME SPECIFIED,
WHICH IS A VERY LIBERAL
ESTIMATE OF THE DATES INSIDE
WHICH THE BIRD BREEDS ACROSS
ITS ENTIRE RANGE. "BREEDS
ELSEWHERE" INDICATES THAT THE
BIRD DOES NOT LIKELY BREED IN
YOUR PROJECT AREA.)

Burrowing Owl *Athene cunicularia*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
<https://ecos.fws.gov/ecp/species/9737>

Breeds Mar 15 to Aug 31

California Thrasher *Toxostoma redivivum*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

| | |
|--|-------------------------|
| Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Jan 1 to Dec 31 |
| Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084 | Breeds May 20 to Jul 31 |
| Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464 | Breeds Mar 20 to Sep 20 |
| Lewis's Woodpecker <i>Melanerpes lewis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408 | Breeds Apr 20 to Sep 30 |
| Long-billed Curlew <i>Numenius americanus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511 | Breeds elsewhere |
| Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481 | Breeds elsewhere |
| Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410 | Breeds Apr 1 to Jul 20 |
| Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656 | Breeds Mar 15 to Jul 15 |
| Rufous Hummingbird <i>Selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002 | Breeds elsewhere |

Short-billed Dowitcher *Limnodromus griseus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Song Sparrow *Melospiza melodia*

Breeds Feb 20 to Sep 5

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee *Pipilo maculatus clementae*

Breeds Apr 15 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/4243>

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Whimbrel *Numenius phaeopus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9483>

Wrentit *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie *Pica nuttalli*

Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9726>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

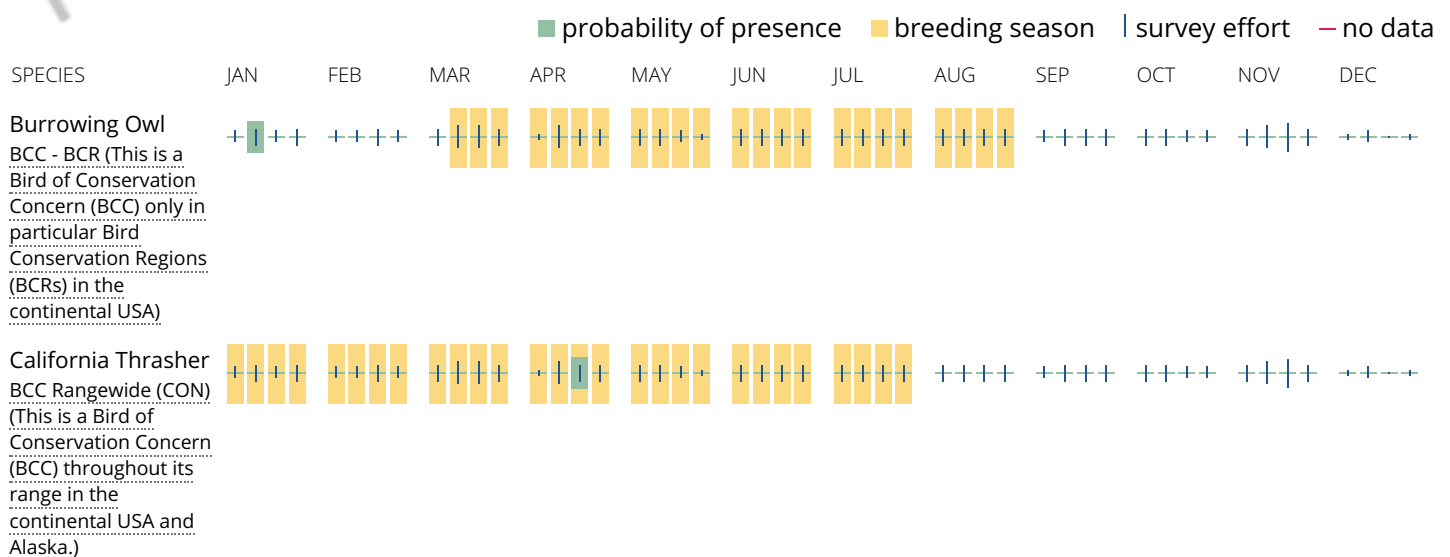
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

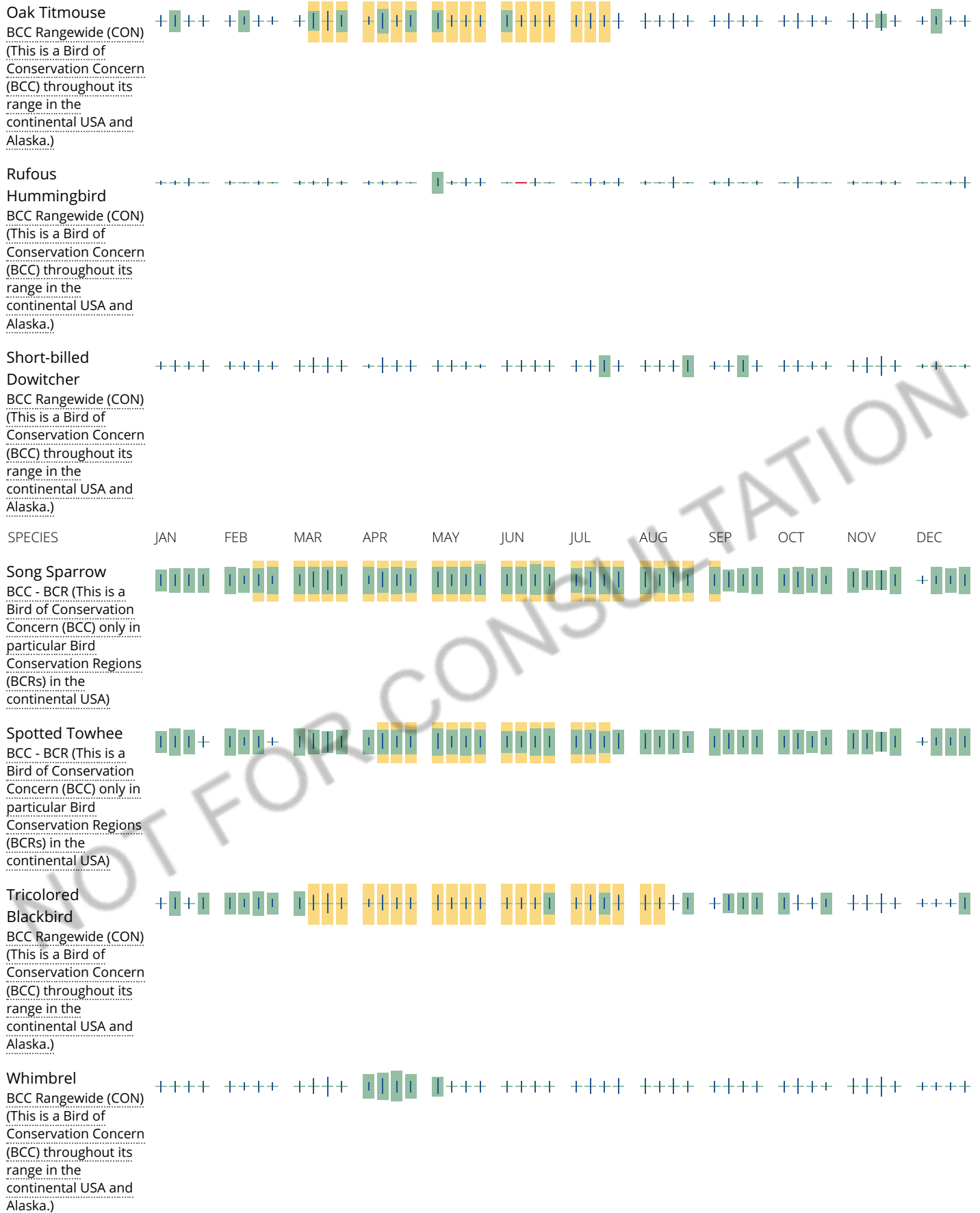
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.









Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential

impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1A](#)

[PEM1T](#)

[PEM1Ah](#)

[PEM1C](#)

[PEM1Kx](#)

[PEM1Ax](#)

[PEM1Fx](#)

[PEM1F](#)

FRESHWATER FORESTED/SHRUB WETLAND

[PSSA](#)

FRESHWATER POND

[PUBHx](#)

LAKE

[L1UBKx](#)[L1UBHx](#)

OTHER

[Pf](#)

RIVERINE

[R1UBVx](#)[R5UBFx](#)[R4SBCx](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment C

Photographs



Recently disked field in the body of the site, looking west from the east edge of the site; 09/11/19. Several ground squirrels and their burrows were observed along the edges of the cultivated field, but no burrowing owls were observed.



The body of the site contained minimal vegetation during the survey as it had been recently farmed in a hay crop, looking north from the south edge of the site; 06/24/19.



West edge of the cultivated field in the project site, looking southeast from the northeast corner of the site; 06/24/19. There is a band of ruderal grassland to the west of the field that is included in the project site.



Ruderal grassland vegetation along the south edge of the site, looking west from the southeast corner of the site; 06/24/19.



Two Swainson's hawks (circled) perched in a cottonwood tree approximately 2,000 feet southeast of the project site, looking south; 06/24/19.



Swainson's hawk chick (circled) in the nest within the tree mentioned above, looking southwest; 06/24/19.



Large trees along an unnamed slough to the west of the project site, looking west;
06/24/19. This band of trees is approximately 1,350 feet west of the project site.

Attachment D

Designated Critical Habitat

