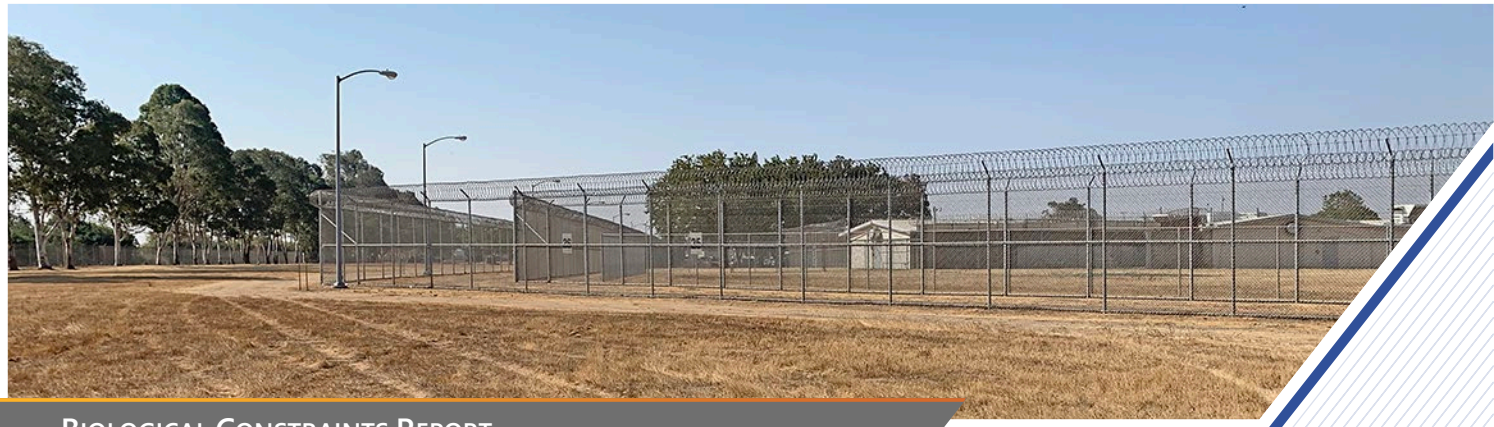
ASCENT



BIOLOGICAL CONSTRAINTS REPORT

Final Biological Constraints Report for the SASD RCCC Pump Station Rehabilitation Project

Prepared for:

SACRAMENTO AREA SEWER DISTRICT

Sacramento Area Sewers District

And

carollo

Carollo Engineers

November 10 , 2021

Final Biological Constraints Report for the SASD RCCC Pump Station Rehabilitation Project

Prepared for:

Sacramento Area Sewer District
10060 Goethe Road
Sacramento, CA 95827

Contact:

Hillary Masters
916.876.6015

Along with

Carollo Engineers
2880 Gateway Oaks Dr., Suite 300
Sacramento, CA 95833

Contact:

Ryan Hook
Principal Civil Engineer/Associate Vice President
916.565.4888

Prepared by:

Ascent Environmental
455 Capitol Mall, Suite 300
Sacramento, CA 95814

Contact:

Tammie Beyerl
Senior Biologist
916.732.3330

November 10, 2021

20210013.01

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

Carollo	Carollo Engineers
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
ESA	Endangered Species Act
IPaC	Information for Planning and Consultation
project	Pump Station Rehabilitation Project
RCCC	Rio Cosumnes Correctional Center
SASD	Sacramento Area Sewer District
SSHCP	South Sacramento Habitat Conservation Plan
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1 INTRODUCTION

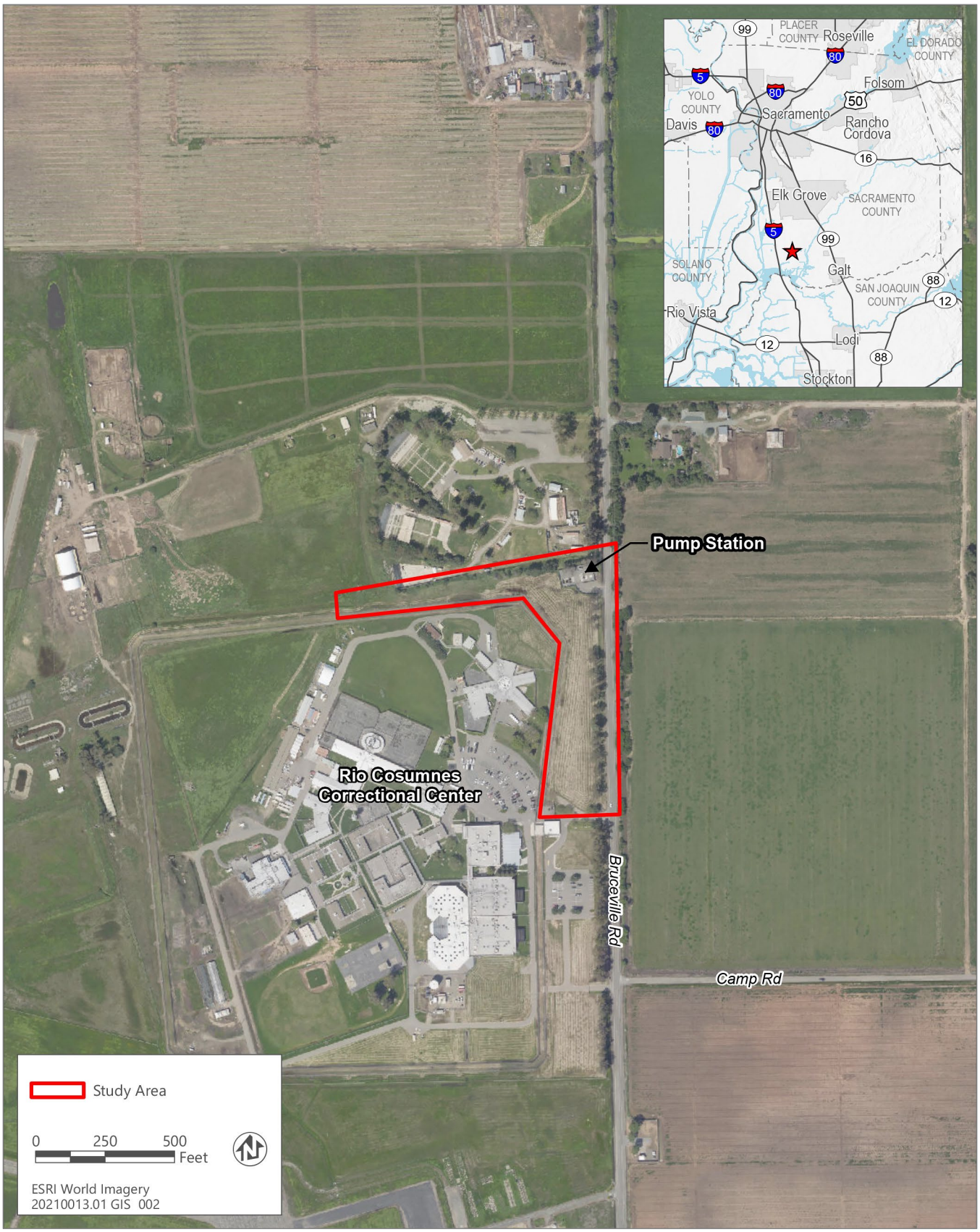
This report presents the results of a biological resources technical assessment for the Sacramento Area Sewer District (SASD) Rio Cosumnes Correctional Center (RCCC) Pump Station (S012) Rehabilitation Project (project). The study area is located at 12500 Bruceville Road, south of the City of Elk Grove in Sacramento County, California (Figure 1). Ascent Environmental was subcontracted by Carollo Engineers (Carollo), to perform a biological constraints analysis to evaluate the potential for sensitive biological resources to be affected by project actions and to identify modifications or adjustments to project design that may be feasible to avoid environmental impacts or avoid the need for biological permits. The study area for the biological constraints analysis consists of the RCCC Pump Station and surrounding areas that may be used for underground storage tanks and project access and staging (Figure 1).

1.5 PROJECT DESCRIPTION

The project will address RCCC Pump Station deficiencies including high operating pressure in the force main during peak flows, limited storage and redundancy, and lack of an emergency bypass system (Carollo Engineers 2021). Alternatives, such as examining potential modifications to sewer facilities, will be considered as part of the project. The proposed project will expand on work performed during 2015 assessment of the pump station and includes the additional condition and performance assessment of the pump station, screenings facility, generator, odor control and corrosion system, and force main (Carollo Engineers 2021).

The goal of the Project is to first evaluate the S012 collection system and develop recommendations that address deficiencies of the RCCC Pump Station. Ideal solutions will enhance operational flexibility, alleviate known maintenance issues, and accommodate future capacity needs (e.g., potential annexation of the Town of Thornton). The project will include evaluation of the pump station's current condition and investigate sewer facilities upstream and downstream of S012 to develop comprehensive alternatives. Those alternatives will be evaluated based on cost, hydraulic performance, maintenance and risk considerations, environmental impacts, and constructability to determine the recommended project or projects to implement. Phasing options will be developed if multiple projects are recommended.

Factors that could benefit both the operation of S012 and the entire S012 collection system include the following: 1) confirming that the recently installed Bioxide system is the best solution for controlling corrosive gases at S012 and upstream and downstream facilities; 2) improving the limited amount of storage within the system; and 3) improving the screenings removal facilities.



Source: adapted by Ascent in 2021

Figure 1 Study Area and Location

2 METHODS

Potential biological constraints for the study area were evaluated by Ascent biologist Tammie Beyerl during a reconnaissance-level field survey conducted on August 30, 2021. A certified arborist conducted a tree inventory survey in the study area on September 16, 2021. Information on sensitive biological resources that may be found in or near the study area was collected through review of U.S. Fish and Wildlife Service (USFWS) species lists, a search of the California Natural Diversity Database (CNDDB), and other existing documentation pertaining to biological resources in the region. Resources and data reviewed include the following:

- CNDDB record search of the Bruceville, Clarksburg, Courtland, Elk Grove, Florin, Galt, Isleton, Lodi North, and Thornton U.S. Geological Survey (USGS) 7.5-minute quadrangles (CNDDB 2021);
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California search of the Bruceville, Clarksburg, Courtland, Elk Grove, Florin, Galt, Isleton, Lodi North, and Thornton USGS 7.5-minue quadrangles (CNPS 2021);
- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) search of study area (USFWS 2021);
- South Sacramento Habitat Conservation Plan (SSHCP) (Sacramento County et al. 2018);
- California Wildlife Habitat Relationships (CDFW 2021); and
- Aerial photographs of the study area and region.

During the reconnaissance-level survey, the biologist verified land cover types in the study area and evaluated the suitability of habitats in the study area for special-status wildlife and plant species. Previously, there were reports of vernal pools in the study area, but during the reconnaissance-level survey, it was confirmed that there are no vernal pools or other aquatic resources present. Representative photos of the study area taken during the reconnaissance survey are presented in Appendix A of this report.

3 KEY REGULATORY SETTING

Biological resources in California are protected and/or regulated by a variety of federal and state laws and policies. Key regulatory issues applicable to the proposed project are discussed below. Because no wetlands, water features, riparian, or other sensitive natural habitats occur in the study area, state and federal wetland and lake and streambed regulations are not discussed.

3.1 FEDERAL ENDANGERED SPECIES ACT

Pursuant to the federal Endangered Species Act (ESA) (16 U.S.C. Section 1531 et seq.), the U.S. Fish and Wildlife Service (USFWS) regulates the taking of species listed in the ESA as threatened or endangered. In general, persons subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant habitat modification that could result in take.

Section 10 of the ESA applies if a nonfederal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. Section 7 of the ESA applies if a federal discretionary action is required (e.g., a federal agency must issue a permit), in which case the involved federal agency consults with USFWS.

3.2 CALIFORNIA ENDANGERED SPECIES ACT

Pursuant to the California Endangered Species Act (CESA), a permit from CDFW is required for projects that could result in the "take" of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species but does not include "harm" or "harass," as does the federal definition. As a result, the threshold for take is higher under CESA than under the federal ESA. Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 incidental take permit.

3.3 CALIFORNIA FISH AND GAME CODE SECTIONS 3503 AND 3503.5—PROTECTION OF BIRD NESTS AND RAPTORS

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs and/or young.

3.4 FULLY PROTECTED SPECIES UNDER THE CALIFORNIA FISH AND GAME CODE

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take.

3.5 CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA applies to projects proposed to be undertaken or requiring approval by state and local governmental agencies. "Projects" are public agency actions with potential to have an impact on the physical environment. Once an activity is determined to be a "project" under CEQA, the lead agency must decide whether it is categorically or statutorily exempt. If it is not exempt, the lead agency must assess the potential for significant environmental effects to occur as a result of the project. For this analysis, thresholds of significance related to biological resources, as described below, are used to determine if a significant impact may occur. The significance criteria are based on applicable parts of Appendix G of the State CEQA Guidelines.

The project would have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on state or federally-protected wetlands, as defined by Section 404 of the Clean Water Act or the Porter-Cologne Water Quality Control Act, through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan.

3.6 SACRAMENTO COUNTY SWAINSON'S HAWK ORDINANCE

Chapter 16.130 of Title 16 of the Sacramento County Code addresses the reduction in Swainson's hawk foraging habitat within unincorporated Sacramento County (Swainson's Hawk Technical Advisory Committee 2000). Participating in the County's Swainson's Hawk Mitigation Program, which is voluntary, is one option for mitigating the loss of foraging habitat within unincorporated areas of the County. Under this program, mitigation for impacts less than 40 acres can be achieved by paying a mitigation fee or providing replacement habitat (title or easement to suitable Swainson's hawk mitigation lands on a per-acre basis); mitigation for impacts of 40 acres or greater can be achieved only by providing replacement habitat under this program. Other mitigation options usually involve working on an individual basis with CDFW. For example, participation in a CDFW-approved conservation bank with available credits for Swainson's hawk foraging habitat could meet mitigation requirements.

3.7 SACRAMENTO COUNTY TREE PRESERVATION AND PROTECTION ORDINANCE

The Sacramento County Tree Preservation and Protection Ordinance (Chapter 19.12 of the Sacramento County Code of Ordinances) provides for the protection of native oak trees, including valley oak (*Quercus lobata*), interior live oak (*Q. wislizeni*), blue oak (*Q. douglasii*), and oracle oak (*Q. morehus*). Protected trees include any living native oak tree having at least one trunk of six inches or more DBH, or a multi-trunked native oak tree having an aggregate DBH of ten inches.

Chapter 19.12 states that no person shall trench, grade, or fill within the dripline of any native oak tree; or destroy, kill, or remove any native oak tree, on any property, public or private, without a tree permit. As indicated in Table 1, Tree #112 is the only tree within the survey area to qualify for protection under Chapter 19.12.

Chapter 19.04 of the Sacramento County Code of Ordinances provides for the protection, preservation, and regulation of trees on public property within Sacramento County. This includes all trees planted or maintained by the County on an easement, planting easement, street, county park, or public premises. A permit shall be required to plant, transplant, move, separate, trim, prune, cut above or below ground, disrupt, alter, or take any other action upon any tree located on public premises. Because the study area is entirely on public property, all trees within the study area are subject to the tree permit requirements in Chapter 19.04.

3.8 SOUTH SACRAMENTO HABITAT CONSERVATION PLAN

Pursuant to Section 10(a)(1)(B) of the ESA, the South Sacramento Habitat Conservation Plan (SSHCP) presents a regional approach to preserve federal and state endangered and threatened species and to streamline the existing permitting process in areas under development. The SSHCP, which was approved by Sacramento County in 2018, is a large-scale consolidated effort to protect and enhance wetlands (primarily vernal pools), aquatic, and upland habitats to provide ecologically viable conservation areas (Sacramento County 2018). Permits for the SSHCP were issued in 2019. The SSHCP covers 372,000-acres of south Sacramento County and Rancho Cordova, California. It will preserve natural lands in Sacramento County and protect habitat for 28 special-status plant and animal species, including 10 state and federally listed species. The boundary of the SSHCP was defined using political and ecological factors. The geographical boundaries are U.S. Highway 50 to the north, the Sacramento River levee and County Road J11 to the west, the Sacramento County line with El Dorado and Amador counties to the east, and the San Joaquin County line to the south. The SSHCP allows the County of Sacramento, and cities of Rancho Cordova, and Galt to extend incidental take coverage to third parties.

4 ENVIRONMENTAL SETTING

The project is located on the western side of Bruceville Road, north of Camp Road and south of Lambert Road in Sacramento County (Figure 1). RCCC facilities are north, west, and south of the study area, and cropland is to the east.

The study area is composed of a pump station and a mowed field that is part of RCCC and is enclosed by chain-link fencing. The pump station has developed land cover with asphalt, concrete and gravel surfaces, and therefore does not provide habitat for native plant or wildlife species. The field is regularly mowed and consists of ruderal species, including Mediterranean barley (*Hordeum marinum)*, wild oats (*Avena* spp.), brome (*Bromus* spp.), Bermuda grass (*Cynodon dactylon*), Italian rye-grass (*Festuca perennis*), Chicory (*Cichorium intybus*), prickly lettuce (*Lactuca serriola*), Field bindweed (*Convolvulus arvensis*), Spring vetch (*Vicia sativa*), ribwort plantain (*Plantago lanceolata*), and curly dock (*Rumex crispus*). The only native forb species observed in the study area are spikeweed (*Centromadia fitchii)* and harvest brodiaea (*Brodiaea elegans*). Mostly nonnative trees line the northern and eastern edges of the study area, aside from two native oak trees (Ascent 2021). Only one of the native oak trees is alive. The project arborist report provides a complete inventory of trees present in the study area. There are no elderberry shrubs present in the study area, and no ground squirrel colonies or other obvious sign of burrowing animals was observed in the study area during the reconnaissance-level survey.

4.1 SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources evaluated herein consist of habitats and species that are afforded specific consideration through the California Environmental Quality Act (CEQA), California Fish and Game Code, including the California Endangered Species Act (CESA), the federal Endangered Species Act (ESA), or local plans, policies, and regulations. The study area does not contain state or federally protected wetlands or any aquatic or riparian habitats and does not serve as an important migration or movement corridor, or nursery site for any wildlife species.

4.1.1 Special-Status Species

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- officially listed by California under CESA or the federal government under ESA as endangered, threatened, or rare;
- a candidate for state or federal listing as endangered, or threatened under CESA or ESA;
- taxa (i.e., taxonomic category or group) that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the State CEQA Guidelines;
- species identified by CDFW as Species of Special Concern;
- species listed as Fully Protected under the California Fish and Game Code;
- species afforded protection under local planning documents; and
- taxa considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR) of 1 or 2. The CDFW system includes rarity and endangerment ranks for categorizing plant species of concern, and ranks 1 and 2 are summarized as follows:
  - CRPR 1A - Plants presumed to be extinct in California;
  - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
  - CRPR 2A - Plants presumed to be extinct in California but common elsewhere; and
  - CRPR 2B - Plants that are rare, threatened, or endangered in California but more common elsewhere.

The term "California species of special concern" is applied by CDFW to animals not listed under ESA or CESA, but that are considered to be declining at a rate that could result in listing, or that historically occurred in low numbers and known threats to their persistence currently exist. CDFW's fully protected status was California's first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however, some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes, for relocation to protect livestock, or as part of an NCCP.

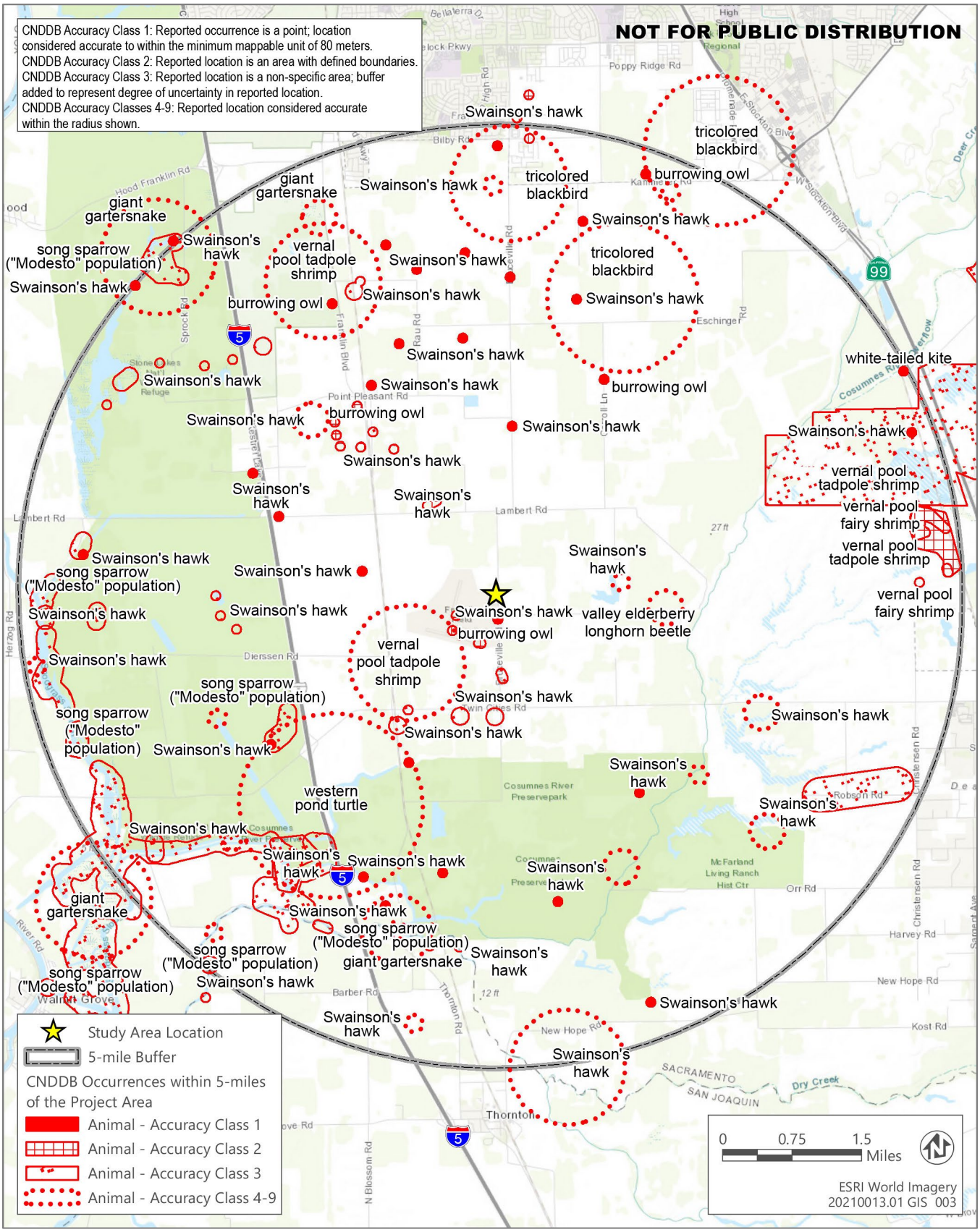
Six special-status wildlife species, burrowing owl, Ferruginous hawk, loggerhead shrike, song sparrow ("Modesto" population), Swainson's hawk, and white-tailed kite, have the potential to be present in the study area, or to use it occasionally, and are discussed in more detail below (Table 1). The distribution of CNDDB special-status wildlife species occurrence records within 5 miles of the study area is shown in Figure 2.

No special-status plant species are expected to occupy the study area because of a lack of suitable habitat. Wildlife species reliant on rivers, riparian, vernal pools, or other wetland habitats will not be analyzed further because there are no such habitats present in study area. These species include:

- California tiger salamander (central CA DPS)
- foothill yellow-legged frog
- steelhead (Central Valley DPS)
- Delta smelt,
- longfin smelt
- Sacramento splittail
- vernal pool fairy shrimp
- midvalley fairy shrimp
- vernal pool tadpole shrimp,
- Ricksecker's water scavenger beetle,
- western pond turtle, and
- giant gartersnake.

A list of all species considered but eliminated from further analysis due to absence of habitat are included in the CNDDB record search report, as well as CNPS and IPaC reports, which can be found in Appendix B–D (CNDDB 2021; CNPS 2021; USFWS 2021). Out of the above listed species, the following are covered under the SSHCP:

- California tiger salamander (central CA DPS),
- vernal pool fairy shrimp,
- midvalley fairy shrimp,
- vernal pool tadpole shrimp,
- Ricksecker's water scavenger beetle,
- western pond turtle, and
- giant garter snake.



Source: Data downloaded from CDFW in October 2021; adapted by Ascent in 2021

Figure 2 CNDDB Occurrences within 5 miles of Study Area

Table 1 Special-Status Wildlife Species Known to Occur in the Vicinity of the Study Area and Potential for Occurrence on the Study Area

Species	Listing Status[1] Federal	Listing Status[1] State	SSHCP	Habitat	Potential for Occurrence
Birds					
Burrowing owl *Athene cunicularia* (year round)	–	SSC	Covered	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	***May occur***. Ruderal grassland habitat potentially suitable for burrowing owl foraging and nesting is present on the study area, though no burrows or burrowing mammals were observed during reconnaissance surveys. A burrowing owl breeding site was documented 0.5 mile southwest of study area in 2008 (CNDDB 2021). Burrowing owl were also documented wintering at this location through January 2010 (CNDDB 2021). There are additional burrowing owl occurrences 2.3 miles northwest of the study area where five sites were documented with approximately one mating pair at each location and three juveniles at one of the locations. It is noted that burrowing owls are documented at these sites year-round (CNDDB 2021).
California black rail *Laterallus jamaicensis coturniculus* (year round)	–	ST, FP	–	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	*Not expected to occur*. The study area does not support wetland habitat suitable for this species.
Cooper's hawk *Accipiter cooperii* (year round)	–	–	Covered	Woodland, chiefly of open, interrupted, or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	*Not expected to occur*. The study area does not contain riparian habitat suitable for this species.
Ferruginous hawk *Buteo regalis* (wintering)	–	–	Covered	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs (e.g., rabbits and hares), ground squirrels, and mice. Population trends may follow lagomorph population cycles.	***May occur***. Grassland habitat potentially suitable for winter foraging habitat for this species is present on the study area.
Grasshopper sparrow *Ammodramus savannarum* (nesting)	–	SSC	–	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	*Not expected to occur*. Dense native grassland habitat suitable for this species is not present on the study area.
Greater sandhill crane *Grus canadensis tabida* (wintering)	–	T, FP	Covered	Annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands. Typically nests in mounds of wetland plants or hummocks in remote portions of extensive wetlands. Sometimes nests in grass-lined depressions on dry sites.	*Not expected to occur*. The study area does not contain suitable foraging or winter roosting habitat for this species. Additionally, this species is known to breed only in Siskiyou, Modoc, and Lassen counties and in Sierra Valley, Plumas, and Sierra counties.

Species	Listing Status[1] Federal	Listing Status[1] State	SSHCP	Habitat	Potential for Occurrence
Least bittern *Ixobrychus exilis* (nesting)	–	SSC	–	Marsh and swamp, wetlands. Colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover. Nests usually placed low in tules, over water.	*Not expected to occur*. The study area does not support wetland nesting habitat suitable for this species.
Lesser sandhill crane *Antigone* [=*Grus*] *canadensis* (wintering)	–	SSC	–	Annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands.	*Not expected to occur*. The study area does not contain suitable wintering habitat for this species. Breeding for the Lesser sandhill crane occurs outside of California.
Loggerhead shrike *Lanius ludovicianus* (year round)	–	SSC	Covered	A common resident and winter visitor in lowlands and foothills throughout California. Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Occurs only rarely in heavily urbanized areas, but often found in open cropland. Sometimes uses edges of denser habitats.	***May occur***. Trees and shrubs providing potential nest sites for this species are present on and near the study area. Agricultural field habitat suitable for this species is present adjacent to the study area.
Mountain plover *Charadrius montanus* (wintering)	–	SSC	–	Chenopod scrub, valley and foothill grassland. Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground and flat topography. Prefers grazed areas and areas with burrowing rodents.	*Not expected to occur*. The study area is outside of this species' currently known wintering range, which in Sacramento County, is restricted to areas west of Elk Grove in the Sacramento-San Joaquin River Delta west of I-5. Mountain plover nests outside of California.
Northern Harrier *Circus cyaneus* (nesting)	–	SSC	Covered	Coastal salt and fresh-water marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	*Not expected to occur*. Ruderal grassland habitat potentially suitable for foraging for this species is present in the study area, but nesting habitat is not present.
Song sparrow ("Modesto" population) *Melospiza melodia* (year round)	–	SSC	–	Emergent freshwater marshes, riparian willow thickets, riparian forests of valley oak (*Quercus lobata*), and vegetated irrigation canals and levees.	***May occur***. May nest east of the study area, in vegetation lining the irrigation ditch on the other side of Bruceville Road.
Swainson's hawk *Buteo swainsoni* (nesting)	–	ST	Covered	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.	***May occur***. Trees providing potential nest sites for Swainson's hawks are present on and adjacent to the study area. Swainson's hawk nests with young were documented 0.15 miles and 0.75 miles south of the study area in 2009 (CNDDB 2021). There are also multiple known occurrences documented in the surrounding area, which include a nest occurrence 1.3 miles west of the study area (CNDDB 2021).
Tricolored blackbird *Agelaius tricolor* (year round)	–	ST, SSC	Covered	Freshwater marsh, marsh and swamp, swamp, wetland. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	*Not expected to occur*. The study area does not contain suitable nesting habitat for this species.

Species	Listing Status[1] Federal	Listing Status[1] State	SSHCP	Habitat	Potential for Occurrence
Western yellow-billed cuckoo *Coccyzus americanus occidentalis* (nesting)	FT, USFS-S	SE	–	Riparian forest. Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	*Not expected to occur*. The study area is out of range for this species and does not contain riparian forest nesting habitat suitable for this species.
White-tailed kite *Elanus leucurus* (year round)	–	FP	Covered	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.	***May occur***. Dense-topped tree habitat potentially suitable for nesting is present on and near the study area as well as ruderal grasslands and agricultural fields suitable for foraging.
Yellow-breasted chat *Icteria virens* (nesting)	–	SSC	–	Riparian forest, riparian scrub, riparian woodland. Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	*Not expected to occur*. The study area does not contain riparian habitat suitable for this species.
Yellow-headed blackbird *Xanthocephalus* (year round)	–	SSC	–	Marsh and swamp, wetland. Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds. Nests only where large insects such as Odonata are abundant, nesting timed with maximum emergence of aquatic insects.	*Not expected to occur*. Study area does not contain wetland nesting habitat suitable for this species.
Yellow warbler *Setophaga petechia* (nesting)	–	SSC	–	Riparian forest, riparian scrub, riparian woodland. Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	*Not expected to occur*. The study area is outside the current known range of this species. This species has been largely extirpated from the Sacramento Valley (Shuford and Gardali 2008).
Invertebrates					
Crotch bumble bee *Bombus crotchii*	–	SSC	–	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum* spp., *Phacelia* spp., *Clarkia* spp., *Dendromecon* spp., *Eschscholzia* spp., and *Eriogonum* spp..	*Not expected to occur*. The study area does not support plants associated with this bumble bee, as the field in the study area is mowed regularly.
Monarch butterfly *Danaus plexippus*	FC USFS-S	–	–	Closed-cone coniferous forest. Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	*Not expected to occur*. The study area does not support milkweed larval hosts and or sufficient nectar plant species, as the field in the study area is mowed regularly.

Species	Listing Status[1] Federal	Listing Status[1] State	SSHCP	Habitat	Potential for Occurrence
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT	–	Covered	Riparian scrub. Occurs 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.	*Not expected to occur*. The study area does not contain elderberry shrubs suitable for this species.
Mammals					
American badger *Taxidea taxus*	–	SSC	Covered	Alkali marsh, alkali playa, alpine, alpine dwarf scrub, bog a fen, brackish marsh, broadleaved upland forest, chaparral, chenopod scrub, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	*Not expected to occur*. The study area does not contain friable soils suitable for burrowing habitat and during the reconnaissance-level survey, no evidence of burrowing animals was found.
Riparian brush rabbit *Sylvilagus bachmani riparius*	FE	SE	–	Riparian forest. Riparian areas on the San Joaquin River in northern Stanislaus County. Dense thickets of wild rose, willows, and blackberries.	*Not expected to occur*. The study area does not support riparian habitat suitable for this species.
Western red bat *Lasiurus blossevillii*	–	SSC	Covered	Roosts primarily in dense tree foliage, especially in cottonwood, sycamore, and other riparian trees or orchards (Pierson et al. 2004). Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging. Strongly associated with intact mature riparian forest.	*Not expected to occur*. The study area does not support riparian habitat preferred by this species.

Notes:

[1] Status definitions:

Federal:

Candidate (legally protected under ESA)

Threatened (legally protected under ESA)

Endangered (legally protected under ESA)

State:

Endangered (legally protected under CESA)

Threatened (legally protected under CESA)

FP Fully Protected (legally protected under California Fish and Game Code)

SSC Species of Special Concern (protected under CEQA, but not legally protected under CESA)

Not Expected to Occur – For wildlife species, suitable habitat is not in study area or else surrounding urban development makes occurrence unlikely. For plant species, suitable habitat is lacking, or else presence is unlikely due to rarity of species and/or nearest known occurrence is greater than 5 miles.

May Occur – Suitable habitat is present in the study area and the nearest known occurrence is within 5 miles.

Burrowing owl

Burrowing owl is a California Species of Special Concern and is covered under the SSHCP. Burrowing owl habitat is characterized by low growing vegetation and may include annual and perennial grasslands and arid scrublands. Burrows are an essential component of burrowing owl habitat. Burrowing owls typically use burrows made by mammals such as ground squirrels or badgers but may also use artificial structures such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. They can also create their own burrows if soil conditions are suitable. The breeding season for burrowing owls is from approximately February 1 to August 31. Burrowing owls may make local movements or small migrations during the nonbreeding season, but still require burrows for shelter and protection from predators.

The CNDDB contains six records of burrowing owl within a five-mile radius of the study area, ranging from approximately 0.5-4.8 miles away from the study area (CNDDB 2021). Four out of six of these occurrences had documented breeding pairs present (CNDDB 2021). Although ground squirrel burrows were not observed on site during the reconnaissance survey, burrowing owl has been documented on Franklin Field, 0.5 miles southwest of the study area.

Ferruginous hawk

Ferruginous hawk is covered under the SSHCP. Ferruginous hawk is a common winter resident in southwestern California in grasslands and agricultural areas (Garrett and Dunn 1981). Ferruginous hawk generally will arrive in California in September depart by the middle of April and does not nest in California. This species is an uncommon winter resident and migrant in lower elevations of the Modoc Plateau, Coast Ranges, and Central Valley. Ferruginous hawk habitat includes open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitat, and their diet is mostly made up of lagomorphs, ground squirrels and mice. Population trends may follow lagomorph population cycles. Ferruginous hawk requires large tracts of habitat and roosts on trees or poles in open areas. In Colorado it was found that wintering Ferruginous hawks avoided urban development and surrounding areas (Berry et al. 1998).

The CNDDB contains no records of Ferruginous hawk within a five-mile radius of the study area (CNDDB 2021). Within a ten-mile radius of the study area there was a sole documented occurrence of a Ferruginous hawk wintering near a wastewater treatment facility in 2003 (CNDDB 2021). However, because ferruginous hawk has no special-status, it is not often reported to the CNDDB.

Loggerhead shrike

Loggerhead shrike is a California Species of Special Concern and is covered under the SSHCP. Loggerhead shrike is a year-round resident of Sacramento County. Nesting occurs in densely-foliaged trees or shrubs, and usually on stable, well-concealed branches (Miller 1931; Bent 1950). Breeding season is typically from March through August.

Loggerhead shrike preferred habitat includes scattered shrubs, posts, trees, utility lines, or other perches. It occurs only rarely in heavily urbanized areas but is often found in open cropland and sometimes uses edges of denser habitats (Grinnell and Miller 1944; McCaskie et al. 1979; Garrett and Dunn 1981). Loggerhead shrike diet mostly consists of large insects, but can also contain small birds, amphibians, reptiles, mammals, and fish, among other things. Hunting usually occurs while perched at least two feet above ground (Grinnell and Miller 1944).

The CNDDB contains no records of loggerhead shrike within a five- or ten-mile radius of the study area (CNDDB 2021); however, loggerhead shrike is known to be an underreported species.

Song sparrow (Modesto population)

The Modesto population of song sparrow is a California Species of Special Concern. Song sparrow is a year-round resident of Sacramento County. Nesting can occur on or just above the ground in shrubs or other low vegetation, normally within four feet of the ground (Bent 1968; Harrison 1978). When nesting on the ground, the nest is normally hidden under low, dense vegetation, and typically near water. Breeding season for song sparrow generally starts in April.

Song sparrow preferred habitat typically consists of emergent freshwater marshes, riparian willow thickets, riparian forests of valley oak (*Quercus lobata*), and vegetated irrigation canals and levees. Generally, song sparrow is more abundant in the lowlands and desert areas of California. Song sparrow typically feed on seeds, which constitutes most of their diet annually, but during nesting season will also feed on insects, spiders, and other small invertebrates, making up almost half their diet during this time of year (Martin et al. 1961).

The CNDDB contains seven records of song sparrow occurrences within a five-mile radius of the study area, ranging from approximately 2.7-5 miles away in 2009 (CNDDB 2021). This includes up to 185 nesting song sparrows in the areas where occurrences were recorded, which were mostly by water (CNDDB 2021).

Swainson's Hawk

Swainson's hawk is state listed as threatened in California and is covered under the SSHCP. Swainson's hawks typically are found in California only during the breeding season (March–September) and generally begin to arrive in the Central Valley in March. Nesting territories are usually established by April, with incubation and rearing of young occurring through June. Most Swainson's hawks leave the Central Valley by late August to mid-September to migrate to Mexico and South America. Nesting pairs frequently return to the same nest site for multiple years. Sacramento, Yolo, Solano, and San Joaquin Counties support the largest concentration of nesting Swainson's hawks in California.

Swainson's hawks are most commonly present in grassland, low-shrubland, and agricultural habitats that include large trees for nesting. Nests are found in riparian woodlands, roadside trees, trees along field borders, and isolated trees. In the Central Valley, the Swainson's hawk population is correlated with agricultural production that creates abundant prey availability in large tracts of foraging areas (Estep 2008). However, Swainson's hawks can also be found in areas undergoing urbanization (e.g., City of Elk Grove), if sufficient nesting and foraging habitat remains available (Estep 2009).

Prey abundance and accessibility are the most important features determining the suitability of Swainson's hawk foraging habitat. Agricultural operations (e.g., mowing, flood irrigation) have substantial influence on the accessibility of prey and, thus, create important foraging opportunities. Swainson's hawks feed primarily on small rodents, but also consume insects and birds.

There are 54 reported Swainson's hawk historic nests within five miles of the study area (CNDDB 2021). Not all of these nesting territories may be active in a given year. Swainson's hawk may nest in trees along the eastern and northern borders of study area, and nests have been documented as close as 0.15 mile south of the study area.

White-tailed kite

White-tailed kite is fully protected by the California Fish and Game Code and is covered under the SSHCP. California supports the largest number of white-tailed kites in North America. White-tailed kites are typically found in virtually all lowlands west of the Sierra Nevada range and the southeast deserts. Nest-building occurs January through August (Dunk 1995). Egg laying begins in February and probably peaks in March and April. Peak fledging probably occurs in May and June with most fledging complete by October (Erichsen 1995). Although the white-tailed kite is probably resident through most of its breeding range, dispersal occurs during the nonbreeding season, leading to range expansion that includes most of California.

White-tailed kites generally nest in dense stands of trees, but like Swainson's hawks, they nest on habitat edges adjacent to open foraging habitat (CDFW 2005). They occasionally nest in isolated trees. They typically nest within 0.5 mile of foraging habitat and are rarely found away from their preferred foraging habitats (Dunk 1995, CDFW 2005, Estep pers. comm. 2014). They inhabit lowland grasslands, agriculture, wetlands, oak-woodland and savannah habitats, and riparian areas associated with open areas. Erichsen (1995) found that riparian corridors represent preferred nesting sites for kites. As preferred habitats (e.g., riparian woodlands, wetlands, and native wooded grasslands) have diminished, kites must compete with larger raptors for nesting sites in remaining woodlands and agricultural settings. Such nest site competitors include great horned owls (*Bubo virginianus*), red-tailed hawks (*Buteo jamaicensis*), red-shouldered hawks, and Swainson's hawks (*Buteo swainsoni*).

Kites do not seem to associate with particular plant species but are more tied to prey abundance and vegetation structure. Those habitats supporting larger prey populations are more suitable; ungrazed lands support higher prey populations than grazed lands. Alfalfa and sugarbeet fields support the highest vole populations, relative to other agriculture. Erichsen (1995) found summer habitat preferences to include riparian zones, dry pastures, alfalfa, orchards, and rice stubble fields. Plowed fields were avoided in both winter and summer. White-tailed kites have been reported to nest in a wide variety of tree and shrub species ranging from shrubs, such as coyote brush (*Baccharis pilularis*), that are less than 10 feet tall to redwood trees over 150 feet tall (Dunk 1995). However, they most often build their nests near the tops of trees (generally 20 to 100 feet above ground) with dense canopies (CDFW 2005). White-tailed kites show strong fidelity to general nesting locations and return annually to the same sites to breed. Unlike some other raptors however, kites tend to exhibit nesting fidelity to a particular tree or grove of trees but may not reuse their nest from previous years (AMEC 2008).

There was only one documented white-tailed kite nest occurrence reported in the CNDDB within a five-mile radius of the study area, located approximately 4.9 miles northeast of the study area and recorded in 1991 (CNDDB 2021). The nest was located in a cottonwood tree surrounded by habitat consisting of agricultural fields and grazed grasslands. White-tailed kite is known to be an underreported species in the CNDDB. In Cornell Lab of Ornithology's eBird database, the closest observation of white-tailed kite was recorded in March 2020, 0.35 mile northwest of the study area (eBird 2021). There are approximately seven observation locations in a 1.5-mile radius of the study area in the eBird database. At one of the locations 1.5 miles south of the study area, there are approximately 53 observations of white-tailed kite from 2011 to 2021 (eBird 2021).

5 IMPACT EVALUATION

5.1 THRESHOLDS OF SIGNIFICANCE

This biological constraints report has been prepared in support of CEQA, therefore potential adverse impacts on biological resources are evaluated in the context of the State CEQA Guidelines.

Biological resource issues that were considered pursuant to the State CEQA Guidelines but eliminated from further evaluation because they are absent from the study area are state and federally protected wetlands, riparian habitats or other sensitive natural communities, and wildlife movement corridors and nursery sites.

5.2 SPECIAL-STATUS SPECIES

5.2.1 Swainson's Hawk, Burrowing Owl, Loggerhead Shrike, White-Tailed Kite, and Other Raptors

Swainson's hawk, burrowing owl, loggerhead shrike, white-tailed kite, and other raptors have the potential to forage and nest in the study area. Ferruginous hawk has the potential to forage in the study area, though it breeds outside of California, so nesting would not occur for this species. Foraging habitat for Swainson's hawk and other raptors is located within the mowed field in the study area and in the adjacent agricultural fields. Nesting could occur in trees lining the north and east edges of the study area, trees located south and west of the study area, and trees lining the irrigation ditch east of the study area, across Bruceville road.

There have been 54 Swainson's hawk nest occurrences documented within 5 miles of the study area, the two closest recorded 0.15 miles and 0.75 miles south of the study area in 2009 (CNDDB 2021). There is also a nest occurrence documented 1.3 miles west of the study area (CNDDB 2021). Construction activities conducted during the breeding season (defined as March 1 – September 15 for Swainson's hawk) near active nest trees could disturb Swainson's hawks if they are nesting nearby, causing adults to abandon their nests, resulting in mortality of chicks or eggs. Generally, visual and noise disturbances can affect nesting success of Swainson's hawks nesting up to 0.05 mile away

from the disturbance source. Other raptor nests located near the study area could also be disturbed or fail as a result of project construction during the breeding season; however, other raptor species occur in the area are generally not as sensitive to disturbances originating from distances further than 500 feet from the nest.

Although Swainson's hawk is the only state-listed raptor species expected to occur in the project vicinity, white-tailed kite, a fully protected species under the California Fish and Game Code, could also nest in and near the study area. There are approximately seven documented observation locations in a 1.5-mile radius of the study area in the eBird database. At one of these locations, which is about 1.5 miles south of the study area, there are approximately 53 observations of white-tailed kite from 2011 to 2021 (eBird 2021). Additionally, all raptor species and their nests are protected under California Fish and Game Code. Other raptors known to nest in the project vicinity include red-shouldered hawk, American kestrel, red-tailed hawk, great horned owl, and barn owl.

Although loggerhead shrike is not a raptor, the SSHCP includes them within their AMM for Covered Raptor Species. Swainson's hawk, white-tailed kite, burrowing owl, and loggerhead shrike are all covered species under the SSHCP. For consistency and to minimize repetition, they are evaluated together with raptors in this report; however, because the SSHCP AMMs for burrowing owl differ, a separate recommendation is included for burrowing owl below.

The closest burrowing owl nest occurrence was documented 0.5 miles southwest of the study area in 2008, with multiple years of wintering burrowing owl occurrences documented at the same location from 2008-2010 (CNDDB 2021). With that said, it should be noted that the site is regularly mowed which may discourage burrowing owl nesting, and as mentioned above, no burrows were observed during the reconnaissance survey. Burrowing owls may be flushed from their burrows by disturbances occurring up to 500 meters (1,640 feet) from the burrow site. Flushing burrowing owls from their burrows can result in nest abandonment resulting in death of chicks or eggs. In addition, burrowing owls need burrows at all times of year to survive and displacing individuals from their burrows can result in indirect impacts such as predation, increased energetic costs, increased stress, exposure to extreme heat or cold, and risks associated with having to find and compete for burrows, all of which can lead to take or reduced reproduction.

5.2.2 Song Sparrow (Modesto Population) and Common Native Birds

Though song sparrow is not expected to nest in the study area, it has the potential to nest east of the study area in vegetation lining the irrigation ditch on the other side of Bruceville Road. Construction could disturb nesting song sparrows if they were to nest along the irrigation ditch adjacent to the study area.

Common native nesting birds are protected by California Fish and Game Code and the federal MBTA. Nesting habitat potentially suitable for native bird species is present in the trees bordering the northern and eastern edges of the study area, as well as vegetation lining the irrigation ditch east of the study area. Project activities could disturb of native nesting birds resulting in the loss of nests, or disruption to nesting attempts, of song sparrow, and non-special-status native birds protected by California Fish and Game Code and MBTA.

5.2.3 Ferruginous Hawk

Ferruginous hawk, which is covered under the SSHCP, has the potential to forage in the study area. This species breeds outside of California so nesting disturbance would not be an issue for this species. The study area contains approximately 7 acres of suitable winter foraging habitat for Ferruginous hawk that may be temporarily disturbed during project construction. Because the amount of foraging habitat that would be affected is small compared to the amount of foraging habitat available in surrounding areas and because there would be no permanent loss of foraging habitat in the study area, impacts to ferruginous hawk would be less than significant.

5.2.4 Other Special-Status Species

No other special-status species are expected to be affected by the project.

5.3 CONFLICT WITH LOCAL POLICIES AND ORDINANCES

Development of the RCCC Pump Station Project has the potential to affect trees covered under the Sacramento County Tree Protection Ordinance (tree ordinance) by trenching, grading, or other ground alterations within the root zones of trees or through tree pruning or trimming. The tree ordinance requires that a permit be obtained from the County prior to carrying out any action upon trees located on public premises such as the trees located in the study area. By obtaining a tree permit, complying with conditions of the permit, and following the tree preservation guidelines outlined in the arborist report (Ascent 2021), the project would avoid conflicts with the tree ordinance.

The project also has the potential to conflict with Sacramento County Swainson's Hawk Ordinance, which is aimed at protecting Swainson's hawk foraging habitat (Swainson's Hawk Technical Advisory Committee 2000). The study area is smaller than 5 acres, is zoned for cemetery, public, quasi-public land use, and the project would temporarily disturb but not remove the potential Swainson's hawk foraging habitat (mowed field); therefore, project implementation would not conflict with the County's Swainson's hawk ordinance.

5.4 CONFLICT WITH ADOPTED HABITAT CONSERVATION PLANS

As the study area is within the plan area of the SSHCP, development may conflict with the provisions of the adopted South Sacramento Habitat Conservation Plan. The SSHCP has modeled land cover in the study area as Valley Grassland. Based on the biological reconnaissance-level survey conducted August 30, 2021, frequently mowed ruderal vegetation and developed land cover consisting of asphalt, concrete, and gravel surfaces are present in the study area, therefore some valley grassland land cover type is present within the study area, but this habitat is subject to ongoing disturbance. The SSHCP has modeled the study area as containing habitat for western spadefoot, western pond turtle, tricolored blackbird, Ferruginous hawk, Northern harrier, greater sandhill crane, loggerhead shrike, Swainson's hawk, white-tailed kite, American badger, vernal pool tadpole shrimp, and western red bat. Although it was found that Swainson's hawk, loggerhead shrike, Ferruginous hawk, and white-tailed kite may occur in the study area, aerial photographs of the study area and the reconnaissance-level survey found insufficient habitat for western spadefoot, western pond turtle, tricolored blackbird, Northern harrier, greater sandhill crane, American badger, vernal pool tadpole shrimp, and western red bat.

The SSHCP requires implementation of AMMs for Swainson's Hawk, Ferruginous hawk, loggerhead shrike, and white-tailed kite. Mitigation measures included below are consistent with the covered species take AMMs from the SSHCP. Implementation of these AMMs would avoid conflicts with the SSHCP.

6 RECOMMENDATIONS

6.1 BIOLOGICAL MONITOR

SASD will implement the following measures that are consistent with AMMs included in the SSHCP:

- If a Covered Activity includes ground disturbance within Covered Species modeled habitat, an approved biologist will be on site during the period of ground disturbance and may need to be on site during other construction activities depending on the Covered Species affected.
- After ground-disturbing project activities are complete, the approved biologist will train an individual to act as the on-site construction monitor for the remainder of construction, with the concurrence of the Permitting Agencies.
- The on-site monitor will attend the training described below in 'Training for Construction Staff' recommendation in section 6.2 below.

- The approved biologist and the on-site monitor will have oversight over implementation of Avoidance and Minimization Measures, and will have the authority to stop activities if any of the requirements associated with those measures are not met.
- If the monitor requests that work be stopped, the Wildlife Agencies will be notified within one working day by email. The approved biologist and/or on-site monitor will record all observations of listed species on California Natural Diversity Database field sheets and submit them to the California Department of Fish and Wildlife.
- The approved biologist or on-site monitor will be the contact source for any employee or contractor who might inadvertently kill or injure a Covered Species or who finds a dead, injured or entrapped individual.
- The approved biologist and on-site monitor's names and telephone numbers will be provided to the Wildlife Agencies prior to the initiation of ground-disturbing activities. Refer to species-specific measures for details on requirements for biological monitors.

6.2 TRAINING FOR CONSTRUCTION STAFF

SASD will implement the following measures that are consistent with AMMs included in the SSHCP:

- A mandatory Worker Environmental Awareness Program will be conducted by an approved biologist for all construction workers, including contractors, prior to the commencement of construction activities.
- The training will include how to identify Covered Species that might enter the construction site, relevant life history information and habitats, SSHCP and statutory requirements and the consequences of non-compliance, the boundaries of the construction area and permitted disturbance zones, litter control training, and appropriate protocols if a Covered Species is encountered.
- Supporting materials containing training information will be prepared and distributed by the approved biologist. When necessary, training and supporting materials will also be provided in Spanish.
- Upon completion of training, construction personnel will sign a form stating that they attended the training and understand all of the Avoidance and Minimization Measures.
- Written documentation of the training must be submitted to the Implementing Entity within 30 days of completion of the training, and the Implementing Entity will provide this information to the Wildlife Agencies.

6.3 BURROWING OWL

SASD will implement the following measures that are consistent with AMMs included in the SSHCP. Surveys for burrowing owl will be required for both the breeding and nonbreeding season.

- A qualified biologist will survey available habitat within 250 feet of the study area and map all burrows, noting any burrows that may be occupied. Occupied burrows are often (but not always) indicated by tracks, feathers, eggshell fragments, pellets, prey remains, and/or excrement. Surveying and mapping will be conducted by the qualified biologist while walking transects throughout the entire study area and all accessible areas within a 250-foot radius from the study area. The centerline of these transects will be no more than 50 feet apart and will vary in width to account for changes in terrain and vegetation that can preclude complete visual coverage of the area. For example, in hilly terrain with patches of tall grass, transects will be closer together, and in open areas with little vegetation, they can be 50 feet apart. If suitable habitat is identified during the initial survey, and if the project does not fully avoid the habitat, pre-construction surveys will be required. Burrowing owl habitat is fully avoided if project-related activities do not impinge on a 250-foot buffer established by the qualified biologist around suitable burrows.
- Prior to any ground disturbance, a qualified biologist will conduct pre-construction surveys in all areas that were identified as suitable habitat if project activities are closer than the 250-foot buffer to suitable burrows. The purpose of the pre-construction surveys is to document the presence or absence of burrowing owls within the

study area, particularly in areas within 250 feet of construction activities. To maximize the likelihood of detecting owls, the pre-construction survey will last a minimum of 3 hours. The survey will begin 1 hour before sunrise and continue until 2 hours after sunrise (3 hours total) or begin 2 hours before sunset and continue until 1 hour after sunset. A minimum of two pre-construction surveys will be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed will be counted and their location will be mapped. Surveys will conclude no more than two calendar days prior to construction.

If burrowing owl or evidence of burrowing owl is observed in the study area or within 250 feet of the study area during pre-construction surveys, then the following will occur:

- During Breeding Season: If the qualified biologist finds evidence of burrowing owl within the study area during the breeding season (February 1 through August 31), all project-related activities will avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance is establishment of a minimum 250-foot buffer zone around nests. Construction and other project-related activities may occur outside of the 250-foot buffer zone. Construction and other project-related activities may be allowed inside of the 250-foot no-disturbance buffer during the breeding season if the nest is not disturbed, and SASD develops an avoidance, minimization, and monitoring plan that is approved by CDFW prior to project construction based on the following criteria:
  - CDFW and the County approves the avoidance and minimization plan provided by SASD.
  - A qualified biologist monitors the owls for at least 3 days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).
  - The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.
  - If there is any change in owl nesting and foraging behavior as a result of construction activities, the qualified biologist will have the authority to halt activities within the 250-foot buffer. Construction cannot resume within the 250-foot buffer until any owls present are no longer affected by nearby construction activities, and with written concurrence from CDFW.
  - If monitoring by the qualified biologist indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use, the no-disturbance buffer zone may be removed if approved by CDFW. The qualified biologist will excavate the burrow in accordance with the latest CDFW guidelines for burrowing owl to prevent reoccupation after receiving approval from CDFW.
- During Nonbreeding Season: During the nonbreeding season (September 1 through January 31), the qualified biologist will establish a minimum 250-foot no-disturbance buffer around occupied burrows. Construction activities outside of this 250-foot buffer will be allowed. Construction activities within the no-disturbance buffer will be allowed if the following criteria are met to prevent owls from abandoning over-wintering sites:
  - A qualified biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).
  - The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.
  - If there is any change in owl foraging behavior as a result of construction activities, the qualified biologist will have authority to halt activities within the 250-foot buffer.
  - If the owls are gone for at least one week, SASD may request approval from CDFW that a qualified biologist excavate usable burrows and install one-way exclusionary devices to prevent owls from re-occupying the site. After all usable burrows are excavated, the buffer zone will be removed, and construction may continue.
  - Monitoring must continue as described above for the nonbreeding season as long as the burrow remains active.

- During construction of the proposed project, 250-foot construction buffer zones will be established and maintained around any occupied burrow. A qualified biologist will monitor the site to ensure that buffers are enforced, and owls are not disturbed. The qualified biologist will also train construction personnel on avoidance procedures, buffer zones, and protocols in the event that a burrowing owl flies into or is found in the active construction zone.
- Passive relocation is not allowed without the written approval of CDFW. Passive owl relocation may be allowed on a case-by-case basis during the nonbreeding season (September 1 through January 31) with the written approval of CDFW, if the other measures described in this mitigation measure preclude work from continuing. Passive relocation must be done in accordance with the latest CDFW guidelines for burrowing owl. Passive relocation will only be proposed if the burrow needing to be removed or with the potential to collapse from construction activities is the result of the proposed project. If passive relocation is approved by CDFW, a qualified biologist can passively exclude owls from their burrows during the nonbreeding season by installing one-way doors in burrow entrances. These doors will be in place for 48 hours to ensure that owls have left the burrow, and then the biologist will excavate the burrow to prevent reoccupation. Burrows will be excavated using hand tools only. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure into the burrow to avoid having materials collapse into the burrow and trap owls inside.

6.4 SWAINSON'S HAWK, LOGGERHEAD SHRIKE, WHITE-TAILED KITE, AND OTHER RAPTORS

SASD will implement the following measures that are consistent with the AMMs in the SSHCP:

- For construction activities that would occur within 0.25 mile of a known or likely Swainson's hawk nest site (identified based on previous years' use by Swainson's hawk), SASD will initiate construction activities before the nest initiation phase (i.e., before March 1), if possible. Depending on the timing, regularity, and intensity of construction activity, construction in the area prior to nest initiation may discourage a Swainson's hawk pair from using that site and eliminate the need to implement further nest-protection measures, such as buffers and limited construction operating periods around active nests. Other measures to deter establishment of nests (e.g., reflective striping or decoys) may be used prior to the breeding season in areas planned for active construction. However, if breeding raptors establish an active nest site, as evidenced by nest building, egg laying, incubation, or other nesting behavior, near the construction area, they will not be harassed or deterred from continuing with their normal breeding activities.
- For project activities, that begin between March 1 and September 15, preconstruction surveys for Swainson's hawk, other nesting raptors, and loggerhead shrike will be conducted to identify active nests on and within 0.25 mile of the study area. Two surveys will be conducted before the beginning of any construction activities between March 1 and September 15. The first survey will be conducted within 30 days prior to ground disturbance activities, with a follow up surveys three days prior to the start of ground disturbance activities.
- If active Swainson's hawk, or other covered raptor species nest(s) are found within 0.25 mile of any project-related activity, SASD will establish a 0.25-mile no-disturbance buffer around the active nest until the young have fledged.
- If active nests of other raptors (other than Swainson's hawk, or other covered raptor species) or loggerhead shrike are found within 500 feet of any project-related activity, SASD will establish a 500-foot no-disturbance buffer around the active nest until the young have fledged.
- If Swainson's hawk are nesting within 0.25 mile of any project-related activity, then a qualified biologist experienced with Swainson's hawk behavior will monitor the nest throughout the nesting season and to determine when the young have fledged. The qualified biologist can reduce the disturbance buffer as long as reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 0.25-mile-wide buffer for Swainson's hawk and 500-feet for other raptors, but the size of the buffer may be adjusted if a qualified biologist and SASD determine that such an adjustment would not be likely to adversely

affect the nest. The qualified biologist will be on site daily while construction-related activities are taking place within the buffer. If nesting Swainson's hawks begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the qualified biologist will have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, and SASD will meet with the SSHCP Implementing Entity to determine the best course of action to avoid nest abandonment or take of individuals and will consult CDFW, if necessary, to identify appropriate avoidance measures. The qualified biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a Swainson's hawk flies into the active construction zone.

- A mandatory Worker Environmental Awareness Program will be conducted by a qualified biologist for all construction workers, including contractors, prior to the commencement of construction activities. The training will include how to identify special-status species and other species discussed in this section that might enter the construction site, relevant life history information and habitats, statutory requirements and the consequences of noncompliance, the boundaries of the construction area and permitted disturbance zones, litter control training and appropriate protocols if a special-status species is encountered. Supporting materials containing training information will be prepared and distributed by the qualified biologist. When necessary, training and supporting materials will also be provided in Spanish. Upon completion of training, construction personnel will sign a form stating that they attended the training and understand all of the AMMs.
- Orange construction fencing will be installed to ensure that ground disturbance does not extend beyond the allowed construction footprint (i.e., the limit of project construction plus equipment staging areas and access roads). This fencing will remain in place until project completion.
- SASD or its contractor will water active construction areas regularly, including the staging area, if warranted, to avoid or minimize impacts from construction dust on adjacent vegetation and wildlife habitats. No surface water will be used from aquatic land covers; water will be obtained from a municipal source or existing groundwater well.

6.5 SONG SPARROW (MODESTO POPULATION), AND COMMON NATIVE BIRDS

SASD will implement the following measures that are consistent with AMMs included in the SSHCP:

- A qualified biologist will conduct a field investigation to determine if existing or potential song sparrow nesting or foraging sites are present in adjacent areas within 500 feet of the project footprint. Potential song sparrow nest sites are often associated with freshwater marsh and seasonal wetlands, or in thickets of willow, blackberry, wild rose, thistle, and other thorny vegetation. Foraging habitat includes annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules and recently tilled fields), cattle feedlots, and dairies. The qualified biologist will map all existing or potential nesting or foraging sites. Nesting sites will also be noted on construction maps.
- Preconstruction surveys will be required to determine if active nests of song sparrow are present within 500 feet of the study area, if potential nesting sites are found during field investigations and construction activities will occur during the breeding season (March 1 through September 15). A qualified biologist will conduct preconstruction surveys within 30 days and again within 3 days of ground-disturbing activities in areas of potential nesting habitat within 500 feet of the proposed study area to determine the presence of nesting song sparrow. If a song sparrow nest colony is present, then the following measures shall be implemented
    - If active nests are found within the project footprint or within 500 feet of any project-related activity, SASD will establish a temporary no-disturbance buffer, the size of which has been determined by a qualified biologist around the active nest site until the young have fledged.
    - If nesting song sparrows are present within 500 feet of any project-related activity, then a qualified biologist will monitor the nest colony throughout the nesting season and to determine when the young have fledged. The qualified biologist will be on site daily while construction-related activities are taking place near the no-

disturbance buffer. Work within the nest disturbance buffer will not be permitted. If the qualified biologist determines that song sparrows are exhibiting agitated behavior, construction will halt until the buffer size is increased to a distance necessary to prevent harm or harassment of nesting song sparrows. If the biologist determines that the colonies are at risk, a meeting with SASD will be held to determine the best course of action to avoid nest abandonment or take of individuals. CDFW will be consulted, if necessary, to identify appropriate avoidance measures for the song sparrow nesting colony. The qualified biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a song sparrow flies into an active construction zone (i.e., outside the buffer zone).

- A preconstruction survey will be required to determine if active nests of common native birds are present within 100 feet of the study area if construction activities will occur during the breeding season (March 1 through September 15). A qualified biologist will conduct preconstruction surveys within 14 days of ground-disturbing activities. If active nests of common native bird species are found, SASD will establish a temporary no-disturbance buffer; the size of which will be determined by a qualified biologist. Factors to be considered for determining buffer size will include presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and proposed project construction activities. Generally, buffer size for common native bird species will be at least 20 feet. The size of the buffer may be adjusted if a qualified biologist, determines that such an adjustment would not be likely to adversely affect the nest.

7 CONCLUSIONS

The study area may have suitable nesting habitat for Swainson's hawk, loggerhead shrike, and white-tailed kite and burrowing habitat for burrowing owl. Though the study site does not contain suitable habitat for song sparrow (Modesto population), potential nesting habitat is present adjacent to the study area, and burrowing owls have been documented 0.5 miles southwest of the study area. Protective measures consistent with the SSHCP AMMs for raptors, song sparrow, and other native birds are recommended to avoid impacts to these special-status species.

8 REFERENCES

AMEC. 2008. More Mesa Handbook. Available online at http://www.moremesa.org/wordpress/handbook/. Accessed October 2021.

Ascent. See Ascent Environmental.

Ascent Environmental. 2021. SASD RCCC Pump Station Project – Arborist Survey Results. Prepared for Sacramento Area Sanitation District (SASD).

Bent, A. C. 1950. Life histories of North American wagtails, shrikes, vireos, and their allies. U.S. National Museum Bulletin 197:411.

Bent, A. C. (O. L. Austin, Jr., ed.). 1968. Life histories of North American cardinals, grosbeaks, buntings, towhees, finches, sparrows, and allies. U.S. National Museum Bulletin 237:1889.

Berry, M. E., Bock, C. E., and S. L. Haire. 1998. Grassland raptors in an urbanized landscape. Condor. 100(4): 601-608.

California Department of Fish and Wildlife. 2005. Species account for white-tailed kite (Elanus leucurus). California Wildlife Habitat Relationships System. California Interagency Wildlife Task Group.

———. 2021. California Wildlife Habitat Relationships. Available: https://wildlife.ca.gov/Data/CWHR. Accessed October 2021.

CDFW. See California Department of Fish and Wildlife.

California Native Plant Society. 2021. Inventory of Rare and Endangered Plants of California (online edition, v3-03 0.39). Available: http://www.rareplants.cnps.org. Accessed October 2021.

California Natural Diversity Database. 2021. Results of electronic records search. Sacramento: California Department of Fish and Wildlife, Biogeographic Data Branch. Accessed October 2021.

Carollo Engineers. 2021. Sacramento Area Sewer District (SASD) Proposal for Engineering Design Services Rio Cosumnes Correctional Center (RCCC) Pump Station (S012) Rehabilitation Project. RFP No. 9071.

CNDDB. See California Natural Diversity Database.

CNPS. See California Native Plant Society.

Dunk, J. R. 1995. White-tailed kite (Elanus leucurus). The Birds of North America, The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C, No. 178.

eBird. 2021. eBird: An online database of bird distribution and abundance [web application]. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available: http://www.ebird.org. Accessed: November 2021.

Erichsen, A. L. 1995. The White-tailed kite (Elanus leucurus): nesting success and seasonal habitat selection in an agricultural landscape. Thesis. University of California at Davis, Davis, California.

Estep. See Estep Environmental Consulting.

Estep pers. comm. See Estep, J.A.

Estep Environmental Consulting. 2008 (March). The Distribution, Abundance, and Habitat Associations of the Swainson's Hawk (Buteo swainsoni) in Yolo County, California. Prepared for Technology Associates International Corporation and Yolo Natural Heritage Program.

———. 2009 (January). The Distribution, Abundance, and Habitat Associations of the Swainson's Hawk (Buteo swainsoni) in the City of Elk Grove, California. Prepared for the City of Elk Grove.

Estep, J. A. 2014. Estep Environmental Consulting, Sacramento, CA. September 17, 2014, email to Tammie Beyerl while working at AECOM regarding preferred habitat of white-tailed kites in the Central Valley.

Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles: Los Angeles Audubon Society.

Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pacific Coast Avifauna 27:608.

Harrison, C. 1978. A field guide to the nests, eggs and nestlings of North American birds. Cleveland, OH: William Collins Sons and Co.

Martin, A. C., H. S. Zim, and A. L. Nelson. 1961. American wildlife and plants, a guide to wildlife food habits, pp. 500. New York: Dover Publications, Inc.

McCaskie, G., P. D. Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list, second edition. Berkeley: Golden Gate Audubon Society.

Miller, A. H. 1931. Systematic revision and natural history of the American shrikes (Lanius). University of California Publications in Zoology 38:11-242.

Pierson, E. D., W. E. Rainey, and C. Corben. 2004. Distribution and Status of Western Red Bats (Lasiurus blossevillii) in California. California Department of Fish and Game, Habitat Conservation Planning Branch, Species Conservation and Recovery Program Report 2006-04, Sacramento, CA.

Sacramento County, City of Rancho Cordova, City of Galt, Sacramento County Water Agency, Sacramento Regional County Sanitation District, and the Southeast Connector Joint Powers Authority. 2018. Final South Sacramento Habitat Conservation Plan. January 2018. Sacramento, California. Available: https://www.southsachcp.com/sshcp-chapters---final.html. Accessed October 2021.

Sacramento County. 2011 (November). Sacramento County General Plan of 2005–2030: Conservation Element. Sacramento, CA. Adopted December 15, 1993; amended September 26, 2017. Available: https://planning.saccounty.net/PlansandProjectsIn-Progress/Pages/GeneralPlan.aspx. Accessed October 2021.

Shuford, W. D., and T. Gardali, editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, CA, and California Department of Fish and Game, Sacramento, CA. Available: https://www.contracosta.ca.gov/DocumentCenter/View/34166/Shuford-Gardali-2008-California-Bird-Species-of-Special-Concern-PDF. Accessed October 2021.

Swainson's Hawk Technical Advisory Committee. 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Available: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990. Accessed October 2021.

U.S. Fish and Wildlife Service. 2021. Information for Planning and Consultation. Available: https://ecos.fws.gov/ipac/. Accessed November 2021.

USFWS. See U.S. Fish and Wildlife Service.

Appendix A

Representative Photographs

Source: Ascent Environmental 2021

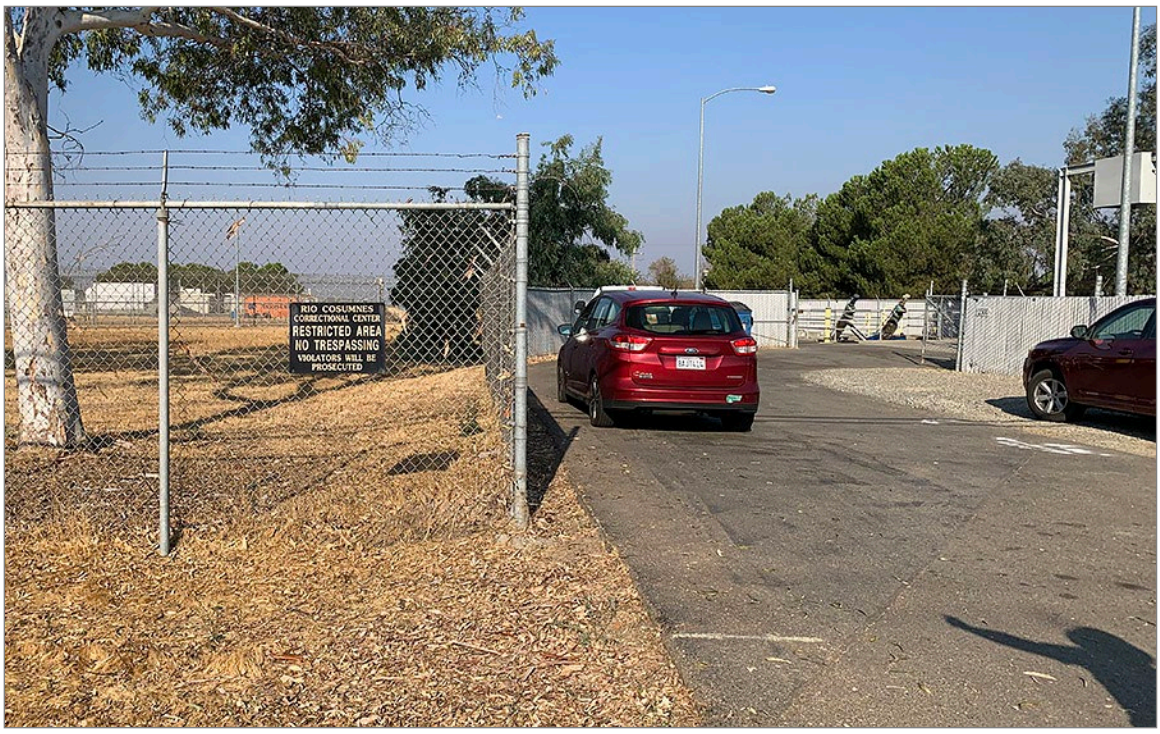
RCCC Pump Station. Photograph taken facing northwest.

Source: Ascent Environmental 2021

RCCC Pump Station. Photograph taken facing southeast.

Source: Ascent Environmental 2021

RCCC Pump Station. Photograph taken facing west.



Source: Ascent Environmental 2021

RCCC Pump Station entrance. Photograph taken facing west.

Source: Ascent Environmental 2021

Outside edge of RCCC Pump Station bordered by Bruceville road. Photograph taken facing north.

Source: Ascent Environmental 2021

Field south of RCCC Pump Station at south end of the study area. Photograph taken facing north.

Source: Ascent Environmental 2021

Field south of RCCC Pump Station. Photograph taken facing southeast.

Source: Ascent Environmental 2021

Field south of RCCC Pump Station. Photograph taken facing north.

Source: Ascent Environmental 2021

Bruceville Road along the eastern border of the study area. Photograph taken facing south.

Source: Ascent Environmental 2021

Culvert under Bruceville Road outside of RCCC facility. Photo taken facing northeast.

Appendix B

CNDDB Species Occurrence Report

Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Bruceville (3812134) OR Galt (3812133) OR Elk Grove (3812143) OR Florin (3812144) OR Clarksburg (3812145) OR Courtland (3812135) OR Isleton (3812125) OR Thornton (3812124) OR Lodi North (3812123))
 AND Taxonomic Group IS (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine OR Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAA01181	***Ambystoma californiense pop. 1*** California tiger salamander - central California DPS	Threatened	Threatened	G2G3	S3	WL
AAABH01050	***Rana boylii*** foothill yellow-legged frog	None	Endangered	G3	S3	SSC
ABNFD01020	***Phalacrocorax auritus*** double-crested cormorant	None	None	G5	S4	WL
ABNGA04010	***Ardea herodias*** great blue heron	None	None	G5	S4	
ABNGA04040	***Ardea alba*** great egret	None	None	G5	S4	
ABNGA11010	***Nycticorax nycticorax*** black-crowned night heron	None	None	G5	S4	
ABNKC06010	***Elanus leucurus*** white-tailed kite	None	None	G5	S3S4	FP
ABNKC12040	***Accipiter cooperii*** Cooper's hawk	None	None	G5	S4	WL
ABNKC19070	***Buteo swainsoni*** Swainson's hawk	None	Threatened	G5	S3	
ABNKC19120	***Buteo regalis*** ferruginous hawk	None	None	G4	S3S4	WL
ABNKD06030	***Falco columbarius*** merlin	None	None	G5	S3S4	WL
ABNME03041	***Laterallus jamaicensis coturniculus*** California black rail	None	Threatened	G3G4T1	S1	FP
ABNRB02022	***Coccyzus americanus occidentalis*** western yellow-billed cuckoo	Threatened	Endangered	G5T2T3	S1	
ABNSB10010	***Athene cunicularia*** burrowing owl	None	None	G4	S3	SSC
ABPBXA3010	***Melospiza melodia*** song sparrow ("Modesto" population)	None	None	G5	S3?	SSC

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
ABPBXB0020	***Agelaius tricolor*** tricolored blackbird	None	Threatened	G1G2	S1S2	SSC
ABPBXB3010	***Xanthocephalus xanthocephalus*** yellow-headed blackbird	None	None	G5	S3	SSC
AFCHA0209K	***Oncorhynchus mykiss irideus pop. 11*** steelhead - Central Valley DPS	Threatened	None	G5T2Q	S2	
AFCHB01040	***Hypomesus transpacificus*** Delta smelt	Threatened	Endangered	G1	S1	
AFCHB03010	***Spirinchus thaleichthys*** longfin smelt	Candidate	Threatened	G5	S1	
AFCJB34020	***Pogonichthys macrolepidotus*** Sacramento splittail	None	None	GNR	S3	SSC
AMACC05060	***Lasiurus blossevillii*** western red bat	None	None	G4	S3	SSC
AMAEB01021	***Sylvilagus bachmani riparius*** riparian brush rabbit	Endangered	Endangered	G5T1	S1	
AMAJF04010	***Taxidea taxus*** American badger	None	None	G5	S3	SSC
ARAAD02030	***Emys marmorata*** western pond turtle	None	None	G3G4	S3	SSC
ARADB36150	***Thamnophis gigas*** giant gartersnake	Threatened	Threatened	G2	S2	
CTT44110CA	***Northern Hardpan Vernal Pool*** Northern Hardpan Vernal Pool	None	None	G3	S3.1	
CTT52410CA	***Coastal and Valley Freshwater Marsh*** Coastal and Valley Freshwater Marsh	None	None	G3	S2.1	
CTT61420CA	***Great Valley Mixed Riparian Forest*** Great Valley Mixed Riparian Forest	None	None	G2	S2.2	
CTT61430CA	***Great Valley Valley Oak Riparian Forest*** Great Valley Valley Oak Riparian Forest	None	None	G1	S1.1	
CTT71130CA	***Valley Oak Woodland*** Valley Oak Woodland	None	None	G3	S2.1	
ICBRA03030	***Branchinecta lynchi*** vernal pool fairy shrimp	Threatened	None	G3	S3	
ICBRA03150	***Branchinecta mesovallensis*** midvalley fairy shrimp	None	None	G2	S2S3	
ICBRA06010	***Linderiella occidentalis*** California linderiella	None	None	G2G3	S2S3	
ICBRA10010	***Lepidurus packardi*** vernal pool tadpole shrimp	Endangered	None	G4	S3S4	
IICOL48011	***Desmocerus californicus dimorphus*** valley elderberry longhorn beetle	Threatened	None	G3T2	S3	

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
IICOL49010	***Anthicus sacramento*** Sacramento anthicid beetle	None	None	G1	S1	
IICOL5V010	***Hydrochara rickseckeri*** Ricksecker's water scavenger beetle	None	None	G2?	S2?	
IIHYM24480	***Bombus crotchii*** Crotch bumble bee	None	None	G3G4	S1S2	
PDAPI0M051	***Cicuta maculata var. bolanderi*** Bolander's water-hemlock	None	None	G5T4T5	S2?	2B.1
PDAPI19030	***Lilaeopsis masonii*** Mason's lilaeopsis	None	Rare	G2	S2	1B.1
PDAST4R0P2	***Centromadia parryi ssp. parryi*** pappose tarplant	None	None	G3T2	S2	1B.2
PDAST5L030	***Lasthenia chrysantha*** alkali-sink goldfields	None	None	G2	S2	1B.1
PDASTE8470	***Symphyotrichum lentum*** Suisun Marsh aster	None	None	G2	S2	1B.2
PDBRA1M0K1	***Lepidium latipes var. heckardii*** Heckard's pepper-grass	None	None	G4T1	S1	1B.2
PDCAB01010	***Brasenia schreberi*** watershield	None	None	G5	S3	2B.3
PDCAM060C0	***Downingia pusilla*** dwarf downingia	None	None	GU	S2	2B.2
PDCAM0C010	***Legenere limosa*** legenere	None	None	G2	S2	1B.1
PDCUS01111	***Cuscuta obtusiflora var. glandulosa*** Peruvian dodder	None	None	G5T4?	SH	2B.2
PDFAB250D2	***Lathyrus jepsonii var. jepsonii*** Delta tule pea	None	None	G5T2	S2	1B.2
PDFAB400R5	***Trifolium hydrophilum*** saline clover	None	None	G2	S2	1B.2
PDLAM1U0J0	***Scutellaria galericulata*** marsh skullcap	None	None	G5	S2	2B.2
PDLAM1U0Q0	***Scutellaria lateriflora*** side-flowering skullcap	None	None	G5	S2	2B.2
PDMAL0H0R3	***Hibiscus lasiocarpos var. occidentalis*** woolly rose-mallow	None	None	G5T3	S3	1B.2
PDSCR0R060	***Gratiola heterosepala*** Boggs Lake hedge-hyssop	None	Endangered	G2	S2	1B.2
PDSCR10030	***Limosella australis*** Delta mudwort	None	None	G4G5	S2	2B.1
PMALI040Q0	***Sagittaria sanfordii*** Sanford's arrowhead	None	None	G3	S3	1B.2

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PMCYP032Y0	***Carex comosa*** bristly sedge	None	None	G5	S2	2B.1
PMPOA4G050	***Orcuttia tenuis*** slender Orcutt grass	Threatened	Endangered	G2	S2	1B.1
PMPOA4G070	***Orcuttia viscida*** Sacramento Orcutt grass	Endangered	Endangered	G1	S1	1B.1

Record Count: 60

Appendix C

CNPS Inventory Report

Inventory of Rare and Endangered Plants of California

California Native Plant Society

Search Results

26 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3812123:3812143:3812133:3812124:3812125:3812144:3812135:3812134:3812145**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual/perennial herb	Aug	None	None	G5	S4	4.2	No Photo Available
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	None	None	G5	S3	2B.3	No Photo Available
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	None	None	G5	S2	2B.1	 Dean Wm. Taylor 1997
Centromadia parryi ssp. *parryi*	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	G3T2	S2	1B.2	No Photo Available
Centromadia parryi ssp. *rudis*	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	None	None	G3T3	S3	4.2	No Photo Available
Cicuta maculata var. *bolanderi*	Bolander's water-hemlock	Apiaceae	perennial herb	Jul-Sep	None	None	G5T4T5	S2?	2B.1	No Photo Available
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	None	None	G5T4?	SH	2B.2	No Photo Available
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2	No Photo Available
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2	No Photo Available
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	No Photo Available
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	None	None	G5T3	S3	1B.2	No Photo Available
Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	No Photo Available
Lasthenia ferrisiae	Ferris' goldfields	Asteraceae	annual herb	Feb-May	None	None	G3	S3	4.2	No Photo

										Available
Lathyrus jepsonii var. *jepsonii*	Delta tule pea	Fabaceae	perennial herb	May-Jul(Aug-Sep)	None	None	G5T2	S2	1B.2	No Photo Available
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1	No Photo Available
Lepidium latipes var. *heckardii*	Heckard's pepper-grass	Brassicaceae	annual herb	Mar-May	None	None	G4T1	S1	1B.2	No Photo Available
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	None	CR	G2	S2	1B.1	No Photo Available
Limosella australis	Delta mudwort	Scrophulariaceae	perennial stoloniferous herb	May-Aug	None	None	G4G5	S2	2B.1	No Photo Available
Navarretia eriocephala	hoary navarretia	Polemoniaceae	annual herb	May-Jun	None	None	G4?	S4?	4.3	No Photo Available
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	G2	S2	1B.1	No Photo Available
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	G1	S1	1B.1	No Photo Available
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	No Photo Available
Scutellaria galericulata	marsh skullcap	Lamiaceae	perennial rhizomatous herb	Jun-Sep	None	None	G5	S2	2B.2	 © 2021 Scot Loring
Scutellaria lateriflora	side-flowering skullcap	Lamiaceae	perennial rhizomatous herb	Jul-Sep	None	None	G5	S2	2B.2	No Photo Available
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	None	None	G2	S2	1B.2	No Photo Available
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2	No Photo Available

Showing 1 to 26 of 26 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v9-01 1.0). Website https://www.rareplants.cnps.org [accessed 1 November 2021].

CONTACT US

Send questions and comments to rareplants@cnps.org.

ABOUT THIS WEBSITE

About the Inventory
Release Notes

Advanced Search
Glossary

ABOUT CNPS

About the Rare Plant Program
CNPS Home Page

About CNPS
Join CNPS

CONTRIBUTORS

The Calflora Database
The California Lichen Society

California Natural Diversity Database
The Jepson Flora Project
The Consortium of California Herbaria
CalPhotos

Developed by
Rincon Consultants, Inc.

Appendix D

IPaC List of Threatened and Endangered Species

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: November 01, 2021
Consultation Code: 08ESMF00-2022-SLI-0269
Event Code: 08ESMF00-2022-E-00792
Project Name: Rio Cosumnes Correctional Center Pump Station Rehabilitation

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2022-SLI-0269
Event Code: Some(08ESMF00-2022-E-00792)
Project Name: Rio Cosumnes Correctional Center Pump Station Rehabilitation
Project Type: WASTEWATER FACILITY
Project Description: Upgrade facilities to address sewer pump station deficiencies including high operating pressure in the force main during peak flows, limited storage and redundancy, and lack of an emergency bypass system.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.30789195,-121.42061993572959,14z

Counties: Sacramento County, California

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. 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.

Birds

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: 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. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp *Lepidurus packardi*	Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/2246

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.