

APPENDIX BR-2
Biological Resources Survey Report

Sacramento Municipal Utility District Oveja Ranch Solar Project

FINAL Biological Resources Survey Report
September 2024

Powering forward. Together.



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Acronyms and Abbreviations

AMM	Avoidance and minimization measures
AMSL	above mean sea level
APN	Assessor's Parcel Number
BESS	Battery Energy Storage System
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	Unincorporated Sacramento County
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DPS	Distinct Population Segments
EPA	Environmental Protection Agency
ESA	Federal Endangered Species Act
gen-tie	Generation tie-lines
GPS	Global Positioning System
HUC	Hydrologic Unit Code
km	kilometer
kV	kilovolt
MBTA	Migratory Bird Treaty Act
Mediterranean climate	Mediterranean California subregion of the Arid West Region
MW	megawatt
NMFS	National Marine Fishery Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
ppt	parts per thousand
PPU	Preservation Planning Unit
proposed project	SMUD Oveja Ranch Solar Project
PV	photovoltaic
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SMUD	Sacramento Municipal Utility District
SSCA	South Sacramento Conservation Agency
SSHCP	South Sacramento Habitat Conservation Plan
study area	project site and the associated collection lines options
SWRCB	State Water Regional Quality Control Board
U.S.	United States
USACE	U.S. Army Corps of Engineers
UDA	Urban Development Area
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WRCC	Western Regional Climate Center
WUS	waters of the U.S.

1 Introduction

This report describes the methods and results of a reconnaissance-level biological resources survey for the proposed Sacramento Municipal Utility District (SMUD) Oveja Ranch Solar Project (the “proposed project”) in unincorporated southeastern Sacramento County (County), California. The purpose of the survey was to map habitats and evaluate the potential for sensitive biological resources to be present within and immediately adjacent to the proposed project. Biological resources studies conducted within the proposed study area (defined as the project site and associated collection line routes and associated buffers) included mapping of vegetation communities and other cover types; delineation of wetlands and other waters of the United States (U.S.) and state; a habitat assessment for wildlife; and an evaluation of the potential for special-status species to occur onsite. This report defines the location and extent of vegetation communities and land cover types on the project site and discusses the methods and results of AECOM’s desktop analysis and biological resources survey of the project site. Results of the aquatic resources delineation are provided in a separate report.

2 Project Description

SMUD is proposing to construct and operate a new photovoltaic (PV) solar facility and a battery energy storage system (BESS) facility that would interconnect to SUMUD’s distribution grid in southeastern unincorporated Sacramento County. The proposed project would develop the proposed project on approximately 400 acres of leased land within the project site, delivering up to 75 megawatts (MW) of PV solar energy generation. The project site is located in an area covered by the South Sacramento Habitat Conservation Plan (SSHCP). Specifically, the site is within the Urban Development Area (UDA) of the SSCHP, within Preservation Planning Unit (PPU) 3. However, SMUD is not a participating entity of the SSHCP and has determined, in coordination with Sacramento County, that they would not seek coverage under the SSHCP by becoming a special participating entity.

SMUD is proposing to construct PV solar panels, a BESS, a substation, and new and upgraded distribution lines to interconnect the project to SMUD’s existing distribution system.

The project would include up to 3.5 miles of new offsite 69 kV lines and up to 4 miles of recondutored existing overhead 69kV lines. Reconductoring is the process of replacing wires on an existing electric circuit to update them to meet capacity needs; reconductoring often requires the existing poles to be replaced. There are two options to connect the project gen-tie lines to the SMUD 69kV system:

- Option 1: install 69kV along Florin Rd, Eagles Nest Road, and the property line to the project site. There is existing overhead 12kV along the majority of the route; plans call for installing a double-circuit 69kV with an 12kV underbuild.

- Option 2: install new 69kV along non-public road/property line to the west of the project site. There are no existing facilities along the route. This new line would connect to existing 69kV lines along Excelsior Road between Florin Road and Gerber Road which would require reconductoring of 69kV existing single-circuit 69kV with 12kV underbuild.

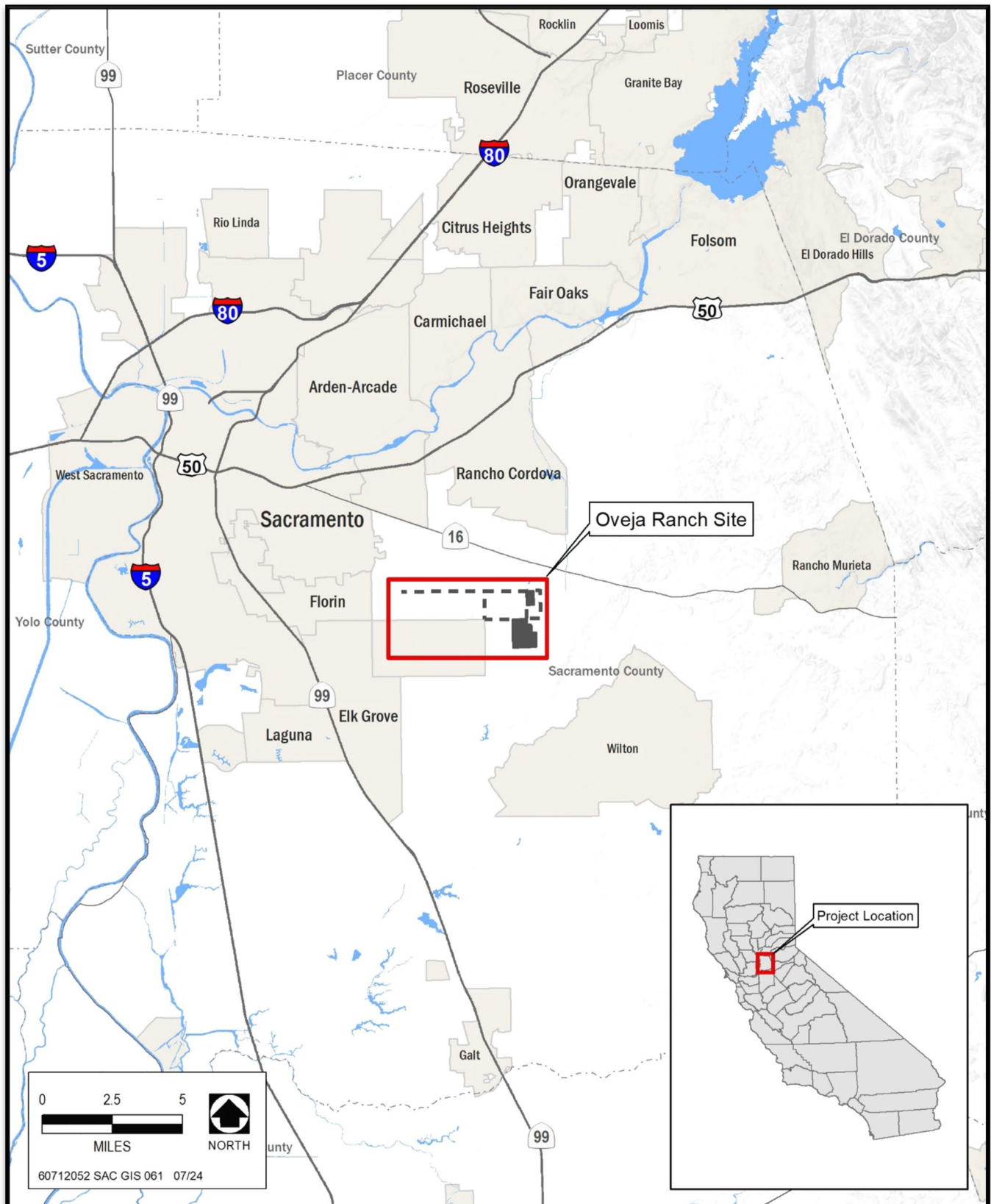
Both options include utilizing the existing 69kV line along Florin Road between approximately 300 feet east of Arroyo Willow Drive and Excelsior Road, which will require reconductoring existing single-circuit 69kV with a 12kV underbuild; the 12kV will also be reconducted since the pole line will have to be rebuilt.

2.1 Project Location

The project is located in unincorporated southeastern Sacramento County, south of the City of Rancho Cordova and north of Wilton, within the Elk Grove U.S. Geological Survey (USGS) 7.5-minute quadrangle, and within Township 7N, Range 06E, Sections 1, 2, 3, 11, and 12. Figure 1 shows the regional vicinity of the proposed project and Figure 2 shows the project site. The approximate center of the project is 38.474179 degrees north and - 121.273349 degrees west.

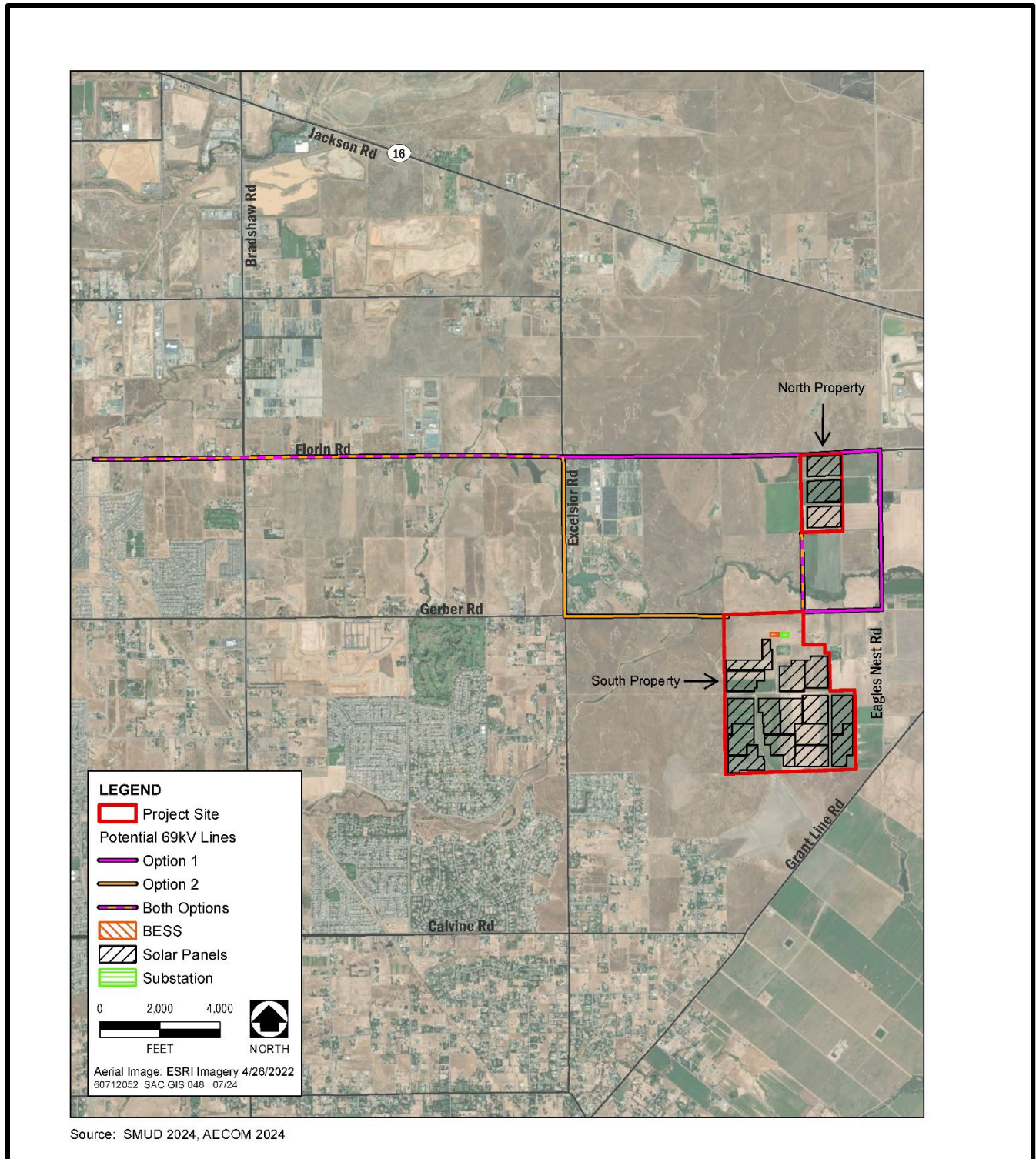
The project site includes three parcels: Assessor's Parcel Number (APN) 123-0030-003, 123-0040-001, and 067-0110-083. APN 123-0030-003 and APN 123-0040-001 are located near the intersection of Grant Line and Eagles Nest roads and are next to each other and are collectively referred to as the "South Property" in this report. APN 067-0110-083 located to the north, on the south side of Florin Road just east of the intersection with Eagles Nest Road and physically separated from the other two parcels and are be referred to as the "North Property" In this report. The South Property comprises the western portion of APN 123-0030-003 and most of APN 123-0040-001 (except for the northeastern salient portion), and the North Property includes the western half of APN 067-0110-083.

The project site is accessed by heading south on Sunrise Blvd from Rancho Cordova, then heading West on Florin Road. The North Property is best accessed directly from Florin Road or turning south on Eagles Nest Road and using a private drive. The South Property is best accessed by continuing south on Eagles Nest Road and turning west at the private drive at 7700 Eagles Nest Road.



Source: AECOM 2024

Figure 1. Project Vicinity



Source: AECOM 2024

Figure 2. Site Location Map with Proposed Project Elements

2.2 Project Setting

The project site is generally flat, with an elevation of 55 to 120 feet above mean sea level (AMSL). Irrigated pastures and croplands are the dominant landcover within the study area, and the surrounding land uses include developed roads and infrastructure, low-density residential, cattle grazing, croplands, and existing open space preserves. Vernal pool complexes and wetlands are common in the surrounding existing preserves.

The proposed project is located within the Central California Valley ecoregion of California (Griffith et al. 2016). This region is characterized by rolling grasslands used mostly for agriculture with interspersed creeks, rivers, wetlands, and vernal pools. This region tends to lack the extent of oak woodlands present in the neighboring regions with higher elevation. The project region is defined by a “Mediterranean” climate (Mediterranean California subregion of the Arid West Region), which is characterized by relatively warm, wet winters and dry summers with most of the precipitation falling between November and April (Environmental Laboratory 2010). Rainfall averages approximately 18.15 inches annually, with most of the precipitation occurring from December to March (WRCC 2024).

The proposed project is within the Laguna Creek Watershed (Hydrologic Unit Code [HUC] 180201630403, EPA 2024). Agricultural irrigation occurs within the project site during the late spring and summer; this includes the flood irrigation of row crops and pastures. The proposed collection lines overlap with portions of Laguna Creek, Frye Creek and Gerber Creek. The headwaters to Frye Creek are located near the intersection of Kiefer Boulevard and Sunrise Boulevard. From its headwaters, the stream flows southwest approximately 4.5 miles before intersecting with the northern portion of Laguna Creek, west of Eagles Nest Road. The headwaters of Laguna Creek are approximately 5 miles northeast of the collection lines. Laguna Creek enters the project site at Eagle Nest Road, connects with Frye Creek, and then moves southwest exiting the project on Gerber Road and ultimately ends at the Stone Lakes National Wildlife Refuge. Gerber Creek originates near the intersection of Excelsior and Florin Road. It crosses through the collection line position at this location and then flows southwest approximately 5.5 miles where it connects with Elder Creek. All creeks within the proposed project cross the collection lines area. No creeks within the proposed project cross the portion of the project site where the PV solar panels, BESS, substation, and associated infrastructure would be housed.

3 Methods

The 643-acre study area consists of the North and South Properties, including all collection lines, and a 25-foot buffer on either side of the collection lines. Before conducting the biological resources survey, an AECOM biologist reviewed the SSHCP (SSCA 2018) and conducted a query of the California Native Plant Society Rare Plant Inventory (CNPS 2024a) as well as the California Natural Diversity Database (CNDDDB) (CDFW 2024a) for records of special-status species occurring within an eight-quadrangle area containing and surrounding the property.

Bruceville, the ninth surrounding quad was not added due to distance from the study area and proximity to the delta, which would result in an excessive analysis of species not known to occur in the study area. In addition, the biologist reviewed the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation project planning tool (USFWS 2024a), USFWS National Wetlands Inventory (NWI) (USFWS 2024b), and the USFWS Critical Habitat Mapper (USFWS 2024c).

AECOM biologists conducted a reconnaissance-level biological resources survey of the study area on January 10–12, 2024 and February 16, 2024. In coordination, AECOM wetland ecologists conducted an aquatic resource delineation survey of the proposed project site January 10–12, 2024 and February 16, 2024. The biological resources work included mapping land cover types and vegetation communities and assessing habitat conditions for their potential to support special-status species within the study area. After the results from the previous survey were reviewed, another possible parcel was added to the proposed project site. A reconnaissance-level biological resources survey and an aquatic resource delineation survey were conducted in tandem, for the newly added property, on May 7, 2024. The access road leading to this newly proposed project site was surveyed on June 10, 2024, as a result of needing additional land access permissions.

All plant and wildlife species encountered during the surveys were recorded to the highest taxonomic level possible at the time of the survey. Vegetation communities and other land cover types in the study area were documented using the SSHCP guidance. The Manual of California Vegetation was used to describe sensitive vegetation communities to the alliance level, when possible (CNPS 2024b); however, the dominance and diversity of some communities were not always distinguishable due to the timing of the survey or vegetation maintenance activities. All vascular plant species observed during the field surveys, along with their wetland indicator status are listed in Appendix B. All wildlife identified through visual, audial, or trace methods are listed in Appendix B. Table 1 lists the vegetation communities as well as several non-vegetated land cover types mapped within the study area. Table 2 lists the aquatic features mapped within the study area.

Field mapping of features utilized a Global Navigation Satellite System (GNSS) Trimble R1 connected to a smartphone or tablet using the Esri Field Maps application to collect spatial, tabular and photographic data. Spatial data were recorded using the World Geodetic System datum (WGS 84). The mapped feature boundaries were digitized and projected onto current (1-inch equals 1,000 feet) aerial photograph maps.

4 Results

4.1 Vegetation Communities and Land Cover Types

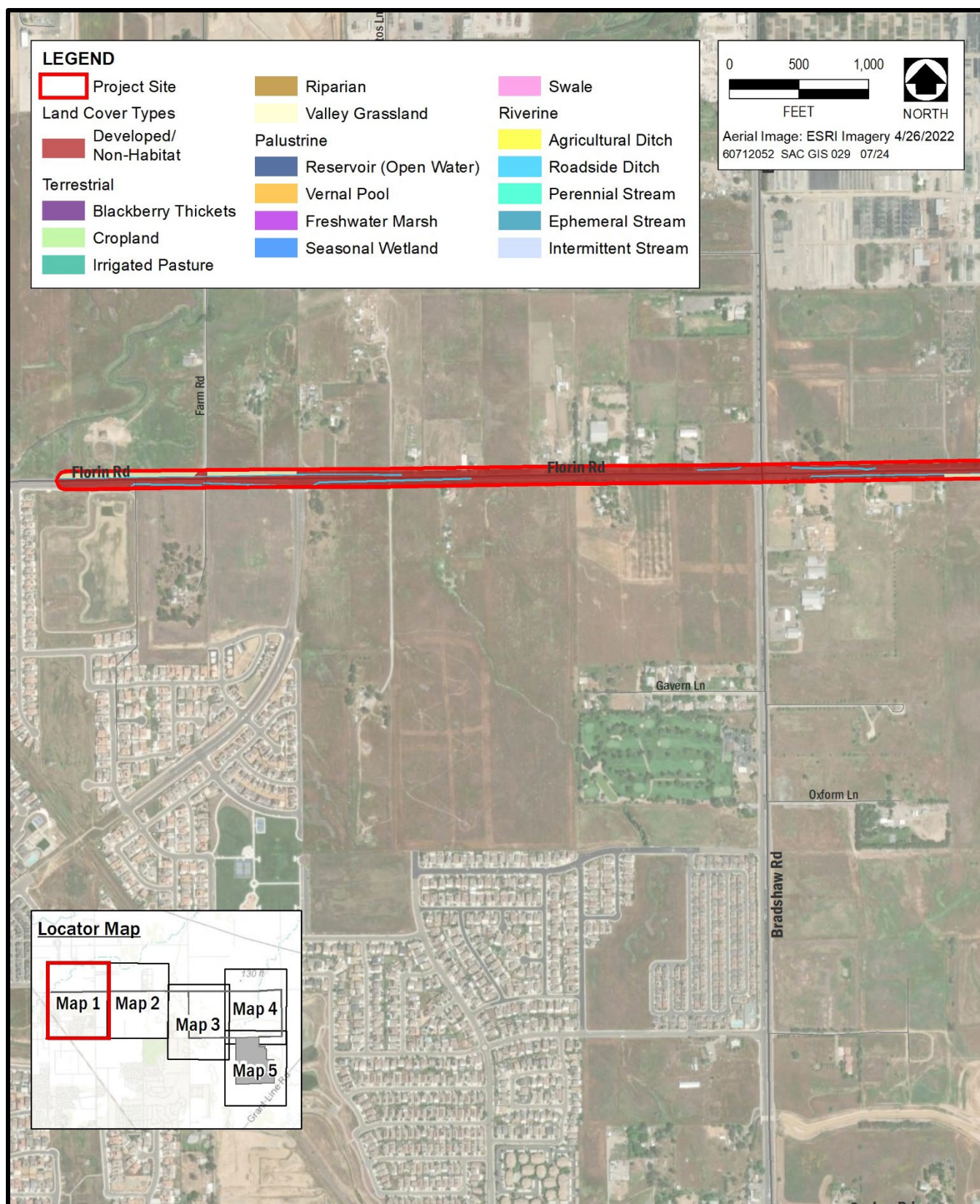
Vegetation communities and land cover types in the study area were documented during the field survey and are described here consistent with the SSHCP for consistency purposes, even though the proposed project will not seek coverage under the SSHCP. The location and extent of all vegetation communities and land cover types in the study area are shown in Figure 3 through Figure 7. Table 1 summarizes area of the vegetation communities and land covers in the study area. Aquatic features in the study area are shown in Figure 3 through Figure 7. Table 2 summarizes the aquatic features in the study area. Vegetation communities, land cover types and aquatic features are discussed below. Representative photos are provided in Appendix C.

Table 1. Land Cover Types and Acreages in the Proposed Project Site

Land Cover Type	Powerline Acreage	North Property	South Property	Study Area Acreage
Developed				
Roads, Disturbed, Developments	69.31	0.00	1.34	70.66
Terrestrial				
Blackberry thickets	0.06	0.00	0.00	0.06
Cropland	0.79	79.71	305.37	385.87
Irrigated Pasture	0.00	0.00	102.93	102.93
Riparian	0.90	0.00	0.00	0.90
Valley Grassland	32.82	0.00	31.03	63.85
Total	103.88	79.71	440.68	624.27

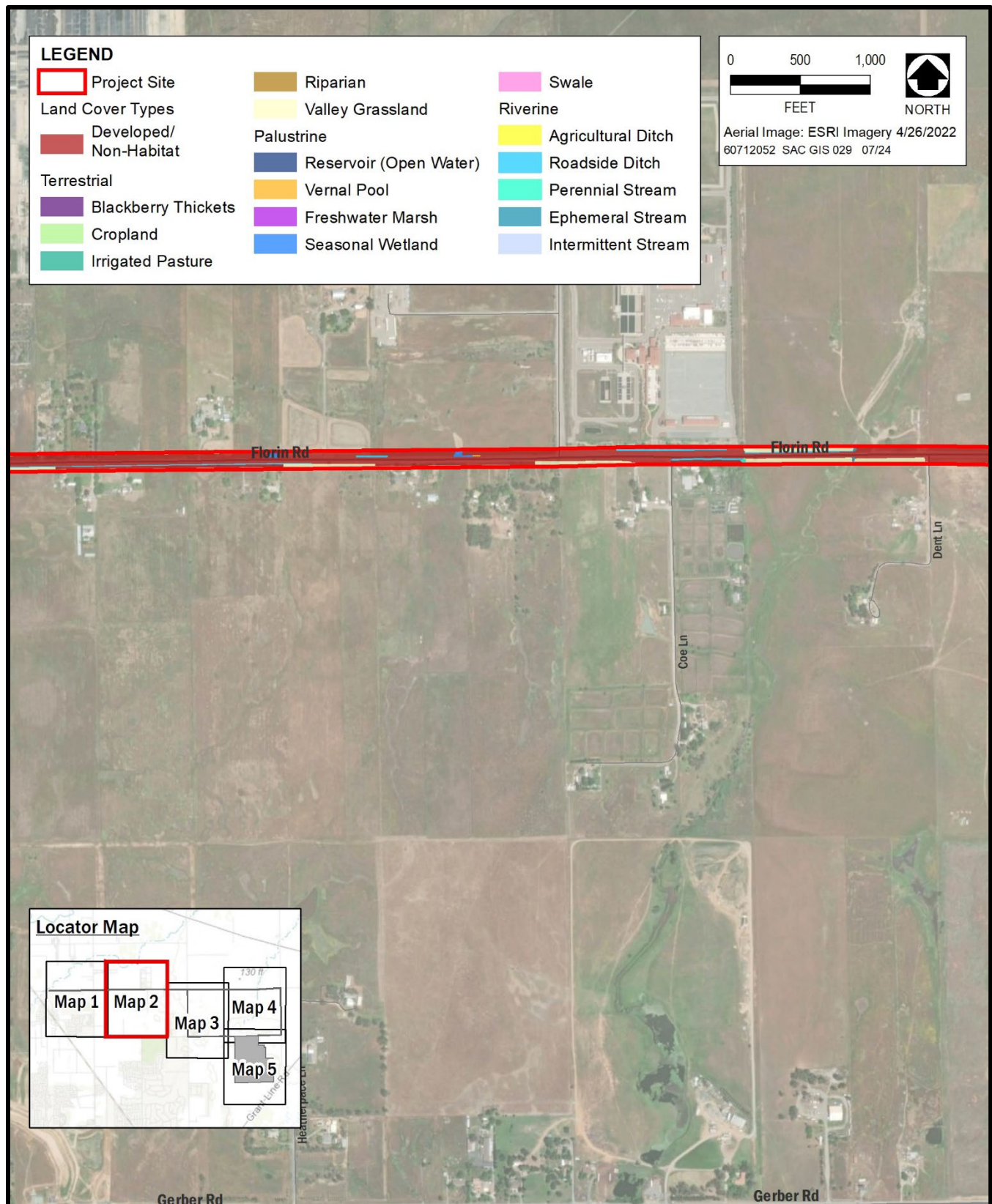
Table 2. Aquatic Feature Types and Acreages in the Proposed Project Site

Aquatic Feature Type	Powerline Acreage	North Property	South Property	Study Area Acreage
Riverine				
Agricultural Ditch	1.45	0.25	4.78	6.48
Roadside Ditch	0.96	0.00	0.01	0.96
Perennial Stream	0.18	0.00	0.00	0.18
Ephemeral Stream	0.11	0.00	0.00	0.11
Intermittent Stream	0.10	0.00	0.00	0.10
Palustrine				
Reservoir (Open water)	0.00	0.00	2.85	2.85
Vernal Pool	0.75	0.00	0.53	1.28
Freshwater Marsh	0.35	0.00	1.06	1.41
Seasonal Wetland	0.67	0.05	4.75	5.47
Swale	0.08	0.00	0.00	0.08
Total	4.70	0.05	13.98	18.73



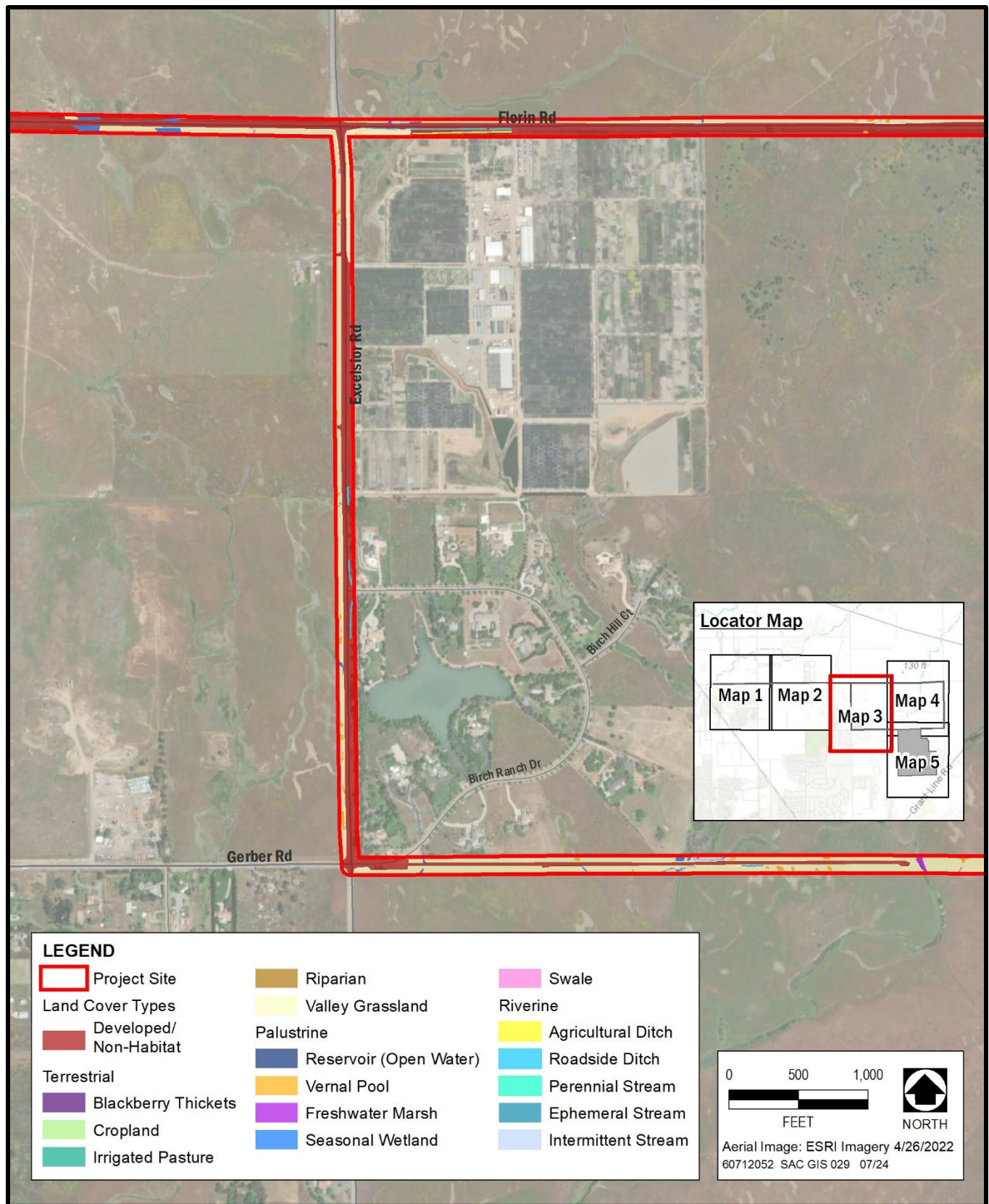
Source: AECOM 2024

Figure 3. Vegetation Communities and Land Covers (Map 1 of 5)



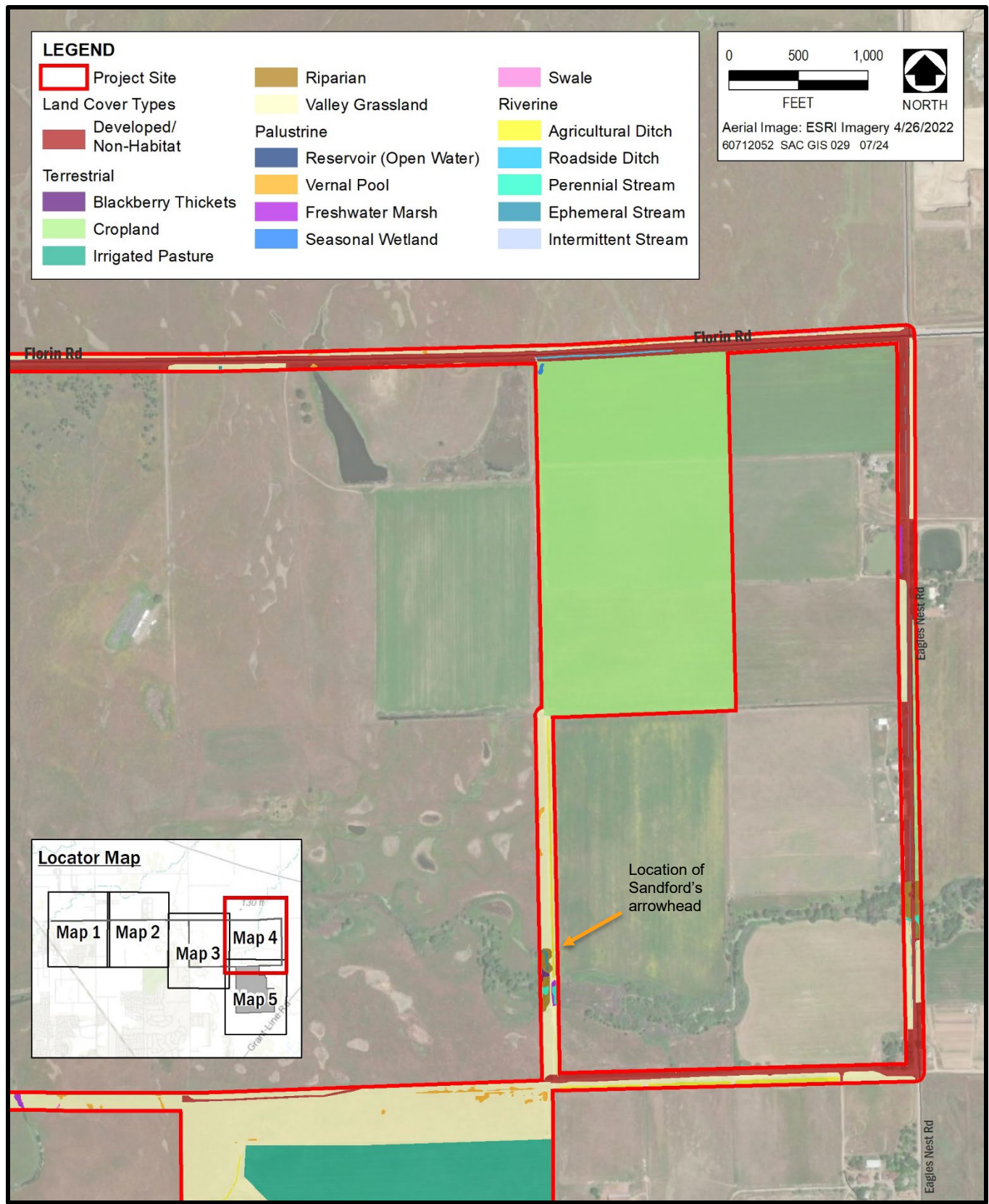
Source: AECOM 2024

Figure 4. Vegetation Communities and Land Covers (Map 2 of 5)



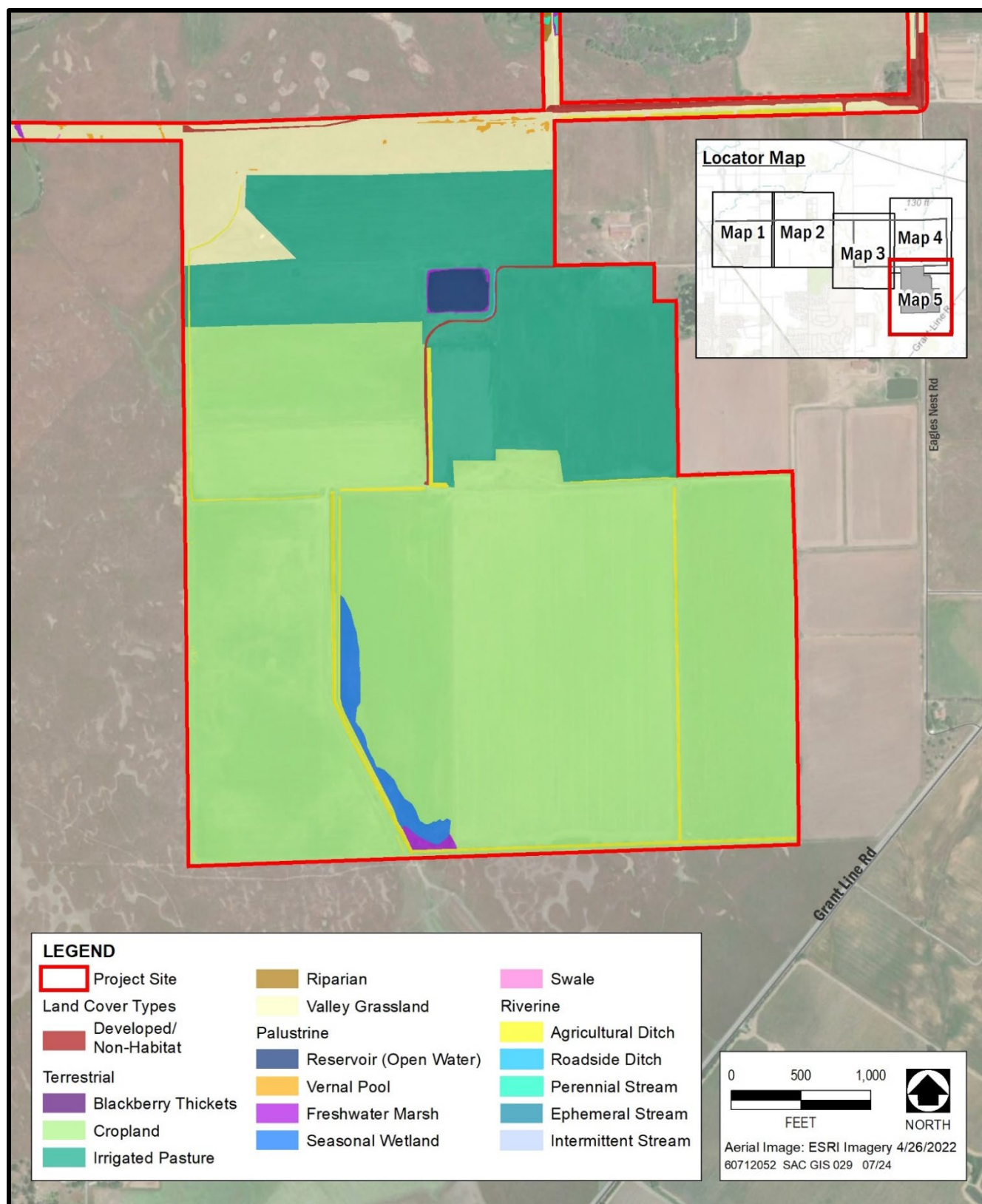
Source: AECOM 2024

Figure 5. Vegetation Communities and Land Covers (Map 3 of 5)



Source: AECOM 2024

Figure 6. Vegetation Communities and Land Covers (Map 4 of 5)



Source: AECOM 2024

Figure 7. Vegetation Communities and Land Covers (Map 5 of 5)

The sections below describe each land cover type determined by the dominant vegetation in natural settings and/or use of the land in developed settings.

4.1.1 Developed

Developed land cover includes the asphalt and dirt roads as well as the disturbed road shoulders which generally surround the cropland, irrigated pastures, and valley grasslands of the study area. Low density development, consisting of small residential and a commercial nursery structure as well as their associated landscaping, are also included in this land cover (Figure 3.1-3.5 and Appendix C, Photographs 1-4 and 6). Detailed descriptions of each of these land covers (major roads, disturbed, and low-density development) are provided below.

Major Roads

The major roads in the study area are Florin Road in the north, Excelsior Road in the west, Gerber Road in the south, and Eagles Nest Road on the east side of the study area. These major roads are mostly paved, impervious surfaces that undergo regular high disturbances. Vegetation does not grow on the major roads and apart from opportunistic foraging, major roads are not suitable for wildlife species. The shoulders of these roads are also subject to high disturbance and compaction.

Disturbed

Disturbed land cover is present throughout the study area. This landcover consists of disturbed road shoulders and dirt roads connecting the pasture or cropland fields. The road shoulders typically have compacted and altered soils with a mixture of low density, non-native forbs and grasses that appear to be routinely disturbed by motor vehicles, pedestrians, or maintenance. The vegetation identified within the disturbed land cover at the time of the survey was dominated by grasses such as bromes (*Bromus* spp.), and Italian rye grass (*Festuca perennis*), medusahead (*Elymus caput-medusae*) and forbs such as filaree (*Erodium* spp.), prickly lettuce (*Lactuca serriola*), yellow starthistle (*Centaurea solstitialis*), and Canadian horseweed (*Erigeron canadensis*).

Low Density Development

Low density developments within the study area are primarily small residential buildings or buildings associated with agriculture along Eagles Nest Road and Gerber Road. The Matsuda nursery in the northeast portion of the study area off Florin Road was also grouped into this land cover. Developed landcovers are dominated by landscaped and native or non-native ornamental trees and plants. This vegetation is subject to disturbance, removal, alteration, herbicide, or pest control, as deemed appropriate by property owners. There were many large trees such as eucalyptus (*Eucalyptus* spp.), oaks (*Quercus* spp.), incense cedar (*Calocedrus decurrens*), Oregon ash (*Fraxinus latifolia*), Mexican fan palms (*Washingtonia robusta*), and other exotic species found within these developments.

Altered habitats such as the developed, ruderal, and low-density development in the study area can offer foraging, roosting, cover, and nesting sites for birds, raptors, and small animals. Wildlife commonly found in altered habitats include opportunistic birds like American crow (*Corvus brachyrhynchos*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), California scrub jay (*Aphelocoma californica*), and killdeer (*Charadrius vociferus*). Other wildlife that may use developed areas for cover and foraging include common species such as the North American raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), western fence lizard (*Sceloporus occidentalis*) and eastern fox squirrel (*Sciurus niger*).

4.1.2 Terrestrial

Terrestrial habitats found within the study area are primarily within the North and South Properties and surrounding the roads in preserves (Figure 3.1-3.5). Terrestrial habitat in the study area consists of croplands, irrigated pastures, riparian, and valley grassland. The division of habitats were based on the definitions of land use from the SSHCP. Detailed descriptions of each of these land covers are provided below.

Blackberry Thickets

Blackberry thickets are dominated by Himalayan blackberry (*Rubus armeniacus*). In the study area, the blackberry thickets were identified growing on the banks of agricultural canals. These thickets were extremely dense and some almost filled the width of the canal beds (Appendix C, Photographs 9, 33-35).

Cropland

Croplands in the study area at the time of the field survey consisted of annual row and field crops. Fields were mostly fallow and appeared to have been plowed in 2023 (Appendix C, Photographs 7, 37-38). Identifiable sprouting vegetation in these areas included Italian rye grass, medusahead, filaree, and in some areas, tall nut sedge (*Cyperus eragrostis*).

Irrigated Pasture

Some of the irrigated pastures on the South Property were being grazed by sheep at the time of the field survey. All fields with signs of grazing are included in the irrigated pasture-grassland land cover. Some of the fields within this land cover supported wetland species such as nut sedge, spinyfruit buttercup (*Ranunculus muricatus*), wall barley (*Hordeum marinum*), and lamp rush (*Juncus effusus*) (Appendix C, Photographs 8, 17, 29). Although wetland vegetation was present, wetland hydrology was absent. A verbal discussion with the landowners revealed yearly irrigation flooding in these fields to promote regrowth of the pasture grasses for livestock (B. Waegell, personal communication, SMUD, AECOM. January 23, 2024).

Valley Grassland

Valley grassland is an annual herbaceous plant community that is found surrounding the study area on less disturbed land, adjacent to roads, and developments. Valley grassland is also intertwined with vernal pool complexes in the northwest portion of the South Property and occurs as an understory within Valley oak riparian woodland (Appendix C, Photographs 39-40). Valley grassland is dominated by naturalized annual grasses such as bromes, Italian ryegrass, wild barley (*Hordeum* spp.), and wild oats (*Avena* spp.). Also included are native and non-native forbs and native grasses. Common forbs include filaree, turkey mullein (*Croton setiger*), true clovers (*Trifolium* spp.), lupines (*Lupinus* spp.), fiddleneck (*Amsinckia* spp.), and willowherb (*Epilobium* spp.).

The blackberry thickets, cropland, irrigated pasture, and valley grassland habitats in the study area can provide foraging, nesting, breeding, and refuge to both common and special-status wildlife species. This habitat offers potential foraging and breeding habitat for special-status species such as Monarch butterfly (*Danaus plexippus*) and western spadefoot (*Spea hammondi*). Small rodents are commonly found within these habitats and are important prey for raptors, such as Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), and northern harrier (*Circus hudsonius*), which also nest in these habitats. Western burrowing owl (*Athene cunicularia*) consume a mix of small rodents, arthropods, and other small animals and may use these habitat types for breeding and foraging. Loggerhead shrike (*Lanius ludovicianus*) primarily prey on ground-dwelling insects but also take small rodents. Greater sandhill crane (*Antigone canadensis tabida*) is a winter visitor to the study area and forages for seeds and small animals. Tri-colored blackbird (*Agelaius tricolor*) forage on grassland dwelling invertebrates and frequently nest in blackberry thickets.

Riparian

Riparian habitats are those surrounding water bodies, such as rivers and creeks, and are unique vegetation communities influenced by the presence of water. The areas surrounding the water body are a transitional zone between plants that are adapted to the wet environment and the neighboring upland habitat. The mixed riparian forest in the study area surrounds Laguna Creek on both sides of Eagle Nest Road in the South Property and surrounding Laguna Creek in the North Property (Appendix C, Photographs 27-28, 35). The dominant species in this area is Valley oak (*Quercus lobata*) providing the canopy with orchard grass (*Dactylis glomerata*) and lamp rush growing along the banks. Riparian scrub in the study area surrounds Frye Creek (Appendix C, Photograph 35). The dominant species in this area is Himalayan blackberry and lamp rush growing along the banks.

Riparian habitats in the study area provides foraging, shelter, and breeding habitat for several special-status species and other native plant and animal species, including both resident and migratory species. Western pond turtle (*Emys marmorata*) and giant gartersnake (*Thamnophis gigas*) utilize this habitat. Swainson's hawk, white-tailed kite, Cooper's hawk, loggerhead

shrike, tri-colored blackbird, and song sparrow “Modesto” population (*Melospiza melodia* pop. 1) may use this landcover for nesting, foraging, and cover. Western red bat (*Lasiurus frantzii*) may use this habitat for roosting and wintering. Additionally, there is potential for special-status plant species such as Sanford’s arrowhead (*Sagittaria sanfordii*) in Frye and Laguna Creek. Sanford’s arrowhead was identified in Frye Creek during the June 10, 2024 survey (Appendix C, Photograph 36).

4.1.3 Palustrine

Palustrine habitats are found scattered throughout the study area (Figure 3 through Figure 7). Some of these features are natural and some are associated with man-made features created to convey water. Palustrine habitat in the study area consists of reservoirs, vernal pools, freshwater marsh, seasonal wetlands, and wetland swales (Appendix C, Photographs 14-16 and 18-23). Detailed descriptions of each of these habitats are provided below.

Reservoir (Open Water)

The reservoir on the South property is surrounded by a steep berm, characterized by dense emergent vegetation on the banks, and fed by a perennial source of fresh water. The berm surrounding the reservoir was found to have deep, well established, ground squirrel burrows, providing suitable habitat for western burrowing owl. The reservoir also provides suitable nesting places for many waterfowl and migratory nesting birds.

Seasonal Wetlands and Swales

Seasonal wetlands and swales are low-lying regions that become flooded during the rainy season and gradually dry up from spring to summer. Along collection line placements, these features are commonly situated in depressional areas within grasslands and adjacent to stream banks. The dominant species found within the seasonal wetlands of the study area was lamp rush. Other species commonly found include prickly buttercup, tall nut sedge, curly dock (*Rumex crispus*), wall barley, and Italian rye grass.

The seasonal wetland vegetation provides habitat for a variety of common, migratory, and special-status nesting birds such as the tricolored blackbird and song sparrow – “Modesto” population. Other special-status wildlife species with the potential to occur in seasonal wetland and swale habitats include the following: vernal pool fairy shrimp (*Branchinecta lynchi*), Midvalley fairy shrimp (*Branchinecta mesoavallensis*), vernal pool tadpole shrimp (*Lepidurus packardii*), and Ricksecker’s water scavenger beetles (*Hydrochara rickseckeri*), and western spadefoot (*Spea hammondi*). Less dense edges of seasonal wetlands have the potential to support special-status plant species such as the dwarf downingia (*Downingia pusilla*), Boggs Lake hedge hyssop (*Gratiola heterosepala*), and legenere (*Legenere limosa*).

Freshwater Marsh

Freshwater marshes are commonly found along streams in poorly drained depressions and in the shallow waters bordering lakes, ponds, and rivers. These wetlands typically exhibit varying

water levels, ranging from a few inches to two or three feet, with some marshes occasionally drying out completely. Marsh vegetation is predominantly characterized by enduring perennial species such as narrow-leaf cattail (*Typha angustifolia*) and common tule (*Schoenoplectus acutus* var. *occidentalis*). In the North and South Property, all agricultural ditches host dense and predominant emergent marsh vegetation, resembling freshwater marshes due to irrigation practices as does the portion of Frye Creek that runs through the North Property and appears to also collect flows from irrigation practices. Moreover, areas within irrigated grasslands also support emergent marsh vegetation. The freshwater marshes in the study area offer habitat for various wildlife, including small mammals, nesting birds, and special-status species like tricolored blackbird and song sparrow (“Modesto” population).

Vernal Pools

Vernal pools are seasonal depressional wetlands characterized by shallow depths and an extended hydroperiod, attributed to a subsurface restrictive soil layer that impedes water infiltration. These unique features foster specialized flora and fauna adapted to their distinctive environment. Identification of vernal pools often relies on the presence of specific plant and animal species indicative of these habitats. Typically dispersed in small units amidst grasslands, vernal pools create a diverse ecosystem capable of supporting a variety of both common and special-status species. In the study area, vernal pool habitat is scattered throughout, notably along the northern section of the South Property, within the valley grasslands north of Florin Road, and within the preserve areas immediately west and south of the South Property.

The vernal pools within the survey area have the potential to provide high quality substrate, breeding, foraging, and sheltering habitat to an abundant number of special-status species. Special-status vernal pool plant species with the potential to occur in vernal pool habitats include the following: dwarf downingia, Boggs Lake hedge hyssop, Ahart’s dwarf rush (*Juncus leiospermus* var. *ahartii*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), Slender Orcutt grass (*Orcuttia tenuis*), and Sacramento Orcutt grass (*Orcuttia viscida*). Special-status wildlife species with the potential to occur in vernal pool habitats include the following: vernal pool fairy shrimp, Midvalley fairy shrimp, vernal pool tadpole shrimp, and Ricksecker’s water scavenger beetles, and western spadefoot.

4.1.4 Riverine

Riverine habitats are found scattered throughout the study area (Figure 3 through Figure 7). Some of these features are natural and some are man-made features created to convey water. Riverine habitat in the study area consists of agricultural ditches, roadside ditches, perennial streams, ephemeral streams, and intermittent streams (Appendix C, Photographs 9-13 and 23-28). Detailed descriptions of each of these land covers are provided below.

Agricultural Ditch

As discussed further in section 5.1.3.3 Freshwater Marsh, the agricultural ditches on the both the North and South Properties are routinely used for irrigation and therefore contain water throughout the year (Appendix C, Photographs 9-13, 18). Portions of the agricultural ditches have deep, slow moving water, while other sections house dense emergent marsh vegetation. The agricultural ditches in the study area offer habitat for various wildlife, including small mammals, nesting birds, and special-status species like the giant garter snake, Sanford's arrowhead, tricolored blackbird and song sparrow ("Modesto" population).

Roadside Ditch

Roadside drainage ditches are constructed in uplands to drain and convey water from developed areas and along roads (Appendix C, Photographs 5, 6, 30). Similar to the developed habitats where they are typically found, the vegetation in and surrounding the ditches consists mostly of naturalized grasses and non-native forbs that only offer temporary and opportunistic foraging or cover to common species.

Ephemeral Stream

Ephemeral streams are watercourses characterized by intermittent flow, typically occurring in response to precipitation events. They lack continuous flow throughout the year and may not have a defined channel or permanent water source often remaining dry for extended periods between such precipitation events. They are typically vegetated by fast-growing or flood-adaptative plant species and primarily offer temporary and opportunistic foraging or cover to common species. There are several ephemeral streams scattered throughout the study area.

Intermittent Stream

Intermittent streams have seasonal flow and convey surface water after precipitation and are commonly supported by other sources of water such as groundwater or artificial sources (e.g., irrigation or urban runoff). Increases in the duration and volume of flow due to artificial sources can result in naturally ephemeral streams to qualify as intermittent streams. Depending on the amount of water they receive and the vegetation they support, intermittent streams may offer temporary nesting habitat, foraging or cover to many common and special-status species also found in perennial stream habitats. There are several intermittent streams scattered throughout the study area (Appendix C, Photographs 24-26).

Perennial Stream

Perennial streams are characterized by flowing water throughout the year. Typically, they convey water from precipitation, overland flow, and groundwater. However, artificial sources such as urban and agricultural runoff may also contribute to the sources of flow. Perennial streams are commonly associated with a surrounding riparian corridor which provides essential foraging, shelter, migration, and breeding habitat for several special-status species and other native plant and animal species. Perennial streams within the study area are Frye and Laguna Creek (Appendix C, Photographs 27-28 and 32-36). Laguna Creek has the potential to support special-

status aquatic species such as western pond turtle, giant gartersnake, tricolored blackbird, song sparrow (“Modesto” population), and Sanford’s arrowhead.

4.2 Special-Status Species

Multiple special-status species were observed in the study area during the survey. Appendix A summarizes the special-status plant and animal species evaluated for potential to occur in the project region based on the pre-field investigation (database and literature review). Appendix B lists all plant and wildlife species identified during the field survey. Appendix D provides examples of modeled habitat provided by the SSHCP for Covered Species.

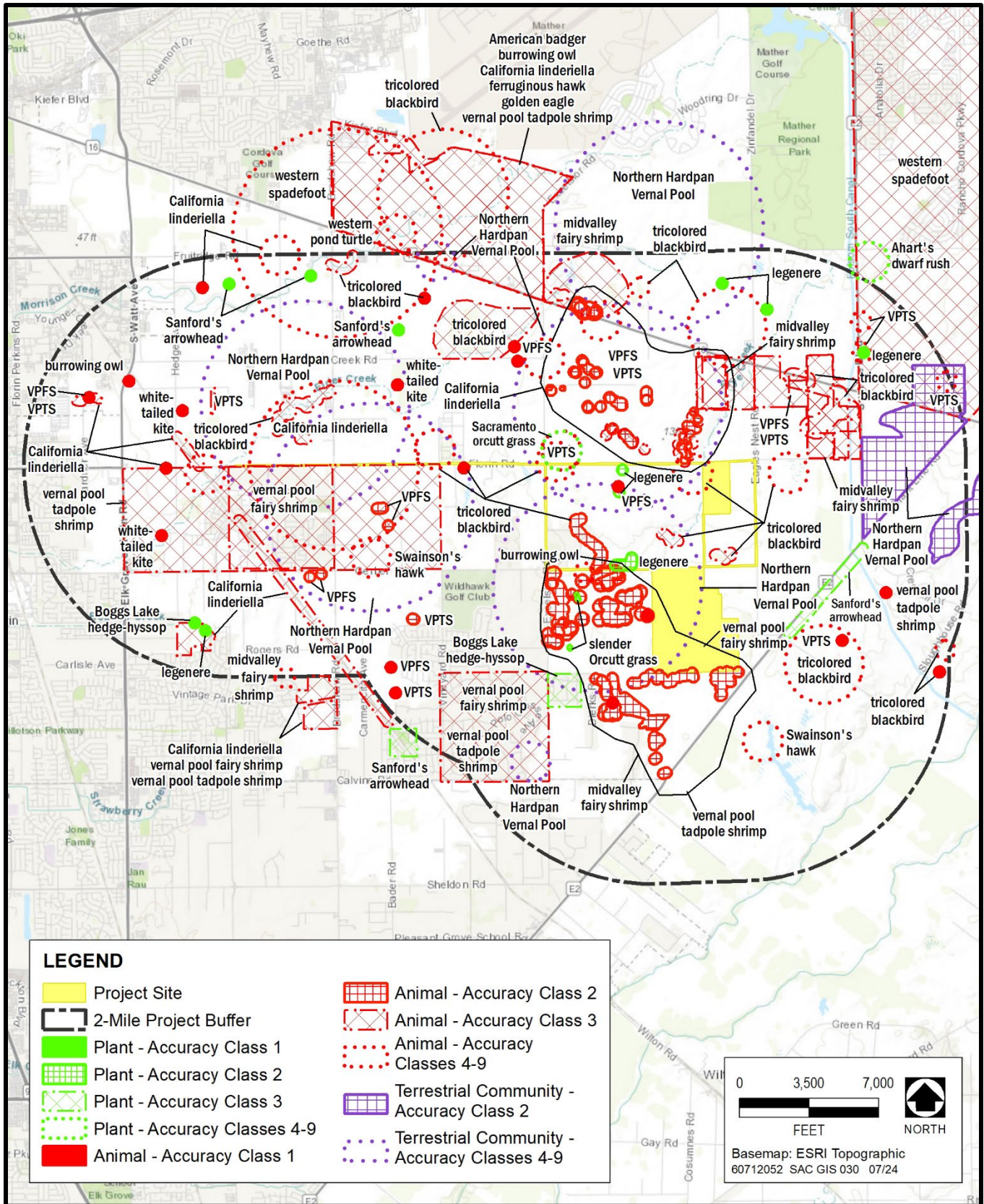
For this analysis, special-status species are plants and animals in any of the following categories:

- Species Covered under the SSHCP with modeled habitat in the PPU 3.
- Species that are listed under the federal Endangered Species Act (ESA) and/or California Endangered Species Act (CESA) as rare, threatened, or endangered;
- Species considered to be candidates and proposed for federal or state listing as threatened or endangered;
- Wildlife designated by California Department of Fish and Wildlife (CDFW) as fully protected and/or species of special concern and/or watchlist;
- Birds protected under the federal Migratory Bird Treaty Act (MBTA) and/or California Fish and Game Code Sections 3503, 3503.5, 3800(a), and 3513;
- Plants ranked by the California Native Plant Society to be rare, threatened, or endangered in California, including plants on Lists 1A, 1B, and 2 of the California Native Plant Society’s (CNPS) California Rare Plant Ranks (CRPRs), defined as follows:
 - List 1A—plant species presumed to be extinct in California;
 - List 1B—plant species considered to be rare, threatened, or endangered in California and elsewhere; and
 - List 2—plant species considered to be rare, threatened, or endangered in California but more common elsewhere.

Each CRPR category may include an extension indicating the level of endangerment in California, as follows:

- Seriously endangered in California (more than 80 percent of occurrences are threatened and/or high degree and immediacy of threat);
- Fairly endangered in California (20 to 80 percent of occurrences are threatened);

Figure 8 shows CNDDDB records of special-status species within a 5-mile radius of the project site (CDFW 2024a).



Source: CDFW 2024a

Figure 8. CNDDDB Map

4.2.1 Special-Status Plant Species

A review of the SSHCP and database searches resulted in 13 special-status plant species being evaluated for their potential to occur in the study area or vicinity. Of the 13 species evaluated for their potential to occur, eight species, listed below, have moderate to high potential of occurring or are known to occur within the study area (Appendix A, Table A-1 Special-Status Plant Species with Potential to Occur in the Proposed Project Site).

Reconnaissance surveys on the South Property and collection lines were conducted outside of the blooming period. Observations made on the South Property were incidental as part of reconnaissance level surveys and wetland delineation surveys. Occurrence data is largely based on the presence of suitable habitat.

Surveys conducted on the North Property did occur during the blooming period for all special status species with the potential to occur in the vicinity of the proposed project. Regardless, a large population of Sanford's arrowhead (*Sagittaria sanfordii*) was identified in Frye Creek adjacent to the access road (Appendix C, Photograph 36).

Dwarf Downingia

Dwarf downingia (*Downingia pusilla*) is a California rare plant rank 2B.2 plant (CNPS 2024a). This annual herb is endemic to California and is also found elsewhere in North America. This species generally occurs in wetlands, irrigation ditches, and vernal pools in California's central valley. This species was not observed by AECOM biologists during the field surveys; however, surveys were not conducted on the South Property during the growing season. There is suitable habitat for this species within the study area's wetlands and vernal pools.

Boggs Lake hedge-hyssop

Boggs Lake hedge-hyssop (*Gratiola heterosepala*) is listed as endangered under the CESA and is a California rare plant rank 1B.2 plant (CNPS 2024a) and California endemic. This species generally grows in mud and very shallow water, such as the edges of vernal pools. This species was not observed by AECOM biologists during the field surveys; however, surveys were not conducted on the South Property during the growing season. There is suitable habitat for this species within the study area's wetlands and vernal pools.

Ahart's dwarf rush

Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*) is a California rare plant rank 1B.2 plant (CNPS 2024a). It is an annual herb that grows in wetlands and vernal pools. This species was not observed by AECOM biologists during the field surveys; however, surveys were not conducted on the South Property during the growing season. There is suitable habitat for this species within the study area's wetlands and vernal pools.

Legenere

Legenere (*Legenere limosa*) is a California rare plant rank 1B.1 plant (CNPS 2024a). It is an annual herb that grows in well-developed vernal pools and playa lakes, as well as along the seasonally fluctuating margins of small lakes, ponds, stock ponds, and basins within seasonal drainages. This species was not observed by AECOM biologists during the field surveys; however, surveys were not conducted on the South Property during the growing season. There is suitable habitat for this species within the study area's wetlands and vernal pools.

Pincushion navarretia

Pincushion navarretia (*Navarretia myersii* ssp. *myersii*) is a California rare plant rank 1B.1 plant (CNPS 2024a). It is an annual herb that grows in vernal pools. This species was not observed by AECOM biologists during the field surveys; however, surveys were not conducted on the South Property during the growing season. There is suitable habitat for this species within the study area's wetlands and vernal pools.

Slender Orcutt grass

Slender Orcutt grass (*Orcuttia tenuis*) is federally listed as threatened, state listed as endangered, and a California rare plant rank 1B.1 plant (CNPS 2024a). It is an annual wind pollinated grass that grows in vernal pools with clay soils and a very well-developed soil profile. This species was not observed by AECOM biologists during the field surveys; however, surveys were not conducted on the South Property during the growing season. There is suitable habitat for this species within the study area's wetlands and vernal pools.

Sacramento Orcutt grass

Sacramento Orcutt grass (*Orcuttia viscida*) is federally and state listed as endangered and a California rare plant rank 1B.1 plant (CNPS 2024a). It is an annual wind pollinated grass that grows in vernal pools with a very well-developed soil with a silica-iron hardpan layer 2–10 feet below ground level. This species was not observed by AECOM biologists during the field surveys; however, surveys were not conducted on the South Property during the growing season. There is suitable habitat for this species within the study area's wetlands and vernal pools.

Sanford's arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is a California rare plant rank 1B.2 plant (CNPS 2024a). It is a perennial rhizomatous emergent herb that is associated with freshwater wetland hydrology. It is found in a variety of emergent wetlands as well as the margins of rivers, streams, ponds, reservoirs, irrigation and drainage canals and ditches, and stock-ponds. This species was observed by AECOM biologists in an agriculture ditch on the North Property on June 10, 2024 (Figure 3.4). Surveys were not conducted during the blooming period for this species on the South Property, however; there is suitable habitat for this species in the

reservoir on the South Property, large agricultural ditches with standing water, and Laguna Creek.

4.2.2 Special-Status Wildlife Species

A review of the SSHCP modelled habitat (Appendix E) and database searches resulted in 33 special-status animal species being evaluated for their potential to occur in the proposed study area or vicinity. Of the 33 species evaluated for their potential to occur, 18 species, listed below, have moderate to high potential of occurring within the project site (Appendix A, Table A-2 Special-Status Wildlife Species with Potential to Occur in the Proposed Project Site).

Based on the results of the biological reconnaissance survey and database searches, vegetation in the annual grassland, freshwater emergent wetlands, valley oak woodland, and riparian habitats, as well as the trees in the developed landcover present in the proposed study area, could provide marginally suitable nesting substrate for migratory birds covered by the MBTA. The MBTA prohibits the killing, possessing, or trading of migratory birds, and essentially all native bird species in California are covered by the MBTA. Migratory bird and raptor nests are also protected further by Sections 3503 and 3503.5, respectively, of the California Fish and Game code.

Special-Status Invertebrates

The vernal pools, seasonal wetlands, and swales in the study area could provide suitable habitat for three special-status species of crustaceans and one special-status species of insect, listed below, and the grasslands in the study area could provide suitable habitat for monarch butterfly. The remaining special-status invertebrates evaluated for their potential to occur have no potential or are not likely to occur in the study area due to a lack of suitable habitat or because the study area is outside of the species' current range (Appendix A).

- Vernal pool fairy shrimp (*Branchinecta lynchi*) – Federally threatened and covered under the SSCHP.
- Midvalley fairy shrimp (*Branchinecta mesoatlantica*) – Covered under the SSCHP.
- Vernal pool tadpole shrimp (*Lepidurus packardii*) – Federally endangered and covered under the SSCHP.
- Monarch Butterfly (*Danaus plexippus*) – Federal candidate.
- Ricksecker's water scavenger beetles (*Hydrochara rickseckeri*) – Covered under the SSCHP.

Special-Status Birds

The presence of numerous shrubs and trees within riparian areas as well as agricultural land, valley grassland, and marsh habitat provide suitable nesting substrate and foraging habitat for migratory birds. Section 3503 of the California 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 specifically 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. Violations of these codes can include destruction of active nests resulting from the removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction.

A total of nine special-status bird species, listed below, are either known to occur or have the potential to occur in the study area. The remaining seven species either have no potential, are not likely to occur, or have a low potential to occur in the study area due to a lack of suitable habitat or because the study area is outside of the species' current range (Appendix A).

- Cooper's hawk (*Accipiter cooperii*) – CDFW Watch List and covered under the SSCHP.
- Greater sandhill crane (*Antigone canadensis tabida*) – CA State threatened, CDFW Fully Protected, and covered under the SSCHP.
- Tricolored blackbird (*Agelaius tricolor*) – CA State threatened, CDFW Species of Special Concern, and covered under the SSCHP.
- Western burrowing owl (*Athene cunicularia*) – CDFW Species of Special Concern and covered under the SSCHP.
- Swainson's hawk (*Buteo swainsoni*) – CA State threatened and covered under the SSCHP.
- Northern Harrier (*Circus hudsonius*) – CDFW Species of Special Concern and covered under the SSCHP.
- White-tailed kite (*Elanus leucurus*) – CDFW Fully Protected and covered under the SSCHP.
- Loggerhead shrike (*Lanius ludovicianus*) – CDFW Species of Special Concern and covered under the SSCHP.
- Song sparrow, "Modesto" population (*Melospiza melodia* pop. 1) – CDFW Species of Special Concern.

Amphibians and Reptiles

Three special-status amphibian and reptile species are either known to occur or have the potential to occur in the study area, listed below. The remaining special-status species had no potential or are not likely to occur in the study area due to a lack of suitable habitat (Appendix A).

- Western spadefoot (*Spea hammondi*) – Federal candidate, CDFW Species of Special Concern, and covered under the SSCHP.

- Western pond turtle (*Emys marmorata*) – Federal candidate, CDFW Species of Special Concern, and covered under the SSCHP.
- Giant gartersnake (*Thamnophis gigas*) – Federally threatened, CA State threatened, and covered under the SSCHP.

Mammals

Three special-status mammal species were evaluated for their potential to occur in the study area (Appendix A). Of these, only one special-status mammal species has the potential to occur in the study area, listed below. The remaining two special-status species had no potential or are not likely to occur in the study area due to a lack of suitable habitat (Appendix A).

- Western red bat (*Lasiurus frantzii*) – CDFW Species of Special Concern and covered under the SSCHP.

4.3 Sensitive Natural Communities

California natural communities are categorized by CDFW and partner organizations, such as CNPS, based on vegetation type classification, and are ranked using the same system to assign global and state rarity ranks for plant and animal species in the CNDDDB. Natural communities that are ranked S1–S3 are considered sensitive natural communities by CDFW, to be addressed in the environmental review processes. Riparian habitat is defined separately in the context of Section 1600 of the California Fish and Game Code. According to guidance provided in *A Field Guide to Lake and Streambed Alteration Agreements: Section 1600 Fish and Game Code* (CDFG 1994), the outer edge of riparian vegetation is a reasonable and identifiable boundary for the lateral extent of a stream, the protection of which should result in preserving the fish and wildlife at risk within a stream or drainage, and therefore may constitute the limits of CDFW jurisdiction along waterways. The following sensitive natural communities were identified within the study area (CDFW 2024b).

- Quercus lobata Riparian Forest & Woodland Alliance; a S3/G3 community (described as mixed riparian forest above);
- Juncus (*effusus*, *patens*) – Carex (*pansa*, *praegracilis*) Herbaceous Alliance; a S3/G4 community (described as seasonal wetlands above);
- Vernal pools (described as vernal pools above).

4.4 Critical Habitat

The USFWS designates critical habitats for species listed as threatened or endangered under the ESA. These habitats include specific geographic areas that contain features essential for the conservation of a threatened or endangered species and may include an area that will be needed for a species' recovery. There is no designated critical habitat in the proposed project

site or vicinity. The nearest critical habitat is approximately 1.2 miles north of the 69 kV installation portion of the project site on Florin Road. This critical habitat is designated for the Sacramento Orcutt grass, Slender Orcutt grass, vernal pool tadpole shrimp, and vernal pool fairy shrimp (NMFS 2024, USFWS 2024c).

5 Recommendations

The recommended measures provided below are for guidance only. Specific avoidance and minimization measures or mitigation measures will be developed during the California Environmental Quality Act (CEQA) review process for the project or in consultation with USFWS, California Department of Fish and Game (CDFG), as appropriate.

5.1 Ensure Consistency with the South Sacramento County Habitat Conservation Plan

The proposed project is within the SSHCP's UDA within SSHCP PPU 3. The SSHCP's conditions include several avoidance and minimization measures, Best Management Practices, and direction for compensation for impacts to SSHCP Covered Species and their habitats for projects that seek coverage under the SSHCP. SMUD, in coordination with the County, had determined that the project will not be seeking coverage under the SSHCP by SMUD becoming a special participating entity. However, SMUD may incorporate specific guidance, as appropriate, into project design and the development of mitigation measures, to ensure that implementation of the proposed project will not adversely affect successful implementation of the SSHCP's goals. These measures are provided here for a consistency analysis only.

5.1.1 General Covered Species Take Avoidance and Minimization Measures:

Species specific measures for reducing impacts to each of the covered species are identified in the SSHCP.

5.1.2 Project Wide Conditions

- **STREAM-1 (Laguna Creek Wildlife Corridor):** A 150-foot setback measured from the top of the bank on both sides of the stream will be applied to Laguna Creek within the Urban Development Area (minimum 300-foot corridor width). If trails are located within the Laguna Creek Wildlife Corridor, the nearest edge of the trail will be located at least 80 feet from the top of the bank.
- **STREAM-2 (UDA Stream Setbacks):** A 100-foot setback measured from the top of the bank on both sides of the stream channel will be applied to Frye Creek and Gerber Creek. If a stream reach supports woody riparian vegetation, the setback will be equal to the riparian edge plus 25 feet or will be the setback defined above, whichever is greater. If trails are located within the Stream Setback, the nearest edge of the trail will be located at least 50 feet from the top of the bank.

- **STREAM-3 (Minor Tributaries to UDA Streams):** A 25-foot setback measured from the top of the bank on both sides of the stream channel will be applied to all avoided first and second order tributaries to Frye Creek, Gerber Creek, and Laguna Creek.
- **UTILITY-1 (Avian Collision Avoidance):** Installation of new, or relocation of existing, utility poles, and lines located within the Preserve System or within 1,000 feet of a Preserve boundary will be coordinated with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife and installed in conformance with Avian Powerline Interaction Committee standards.
- **UTILITY-3 (Trenchless Construction Methods):** Where a pipeline or conduit crosses an existing or planned Preserve or will be located between adjacent Preserves (e.g., under a roadway that has a Preserve on both sides), trenchless construction methods will be used to minimize impacts to the existing soil profile (including impacts to a hardpan or duripan) to maintain the perched aquifer in Vernal Pool Grassland land cover type.
- **UTILITY-4 (Siting of Entry and Exit Location):** The entry and exit locations for the trenchless construction method (see Utility-3) will be sited to avoid impacts to vernal pools and Riparian Woodland, and to avoid direct take of SSHCP Covered Species.

5.2 Special-Status Species Avoidance and Minimization

This section describes measures to avoid or minimize effects on special-status species and specific SSHCP Covered Species with potential to occur in the study area. Most species-specific avoidance and minimization measures (AMMs) require that species surveys be conducted if suitable habitat is present within the proposed project footprint or within a specified distance of the proposed project. Species-specific AMMs may also include pre-construction surveys, and construction monitoring.

Special-status plant and wildlife species are not uniformly distributed; rather, a few key habitats support most occurrences, and many species are only found in specific habitats or on specific substrates. Table 3 describes all special-status species (including SSHCP Covered Species) known to occur or with the potential to occur within the study area and the specific habitat types they are associated with.

Developed and grassland habitats are present in the study area. The project area also includes creeks, water crossings, riparian habitats, emergent wetland vegetation, wetlands, or vernal pools.

Table 3. Special-Status Species Potential to Occur in the Proposed Project Site Habitats

Species Name	Habitat			
	Developed and Grassland Habitats	Creeks, Water Crossings, or Riparian Habitat	Freshwater Marsh and Wetland Habitat	Vernal Pool Habitat
Plants				
Ahart's dwarf rush				X
Boggs Lake hedge hyssop				X
dwarf downingia				X
legenere				X
Pincushion navarretia				X
Sacramento Orcutt grass				X
Sanford's arrowhead		X		
Slender Orcutt grass				X
Invertebrates				
Midvalley fairy shrimp				X
Monarch Butterfly	X			
Ricksecker's water scavenger beetles		X	X	
Vernal pool fairy shrimp				X
Vernal pool tadpole shrimp				X
Birds				
Cooper's hawk	X			
Greater sandhill crane	X		X	
Tricolored blackbird	X	X	X	
Western burrowing owl	X			
Swainson's hawk	X	X		
Northern harrier	X	X	X	
White-tailed kite	X	X	X	
Loggerhead shrike	X	X	X	
Song sparrow, "Modesto" population	X	X	X	
Reptiles and Amphibians				
Western spadefoot	X		X	X
Western pond turtle	X	X	X	
Giant gartersnake		X	X	
Mammals				
Western red bat		X		

5.2.1 Developed and Grassland Habitats

Impacts to developed and grassland habitats could require the following:

- **Avoidance and Minimization Measures.** Species which have the potential to occur in these habitats as specified by Table 3 should have species specific AMMs developed with an effort to reduce the impacts to less than significant.

5.2.2 Creeks, Water Crossings, or Riparian Habitat

Impacts to creeks, water crossings, or riparian habitats could require the following:

- **Section 404 of the Clean Water Act (CWA).** U.S. Army Corps of Engineers (USACE) and the EPA are the regulatory authorities for permitting the discharge of pollutants into waters of the U.S. (WUS), including wetlands. Section 404 permits typically require the avoidance or minimization to impacts on federally protected aquatic resources and a CWA Section 404 permit prior to discharges to WUS. Where impacts to WUS are unavoidable, compensatory mitigation for impacts to federally protected wetlands and waters (i.e., WUS) are required.
- **Section 401 of the Clean Water Act.** Section 401 of the federal CWA recognizes state authority for water quality standards. In California, section 401 defers water quality certification authority to the SWRCB and the RWQCBs to ensure federal permits do not violate California water quality standards. A water quality certification or waiver is required for all nationwide or individual permits issued by USACE under Section 404 of the CWA.
- **Streambed Alteration Agreement (SAA).** CDFW has jurisdictional authority over streams, lakes, and wetland resources associated with these aquatic systems. In California a SAA is required for diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake and its associated and riparian vegetation that could adversely affect fish and wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code.
- **National Pollutant Discharge Elimination System (NPDES) Permit:** If the project involves the discharge of pollutants into TNWs or associated waters, a NPDES permit may be required from the SWRCB or one of the nine RWQCBs in California. This permit regulates point source discharges to ensure compliance with water quality standards and protection of beneficial uses.
- **Avoidance and Minimization Measures.** Species which have the potential to occur in these habitats as specified by Table 3 should have species specific AMMs developed with an effort to reduce the impacts to less than significant.

Adjacent Wetlands to WUS

Impacts to adjacent wetland habitats could require the following:

- **Section 404 of the Clean Water Act (CWA).** USACE and the EPA are the regulatory authorities for permitting the discharge of pollutants into WUS, including wetlands. Section 404 permits typically require the avoidance or minimization to impacts on federally protected aquatic resources and a CWA Section 404 permit prior to discharges to WUS. Where impacts to WUS are unavoidable, compensatory mitigation for impacts to federally protected wetlands and waters (i.e., WUS) are required.
- **Section 401 of the Clean Water Act.** Section 401 of the federal CWA recognizes state authority for water quality standards. In California, section 401 defers water quality certification authority to the SWRCB and the RWQCBs to ensure federal permits do not violate California water quality standards. A water quality certification or waiver is required for all nationwide or individual permits issued by USACE under Section 404 of the CWA.
- **National Pollutant Discharge Elimination System (NPDES) Permit:** If the project involves the discharge of pollutants into TNWs or associated waters, a NPDES permit may be required from the SWRCB or one of the nine RWQCBs in California. This permit regulates point source discharges to ensure compliance with water quality standards and protection of beneficial uses.

Vernal Pools, Freshwater Marsh, and all other Wetlands

Porter-Cologne Water Quality Control Act.

The RWQCB's jurisdiction includes federally protected waters, as well as areas that meet the definition of "waters of the state." Waters of the state is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally regulated under Section 401 provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetlands functions and values of waters of the state is typically required by the RWQCB.

Impacts to vernal pools and all other wetland or freshwater marsh habitat could require the following:

- **Section 401 of the Clean Water Act.** Section 401 of the federal CWA recognizes state authority for water quality standards. In California, section 401 defers water quality certification authority to the SWRCB and the RWQCBs to ensure federal permits do not violate California water quality standards. A water quality certification or waiver is required for all nationwide or individual permits issued by USACE under Section 404 of the CWA.
- **National Pollutant Discharge Elimination System (NPDES) Permit:** If the project involves the discharge of pollutants into TNWs or associated waters, a NPDES permit may

be required from the SWRCB or one of the nine RWQCBs in California. This permit regulates point source discharges to ensure compliance with water quality standards and protection of beneficial uses.

- **Avoidance and Minimization Measures.** Species which have the potential to occur in these habitats as specified by Table 3 should have species specific AMMs developed with an effort to reduce the impacts to less than significant.

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APPENDIX A

Special-Status Species Occurrence Tables

Table A-1. Special-Status Plant Species with Potential to Occur in the Proposed Project Site

Scientific Name	Common Name	Regulatory Status ¹				Elevation Range (ft AMSL ²)	Bloom Period	Potential for Occurrence ³
		Federal	State	CRPR	SSHCP			
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	Peruvian dodder	–	–	2B.2	N	Marshes and swamps (freshwater); Found at elevations between 50–920 feet	July to October	No Potential to Occur; no suitable habitat (marshes or swamps) in the study area.
<i>Downingia pusilla</i>	dwarf downingia	–	–	2B.2	Y	Central Valley; Vernal pools and mesic valley and foothill grasslands; Found at elevations between 0–2,820 feet	March to May	Potential to Occur; habitat does occur in the study area. A complex of occurrences have been reported on CNDDDB less than 6 miles southwest.
<i>Gratiola heterosepala</i>	Boggs Lake hedge hyssop	–	SE	1B.2	Y	Clay soils; usually in vernal pools, sometimes on the margins of lakes, stock ponds, borrow pits, marshes or swamps; Found at elevations between 30 to 7,790 feet	April to August.	Potential to Occur; habitat does occur in the study area. A CNDDDB occurrence (#30) was reported in a vernal pool approximately 2 miles east of the study area.
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	woolly rose-mallow	–	–	1B.2	N	Moist, freshwater-soaked riverbanks and low peat islands in sloughs; also, can occur on riprap and levees. In California, known from the Delta watershed; Found at elevations between 0 to 395 feet	June to September	Low Potential to Occur; no suitable habitat (Delta riverbanks, peat islands, riprap, levees) in the study area.
<i>Juncus leiospermus</i> var. <i>ahartii</i>	Ahart's dwarf rush	–	–	1B.2	Y	Wet areas in valley and foothill grassland, vernal pool margins; Found at elevations between 95–750 feet	March to May	Potential to Occur; habitat does occur in the study area. Two CNDDDB occurrences (#7 and 8) was reported within 2.5 miles north of the study area.
<i>Lasthenia chrysantha</i>	alkali-sink goldfields	–	–	1B.1	N	Vernal pools; Alkaline. Found at elevations between 0–655 feet	February to April	No Potential to Occur; no suitable habitat (alkaline soils) in the study area.
<i>Legenere limosa</i>	legenere	–	–	1B.1	Y	Deep, seasonally wet habitats such as vernal pools, ditches, marsh edges, and river banks; Found at elevations between 0 to 2,885 feet	April to June	Known to Occur; habitat does occur in the study area. A CNDDDB occurrence (#28) was reported within 350 feet of the collection lines surrounding Laguna Creek. Several other occurrences have been reported north of the study area and within 2 miles of the study area.
<i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard's pepper-grass	–	–	1B.2	N	Valley and foothill grassland (alkaline flats); Found at elevations between 5–655 feet	March to May	No Potential to Occur; no suitable habitat (alkaline flats) in the study area.
<i>Navarretia myersii</i> ssp. <i>myersii</i>	Pincushion navarretia	–	–	1B.1	Y	Vernal pools; Acidic (often) Found at elevations between 65–1,085 feet.	April to May	Potential to Occur; Vernal pool habitat does occur in the study area. There are no CNDDDB occurrences within 10 miles of the study area. The SSHCP includes the study area in modeled habitat for this species.
<i>Orcuttia tenuis</i>	Slender Orcutt grass	FT	SE	1B.1	Y	Vernal pools; Gravelly (often); Found at elevations between 115–5,775 feet	May to September (Oct)	Potential to Occur; habitat does occur in the study area. Two CNDDDB occurrences (#16 and 90) was reported within 1 mile south of the study area.

Table A-1. Special-Status Plant Species with Potential to Occur in the Proposed Project Site

<i>Scientific Name</i>	<i>Common Name</i>	Regulatory Status¹				Elevation Range (ft AMSL²)	Bloom Period	Potential for Occurrence³
		Federal	State	CRPR	SSHCP			
<i>Orcuttia viscida</i>	Sacramento Orcutt grass	FE	SE	1B.1	Y	Vernal pools; Found at elevations between 100–330 feet	April to July (Sep)	Known to Occur ; habitat does occur in the study area. CNDDDB occurrence (#20) was reported within the study area.
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	–	–	1B.2	Y	In standing or slow-moving freshwater ponds, marshes, and ditches; Found at elevations between 0 to 2,135 feet	May to October (November)	Known to Occur ; habitat does occur in the study area surrounding Frye Creek and Laguna Creek. This species was observed in Frye Creek during the June 10, 2024 survey (Figure 3.4). Several CNDDDB occurrences have been reported within 5 miles of the study area.
<i>Trifolium hydrophilum</i>	saline clover	–	–	1B.2	N	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools; Found at elevations between 0-985 feet	April to June	No Potential to Occur ; no suitable habitat (alkaline soil) in the study area.

Table A-1. Special-Status Plant Species with Potential to Occur in the Proposed Project Site

Scientific Name	Common Name	Regulatory Status ¹				Elevation Range (ft AMSL ²)	Bloom Period	Potential for Occurrence ³
		Federal	State	CRPR	SSHCP			
Notes: – = not applicable; CRPR = California Rare Plant Rank; CEQA = California Environmental Quality Act; CESA = California Endangered Species Act; CNDDDB = California Natural Diversity Database; ESA = Environmental Protection Agency; SSHCP = South Sacramento Habitat Conservation Plan								
¹ Regulatory Status Definitions:								
Federal Status Categories FE = Listed as endangered under United States Endangered Species Act FT = Listed as endangered under United States Endangered Species Act								
California State Status Categories SE = Listed as endangered under California Endangered Species Act								
California Rare Plant Rank (CRPR) Categories: 1B = Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA) 2B = Plants rare, threatened, or endangered in California but common elsewhere								
CRPR Threat Rank Extensions: .1 Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat) .2 Fairly endangered in California (20 to 80% of occurrences are threatened)								
SSHCP Categories Y = Species is covered under the South Sacramento Habitat Conservation Plan. N = Species is not covered under the South Sacramento Habitat Conservation Plan								
² ft AMSL = feet above mean sea level								
³ Potential for Occurrence: <ul style="list-style-type: none"> • No Potential to Occur: The study area is outside the species' range or suitable habitat for the species is absent from the study area and adjacent areas. • Unlikely to Occur: No occurrences of the species have been recorded within or near the study area (i.e., within 3 miles), and either habitat for the species is marginal or potentially suitable habitat may occur, but the species' current known range is restricted to areas far from the study area. • Low potential to Occur: The species was identified during literature review as potentially occurring near the project site and habitat for the species is marginal or potentially suitable habitat may occur, but there are no records of species occurrence within the project site or its vicinity. • Potential to Occur: The project site is within the species' range, and no occurrences of the species have been recorded within the project site; however, suitable habitat for the species is present and recorded occurrences of the species are generally present in the vicinity. • Known to Occur: The project site is within the species' range, suitable habitat for the species is present, and the species has been recorded from within the project site. 								
Sources: CDFW 2024b, CNPS 2024a								

Table A-2. Special-Status Wildlife Species with Potential to Occur in the Proposed Project Site

Scientific Name	Common Name	Regulatory Status ¹				Habitat Requirements	Distribution	Potential for Occurrence ²
		Federal	State	CDFW	SSHCP			
Crustaceans								
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	–	–	Y	Vernal pools in valley and foothill grassland; small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains.	Potential to Occur; The vernal pools in the study area have the potential to provide habitat for this species. The nearest CNDDDB record (#186) is less than 0.2 miles south of the northern collection lines. The nearest CNDDDB record (#532) is less than 0.5 miles west of the South Property.
<i>Branchinecta mesovallensis</i>	Midvalley fairy shrimp	–	–	–	Y	Has been found in small, short-lived vernal pools and grass-bottomed swales.	Sacramento, Solano, Merced, Madera, San Joaquin, Fresno, and Contra Costa Counties	Potential to Occur; The vernal pools in the study area have the potential to provide habitat for this species. The nearest CNDDDB record (#113) is less than 300-feet west of the South Property.
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp	FE	–	–	Y	Vernal pools in valley and foothill grassland; pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	Sacramento Valley	Potential to Occur; The vernal pools in the study area have the potential to provide habitat for this species. The nearest CNDDDB record (#334) is less than 500-feet south of the South Property.
Insects								
<i>Bombus crotchii</i>	Crotch bumblebee	–	SC	–	Y	Open grassland and scrub; nests underground. Food plants include Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia.	Historically occurring from the Northern Central Valley to Baja California, Crotch Bumble Bee is now believed to be absent from 70% of its historic region. and now primarily persists in coastal southern California habitats, though also survives in a few areas around Sacramento.	Unlikely to Occur; Marsh and wet soils do not provide for quality nesting habitat. Potential foraging habitat occurs in undisturbed grassland areas surrounding the study area. The nearest CNDDDB record (#290) is less than 5 miles north of the northern collection lines. The Bumble Bee Watch reports the nearest occurrence to be over 12 miles east of the study area. (Bee-109762) Xerces 2024a.
<i>Danaus plexippus</i>	monarch butterfly	FC	–	–	N	This species can breed or forage in a field, roadside area, open area, wet area, or urban garden, as long as there is milkweed and flowering plants around. This species requires milkweed for breeding.	Occurs as north as northeast United States and as south as Central Mexico.	Potential to Occur; Potential foraging habitat occurs in undisturbed grasslands of the study area. Breeding habitat (milkweed) was not identified during the field surveys, however; surveys were not within the blooming period and vegetation is regularly grazed. The Monarch Milkweed Mapper shows 3 recent milkweed occurrences within 3 miles of the study area. Breeding monarchs were recorded in 2023 approximately 9 miles west of the study area (Sighting- 22196 and 22195) (Xerces 2024b).

Table A-2. Special-Status Wildlife Species with Potential to Occur in the Proposed Project Site

Scientific Name	Common Name	Regulatory Status ¹				Habitat Requirements	Distribution	Potential for Occurrence ²
		Federal	State	CDFW	SSHCP			
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	FT	–	–	Y	Riparian scrub, elderberry savannah. Host plant is the elderberry shrub (<i>Sambucus nigra</i> ssp. <i>cerulea</i>). Prefers to lay eggs in elderberries 2–8 inches in diameter; some preference shown for “stressed” elderberries.	Occurs only in the Central Valley.	No Potential to Occur; no suitable habitat (elderberry shrubs) in the study area.
<i>Hydrochara rickseckeri</i>	Ricksecker's water scavenger beetle	–	–	–	Y	Occurs in playa-like vernal pools and ponds.	San Francisco Bay Area including San Mateo, Sonoma, Alameda, and Marin Counties; Also in Solano, Contra Costa, and Sacramento Counties	Potential to Occur; The vernal pools in the study area have the potential to provide habitat for this species. The nearest CNDDDB record (#5) is 3.3 miles north of the northern collection lines.
Fish								
<i>Acipenser medirostris</i> pop. 1	green sturgeon - southern DPS	FT	–	–	N	Anadromous fish found mostly from inshore waters to 200 feet, primarily in the seawater and mixing zones of bays and estuaries. In estuaries, they concentrate in deep areas with soft bottoms and move into intertidal areas to feed at high tides.	Found in the ocean from the Bering Sea, Alaska, as far south as Ensenada, Mexico; they frequent estuaries and bays from British Columbia, Canada, to Monterey Bay, California, and river mouths from the Skeena River, British Columbia, to the Sacramento River, California. They spawn only in Oregon's Rogue River and the Klamath and Sacramento River systems in California	Low Potential to Occur; Historically are known to occur in Laguna Creek (California Fish Website). It is possible for this species to stray into Laguna Creek on the way to spawning or rearing grounds. There are no CNDDDB records within Laguna Creek.
<i>Oncorhynchus mykiss irideus</i> pop. 11	steelhead – Central Valley DPS	FT	–	–	N	Cool, clear streams with abundant cover and well-vegetated banks, with relatively stable flows. Pool and riffle complexes and cold gravelly streambeds for spawning.	Populations in the Sacramento and San Joaquin rivers and their tributaries.	Low Potential to Occur; Historically are known to occur in Laguna Creek (California Fish Website). It is possible for this species to stray into Laguna Creek on the way to spawning or rearing grounds. There are no CNDDDB records within Laguna Creek
<i>Pogonichthys macrolepidotus</i>	Sacramento Splittail	–	–	SSC	N	Aquatic; estuary, freshwater marsh, Sacramento/San Joaquin flowing waters. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning and foraging for young.	Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay, and associated marshes.	Low Potential to Occur; Historically are known to occur in Laguna Creek (California Fish Website). It is possible for this species to stray into Laguna Creek on the way to spawning or rearing grounds. There are no CNDDDB records within Laguna Creek

Table A-2. Special-Status Wildlife Species with Potential to Occur in the Proposed Project Site

Scientific Name	Common Name	Regulatory Status ¹				Habitat Requirements	Distribution	Potential for Occurrence ²
		Federal	State	CDFW	SSHCP			
<i>Spirinchus thaleichthys</i>	longfin Smelt	FC	ST	–	N	Aquatic; found in open waters of estuaries, mostly in middle or bottom of water column. Prefers salinities of 15–30 ppt but can be found in completely freshwater to almost pure seawater.	Found along the Pacific Coast, from Alaska to California.	No Potential to Occur; no suitable aquatic habitat (estuaries) in the study area.
Amphibians								
<i>Ambystoma californiense</i> pop. 1	California tiger salamander - central California DPS	FT	ST	–	N	Small ponds, lakes, or vernal pools in grasslands and oak woodlands for reproduction and larval development; rodent burrows, rock crevices, or fallen logs for cover for adults and juveniles for summer dormancy.	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Butte County south to northeastern San Luis Obispo County.	Low Potential to Occur; The vernal pools in the study area and surrounding grasslands have the potential to provide habitat for this species. The nearest CNDDDB record (#1113) is less than 8.5 miles southeast of the study area. SSHCP's modelled habitat for this species is not present in the study area.
<i>Spea hammondi</i>	western spadefoot	FC	–	SSC	Y	Occurs primarily in grassland habitats but can be found in valley–foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Throughout the Central Valley and adjacent foothills.	Potential to Occur; The vernal pools in the study area and surrounding grasslands have the potential to provide habitat for this species. The nearest CNDDDB record (#169) is less than 3 miles east of collection lines.
Reptiles								
<i>Emys marmorata</i>	western pond turtle	FC	–	SSC	Y	Aquatic; ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation. Needs basking sites and suitable (i.e., sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	West of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. Below 6,000 feet elevation.	Potential to Occur; Laguna Creek, freshwater ponds, and surrounding grasslands in the study area have the potential to provide habitat for this species. The nearest CNDDDB record (#672) is approximately 5 miles north of northern collection line.
<i>Thamnophis gigas</i>	giant garter snake	FT	ST	–	Y	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches.	Historical range was in the Sacramento and San Joaquin valleys, but its current range is much reduced, and it apparently is extirpated south of Fresno County, except for western Kern County.	Potential to occur; seasonal wetlands and agricultural canals present within the study area have the potential to provide habitat for this species. The nearest CNDDDB occurrence (#84) is approximately 7 miles southwest of study area.

Table A-2. Special-Status Wildlife Species with Potential to Occur in the Proposed Project Site

Scientific Name	Common Name	Regulatory Status ¹				Habitat Requirements	Distribution	Potential for Occurrence ²
		Federal	State	CDFW	SSHCP			
Birds								
<i>Accipiter cooperii</i>	Cooper's hawk	–	–	WL	Y	Dense stands of live oak, riparian deciduous, or other forest habitats near water used most frequently. Hunts in broken woodland and habitat edges. Nesting and foraging usually occur near open water or riparian vegetation. Frequents landscapes where wooded areas occur in patches and groves.	A breeding resident throughout most of California.	Known to occur; trees surrounding Laguna Creek and along the collection lines provide suitable nesting habitat within the study area. During the January 2024 surveys and AECOM Biologists identified this species within the south property.
<i>Antigone canadensis tabida</i>	greater sandhill crane	–	ST	FP	Y	Frequents annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands. It prefers relatively treeless plains. Moist sites commonly used, but also feeds on dry plains far from water.	It winters primarily in the Sacramento and San Joaquin valleys from Tehama Co. south to Kings Co.	Known to occur; agricultural land, cropland and seasonal wetland provide suitable wintering habitat as well as the grasslands surrounding the study area. Sandhill cranes were present during the January 2024 surveys and AECOM Biologists identified over 20 individuals within the study area.
<i>Agelaius tricolor</i>	tricolored blackbird	–	ST	SSC	Y	Highly colonial. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	Most numerous in the Central Valley and vicinity. Generally endemic to California.	Known to Occur; blackberry thickets, cattails and bulrushes along the canal and the riparian area surrounding Laguna Creek have the potential to provide suitable habitat within the study area and the surrounding emergent wetlands. Large mixed black bird flocks were present during the January 2024 surveys and AECOM Biologists identified over 100 tricolored blackbirds within the study area. The nearest CNDDDB record (#13) of nesting tricolored blackbird is on Frye Creek on the northern property.
<i>Aquila chrysaetos</i>	golden eagle	–	–	FP, WL	N	Rolling foothills, mountain ranges, sage-juniper flats, and desert. Nests on cliffs and escarpments or in tall trees overlooking open country. Forages in annual grassland, chaparral, and oak woodland with plentiful medium and large-sized mammals.	Foothills and mountains throughout California; uncommon nonbreeding visitor to lowlands such as the Central Valley; ranges from sea level to around 11,500 feet.	Low Potential to Occur; irrigated pastures and cropland provide suitable foraging (nonbreeding) habitat in the study area and surrounding grasslands. The nearest CNDDDB occurrence (#135) is approximately 2.3 miles north of the collection lines.

Table A-2. Special-Status Wildlife Species with Potential to Occur in the Proposed Project Site

Scientific Name	Common Name	Regulatory Status ¹				Habitat Requirements	Distribution	Potential for Occurrence ²
		Federal	State	CDFW	SSHCP			
<i>Athene cunicularia</i> (burrow sites and some wintering sites)	burrowing owl	–	–	SSC	Y	Open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent on burrowing mammals, most notably, the California ground squirrel, for underground nests.	Resident throughout California in suitable habitat.	Potential to Occur; small mammal burrows were observed in the south property at the time of the field survey and could provide suitable habitat. Irrigated pastures in the study area and surrounding grasslands provide suitable foraging habitat. The nearest CNDDB occurrence (#1024) is approximately 100-feet south of the collection lines.
<i>Buteo regalis</i>	ferruginous hawk	–	–	WL	Y	Open terrain in plains and foothills where ground squirrels and other prey are available; breed in open countryside with open, level, or rolling prairies; prefer arid, semiarid, and grassland/sagebrush habitat; avoid high elevations, forest interiors, narrow canyons, and cliff areas.	Does not nest in California; winter visitor along the coast from Sonoma County to San Diego County, including the Modoc Plateau, Central Valley, and Coast Ranges, east-ward to the Sierra Nevada foothills, south-eastern deserts, the Inyo-White Mountains, the plains east of the Cascade Range, and Siskiyou County.	Low Potential to Occur; irrigated pastures and cropland in the north and south properties and surrounding grasslands in the study area provide suitable foraging (nonbreeding) habitat. The nearest CNDDB occurrence (#31) is approximately 2.3 miles north of the collection lines.
<i>Buteo swainsoni</i>	Swainson's hawk	–	ST	–	Y	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.	Uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert.	Potential to Occur; large trees surrounding Laguna Creek and along the collection lines provide suitable nesting habitat. Agriculture lands and surrounding grasslands provide suitable foraging habitat. The nearest CNDDB occurrence is of a nesting pair (#191), approximately 0.7 miles south of south property.
<i>Circus hudsonius</i>	Northern harrier	–	–	SSC	Y	Grasslands, meadows, marshes, and seasonal and agricultural wetlands/fields; prefer open habitats with adequate vegetative cover.	Occurs throughout lowland California. Has been recorded in fall at high elevations ranging from near sea level to at least 9,000 feet in Mono County; largely within coastal lowlands from Lake Earl in Del Norte County to Bodega Head in Sonoma County, but also inland at Lake Berryessa in Napa County.	Known to Occur; agricultural fields, wetlands, and surrounding grasslands provide suitable habitat in the study area. During the January 2024 surveys, AECOM Biologists identified this species within the study area.

Table A-2. Special-Status Wildlife Species with Potential to Occur in the Proposed Project Site

Scientific Name	Common Name	Regulatory Status ¹				Habitat Requirements	Distribution	Potential for Occurrence ²
		Federal	State	CDFW	SSHCP			
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	FT	SE	–	N	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.	Valley, foothill, and desert riparian habitats in scattered locations in California.	Unlikely to Occur; the riparian area surrounding Laguna Creek could provide marginally suitable habitat within the study area, but it is fragmented, and Laguna Creek is a small water body; larger river systems are preferred. There are no CNDDDB or ebird records within 5 miles of the study area.
<i>Elanus leucurus</i>	white-tailed kite	–	–	FP	Y	Open grasslands, meadows, or marshes for foraging, close to dense-topped trees for nesting and perching. Nest trees may be growing in isolation, or at the edge of or within a forest.	Coastal and valley lowlands, and cismontane regions of California.	Known to Occur; trees surrounding Laguna Creek and the collection lines provide suitable nesting habitat in the project area, Agriculture lands and surrounding grasslands provide suitable foraging habitat. Two CNDDDB records (#21, #27) of the species nesting is approximately 0.7 miles to the northwest and north, respectively of the collection lines. During the January 2024 surveys, AECOM Biologists identified this species within the study area.
<i>Lanius ludovicianus</i>	Loggerhead shrike	–	–	SSC	Y	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches; they also require impaling sites for prey manipulation; makes the east side of the Cascades and Sierra Nevada ideal.	Most abundant in portions of the Central Valley, Coast Ranges, and southeastern deserts; also found in the San Joaquin Valley, south-central and south coasts, and the southeastern deserts; resident and winter visitor in lowlands and foothills throughout California. Rare on coastal slope north of Mendocino County, occurring only in winter.	Potential to Occur; agricultural fields, riparian areas, and seasonal wetlands provide suitable nesting and foraging habitat within the study area. Numerous ebird reports within 0.25 miles of the study area (eBird 2024)
<i>Laterallus jamaicensis coturniculus</i>	California black rail	–	ST	FP	N	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.	San Francisco Bay area, the Sacramento-San Joaquin Delta, coastal southern California at Morro Bay and a few other locations, the Salton Sea, and lower Colorado River area.	Low Potential to Occur; seasonal wetlands with cattails and bulrushes along the canal provide marginally suitable habitat in the North and South Properties. Due to the fragmented nature of the habitat, there is a low potential to occur. There is little data for this rarely seen species.

Table A-2. Special-Status Wildlife Species with Potential to Occur in the Proposed Project Site

Scientific Name	Common Name	Regulatory Status ¹				Habitat Requirements	Distribution	Potential for Occurrence ²
		Federal	State	CDFW	SSHCP			
<i>Melospiza melodia</i>	song sparrow – “Modesto” population	–	–	SSC	N	Moderately dense vegetation to supply cover for nest sites, a source of standing or running water, semi-open canopies to allow light, and exposed ground or leaf litter for foraging. Seems to prefer emergent freshwater marshes dominated by tules and cattails as well as riparian willow thickets.	Restricted to California, where it is locally numerous in the Sacramento Valley, the Delta, and northern San Joaquin Valley.	Potential to Occur; blackberry thickets, cattails and bulrushes along the canal, riparian area surrounding Laguna Creek provide suitable nesting habitat in the study area.
<i>Progne subis</i>	purple martin	–	–	SSC	N	Nests in abandoned woodpecker holes in oaks, cottonwoods, and other deciduous trees in a variety of wooded and riparian habitats. Also nests in vertical drainage holes under elevated freeways and highway bridges or lapsed lava tubes; distributed in (Redwood) forest and woodland areas at low to intermediate elevations.	Coastal mountains of Humboldt County south to San Luis Obispo County, west slope of the Sierra Nevada, and northern Sierra and Cascade ranges. Absent from the Central Valley except in Sacramento. Isolated, local populations in southern California	Low Potential to Occur; riparian area surrounding Laguna Creek and the emergent wetlands provide potentially suitable habitat in the study area.
<i>Riparia riparia</i>	bank swallow	–	ST	–	N	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, and the ocean to dig nesting holes.	Riparian and other lowland habitats in California west of the deserts, during the breeding season.	No Potential to Occur; no suitable habitat (i.e., vertical sandy banks) in the study area.
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	–	–	SSC	N	Nests in fresh emergent wetland with dense vegetation and relatively deep water, frequently along the borders of lakes and ponds. Forages in emergent marshes/wetland and moist, open areas, especially croplands and muddy shores of lakes.	Breeds east of the Cascade Range and Sierra Nevada, in the Imperial and Colorado River valleys, and in the Central Valley. Occurs primarily as a migrant and summer resident; small numbers winter primarily in the southern Central Valley.	Low Potential to Occur; seasonal wetlands of the study area could provide for marginally suitable nesting habitat, but the lack of deep water makes it unlikely for nesting. Numerous ebird reports within 0.5 miles of the collection lines.
Mammals								
<i>Taxidea taxus</i>	American badger	–	–	SSC	Y	Occurs in a wide variety of open, arid habitats but are most commonly associated with grasslands, savannas, and mountain meadows near timberline; they require sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground.	Throughout California, except for the humid coastal forests of northwestern California in Del Norte and the northwestern Humboldt Counties	Low Potential to Occur; no suitable habitat within the north and south properties but the surrounding grasslands of the study area provide potentially suitable habitat for this species. The nearest CNDDDB record (#73) of the species is approximately 2.3 miles north of the collection lines.

Table A-2. Special-Status Wildlife Species with Potential to Occur in the Proposed Project Site

<i>Scientific Name</i>	Common Name	Regulatory Status ¹				Habitat Requirements	Distribution	Potential for Occurrence ²
		Federal	State	CDFW	SSHCP			
<i>Antrozous pallidus</i>	pallid bat	—	—	SSC	N	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with dry habitats with oak, mixed conifer, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts but also uses caves, mines, bridges, and buildings.	Occurs throughout California, except the high Sierra, from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations (up to 6,000 feet)	No Potential to Occur ; No suitable habitat (i.e., dry oak woodland) in the study area.
<i>Lasiurus frantzii</i>	Western red bat	—	—	SSC	Y	Found primarily in riparian and wooded habitats. Occurs at least seasonally in urban areas. Day roosts in trees within the foliage. Found in fruit orchards and sycamore riparian habitats in the Central Valley.	Coastal areas from the San Francisco Bay area south, plus the Central Valley and surrounding foothills, with a limited number of records from southern California, extending as far east as western Riverside and central San Diego counties, upper Sacramento River near Dunsmuir, Siskiyou County	Potential to Occur ; the trees surrounding Laguna Creek provide suitable roosting and the agricultural fields for foraging habitat for this species in the study area

Table A-2. Special-Status Wildlife Species with Potential to Occur in the Proposed Project Site

Scientific Name	Common Name	Regulatory Status ¹				Habitat Requirements	Distribution	Potential for Occurrence ²
		Federal	State	CDFW	SSHCP			
<p>Notes:</p> <p>– = not applicable; CDFW = California Department of Fish and Wildlife; CNDDDB = California Natural Diversity Database; DPS = Distinct Population Segments; ESA = federal Endangered Species Act; km = kilometer; ppt = parts per thousand; SSHCP =South Sacramento Habitat Conservation Plan</p> <p>¹ Regulatory Status Definitions:</p> <p>Federal Status Categories</p> <p>FE = Listed as endangered under the Federal Endangered Species Act</p> <p>FT = Listed as threatened under Federal Endangered Species Act</p> <p>FC = Listed as candidate under Federal Endangered Species Act</p> <p>California State Status Categories</p> <p>SE = Listed as endangered under California Endangered Species Act</p> <p>ST = Listed as threatened under California Endangered Species Act</p> <p>SC = Listed as candidate under California Endangered Species Act</p> <p>California Department of Fish and Wildlife (CDFW) Categories</p> <p>SSC = Species of Special Concern</p> <p>FP = Fully Protected</p> <p>WL = Watch List</p> <p>SSHCP Categories</p> <p>Y = Species is covered under the South Sacramento Habitat Conservation Plan.</p> <p>N = Species is not covered under the South Sacramento Habitat Conservation Plan</p> <p>² Potential for Occurrence:</p> <ul style="list-style-type: none"> •No Potential to Occur: The study area is outside the species' range or suitable habitat for the species is absent from the study area and adjacent areas. •Unlikely to Occur: No occurrences of the species have been recorded within or near the study area (i.e., within 3 miles), and either habitat for the species is marginal or potentially suitable habitat may occur, but the species' current known range is restricted to areas far from the study area. •Low potential to Occur: The species was identified during literature review as potentially occurring near the project site and habitat for the species is marginal or potentially suitable habitat may occur, but there are no records of species occurrence within the project site or its vicinity. •Potential to Occur: The project site is within the species' range, and no occurrences of the species have been recorded within the project site; however, suitable habitat for the species is present and recorded occurrences of the species are generally present in the vicinity. •Known to Occur: The project site is within the species' range, suitable habitat for the species is present, and the species has been recorded from within the project site. <p>Sources: CDFW 2024a; ebird 2024; Xerces 2024a; Xerces 2024b</p>								

APPENDIX B

Species Observed

Plant Species Observed in the Survey Area

Scientific Name	Common Name	Wetland Indicator Status
<i>Abutilon theophrasti</i>	Velvet leaf	UPL
<i>Achyrachaena mollis</i>	blow wives	FAC
<i>Alisma lanceolatum</i>	Water plantain	OBL
<i>Ammannia coccinea</i>	Red ammannia	OBL
<i>Amsinckia menziesii</i>	Common fiddleneck	UPL
<i>Anthemis cotula</i>	Mayweed	FACU
<i>Apiastrum angustifolium</i>	Mock parsley	UPL
<i>Apium graveolens</i>	Garden celery	N/A
<i>Andropogon virginicus</i>	Broomsedge bluestem	FAC
<i>Asclepias fascicularis</i>	Narrow-leaf milkweed	FAC
<i>Avena barbata</i>	Slim oat	UPL
<i>Avena fatua</i>	Wild oat	N/A
<i>Avena sativa</i>	Cultivated oat	UPL
<i>Brodiaea sp.</i>	Brodiaea	N/A
<i>Brassica nigra</i>	Black mustard	UPL
<i>Briza minor</i>	Little quaking grass	FAC
<i>Bromus carinatus</i>	California brome	N/A
<i>Bromus diandrus</i>	Ripgut brome	UPL
<i>Bromus hordeaceus</i>	Soft chess	FACU
<i>Bromus rubens</i>	Red brome	UPL
<i>Calocedrus decurrens</i>	Incense cedar	N/A
<i>Cardamine oligosperma</i>	Bittercress	FAC
<i>Carduus pycnocephalus</i>	Italian thistle	FACU
<i>Castilleja attenuata</i>	Valley tassels	UPL
<i>Centaurea solstitialis</i>	Yellow starthistle	UPL
<i>Centromadia fitchii</i>	Spikeweed	FACU
<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Common soaproot	N/A
<i>Cichorium intybus</i>	Chicory	FACU
<i>Cirsium vulgare</i>	Bullthistle	FACU
<i>Conium maculatum</i>	Poison hemlock	FAC
<i>Convolvulus arvensis</i>	Field bindweed	N/A
<i>Crassula tillaea</i>	Mediterranean pygmy weed	FACU
<i>Crataegus monogyna</i>	Hawthorn	N/A
<i>Croton setiger</i>	Turkey-mullein	UPL

Plant Species Observed in the Survey Area

Scientific Name	Common Name	Wetland Indicator Status
<i>Cynodon dactylon</i>	Bermuda grass	FACU
<i>Cyperus difformis</i>	Variable flatsedge	OBL
<i>Cyperus eragrostis</i>	Tall cyperus	FACW
<i>Dactylis glomerata</i>	Orchardgrass	FACU
<i>Daucus carota</i>	Queen Anne's lace	UPL
<i>Dittrichia graveolens</i>	Stinkwort	N/A
<i>Downingia bicornuta</i>	Bristled downingia	OBL
<i>Eleocharis macrostachya</i>	Spike rush	OBL
<i>Elymus caput-medusae</i>	Medusa head	UPL
<i>Epilobium brachycarpum</i>	Willowherb	FAC
<i>Epilobium ciliatum</i>	Fringed Willowherb	FACW
<i>Erigeron canadensis</i>	Canada horseweed	FACU
<i>Erodium botrys</i>	Long-beak stork's-bill	FACU
<i>Erodium cicutarium</i>	Red stork's-bill	UPL
<i>Erodium moschatum</i>	Greenstem filaree	N/A
<i>Eryngium vaseyi</i>	Coyote thistle	FACW
<i>Eryngium castrense</i>	Great valley coyote-thistle	OBL
<i>Eucalyptus globulus</i>	Blue gum	UPL
<i>Eucalyptus polyanthemus</i>	Silver dollar gum	UPL
<i>Euphorbia</i> sp.	Spurge	N/A
<i>Festuca perennis</i>	Italian rye grass	FAC
<i>Foeniculum vulgare</i>	Fennel	N/A
<i>Fraxinus latifolia</i>	Oregon ash	FACW
<i>Galium aparine</i>	Common bedstraw	FACU
<i>Geranium dissectum</i>	Dissected geranium	UPL
<i>Geranium molle</i>	Crane's bill geranium	N/A
<i>Hedypnois rhagadioloides</i>	Crete weed	UPL
<i>Helminthotheca echioides</i>	Bristly ox-tongue	UPL
<i>Hirschfeldia incana</i>	Mustard	UPL
<i>Holocarpha virgata</i>	Narrow tarplant	UPL
<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Barley	FAC
<i>Hordeum murinum</i>	Wall barley	FACU
<i>Hypericum perforatum</i> ssp. <i>perforatum</i>	Klamathweed	FACU
<i>Hypochaeris glabra</i>	Smooth cat's ear	UPL
<i>Iris pseudacorus</i>	Yellowflag iris	OBL

Plant Species Observed in the Survey Area

Scientific Name	Common Name	Wetland Indicator Status
<i>Juglans hindsii</i>	Northern California black walnut	FAC
<i>Juncus bufonius</i>	Dwarf rush	N/A
<i>Juncus effusus</i>	Lamp rush	FACW
<i>Juncus phaeocephalus</i>	Brown headed rush	FACW
<i>Juncus xiphioides</i>	Irish leaf rush	OBL
<i>Lactuca serriola</i>	Prickly lettuce	FACU
<i>Leontodon saxatilis</i>	Hawkbit	FACU
<i>Lepidium latifolium</i>	Perennial pepperweed	FAC
<i>Lepidium nitidum</i>	Shining pepper grass	FAC
<i>Limnanthes alba ssp. alba</i>	Typical white meadowfoam	FACW
<i>Logfia gallica</i>	Narrowleaf cottonrose	N/A
<i>Lotus corniculatus</i>	Bird's-foot trefoil	FAC
<i>Ludwigia peploides</i>	Floating water primrose	OBL
<i>Lupinus bicolor</i>	Miniature lupine	N/A
<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	OBL
<i>Matricaria discoidea</i>	pineapple weed	FACU
<i>Malva parviflora</i>	Cheeseweed mallow	FAC
<i>Marrubium vulgare</i>	White horehound	FACU
<i>Medicago polymorpha</i>	Burclover	FACU
<i>Muhlenbergia rigens</i>	Deergrass	FAC
<i>Oryza sativa</i>	Domestic rice	OBL
<i>Panicum capillare</i>	Old witch grass	FACU
<i>Paspalum dilatatum</i>	Dallis grass	FAC
<i>Phalaris aquatica</i>	Reed canarygrass	FACU
<i>Plagiobothrys stipitatus</i>	Great valley popcornflower	FACW
<i>Plantago coronopus</i>	Cut leaf plantain	FAC
<i>Plantago lanceolata</i>	Ribwort	FAC
<i>Pinus sp.</i>	Pines	N/A
<i>Poa annua</i>	Annual bluegrass	FAC
<i>Polygonum aviculare</i>	Prostrate knotweed	FAC
<i>Populus fremontii</i>	Fremont cottonwood	FAC
<i>Prunus dulcis</i>	Domestic almond	UPL
<i>Psilocarphus brevissimus</i>	Woolly marbles	FACW
<i>Psilocarphus tenellus</i>	slender woolly-marbles	OBL
<i>Quercus lobata</i>	Valley oak	FACU

Plant Species Observed in the Survey Area

Scientific Name	Common Name	Wetland Indicator Status
<i>Raphanus sativus</i>	Wild radish	UPL
<i>Ranunculus bonariensis</i> var. <i>trisepalus</i>	Vernal pool buttercup	OBL
<i>Ranunculus muricatus</i>	Prickly buttercup	FACW
<i>Rosa</i> sp.	Rose	N/A
<i>Rubus armeniacus</i>	Himalayan blackberry	FAC
<i>Rumex acetosella</i>	Common sheep sorrel	FAC
<i>Rumex crispus</i>	Curly dock	FAC
<i>Rumex pulcher</i>	Fiddleleaf dock	FACW
<i>Sagittaria sanfordii</i>	Sanford's arrowhead ¹	OBL
<i>Salix gooddingii</i>	Goodding's black willow	FACW
<i>Salix lasiolepis</i>	Arroyo willow	FACW
<i>Salsola tragus</i>	Russian thistle	FACU
<i>Schinus molle</i>	Peruvian pepper tree	FACU
<i>Schinus terebinthifolius</i>	Brazilian pepper tree	UPL
<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	Common Tule	OBL
<i>Setaria parviflora</i>	Marsh bristlegrass	FAC
<i>Setaria pumila</i>	Yellow bristlegrass	FAC
<i>Silene gallica</i>	Common catchfly	N/A
<i>Silybum marianum</i>	Milk thistle	UPL
<i>Sisyrinchium bellum</i>	Western blue-eyed-grass	FACW
<i>Sonchus arvensis</i>	Field Sow-Thistle	FACU
<i>Sonchus</i> sp.	Sow-thistle	N/A
<i>Spergula arvensis</i>	Corn spurry	N/A
<i>Torilis arvensis</i>	Field hedge parsley	UPL
<i>Heteromeles arbutifolia</i>	Toyon	N/A
<i>Torilis arvensis</i>	Field hedge parsley	N/A
<i>Trichostema lanceolatum</i>	Vinegarweed	FACU
<i>Tragopogon pratensis</i>	Meadow salsify	UPL
<i>Trifolium alexandrinum</i>	Egyptian clover	UPL
<i>Trifolium angustifolium</i>	narrow-leaved clover	UPL
<i>Trifolium dubium</i>	Little hop clover	UPL
<i>Trifolium hirtum</i>	Rose clover	UPL

¹ Sanford's arrowhead is special status plant species that has a California Native Plant Society (CNPS) California Rare Plant Rank of 1B.2. It was observed in an agricultural ditch during the July 10, 2024 survey.

Plant Species Observed in the Survey Area

Scientific Name	Common Name	Wetland Indicator Status
<i>Trifolium hybridum</i>	Alsike clover	FAC
<i>Trifolium repens</i>	White clover	FACU
<i>Trifolium tomentosum</i>	Woolly clover	UPL
<i>Typha angustifolia</i>	Narrow leaf cattail	OBL
<i>Vicia sativa</i>	Garden vetch	FACU
<i>Vicia villosa</i>	Hairy vetch	UPL
<i>Vitis californica</i>	California wild grape	FACU
<i>Washingtonia robusta</i>	Mexican fan palm	FACW
<i>Wyethia angustifolia</i>	Narrow leaved mule ears	FACU
<i>Xanthium spinosum</i>	Spiny cocklebur	FACU
<i>Zeltnera muehlenbergii</i>	Monterey centaury	FAC

Notes:

- ¹ Wetland Indicator Status
 N/A = Not listed
 FAC = Facultative
 FACU = Facultative Upland
 FACW = Facultative Wetland
 N/A = not applicable
 OBL = Obligate
 UPL = Upland

Wildlife Species Observed in the Survey Area

Common Name	Scientific Name
American crow	<i>Corvus brachyrhynchos</i>
American kestrel	<i>Falco sparverius</i>
American pipit	<i>Anthus rubescens</i>
American robin	<i>Turdus migratorius</i>
American wigeon	<i>Mareca americana</i>
Anna's hummingbird	<i>Calypte anna</i>
Belted kingfisher	<i>Megaceryle alcyon</i>
Black-necked stilt	<i>Himantopus mexicanus</i>
Black phoebe	<i>Sayornis nigricans</i>
Black-tailed jack rabbit	<i>Lepus californicus</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
Brown-headed cowbird	<i>Molothrus ater</i>
Bufflehead	<i>Bucephala albeola</i>
Bushtit	<i>Psaltirparus minimus</i>
California gull	<i>Larus californicus</i>
California scrub-jay	<i>Aphelocoma californica</i>
California towhee	<i>Melospiza crissalis</i>
Canada goose	<i>Branta canadensis</i>
Common raven	<i>Corvus corax</i>
Cooper's hawk	<i>Accipiter cooperii</i>
Dark-eyed junco	<i>Junco hyemalis</i>
Double-crested cormorant	<i>Nannopterum auritum</i>
Eurasian collared-dove	<i>Streptopelia decaocto</i>
European starling	<i>Sturnus vulgaris</i>
Golden-crowned sparrow	<i>Zonotrichia atricapilla</i>
Great blue heron	<i>Ardea herodias</i>
Great horned owl	<i>Bubo virginianus</i>
Great egret	<i>Ardea alba</i>
Greater yellowlegs	<i>Tringa melanoleuca</i>
Hairy woodpecker	<i>Dryobates pubescens</i>
House finch	<i>Haemorhous mexicanus</i>
Killdeer	<i>Charadrius vociferu</i>
Lark sparrow	<i>Chondestes grammacus</i>
Lincoln's sparrow	<i>Melospiza lincolnii</i>
Mallard	<i>Anas platyrhynchos</i>

Wildlife Species Observed in the Survey Area

Common Name	Scientific Name
Marsh wren	<i>Cistothorus palustris</i>
Merlin	<i>Falco columbarius</i>
Mourning dove	<i>Zenaida macroura</i>
Mute swan	<i>Cygnus olor</i>
Northern flicker	<i>Colaptes auratus</i>
Northern harrier	<i>Circus hudsonius</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Nuttall's woodpecker	<i>Dryobates nuttallii</i>
Pacific treefrog	<i>Hyla regilla</i>
Pocket gopher (unknown species)	<i>Thomomys</i> sp.
Raccoon	<i>Procyon lotor</i>
Red-shouldered hawk	<i>Buteo lineatus</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
North American river otter	<i>Lontra canadensis</i>
Rock pigeon	<i>Columba livia</i>
Ruby-crowned kinglet	<i>Corthylio calendula</i>
Sandhill crane	<i>Antigone canadensis</i>
Savannah sparrow	<i>Passerculus sandwichensis</i>
Say's phoebe	<i>Sayornis saya</i>
Snowy egret	<i>Egretta thula</i>
Song sparrow	<i>Melospiza melodia</i>
Spotted towhee	<i>Pipilo maculatus</i>
Striped skunk	<i>Mephitis mephitis</i>
Tricolored blackbird	<i>Agelaius tricolor</i>
Turkey vulture	<i>Cathartes aura</i>
Western bluebird	<i>Sialia mexicana</i>
Western kingbird	<i>Tyrannus verticalis</i>
Western meadowlark	<i>Sturnella neglecta</i>
Western sandpiper	<i>Calidris mauri</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
White-tailed kite	<i>Elanus leucurus</i>
Yellow-billed magpie	<i>Pica nuttalli</i>
Yellow-rumped warbler	<i>Setophaga coronata</i>

APPENDIX C

Representative Photographs



Photograph 1. Excelsior Road with existing collection lines. Facing south. AECOM 1/11/2024.



Photograph 2. Disturbed gravel road in the South Property. Facing West. AECOM 1/11/2024.



Photograph 3. Disturbed road shoulder adjacent to roadside ditch on Eagles Nest Road. Facing north
AECOM 1/11/2024.



Photograph 4. Low density development with landscaping on Excelsior Road. Facing north.
AECOM 1/11/2024.



Photograph 5. Roadside ditch with standing water after rain event on Eagles Nest Road. Facing south.
AECOM 1/11/2024.



Photograph 6. Culvert with riprap at end of roadside ditch on Florin Road. Facing east.
AECOM 1/11/2024.



Photograph 7. Croplands on the South Property. Facing south. AECOM 1/11/2024.



Photograph 8. Irrigated pastures grasslands on the South Property. Facing southwest. AECOM 1/11/2024.



Photograph 9. Large agriculture canal on the South Property. Facing south. AECOM 1/11/2024.



Photograph 10. Large agriculture canal on the South Property. Facing south. AECOM 1/11/2024.



Photograph 11. Large agriculture canal side showing undercutting of hardpan on the South Property. Facing east. AECOM 1/11/2024.



Photograph 12. Agriculture ditch on the South Property with emergent vegetation. Facing west. AECOM 1/11/2024.



Photograph 13. Agriculture ditch on the South Property with emergent vegetation. Facing east. AECOM 1/11/2024.



Photograph 14. Seasonal wetland on the South Property. Facing west. AECOM 1/11/2024.



Photograph 15. Emergent marsh vegetation along Florin Road. Facing north. AECOM 1/11/2024.



Photograph 16. Emergent marsh on the South Property on the low side of a cropland. Facing west. AECOM 1/11/2024.



Photograph 17. Irrigated pasture with emergent wetland vegetation on the South Property. Facing south. AECOM 1/11/2024.



Photograph 18. Agriculture ditch on the South Property with emergent vegetation. Facing east. AECOM 1/11/2024.



Photograph 19. Seasonal wetland on Florin Road, extending outside of study area. Facing north. AECOM 1/11/2024.



Photograph 20. Vernal pools on the South Property. Facing east. AECOM 1/11/2024.



Photograph 21. Vernal pools along Florin Road. Facing north. AECOM 1/11/2024.



Photograph 22. Vernal pools on the South Property. Facing west. AECOM 1/11/2024.



Photograph 23. Vernal pool along Florin Road. Facing south. AECOM 1/11/2024.



Photograph 24. Intermittent stream along Excelsior Road. Facing west. AECOM 1/11/2024.



Photograph 25. Intermittent stream along Florin Road. Facing south. AECOM 1/11/2024.



Photograph 26. Intermittent stream (Frye Creek) along Florin Road. Facing north. AECOM 1/11/2024.



Photograph 27. Perennial stream (Laguna Creek) along Eagle Nest Road. Facing southeast.
AECOM 1/11/2024.



Photograph 28. Perennial stream (Laguna Creek) along Eagle Nest Road. Facing southwest.
AECOM 1/11/2024.



Photograph 29. Irrigated pasture. Facing southeast. AECOM 5/7/2024.



Photograph 30. Roadside ditch along Florin Road. Facing east. AECOM 5/7/2024.



Photograph 31. Seasonal Wetland. Facing north.
AECOM 5/7/2024.



Photograph 32. Frye Creek. Facing southwest.
AECOM 5/7/2024.



Photograph 33. Emergent vegetation in Frye Creek. Facing north.
AECOM 5/7/2024.



Photograph 34. Blackberry thicket in and around Frye Creek. Facing north.
AECOM 5/7/2024.



Photograph 35. Emergent vegetation and riparian scrub on in Frye Creek with Laguna Creek riparian woodland vegetation in background. Facing north.
AECOM 6/10/2024.



Photograph 36. Sanford's arrowhead in Frye Creek. Facing northwest.
AECOM 6/10/2024.



Photograph 37. Cropland in northern property. Facing east.
AECOM 5/7/2024.



Photograph 38. Cropland in northern property. Facing east.
AECOM 6/10/2024.



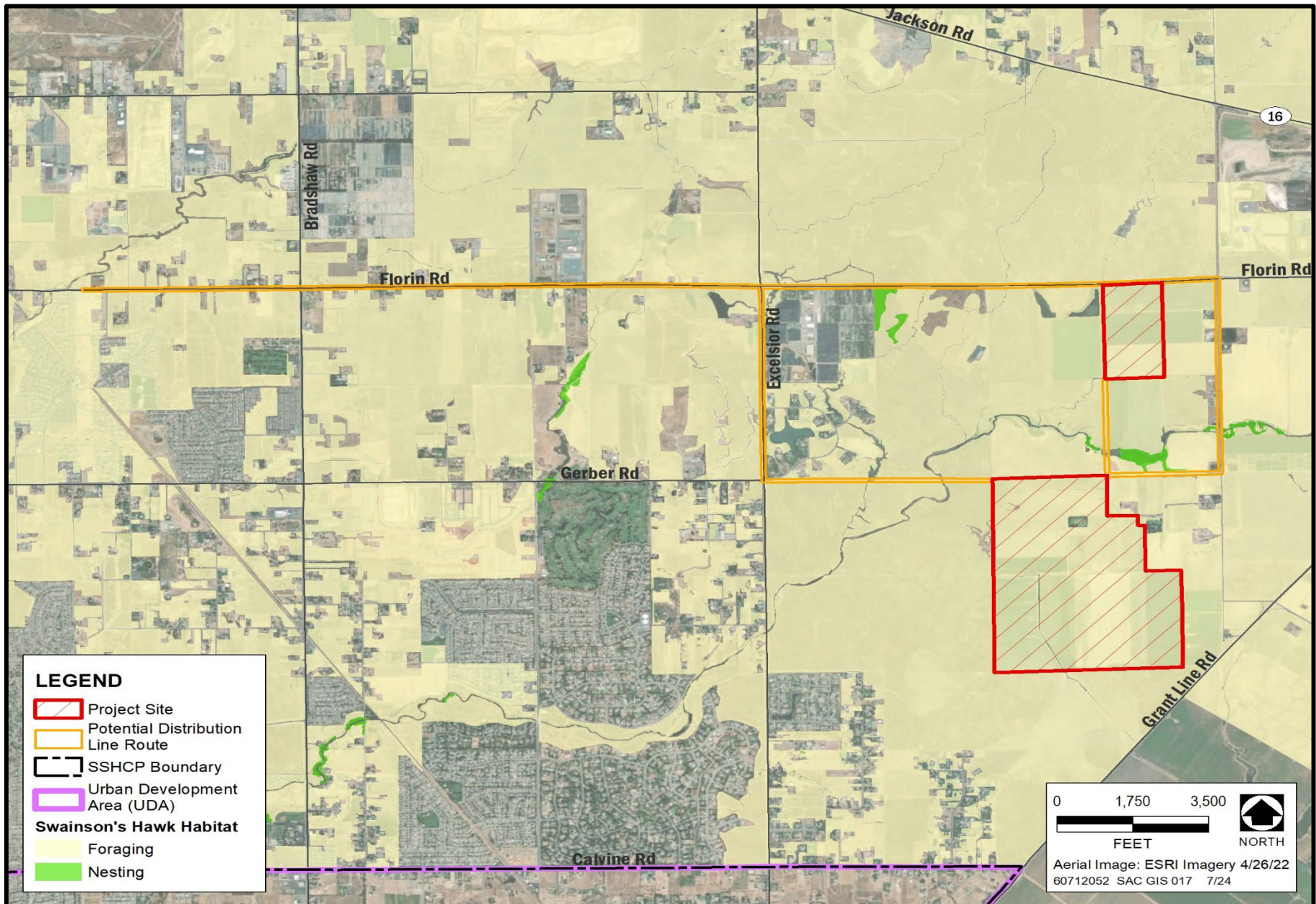
Photograph 39. Valley grassland north of Florin Road. Facing north.
AECOM 1/10/2024.



Photograph 40. Valley grassland in southern property. Facing northeast.
AECOM 1/10/2024.

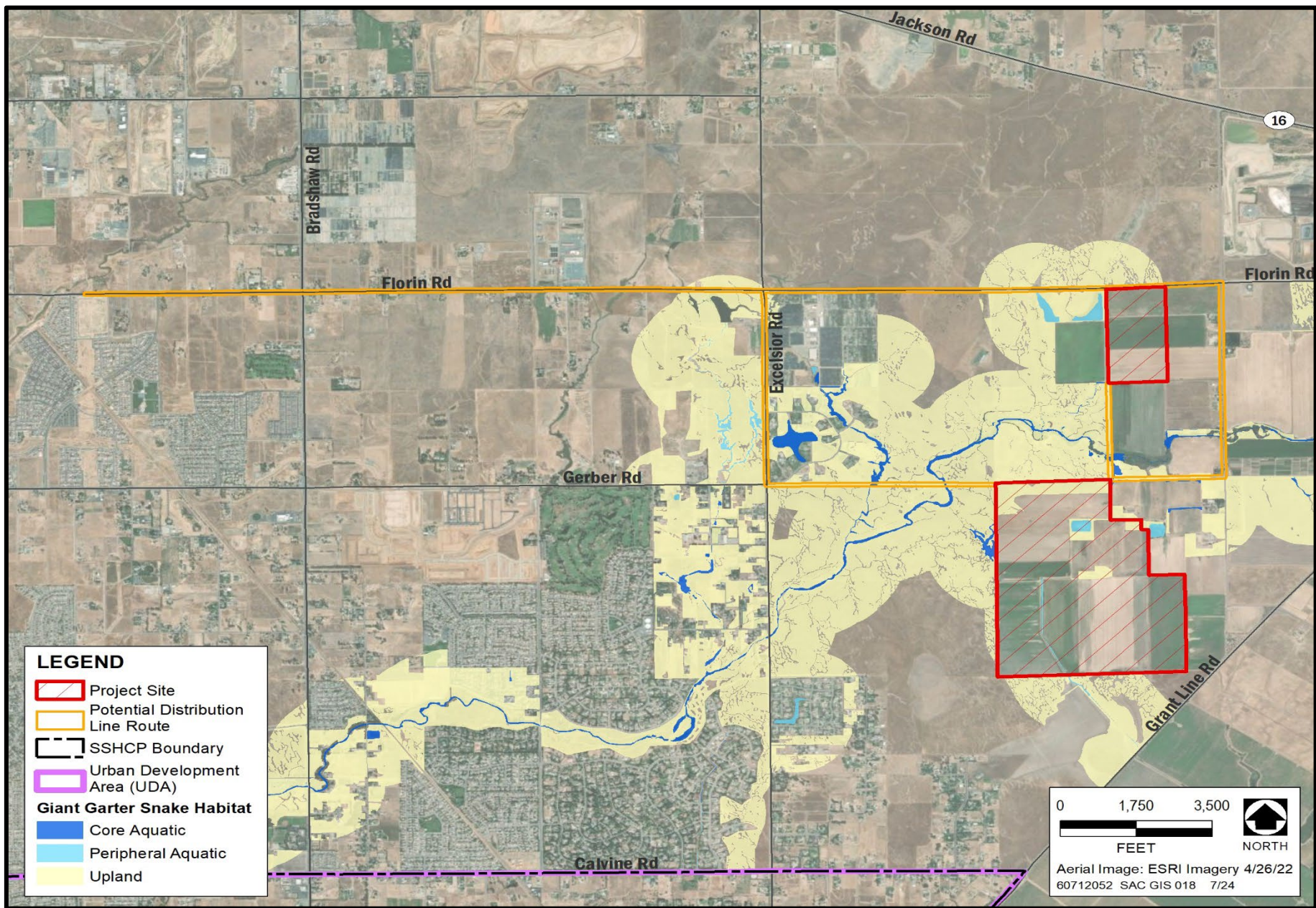
APPENDIX D

SSHCP Modeled Habitat



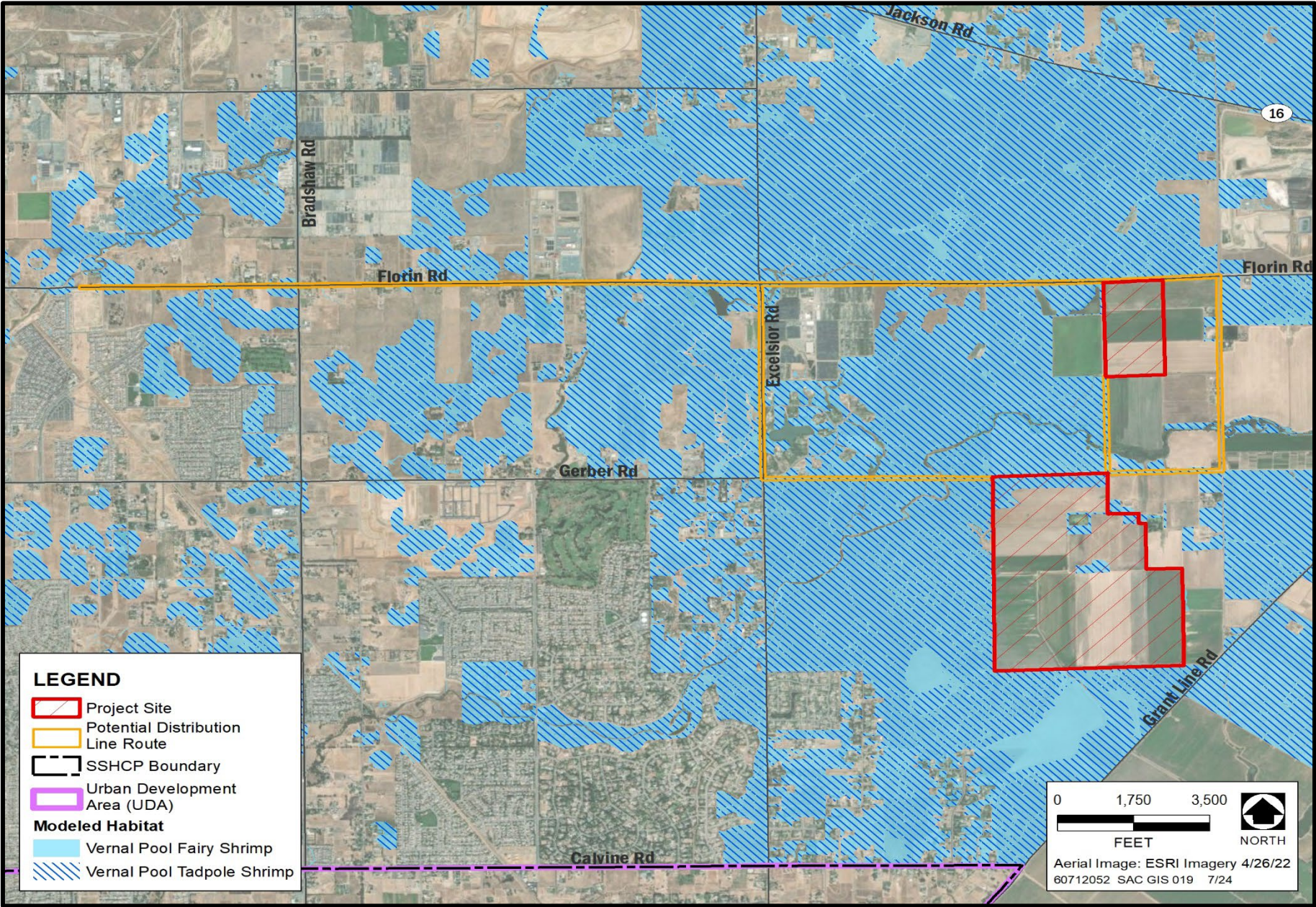
Source: SSCA 2018

SSHCP Modeled Swainson's Hawk Habitat near the Oveja Ranch Solar Project



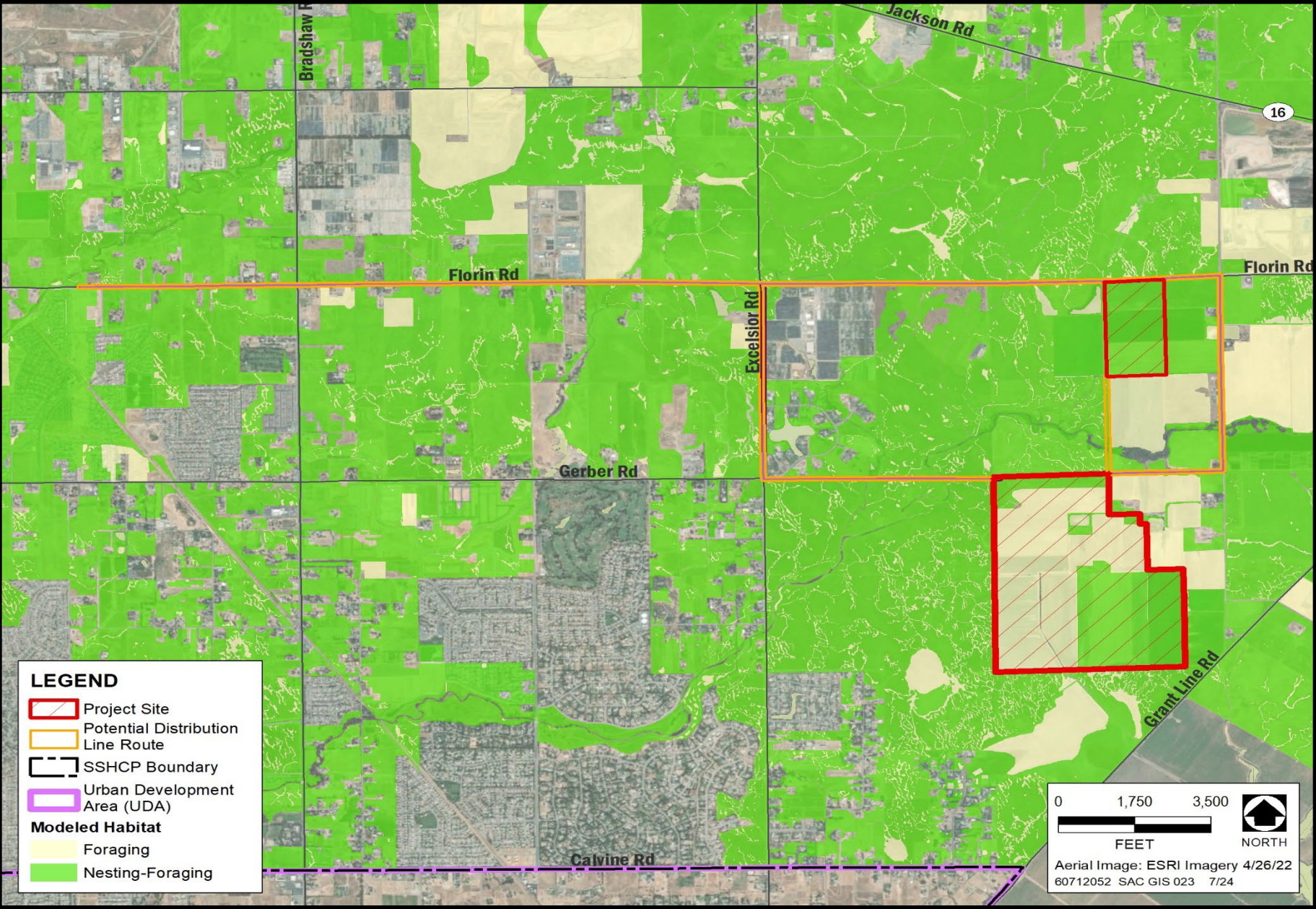
Source: SSCA 2018

SSHCP Modeled Giant Garter Snake Habitat near the Oveja Ranch Solar Project



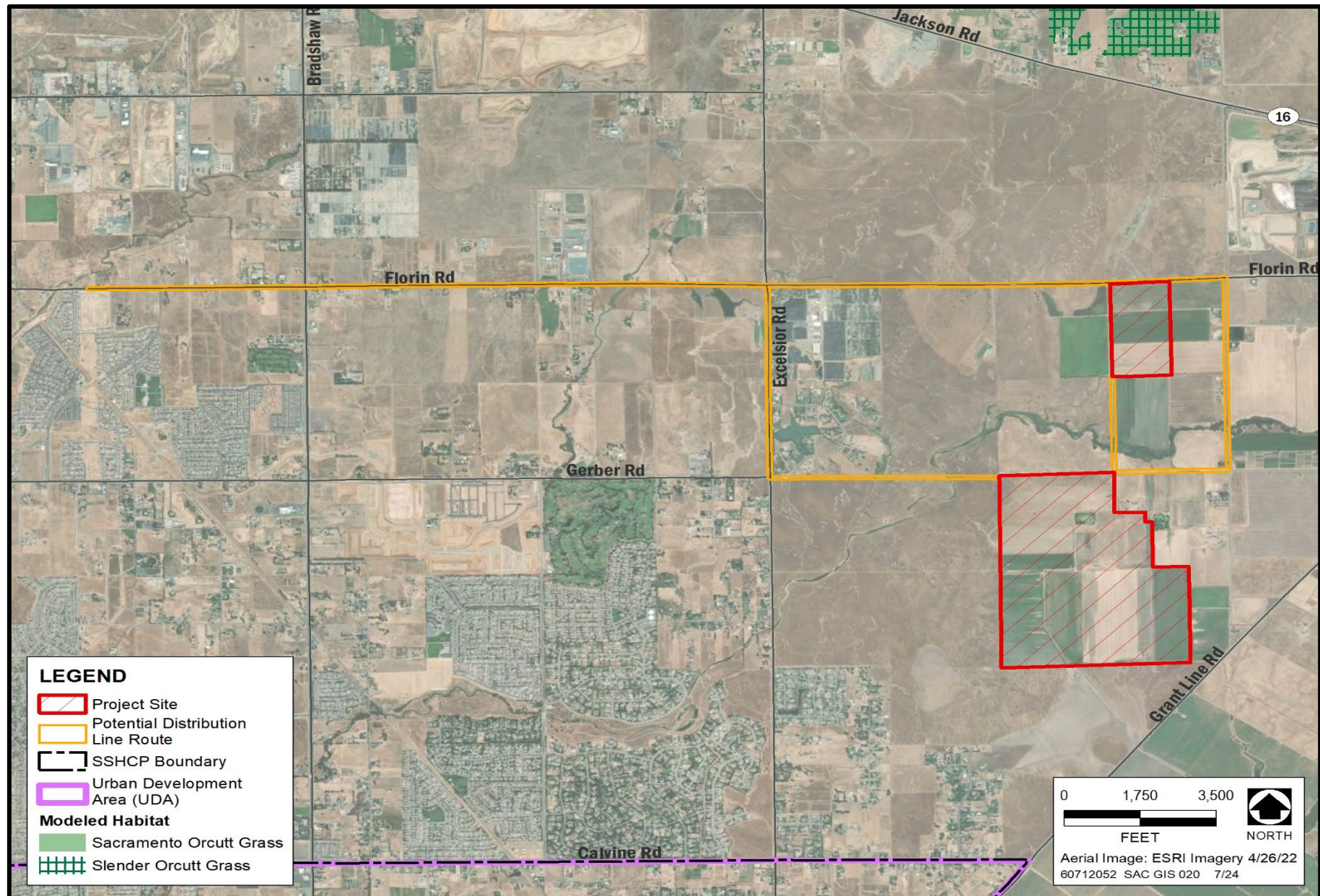
Source: SSCA 2018

SSHCP Modeled Vernal Pool Shrimp Habitat near the Oveja Ranch Solar Project



Source: SSCA 2018

SSHCP Modeled Tricolored Blackbird Habitat near the Oveja Ranch Solar Project



Source: : SSCA 2018

SSHCP Modeled Sacramento Orcutt Grass Habitat near the Oveja Ranch Solar Project