

3.5 BIOLOGICAL RESOURCES

Comments received on the Notice of Preparation (NOP) were reviewed during preparation of this SEIR. The U.S. Army Corps of Engineers (USACE) provided a comment letter indicating concurrence with the wetland delineation that was performed for the City-owned parcel, finding that the on-site pond and on-site agricultural ditch are not Waters of the U.S. that would be regulated by USACE under Section 404 of the Clean Water Act (CWA). In addition, a comment letter was submitted by the Sacramento Local Agency Formation Commission (LAFCo), stating that LAFCo maintains an interest in the Project's impacts on biological resources.

A comment letter was also submitted by the California Department of Fish and Wildlife (CDFW) suggesting that the SEIR should evaluate "the whole of the action" (i.e., including off-site improvements); incorporate a range of alternatives that would avoid or minimize impacts to biological resources; perform habitat assessments; implement detection surveys; evaluate project impacts on special-status species; and include a complete analysis of endangered, threatened, candidate, and locally unique species. CDFW also noted the protections afforded by the Migratory Bird Treaty Act, and urged the City to consider participation in the South Sacramento County Habitat Conservation Plan. Finally, CDFW suggests that future landscaping plans consider incorporation of the California Native Plant Society's "Homegrown Habitat Plant List." A search of the California Native Plant Society's website does not yield any information about the Homegrown Habitat Plant List, although some general information under the heading, "Homegrown Habitat" on native plants is available on the website of the Sacramento Valley Chapter of the California Native Plant Society.

The City reviewed and considered the information provided in these comments during preparation of this section.

3.5.1 ENVIRONMENTAL SETTING

The biological resources setting for the Project site itself has not changed since the 2019 SOIA EIR was prepared. However, since that time, the City has identified the need for several off-site improvements associated with the proposed drainage plan. This section focuses on new biological resources information associated with the off-site drainage improvement areas. (For a detailed discussion of biological resources within the Project site, refer to Section 3.5, "Biological Resources," in the 2019 SOIA EIR.)

An AECOM biologist performed a site visit to the off-site improvement areas in August 2020. AECOM also performed an updated search of the CDFW's California Natural Diversity Database (CNDDDB), and the California Native Plant Society (CNPS) Inventory, the results of which are presented in this section.

The Project site and off-site improvement areas are located in southern Sacramento County within the Great Central Valley Region of the California Floristic Province. The Cosumnes River is approximately 0.5 miles to the east and its tributary, Deer Creek, is immediately adjacent to two of the off-site improvement areas. The Sacramento-San Joaquin Delta (Delta) begins approximately 9 miles southwest of the Project site.

Surface water in the Project site and in the off-site improvement areas flows into a network of agricultural drainage ditches. Most of the water in the ditches is pumped groundwater. The network of ditches is interconnected through a variety of culverts. One on-site ditch within the City-owned parcel overflows into an agricultural pond that is located on-site. The USACE has determined that this on-site pond and ditch do not constitute jurisdictional Waters of the U.S. under the CWA Section 404 (USACE 2020). The other ditches within the Project site eventually converge and flow into an east/west roadside ditch along Grant Line Road, which in

turn flows into a larger north/south ditch along the UPRR; this ditch, which is proposed for widening, discharges southward off the Project site into an approximately 8-acre pond. A short stretch of existing channel conveys flows from the pond to Deer Creek.

An existing ditch (a portion of which is proposed for widening) is also located along the northeastern property boundary; this ditch flows southward off the Project site into an approximately 0.5-acre pond, and then discharges through an existing ditch to an outfall into Deer Creek.

Finally, agricultural return water is stored in an existing off-site 15-acre stock pond, where a variety of Project-related improvements are proposed including a new 60-inch underground drainage pipeline, deepening the existing pond, improving the pond's existing inflow and outfall, and improving the existing conveyance channel from the pond to the existing outfall at Deer Creek. In addition, transition improvements from this channel to Deer Creek may be required, which may include some grading at its connection to Deer Creek.

HABITAT TYPES

The Project site is characterized by four habitat types: urban/disturbed, cropland (including oats and grass for hay crops, and seasonal row crops), irrigated pasture, and aquatic features (an on-site agricultural pond and on-site agricultural ditch) (see Figure 6, Appendix C to the 2019 SOIA EIR).

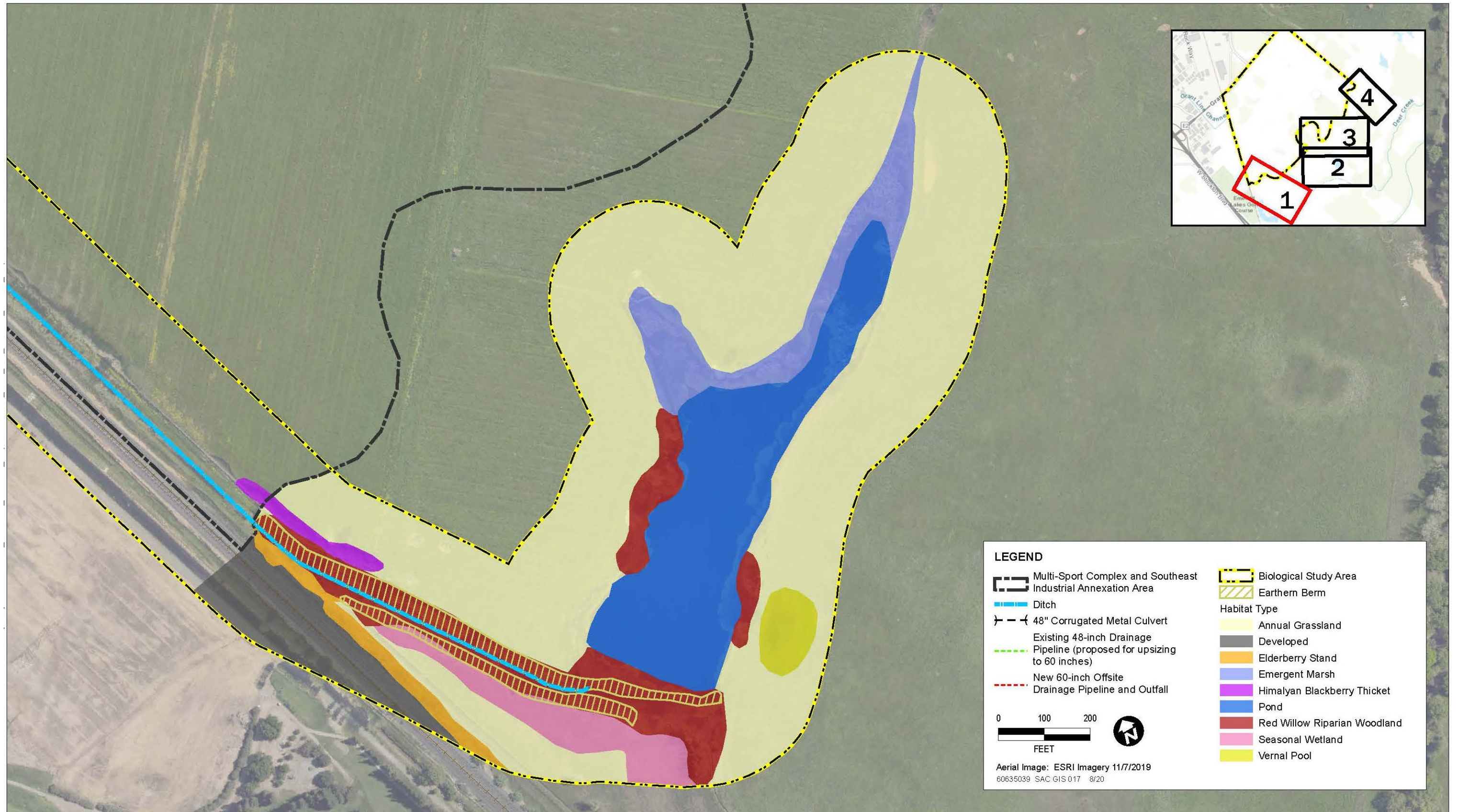
The off-site drainage improvement areas are composed of a variety of habitat types, as shown in Exhibits 3.5-1a through 3.5-1d. These habitat types include urban/disturbed (developed), cropland, irrigated pasture, elderberry stand and Himalayan blackberry thicket (along the southern-most drainage ditch), red willow riparian woodland, Valley oak woodland, and aquatic features. Each of these habitat types are described in further detail below.

Developed (Urban/Disturbed)

Developed areas associated with urban communities are classified as areas that have been heavily modified by humans, including roadways, existing buildings, and structures, as well as recreation fields, lawns, and landscaped vegetation found in residential yards. Because of the high degree of disturbance in these areas, they generally have low habitat value for wildlife; however, migratory birds may find limited nesting and foraging opportunities in trees and shrubs scattered throughout urban areas.

Typically, the species composition in urban areas consists of a mix of native and nonnative trees, shrubs, flowers, and turf grass. Common landscape trees in the project area include valley oak (*Quercus lobata*), redwoods (*Sequoia sempervirens*), eucalyptus (*Eucalyptus* spp.), various pines (*Pinus* spp.), and ornamentals. Wildlife adapted to living in heavily urbanized areas includes common raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), black rat (*Rattus rattus*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), house finch (*Carpodacus mexicanus*), cliff swallow (*Hirundo pyrrhonota*), northern mockingbird (*Mimus polyglottus*), and common ground dove (*Columbina passerina*).

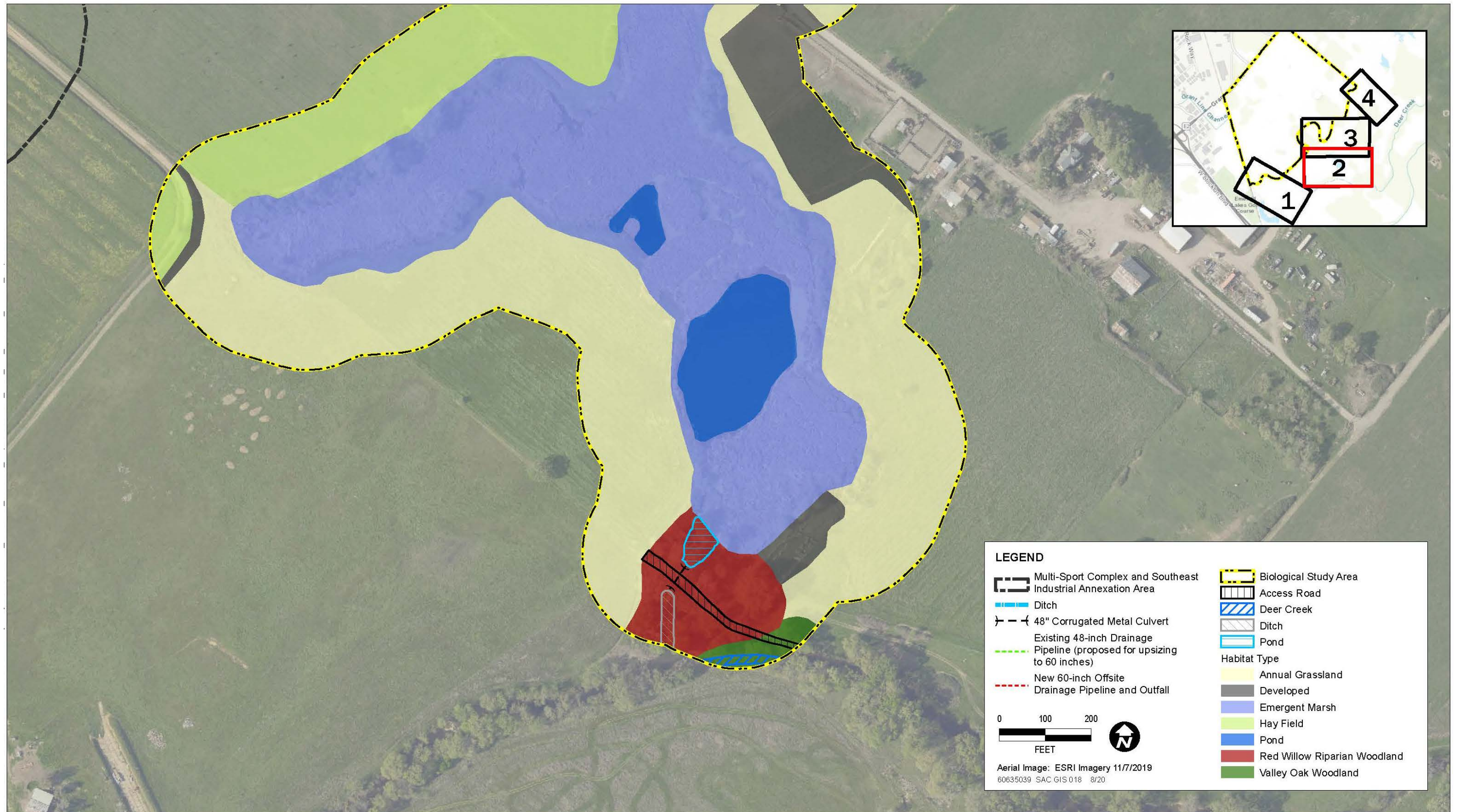
Developed areas are present in all of the off-site improvement areas, including the UPRR tracks, adjacent to the 15-acre pond, and surrounding the northern-most agricultural ditch.



Source: AECOM 2020

Exhibit 3.5-1a. Habitat Types in the Off-site Improvement Areas (Map 1 of 4)

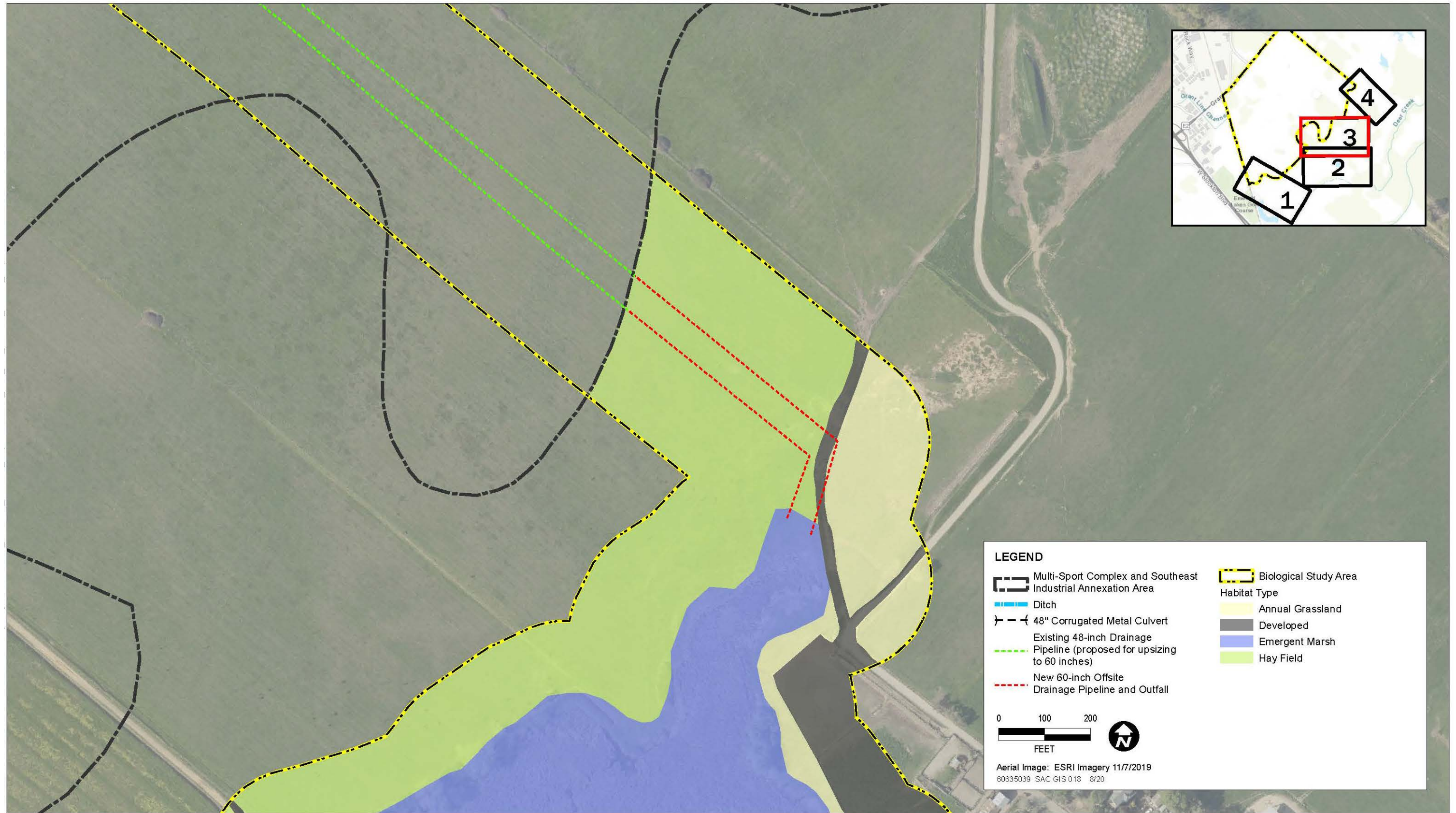
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Source: AECOM 2020

Exhibit 3.5-1b. Habitat Types in the Off-site Improvement Areas (Map 2 of 4)

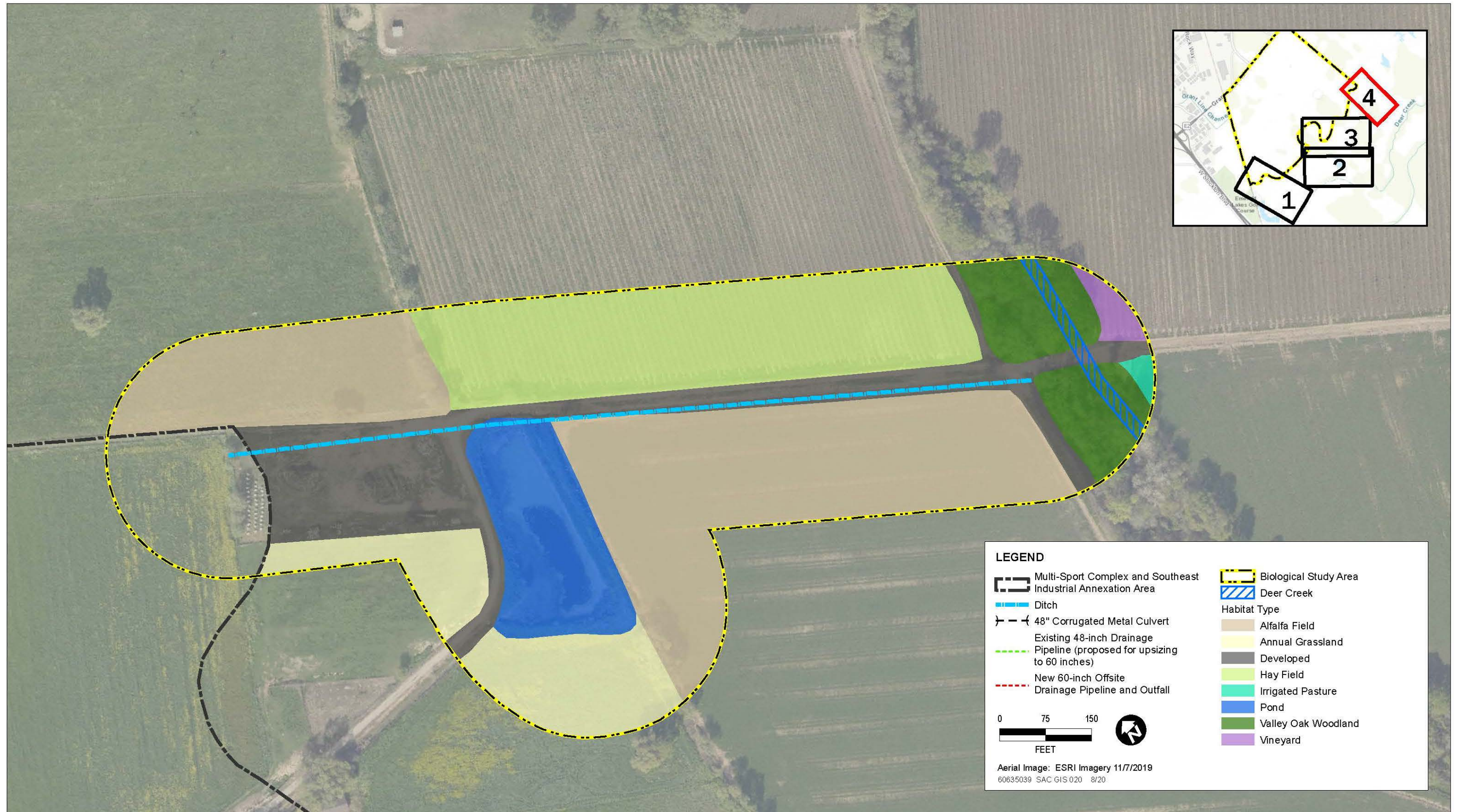
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Source: AECOM 2020

Exhibit 3.5-1c. Habitat Types in the Off-site Improvement Areas (Map 3 of 4)

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Source: AECOM 2020

Exhibit 3.5-1d. Habitat Types in the Off-site Improvement Areas (Map 4 of 4)

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Cropland

Croplands are generally located on flat to gently rolling terrain. Soil characteristics often dictate the crops grown. Croplands occur in association with orchard-vineyard, pasture, residential-park, and wildlife habitats such as riparian, chaparral, wetlands, desert, and herbaceous types. Croplands have greatly reduced wildlife richness and diversity in California. However, many species of rodents and birds have adapted to croplands. This landcover can provide foraging opportunities for many avian species including greater sandhill crane, Swainson's hawk, white-tailed kites, and various passerines.

Cropland, in the form of hay and alfalfa, is present on the northwest side of the 15-acre pond and surrounding the northern-most agricultural ditch.

Annual Grassland

Within the annual grassland habitat, dominant species consist of nonnative annual grasses including slender wild oat (*Avena barbata*), common wild oat (*Avena fatua*), brome grass (*Bromus diandrus*), soft chess brome (*Bromus hordeaceus*), and false barley (*Hordeum murinum*). This habitat type occurs in foothills, waste places, rangelands, and openings in woodlands.

Annual grassland is present around all of the off-site improvement areas. Swainson's hawk, red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and Northern harrier (*Circus hudsonius*) were observed either foraging or flying over the off-site improvement areas during the AECOM site visit in 2020.

Irrigated Pasture

Pasture vegetation is a mix of perennial grasses and legumes that normally provide 100 percent canopy cover. The height of the pasture vegetation varies from a few inches to 2 or more feet. Height and density of vegetation in irrigated pastures depends of cultural and grazing management practices. The type of livestock, stocking rates, and duration of grazing directly impact the composition, density, and height of irrigated pasture vegetation. Irrigated pastures are often a permanent agricultural habitat, established on soils not suitable for other crops and where an ample water supply is available. Pastures are used by a variety of wildlife depending on geographic area and types of adjacent habitats. Ground nesting birds nest in pastures if adequate residual vegetation is present at the beginning of the nesting season. This landcover can provide foraging opportunities for many avian species, including greater sandhill crane (*Grus canadensis*), Swainson's hawk (*Buteo swainsoni*), white-tailed kites (*Elanus leucurus*), and various passerines.

The irrigated pasture habitat type is only present on the south side of Deer Creek.

Blue Elderberry Stands

Blue elderberry (*Sambucus nigra*) is dominant in the shrub canopy within stream terraces and in bottomlands, as well as localized areas in upland settings. Soils are typically gravelly alluvium and are intermittently flooded. The shrub canopy of blue elderberry stands generally includes species such as California sagebrush (*Artemisia californica*), ceonothus, currants (*Ribes* spp.), willow (*Salix* spp.), and California wild grape (*Vitis californica*), among others.

This habitat type forms a narrow row of densely growing, large elderberry shrubs along the base of railroad ballast along the south side of the off-site ditch that runs along the UPRR tracks. In this area, blue elderberry is intermixed with Oregon ash (*Fraxinus latifolia*), box elder (*Acer negundo*), small valley oak trees (*Quercus lobata*), Himalayan blackberry (*Rubus armeniacus*), coyotebrush (*Baccharis pilularis*), and fennel (*Foeniculum vulgare*).

In addition, two small elderberry shrubs (less than 1-inch diameter) are present southeast of the existing outfall to Deer Creek, where the existing hand-dug ditch conveys water from the 15-acre pond.

Red Willow Riparian Woodland

Red willow (*Salix gooddingii* and/or *Salix laevigata*) is dominant or co-dominant in the tree or shrub canopy. This habitat type is found on terraces along large rivers, canyons, along floodplains of streams, seeps, springs, ditches, floodplains, lake edges, low-gradient depositions. The tree canopy in this habitat type also commonly includes species such box elder, California buckeye (*Aesculus californica*), white alder (*Alnus rhombifolia*), and incense cedar (*Calocedrus decurrens*), among others. The shrub canopy commonly includes mule fat (*Baccharis salicifolia*), red osier dogwood (*Cornus sericea*), and Himalayan blackberry.

At the off-site improvement areas (along the UPRR ditch and the 8-acre pond, and the south end of the 15-acre pond), red willow is intermixed with valley oak, black walnut (*Juglans nigra*), black willow (*Salix nigra*), arroyo willow (*Salix lasiolepis*), and an understory of stinging nettle (*Urtica dioica*), California wild grape, Himalayan blackberry, poison oak (*Toxicodendron diversilobum*), coyotebrush, and mugwort (*Artemisia* spp.).

Valley Oak Woodland

Valley oak (*Quercus lobata*) is co-dominant with 35 percent relative cover in the tree canopy along with box elder, white alder, Oregon ash, Fremont's cottonwood (*Populus fremontii*), or western sycamore (*Platanus racemosa*). This habitat type is found on valley bottoms, lower slopes, and summit valleys. Soils are alluvial or residual.

At the off-site improvement areas, this habitat type is found along Deer Creek, and is dominated by valley oak, Fremont cottonwood, Oregon ash, and box elder trees. The understory is dense with California wild grape, sandbar willow (*Salix exigua*), small Oregon ash seedlings, poison oak, and Himalayan blackberry. At the time of the survey, some shallow, turbid, flowing water was observed in Deer Creek.

Aquatic Features

The City-owned parcel includes an on-site agricultural pond and agricultural ditch (discussed in the 2019 SOIA EIR). Agriculture pond features are characterized by man-made depressions in the ground that hold ponded water. Agriculture ditches carry agricultural runoff water along with flashy, ephemeral flows of stormwater runoff from roads and adjacent uplands. The USACE has determined that this on-site pond and ditch do not constitute jurisdictional Waters of the U.S. under the CWA Section 404 (USACE 2020).

The northernmost off-site earthen agricultural ditch was dry at the time of the AECOM site visit, but saturated soils indicated recent irrigation. This ditch is approximately 6 feet deep and appears to be highly maintained; at the time of the site visit, it was almost completely devoid of vegetation except for a few clumps of Harding grass (*Phalaris aquatica*). The adjacent 0.5-acre pond consists primarily of open water, with some floating water

primrose (*Ludwigia* spp.) and duckweed (*Lemna* spp.); the edges of pond are rimmed with narrow patches of cattails (*Typha* spp.). The pond appears to be approximately 6 to 8 feet deep. Small clumps of valley oak trees and sandbar willows are scattered along the banks of this pond. A great egret (*Ardea alba*) was observed foraging in the pond. South of the pond, the drainage ditch discharges into Deer Creek at an existing outfall. At this location, Deer Creek flows underneath an access road, through a box culvert. The outfall on the west side of the box culvert appears to receive regular maintenance (i.e., mucking out).

The approximately 15-acre off-site pond provides emergent wetland habitat. The wetland area where the proposed 60-inch pipeline would connect consists of a large freshwater emergent marsh dominated by cattail and bulrush (*Shoenoplectus* sp.); vegetation on the north end is dominated by knotweed (*Persicaria* spp.), sedges (*Cyperus* spp.), and orchardgrass (*Dactylis glomerata*). The National Wetlands Inventory includes two “riverine” features that historically fed into the marsh from the north and east, but these features do not exist today. The pond functions as a stock pond for cattle and horses, and a permit to excavate fine material from the pond was issued by CDFW in 2010. Water from the south end of the pond travels through a 48-inch box culvert underneath a dirt access road, into a hand-dug ditch (circa 1900) that discharges to Deer Creek. Beaver activity (i.e., damming) was observed at the culvert inlet.

A deep, perennial, drainage ditch runs south along the southern Project site boundary, and extends off the Project site to the southeast. This ditch is approximately 3 to 5 feet deep with man-made earthen berms. Water in the off-site portion of the ditch is covered in pondweed (*Potamogeton* spp.). The edges of the ditch have patches of wetland vegetation including soft rush (*Juncus effusus*), deergrass (*Muhlenbergia rigens*), bulrush, Harding grass, nutsedge (*Cyperus eragrostis*), Dallis grass (*Paspalum dilatatum*), and cattails. Seasonal wetland is present on the south side of the berm along the ditch. The seasonal wetland is dominated by perennial pepperweed (*Lepidium latifolium*), Italian ryegrass (*Lolium multiflorum*), curly dock (*Rumex crispus*), knotweed, English plantain (*Plantago lanceolata*), and yellow star thistle (*Centaurea solstitialis*). Other species intermixed are narrowleaf milkweed (*Asclepias fascicularis*), field bindweed (*Convolvulus arvensis*), chicory (*Cichorium intybus*), and prickly lettuce (*Lactuca serriola*). Emergent trees associated with the seasonal wetland are isolated and scattered and include red willow, black willow, arroyo willow, and box elder. The drainage ditch discharges into an approximately 8-acre pond, which consists of open water. The eastern fingers of the pond consist of emergent marsh that are dominated by cattails.

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under the California Environmental Quality Act (CEQA), California Fish and Game Code, California Endangered Species Act (CESA), federal Endangered Species Act (ESA), Clean Water Act (CWA), and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

An updated list of special-status species that could potentially occur at the Project site or the off-site improvement areas (provided suitable habitat conditions were present), was developed in 2020 for this SEIR through review of available background reports; previous studies conducted in or near the Project site; an official list obtained from the USFWS Information, Planning, and Conservation System; and CNDDDB and CNPS Inventory records of previously documented occurrences of special-status species in the Elk Grove, Florin, Bruceville, Sloughhouse, Clay, Galt, Buffalo Creek, Sacramento East, Carmichael, Thornton, Lodi North, and Lockeford U.S. Geological Survey 7.5-minute quadrangles.

Special-Status Species

Special-status species include plants and animals in the following categories:

- ▶ species officially listed by the State of California or the federal government as endangered, threatened, or rare;
- ▶ candidates for State or federal listing as endangered or threatened;
- ▶ taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations Section 15380 of the CEQA Guidelines;
- ▶ species identified by the CDFW as species of special concern;
- ▶ species listed as fully protected under the California Fish and Game Code;
- ▶ species afforded protection under local or regional planning documents; and
- ▶ taxa considered by CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B.

The CDFW system includes six rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:

- ▶ CRPR 1A – Plants presumed to be extinct in California;
- ▶ CRPR 1B – Plants that are rare, threatened, or endangered in California and elsewhere;
- ▶ CRPR 2A – Plants presumed to be extinct in California, but more common elsewhere;
- ▶ CRPR 2B – Plants that are rare, threatened, or endangered in California, but more common elsewhere;
- ▶ CRPR 3 – Plants about which more information is needed (a review list); and
- ▶ CRPR 4 – Plants of limited distribution (a watch list).

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW’s CNDDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, and 2B may qualify as endangered, rare, or threatened species within the definition of CEQA Guidelines Section 15380. CDFW recommends that CRPR 1 and 2 species be addressed within the context of CEQA analyses and documentation. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Guidelines Section 15380; however, these species may be evaluated by the lead agency on a case-by-case basis to determine significance criteria under CEQA.

The term “California species of special concern” is applied by CDFW to animals not listed under the ESA or CESA, but that are nonetheless declining at a rate that could result in listing, or that historically occurred in low numbers, or have limited ranges, and known threats to their persistence currently exist. “Fully protected” was the first state classification used to identify and protect animal species that are rare or facing possible extinction. Most of these species were subsequently listed as threatened or endangered under CESA or ESA. The remaining fully protected species that are not officially listed under CESA or ESA are still legally protected under California Fish and Game Code, as described below in the “Regulatory Framework” section, and qualify as endangered, rare, or threatened species within the definition of CEQA Guidelines Section 15380.

Exhibit 3.5-2 depicts CNDDDB occurrence data within 3 miles of the Project site and the off-site improvement areas. Information regarding the status and potential to occur for special-status plants, invertebrates, fish, amphibians, reptiles, birds, and mammals in the Project area is presented in Table 3.5-1.

Sensitive Habitats

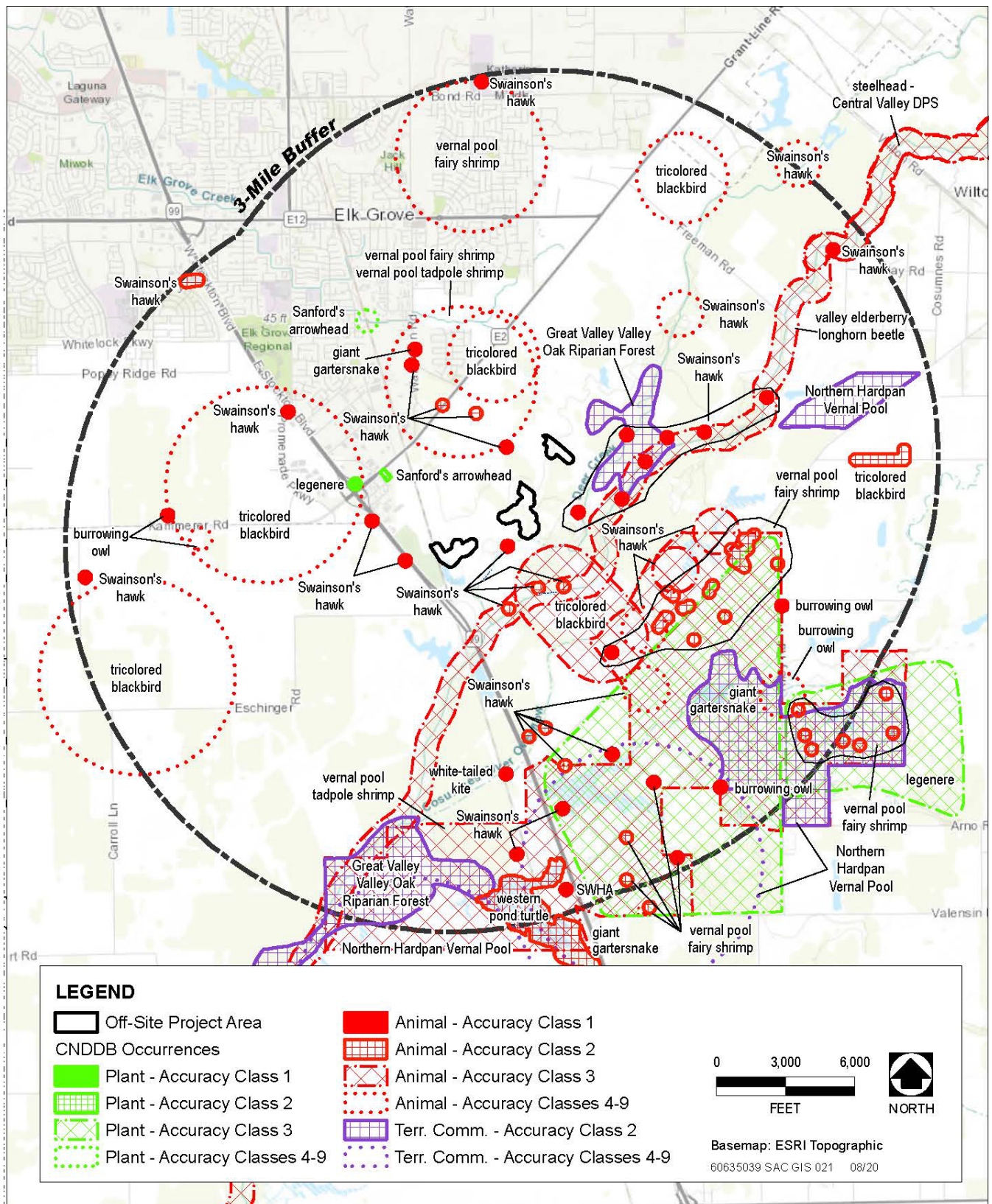
Sensitive habitats include areas of special concern to resource agencies, areas protected under CEQA, areas designated as sensitive natural communities by the CDFW, areas outlined in Section 1600 of the California Fish and Game Code, areas regulated under Section 404 of the federal CWA, and areas protected under local regulations and policies.

The irrigated pasture and croplands provide suitable foraging habitat for the State-threatened Swainson's hawk. Elk Grove Municipal Code Chapter 16.130, Swainson's Hawk Impact Mitigation Fees, provides a pathway for mitigation of impacts to Swainson's hawk habitat. This chapter of the Municipal Code requires mitigation for the loss of Swainson's hawk habitat at a 1:1 ratio. Mitigation can be achieved through the payment of a fee, which is used to fund the City's Swainson's hawk habitat restoration program. Other options for achieving mitigation through the code include the direct transfer to the City of a Swainson's hawk habitat conservation easement, along with an easement monitoring endowment or the purchase of credits at a CDFW-approved conservation bank. The site must be surveyed to determine whether it is suitable Swainson's hawk foraging habitat. The South Sacramento Habitat Conservation Plan also provides a process for mitigating for these impacts.

A vernal pool is present within 0.25 mile of the southern end of the ditch proposed for widening along the UPRR tracks and the 8-acre pond. Vernal pools are a type of seasonal wetland that form in shallow depressions underlain by an impervious or restrictive soil layer near the surface that hinders the percolation of water. These wetland types support low-growing, herbaceous plant communities dominated by annual plants, and are typically characterized by a high percentage of native plant species, many of which may be endemic (restricted) to vernal pools.

The approximately 15-acre off-site pond provides emergent wetland habitat. The wetland area where the proposed 60-inch pipeline would connect consists of a large freshwater emergent marsh. Freshwater emergent wetland is also present within the channel that conveys water from the pond to the outfall in Deer Creek. Emergent marsh is also present along the eastern fingers of the 8-acre pond. A freshwater emergent marsh is a marsh wetland that contains fresh water, and is continuously or frequently flooded. Freshwater emergent marshes primarily consist of emergent plants, which have soft stems and are highly adapted to live in saturated soils. In the off-site improvement areas, the dominant emergent plant is cattails.

Finally, seasonal wetland habitat is present on the southwest side of the irrigation ditch adjacent to the UPRR tracks that is proposed for widening and deepening. Seasonal wetlands support annual and perennial native and nonnative wetland plant species. This habitat type typically resembles a wetland community during the wet season and for a few weeks following the end of the wet season, drying up rapidly with the onset of summer. Seasonal wetlands form in seasonally flooded or saturated soils in depressions in ruderal or grassland areas, at the edges of creeks and ponds, and in ditches and canals.



Source: CNDDB June 2020

Exhibit 3.5-2. CNDDB Occurrence Data within 1 mile of the Project Site and Off-site Improvement Areas

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Plants						
<i>Amsinckia grandiflora</i>	large-flowered fiddleneck	FE	SE	1B.1	Blooming period: (Mar)Apr–May. Inhabits cismontane woodlands and valley and foothill grassland. Elev: 900–1,800 ft.	No potential. Project site is below species' elevation range.
<i>Arctostaphylos myrtifolia</i>	Ione manzanita	FT	—	1B.2	Blooming Period: Nov–Mar. Inhabits acidic, Ione soil, clay or sandy soil. Chaparral, Cismontane woodlands. Elev: 200–1,800 ft.	No potential. Suitable habitat (chaparral, cismontane woodland) not present. Project site is below species' elevation range.
<i>Brasenia schreberi</i>	Watershield	—	—	2B.3	Blooming Period: June–September Freshwater marshes and swamps. Elev: 98–7,218 ft.	Not likely to occur. Project site is below species' elevation range.
<i>Calystegia stebbinsii</i>	Stebbins' morning-glory	FE	SE	1B.1	Blooming Period: Apr–Jul. Inhabits gabbroic or serpentinite soils within chaparral openings and cismontane woodland. Elev: 600–3,200 ft.	No potential. Suitable habitat (chaparral, cismontane woodland) not present. Project site is below species' elevation range.
<i>Carex comosa</i>	Bristly sedge	—	—	2B.1	Blooming Period: May–September Coastal prairies, valley and foothill grasslands, as well as marshes, swamps and lake margins. Elev: 0– 2,051 feet.	Could occur in freshwater marsh habitat in ponds.
<i>Castilleja campestris</i> ssp. <i>succulenta</i>	Succulent owl's-clover	FT	SE	1B.1	Blooming Period: April–May Acidic vernal pools. Elev: 80 to 2,500 ft.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
<i>Ceanothus roderickii</i>	Pine Hill Ceanothus	FE	—	1B.1	Blooming Period: Apr–Jun. Inhabits serpentinite or gabbroic soils within chaparral and cismontane woodland. Elev: 750–3,200 ft.	No potential. Suitable habitat (chaparral, cismontane woodland) not present. Project site is below species' elevation range.
<i>Chloropyron molle</i> ssp. <i>molle</i>	soft bird's-beak	FE	—	1B.2	Blooming Period: Jun–Nov Marshes and swamps (coastal salt). Elev: 0–10 ft.	Could occur in freshwater marsh habitat in ponds.
<i>Cicuta maculata</i> var. <i>bolanderi</i>	Bolander's water-hemlock	—	—	2B.1	Blooming Period: July–September Coastal, fresh, or brackish marshes and swamps. Elev: 0–656 ft.	Could occur in freshwater marsh habitat in ponds.
<i>Cordylanthus palmatus</i>	Palmate-bracted bird's beak	FE	SE	1B.1	Blooming Period: May–Oct. Inhabits alkaline soils within chenopod scrub and valley and foothill grassland. Elev: 15-500 ft.	Could occur, but only if there are alkaline soils in the Project area.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
<i>Cuscuta obtusifloravar. glandulosa</i>	Peruvian dodder	—	—	2B.2	Blooming Period: July–October Freshwater marshes and swamps. Elev: 49–919 ft.	Could occur in freshwater marsh habitat in ponds.
<i>Downingia pusilla</i>	Dwarf downingia	—	—	2B.2	Blooming Period: March–May Vernal pools and mesic valley and foothill grasslands. Elev: 3–1,459 ft.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
<i>Eriogonum apricum var. prostratum</i>	Irish Hill buckwheat	FE	SE	1B.1	Blooming period: Jun-Jul Inhabits chaparral openings, Ione soil. Elev: 200–400 ft.	No potential. Suitable habitat (chaparral, Ione soils) not present. Project site is below species' elevation range.
<i>Erysimum capitatum var. angustatum</i>	Contra Costa wallflower	FE	SE	1B.1	Blooming Period: Mar-Jul. Inhabits inland dunes, known only in Antioch Dunes. Elev: 10–100 ft.	No potential. Suitable habitat (inland dunes) not present.
<i>Fremontodendron decumbens</i>	Pine Hill flannelbush	FE	—	1B.2	Blooming Period: Apr-Jul Inhabits gabbroic or serpentinite, rocky soils. Chaparral, cismontane woodland. Elev: 1300–2400 ft.	No potential. Suitable habitat (gabbro or serpentine soils) not present. Project site is below species' elevation range.
<i>Galium californicum ssp. sierrae</i>	El Dorado bedstraw	FE	—	1B.2	Blooming Period: May-Jun Inhabits gabbroic, chaparral, cismontane woodland, lower montane coniferous forest. Elev: 300–1,800 ft.	No potential. Suitable habitat (gabbro soils) not present. Project site is below species' elevation range.
<i>Gratiola heterosepala</i>	Boggs Lake hedge- hyssop	—	SE	1B.2	Blooming Period: April–August Clay soils in marshes, swamps, lake margins, and vernal pools. Elev: 33–7,792 ft (10–2,375 m).	Could occur, but only if there are clay soils in the Project area.
<i>Hibiscus lasiocarpus var. occidentalis</i>	Woolly rose-mallow	—	—	1B.2	Blooming Period: June–September Moist, freshwater-soaked river banks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed (CDFW 2015c). Elev: 0–394 ft.	No potential. Suitable habitat (sloughs, river banks, riprap levees) not present.
<i>Juncus leiospermus var. ahartii</i>	Ahart's dwarf rush	—	—	1B.2	Blooming Period: March–May Mesic valley and foothill grasslands. Vernal pool margins and wet chaparral or woodland. Elev: 98–751 ft.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
<i>Lasthenia conjugens</i>	Contra costa goldfields	FE		1B.1	Blooming period: Mar-Jun. Habitat is often mesic, cismontane woodland, playas (alkaline), valley and foothill grassland, and vernal pools. Elev: 0–1500 ft.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea	—	—	1B.2	Blooming Period: May–September Usually on marsh and slough edges .Freshwater and brackish marshes and swamps. Elev: 0–13 ft.	Not likely to occur. Project site is above species’ range. All CNDDDB records occur in marshes and sloughs in the Delta (CDFW 2020).
<i>Legenere limosa</i>	Legenere	—	—	1B.1	Blooming Period: April–June Vernal pools and ditches. Elev: 3–2,887 ft.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
<i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard’s pepper-grass	—	—	1B.2	Blooming Period: March–May Alkaline flats in valley and foothill grasslands. Elev: 7–656 ft.	No potential to occur. Suitable habitat not present. No alkaline flats or alkali lake beds occur on-site.
<i>Lilaeopsis masonii</i>	Mason’s lilaeopsis	—	SR	1B.1	Blooming Period: April– November Tidal zones, in muddy or silty soil formed through river deposition or riverbank erosion. Riparian scrub, and brackish or freshwater marshes and swamps. Elev: 3–30 ft.	Not likely to occur. Project site outside of species’ range. All CNDDDB records occur in marshes and sloughs in the Delta.
<i>Limosella australis</i>	Delta mudwort	—	—	2B.1	Blooming Period: May–August Usually mud banks in riparian scrub, and freshwater or brackish marshes and swamps. Elev: 0–10 ft.	Could occur in freshwater marsh habitat in ponds.
<i>Neostapfia colusana</i>	Colusa grass	FT	SE	1B.1	Blooming Period: May-August. Found growing in single-species stands in alkaline basins of Sacramento and San Joaquin valleys. Elev: 15–600 ft.	Could occur, but only if there are alkaline soils in the Project area.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
<i>Oenothera deltooides</i> ssp. <i>howellii</i>	Antioch Dunes evening-primrose	FE	SE	1B.1	Blooming Period: Mar–Sep. Antioch Dunes evening-primrose grows in mostly pure sand, but unlike other species, it will only re-establish in areas that contain new sand. The only naturally-occurring populations of Antioch Dunes evening-primrose are in the Antioch Dunes National Wildlife Refuge, which has been designated as Critical Habitat for Antioch Dunes evening-primrose by the U.S. Fish and Wildlife Service. Elev: 0–75 ft.	No potential. Outside of species' current range. Suitable habitat (pure sand) not present.
<i>Orcuttia tenuis</i>	Slender Orcutt grass	FT	SE	1B.1	Blooming Period: May–October Vernal pools. Elev: 115–5,774 ft.	Not likely to occur. Project area is below elevation range of this species.
<i>Orcuttia viscida</i>	Sacramento Orcutt grass	FE	SE	1B.1	Blooming Period: April–September Vernal pools. Elev: 98–328 ft.	Not likely to occur. Project area is below elevation range of this species.
<i>Senecio layneae</i>	Layne's ragwort	FT	—	1B.2	Blooming period: Apr–Aug. Inhabits serpentinite or gabbroic, rocky soils in chaparral, and cismontane woodlands. Elev: 600–3,200 ft.	Not likely to occur. Project area is below elevation range of this species.
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	—	—	1B.2	Blooming Period: May–October In standing or slow- moving freshwater ponds, marshes, swamps, and ditches (CDFW 2015c [from 2019 SOIA EIR]). Elev: 0–2,133 ft.	Could occur in freshwater marsh and ditch habitats in ponds.
<i>Scutellaria galericulata</i>	Marsh skullcap	—	—	2B.2	Blooming Period: June–September Lower montane coniferous forest, meadows, seeps, marshes, and swamps. Elev: 0–6,890 ft (0–2,100m).	Could occur in freshwater marsh habitats in ponds.
<i>Scutellaria laterifolia</i>	Side-flowering skullcap	—	—	2B.2	Blooming Period: July–September Marshes, swamps, mesic meadows and seeps. Elev: 0–1,640 ft (0–500 m).	Could occur in freshwater marsh habitats in ponds.
<i>Symphyotrichum lentum</i>	Suisun Marsh aster	—	—	1B.2	Blooming Period: May–November Brackish and freshwater marshes and swamps. Elev: 0–10 ft. (0–3 m.)	Could occur in freshwater marsh habitats in ponds.
<i>Trifolium hydrophilum</i>	Saline clover	—	—	1B.2	Blooming Period: April– June Marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools. Elev: 0–984 ft (0–300 m).	Could occur in freshwater marsh habitats in ponds.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
Invertebrates						
<i>Apodemia mormo langei</i>	Lange's Metalmark Butterfly	FE	SE		Only occur within Antioch dunes, lay eggs on a subspecies of naked buckwheat.	No potential to occur. Project is outside of species' range.
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	FT	—		Found in vernal pools and ephemeral wetlands. Distributed throughout the Central Valley, including Sacramento County (USFWS 2005).	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	FE	SE		Inhabits rather large, cool-water vernal pools with moderately turbid water. The pools generally last until June. However, the shrimp are gone long before then. They have been collected from early November to early April.	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
<i>Callophrys mossii bayensis</i>	San Bruno Elfin Butterfly	FE	--		Inhabits rocky outcrops and cliffs in coastal scrub on the San Francisco. Host plant is exclusively broadleaf stonecrop.	No potential to occur. Project is outside of species' range.
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	FT	—		Dependent on hostplant, elderberry (<i>Sambucus</i> sp.), which generally grows in riparian woodlands and upland habitats of the Central Valley.	Could Occur. Several elderberry shrubs in the off-site improvement areas near the Cypress Abbey property at the toe of railroad ballast.
<i>Elaphrus viridis</i>	Delta Green Ground Beetle	FT	--		Associated with vernal pool habitats, seasonally wet pools that accumulate in low areas with poor drainage, which occur throughout the Central Valley.	Not likely to occur. The delta green ground beetle has only been found in the greater Jepson Prairie area in south-central Solano County, California.
<i>Lepidurus packardi</i>	Vernal pool tadpole shrimp	FE	—		Wide variety of ephemeral wetland habitats, including vernal pools. Distributed throughout Central Valley and San Francisco Bay area (USFWS 2005).	Could occur in the off-site improvement areas in vernal pools within 200 feet of off-site drainage area in Cypress Abbey property.
Fish						
<i>Hypomesus transpacificus</i>	Delta smelt	FT	SE		Distribution includes the Sacramento River below Isleton, San Joaquin River below Mossdale, and Suisun Bay. Spawning areas include the Sacramento River below Sacramento, Mokelumne River system, Cache Slough, the delta, and Montezuma Slough.	No potential. Suitable habitat is not present.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
<i>Lampetra ayresii</i>	River lamprey	—	SSC		Adults require clean, gravelly riffles in permanent streams for spawning, while the ammocoetes require sandy backwaters or stream edges in which to bury themselves, where water quality is continuously high and temperatures do not exceed 25°C.	No potential. Suitable habitat is not present.
<i>Mylopharodon conocephalus</i>	Hardhead	—	SSC		Small to large streams in a low to mid-elevation environment. May also inhabit lakes or reservoirs. Their preferred stream temperature might easily exceed 20°C, though these fish do not favor low dissolved oxygen levels. The hardhead minnow is usually found in clear deep streams with a slow but present flow.	No potential. Suitable habitat is not present.
<i>Oncorhynchus mykiss irideus</i>	Central Valley steelhead	FT	—		Spawning habitat = gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non-spawning = estuarine, marine waters.	No potential. Suitable habitat is not present.
<i>Oncorhynchus tshawytscha</i>	Central Valley spring-run chinook salmon	FT	ST		Spawning habitat = fast moving, freshwater streams and rivers. Juvenile habitat = brackish estuaries. Non-spawning = marine waters.	No potential. Suitable habitat is not present.
<i>Oncorhynchus tshawytscha</i>	winter-run chinook salmon, Sacramento River	FE	SE			No potential. Suitable habitat is not present.
<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	—	SSC		Prefer slow-moving sections of freshwater rivers and sloughs. Most abundant in Suisun Bay and Marsh region. Largely absent from Sacramento River except during spawning.	No potential. Suitable habitat is not present.
<i>Spirinchus thaleichthys</i>	Longfin smelt	FC	ST/SSC		Adults and juveniles require salt or brackish estuary waters. Spawning takes place in freshwater over sandy-gravel substrates, rocks, and aquatic plants.	No potential. Suitable habitat is not present.
Amphibians						
<i>Ambystoma californiense</i>	California tiger salamander, central population	FT	ST		Occurs in grasslands of the Central Valley and oak savannah communities in the Central Valley, the Sierra Nevada and Coast ranges, and the San Francisco Bay Area. Needs seasonal or semi-permanent wetlands to reproduce, and terrestrial habitat with active ground squirrel or gopher burrows.	Not likely to occur. Project area is north of the Cosumnes River. There are no known occurrences north of the Cosumnes River (CDFW 2020).

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
<i>Rana boylei</i>	Foothill yellow-legged frog	—	SSC		Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools.	Not likely to occur. Suitable habitat (rocky streams or spring-fed pools) not present.
<i>Rana draytonii</i>	California red-legged frog	FT	SSC		Found mainly near ponds in humid forests, woodlands, grasslands, coastal scrub, and streambanks with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams. Breeding habitat is in permanent or ephemeral water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry. Occurs along the Coast Ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges.	No potential to occur. The Project site is outside the species' range, which is not known to inhabit the Central Valley.
<i>Spea hammondi</i>	Western spadefoot toad	—	SSC		Open areas with sandy/gravelly soils. Variable habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rainpools which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	Not likely to occur. Nearest records of the species are from eastern Sacramento County.
Reptiles						
<i>Emys marmorata</i>	Western pond turtle	—	SSC		Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater.	Could occur in ponds.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
<i>Thamnophis gigas</i>	Giant garter snake	FT	ST		Marshes, sloughs, ponds, small lakes, low gradient streams, irrigation and drainage canals, rice fields and their associated uplands. Upland habitat should have burrows or other soil crevices suitable for snakes to reside during their dormancy period (November–mid March). Ranges in the Central Valley from Butte County to Buena Vista Lake in Kern County.	Could occur in Deer Creek.
Birds						
<i>Agelaius tricolor</i>	Tricolored blackbird	—	SE		Nests in wetlands or in dense vegetation near open water. Dominant nesting substrates: cattails, bulrushes, blackberry, agricultural silage. Nesting substrate must either be flooded, spinous, or in some way defended against predators (Hamilton 2004).	Could occur. Suitable nesting and foraging habitat is present in blackberry that is located in ditches and agriculture fields.
<i>Aquila chrysaetos</i>	Golden eagle	—	FP		Uncommon resident and migrant throughout California, except center of Central Valley. Habitat typically rolling foothills, mountain areas, sage-juniper flats, desert.	Not likely to occur. Suitable habitat is not present.
<i>Ammodramus savannarum</i>	Grasshopper sparrow	—	SSC		In the foothills and lowlands west of the Cascades/Sierras. Dry, dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches.	Not likely to occur. Suitable habitat is not present. History of disturbance at the site precludes this species from existing here.
<i>Athene cunicularia</i>	Burrowing owl	—	SSC		Open, flat expanses with short, sparse vegetation and few shrubs, level to gentle topography and well drained soils. Requires underground burrows or cavities for nesting and roosting. Can use rock cavities, debris piles, pipes, and culverts if burrows unavailable. Habitats include grassland, shrub steppe, desert, agricultural land, vacant lots and pastures.	Could occur. Suitable habitat is present. Species not previously documented on-site; however, presence of suitable habitat results in potential for future colonization.
<i>Buteo swainsoni</i>	Swainson's hawk	—	ST		Nests in stands with few trees in riparian areas, juniper-sage flats, and oak savannah in the Central Valley. Forages in adjacent grasslands, agricultural fields and pastures.	Could occur. Suitable foraging and nesting habitat is present.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
<i>Charadrius montanus</i>	Mountain plover	—	SSC		Found on short grasslands and plowed fields of the Central Valley from Sutter and Yuba counties southward. Also found in foothill valleys. Avoids high and dense cover. Often roosts in depressions such as ungulate hoof prints and plow furrows.	Could occur. Suitable foraging habitat is present.
<i>Charadrius nivosus</i>	Western snowy plover	FT	ST		Southern Washington to Baja California. Breeds on coastal beaches, dunes, salt spits, lagoons, estuaries, above high tide line.	Not likely to occur. Suitable habitat is not present.
<i>Chaetura vauxi</i>	Vaux's swift	—	SSC		Prefers redwood and Douglas fir habitats with nest sites in large hollow trees and snags, especially tall, burnt-out stubs.	Suitable habitat is not present. There are no Douglas fir or redwood trees or any large stands of trees in the off-site improvement areas.
<i>Circus cyaneus</i>	Northern harrier	—	SSC		Nests on the ground in patches of dense, tall vegetation in undisturbed areas. Breeds and forages in variety of open habitats such as marshes, wet meadows, weedy borders of lakes, rivers and streams, grasslands, pastures, croplands, sagebrush flats and desert sinks. (Shuford and Gardali 2008 [from 2019 SOIA EIR]).	Could occur. Suitable foraging habitat is present. Nesting habitat is not present due to highly disturbed nature of site.
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	FT	SE		Nests in riparian forest along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Not likely to occur. Project site is outside of the species' current nesting range, which is restricted to larger river systems.
<i>Elanus leucurus</i>	White-tailed kite	—	FP		Typically nest in the upper third of trees that may be 10–160 feet (33– 525 m) tall. These can be open-country trees growing in isolation, or at the edge of or within a forest.	Could occur. Suitable foraging and nesting habitats are present.
<i>Grus canadensis canadensis</i>	Lesser sandhill crane	—	SSC		In summer, occurs in and near wet meadow, shallow lacustrine, and fresh emergent wetland habitats. In winter, frequents moist croplands with rice or corn stubble and open, emergent	Could occur. No roosting habitat is present; however, the off-site improvement areas provides suitable foraging habitat.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
<i>Grus canadensis tabida</i>	Greater sandhill crane	—	ST/FP		wetlands. Prefers treeless plains. Nests in remote portions of extensive wetlands or sometimes shortgrass prairies.	Could occur. No roosting habitat is present; however, the off-site improvement areas provides non-high value foraging Habitat as identified in the SSHCP (County of Sacramento et al. 2018). The draft SSHCP identified the average distance from roost site and foraging sites ranges from 0.88 acres to 1.74 acres. Known roost sites are 2 miles from the off-site improvement areas.
<i>Haliaeetus leucocephalus</i>	Bald eagle	D	E		Nests in large, old- growth, or dominant live tree with open branchwork, especially ponderosa pine. Requires large bodies of water or rivers with abundant fish, and adjacent snags.	Not likely to occur. Suitable habitat is not present on-site. There are no large water bodies nearby or suitable nest spots.
<i>Ixobrychus exilis</i>	Least bittern	—	SSC		Large, freshwater wetlands with dense emergent vegetation.	Could occur in large ponds on Mahon Ranch and Cypress Abbey properties with dense emergent vegetation.
<i>Lanius ludovicianus</i>	Loggerhead shrike	—	SSC		Breeds in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground (Shuford and Gardali 2008 [from 2019 SOIA EIR]).	Could occur. Suitable foraging habitat is present. Nesting habitat is not present due to highly disturbed nature of site.
<i>Laterallus jamaicensis coturniculus</i>	California black rail	—	ST/FP		Yearlong resident of saline, brackish, and fresh emergent wetlands in the San Francisco Bay area, Sacramento-San Joaquin Delta, coastal southern California at Morro Bay and a few other locations, the Salton Sea, and lower Colorado River area (CDFW 2020).	Not likely to occur, the project site is outside of the species' known range.
<i>Melospiza melodia</i>	Song sparrow ("Modesto" population)	—	SSC		Breeds and winters in riparian, fresh or saline emergent wetland, and wet meadows. Breeds in riparian thickets of willows, other shrubs, vines, tall herbs, and fresh or saline emergent vegetation.	Could occur in emergent marsh, riparian, or pond habitats.
<i>Progne subis</i>	Purple martin	—	SSC		Numerous suitable nest cavities, open air space above nest sites, and aerial insect prey (Shuford and Gardali 2008 [from 2019 SOIA EIR]).	Not likely to occur; suitable nesting habitat is not present in the off-site improvement areas.

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
<i>Rallus longirostris obsoletus</i>	California Clapper Rail	FE	SE		Limited to saltwater and brackish marshes bordering the San Francisco bay area. Required dense groundcover, especially pickleweed and cordgrass.	No potential to occur. Suitable habitat not present, project is not within established range.
<i>Riparia riparia</i>	Bank swallow	—	ST		Riparian areas with sandy, vertical bluffs or riverbanks. Also nest in earthen banks and bluffs, as well as sand and gravel pits.	No potential to occur. Suitable habitat is not present. There are no sandy vertical banks present in off-site improvement areas.
<i>Setophaga occidentalis</i>	Yellow warbler	—	SSC		Riparian vegetation along streams and in wet meadows. Willow cover and Oregon ash important predictors of abundance in northern California pits.	Could occur in riparian vegetation in the off-site improvement areas.
<i>Sternula antillarum browni</i>	California least tern	FE	SE/FP		Nests and roosts in colonies on open beaches, forage near shore ocean waters and in shallow estuaries and lagoons.	Not likely to occur. Suitable habitat is not present. The off-site improvement areas are not near estuary or ocean waters.
<i>Vireo bellii pusillus</i>	Least bell's vireo	FE	SE		Central valley, southern California and Northern Mexico. Lowland riparian habitat.	Could occur in riparian habitat in the off-site improvement areas.
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed blackbird	—	SSC		Nest in marshes with tall, emergent vegetation (e.g., tules and cattails) adjacent to deepwater (Shuford and Gardali 2008 [from 2019 SOIA EIR]).	Could occur in ponds and deep ditches with emergent vegetation in the off-site improvement areas.
Mammals						
<i>Lasiurus blossevillii</i>	Western red bat	—	SSC		Roosting habitat includes forests and woodlands, often in edge habitats adjacent to streams, fields, or urban areas.	Could occur. Suitable foraging habitat is present. Potential roosting habitat is present in large valley oaks present in off-site improvement areas.
<i>Reithrodontomys raviventris</i>	Salt Marsh Harvest Mouse	FE	SE		Limited to saltwater and brackish marshes bordering the San Francisco bay area. Required dense groundcover, especially pickleweed.	No potential to occur. Suitable habitat not present. Project site is outside species known range.
<i>Sylvilagus bachmani riparius</i>	Riparian bush rabbit	FE	SE		Inhabit riparian oak forests with a dense understory of wild roses, grapes and blackberries. Only two populations occur, one at Caswell State Park and one at the Faith Ranch (USFWS 2017a).	No potential to occur. The Project site is outside the species' range (USFWS 2017a).

Table 3.5-1. Special-Status Species in the Project Area						
Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Potential to Occur in Off-site Improvement Areas
<i>Taxidea taxus</i>	American badger	—	SSC		Open shrub, forest and herbaceous habitats with friable soils. Associated with treeless regions, prairies, park lands and cold desert areas. Range includes most of California, except the North Coast.	Could occur. Suitable habitat is present.
Notes: USFWS = United States Fish and Wildlife Service; CDFW = California Department of Fish and Wildlife; CRPR = California Rare Plant Rank; CNDDDB = California Natural Diversity Database; ESA = federal Endangered Species Act; CESA = California Endangered Species Act; I-5 = Interstate 5						
Legal Status Definitions						
USFWS:						
E = Endangered			CRPR:			
T = Threatened			1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)			
D = Delisted			2 Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)			
CDFW:						
E = Endangered			CRPR Extensions:			
T = Threatened			.1 Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat)			
CE = Candidate Endangered			.2 Fairly endangered in California (20 to 80% of occurrences are threatened)			
P = Protected						
SSC = State Species of Special Concern						
Potential for Occurrence Definitions:						
Unlikely to occur: Species is unlikely to be present due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.						
Could occur: Suitable habitat is available in the Project site or off-site improvement areas; however, there are little to no other indicators that the species might be present.						
Known to occur: The species, or evidence of its presence, was observed in the Project site or off-site improvement areas during reconnaissance surveys, or was reported by others.						
Sources: CNDDDB 2020, CNPS 2020						

Waters of the United States and Waters of the State

Jurisdictional waters of the United States and isolated wetlands provide a variety of functions for plants and wildlife. Wetlands and other water features provide habitat, foraging, cover, migration, and movement corridors for both special-status and common species. In addition to habitat functions, these features provide physical conveyance of surface water flows capable of handling large stormwater events. Large storms can produce extreme flows that cause bank cutting and sedimentation of open waters and streams. Jurisdictional waters can slow these flows and lessen the effects of these large storm events, protecting habitat and other resources.

As discussed in the 2019 SOIA EIR, a wetland delineation was conducted for the City-owned parcel, and it was determined that the approximately 1.19 acres of pond and agricultural ditch were not jurisdictional since the water therein is sustained only through groundwater pumping. The USACE has determined that this on-site pond and ditch do not constitute jurisdictional Waters of the U.S. under the CWA Section 404 (USACE 2020).

The off-site improvement areas consist of several agricultural ditches, along with three ponds. All of these features are associated with active, ongoing agricultural operations including crop irrigation and stock watering. The water in these features is obtained from groundwater pumping. However, a wetland delineation has not been performed, and one or more of these features could be found to be a jurisdictional wetland. Furthermore, the off-site 8-acre and 15-acre ponds support freshwater emergent marsh and vernal pools. Deer Creek is a jurisdictional water of the United States.

3.5.2 REGULATORY FRAMEWORK

CITY OF ELK GROVE GENERAL PLAN

The City General Plan (City of Elk Grove 2019), contains the following policies related to biological resources that are applicable to the proposed Project.

Natural Resources Element

- ▶ **Policy NR-1-2:** Preserve and enhance natural areas that serve, or may potentially serve, as habitat for special-status species. Where preservation is not possible, require that appropriate mitigation be included in the project.
 - **NR-1-2a.** Require a biological resources evaluation for private and public development projects in areas identified to contain or possibly contain special-status plant and animal species.
 - **NR-1-2b.** Develop a Noxious Weed Ordinance that includes regulatory standards for construction activities that occur adjacent to natural areas to inhibit the establishment of noxious weeds through accidental seed import.
 - **NR-1-2c.** Require development projects to retain movement corridor(s) adequate (both in size and in habitat quality) to allow for the continued wildlife use based on the species anticipated in the corridor.
- ▶ **Policy NR-1-3:** Support the establishment of multipurpose open space areas to address a variety of needs, including but not limited to maintenance of agricultural uses, wildlife habitat, recreational open space, aesthetic benefits, and flood control. To the extent possible, lands protected in accordance with this policy

should be in proximity to Elk Grove to facilitate use of these areas by Elk Grove residents, assist in mitigation of habitat loss within the City, and provide an open space resource close to the urbanized areas of Elk Grove.

- ▶ **Policy NR-1-4:** Avoid impacts to wetlands, vernal pools, marshland, and riparian (streamside) areas unless shown to be technically infeasible. Ensure that no net loss of wetland areas occurs, which may be accomplished by avoidance, revegetation, restoration on-site or through creation of riparian habitat corridors, or purchase of credits from a qualified mitigation bank.
- ▶ **Policy NR-1-5:** Recognize the value of naturally vegetated stream corridors, commensurate with flood control and public desire for open space, to assist in removal of pollutants, provide native and endangered species habitat, and provide community amenities.
- ▶ **Policy NR-1-6:** Encourage the retention of natural stream corridors, and the creation of natural stream channels where improvements to drainage capacity are required.
- ▶ **Policy NR-1-7:** Consider the adoption of habitat conservation plans for rare, threatened, or endangered species.
- ▶ **Policy NR-2-1:** Preserve large native oak and other native tree species as well as large nonnative tree species that are an important part of the City's historic and aesthetic character.
- ▶ **Policy NR-2-2:** Maximize and maintain tree coverage on public lands and in open spaces.
- ▶ **Policy NR-2-3:** Ensure that trees that function as an important part of the City's or a neighborhood's aesthetic character or as natural habitat on public and private land are retained or replaced to the extent possible during the development of new structures, roadways (public and private, including roadway widening), parks, drainage channels, and other uses and structures.

Land Use Element

- ▶ **Policy LU-3-22:** Identify a mitigation program for critical habitat for special status species known to occur within the Study Areas. A proposed project determined to have a significant impact to habitat for special-status species shall implement all feasible mitigation measures established in the program, including but not limited to land dedication (which may be located either inside or outside the corresponding Study Area) or fee payment, or both.

3.5.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to biological resources if it would:

- ▶ have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;

- ▶ have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW;
- ▶ have a substantial adverse effect on federally protected waters of the United States, including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- ▶ interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- ▶ conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- ▶ conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan; or
- ▶ substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

IMPACT ANALYSIS

Impact 3.5-1: Loss of Habitat for Special-Status Plant Species.

As presented in Table 3.5-1, the off-site drainage improvements areas contain habitat that is suitable for 17 different species of special-status plants. Furthermore, as discussed in the 2019 SOIA EIR, surveys of the City-owned parcel found marginal habitat for Sanford’s arrowhead in the on-site agricultural pond and ditches. Therefore, a variety of special-status plant species may be adversely affected by Project-related activities both on- and off-site. Loss of special-status plants is considered a **potentially significant** impact.

Mitigation Measure 3.5-1a: Minimize the Temporary Off-Site Construction Impact Footprint.

- During final project design and siting, minimize the temporary project footprint to the areas necessary for construction, and select locations that are already disturbed or developed to the greatest extent feasible.
- Avoid known occurrences of all special-status species, wetlands, riparian habitat, and sensitive natural communities to the greatest extent feasible.
- Minimize grading to the greatest extent feasible to avoid clearing of trees and shrubs.

Mitigation Measure 3.5-1b: Conduct Special-status Plant Surveys; Implement Compensatory Mitigation for Special-status Plants (2019 SOIA EIR Mitigation Measure 3.5-1).

Before any vegetation removal or ground-disturbing activities, both on- and off-site, the following measures shall be implemented to mitigate the potential loss of special-status plants:

- Participate in the South Sacramento Habitat Conservation Plan through payment of the appropriate SSHCP Fee and/or dedication of land meeting SSCHP criteria and compliance with relevant

Avoidance and Minimization Measures as detailed in the City's Memorandum of Agreement with the South Sacramento Conservation Agency for Becoming a Participating Special Entity in the South Sacramento Habitat Conservation Plan; OR

- Retain a qualified botanist to conduct protocol-level preconstruction special-status plant surveys for potentially occurring species following the CDFW rare plant survey protocols (CDFW 2018) (or the most recent CDFW rare plant survey protocols). All plant species encountered shall be identified to the taxonomic level necessary to determine species status. The surveys shall be conducted no more than 5 years prior and no later than the blooming period immediately preceding the approval of a grading or improvement plan or any ground disturbing activities, including grubbing or clearing.
- Notify CDFW, as required by the California Native Plant Protection Act, if any special-status plants are found. Notify USFWS if any plant species listed under the ESA are found.
- Develop a mitigation and monitoring plan to compensate for the loss of special-status plant species found during preconstruction surveys, if any. The mitigation and monitoring plan shall be submitted to CDFW or USFWS, as appropriate depending on species status, for review and comment. The City shall consult with these entities, as appropriate, depending on species status, before approval of the plan to determine the appropriate mitigation measures for impacts on any special-status plant population. Mitigation measures may include preserving and enhancing existing on-site populations, creation of off-site populations on project mitigation sites through seed collection or transplantation, and/or preserving occupied habitat off-site in sufficient quantities to offset loss of occupied habitat or individuals.
- If transplantation is part of the mitigation plan, include the following elements in the plan: a description and map of mitigation sites; details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, and monitoring and reporting requirements; remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements; and sources of funding to purchase, manage, and preserve the sites. The following performance standards shall be applied:
 - The extent of occupied area and the flower density in compensatory reestablished populations shall be equal to or greater than the affected occupied habitat and shall be self-producing.
 - Reestablished populations shall be considered self-producing when:
 - plants reestablish annually for a minimum of 5 years with no human intervention, such as supplemental seeding; and
 - reestablished habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types.
- If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement

holders, long-term management requirements, and other details, as appropriate, to target the preservation of long-term, viable populations.

Mitigation Measure 3.5-1c: Implement an Off-Site Revegetation and Weed Control Plan.

To control invasive/noxious weeds, particularly in the off-site improvement areas, implement the following actions to avoid and minimize the spread or introduction of invasive plant species:

- Clean construction equipment and vehicles in a designated wash area prior to entering and exiting the construction site.
- Educate construction supervisors and managers about invasive plant identification and the importance of controlling and preventing the spread of invasive plant infestations.
- Treat small, isolated infestations with eradication methods that have been approved by or developed in conjunction with CDFW and USFWS to prevent or destroy viable plant parts or seeds.
- Minimize surface disturbance to the greatest extent feasible to complete the work.
- Use native, noninvasive species or nonpersistent hybrids in erosion-control plantings to stabilize site conditions and prevent invasive plant species from colonizing.
- Use weed-free imported erosion-control materials (or rice straw) in upland areas.
- One year after construction, conduct a monitoring visit to each active or previously active (within 1 year) improvement footprint to ensure that no new occurrences of invasive plant species have become established.

Reclaim all areas disturbed by project construction, including temporary disturbance areas around construction sites, laydown/staging areas, and temporary access roads, using a locally sourced native and naturalized seed mix in ruderal and natural areas; or reclaim to the pre-existing agricultural condition, if temporary impacts occur in agricultural lands. A qualified biologist with demonstrated experience with the habitat to be restored shall have oversight for the selection of reclamation species.

Implement Mitigation Measure 3.4 1a (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).

Significance after Mitigation

The drainage ditches that require improvement would be maintained by the City under a dedicated easement. Implementation of Mitigation Measures 3.5-1a through 3.5-1c, and 3.4-1a would reduce impacts on potentially-occurring special-status plant species because project applicants would be required to minimize the off-site disturbance areas; identify special-status plants through site-specific protocol-level surveys; implement appropriate avoidance, minimization, and mitigation measures; implement a revegetation and weed control plan; and implement fugitive dust controls. Therefore, as with the 2019 SOIA EIR, this impact would be **less than significant with mitigation**.

Impact 3.5-2: Adverse Effects on Valley Elderberry Longhorn Beetle Habitat.

The valley elderberry longhorn beetle (VELB) is an insect endemic to the Central Valley of California that inhabits riparian and associated upland habitats where elderberry (*Sambucus mexicana* or *Sambucus racemosa* var. *microbotrys*), its host plant, grows. VELB habitat consists of riparian forests whose dominant plant species include cottonwood, sycamore, valley oak, and willow, with an understory of elderberry shrubs (USFWS 1999). Blue elderberry shrubs in the Central Valley with basal stem diameters larger than 1 inch are considered by the USFWS as potential VELB habitat.

There are several records of VELB within a 3-mile radius of the off-site improvement areas, as shown on Exhibit 3.5-2 (CNDDDB 2020). Blue elderberry shrub habitat forms a narrow row of densely growing, large elderberry shrubs along the base of railroad ballast along the south side of the off-site ditch (proposed for widening) that runs along the UPRR tracks. In addition, two small elderberry shrubs (less than 1-inch diameter) are present southeast of the existing outfall to Deer Creek, where the existing hand-dug ditch conveys water from the 15-acre pond. Furthermore, as described in the 2019 SOIA EIR, one elderberry shrub with three stems approximately 1 inch in diameter was observed in the City-owned parcel.

Elderberry plants without stems measuring 1.0 inch or greater in diameter at ground level are unlikely to provide habitat for VELB because of their small size and/or immaturity (USFWS 1999). However, if construction does not occur for several years, existing elderberry bushes would increase in size and additional elderberry bushes could establish that could support VELB. VELB has been recorded in the nearby Cosumnes River/Deer Creek riparian corridor.

Because of the potential for loss of elderberry shrubs during on- and off-site construction activities, the impact to VELB is considered **potentially significant**.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Mitigation Measure 3.5-2a: Conduct VELB Surveys (2019 SOIA EIR Mitigation Measure 3.5-2a).

Before any vegetation removal or ground-disturbing activities for construction both on- and off-site, the following measure shall be implemented to mitigate the potential for impacts on VELB:

- A qualified biologist shall survey for the presence of elderberry shrubs with stems measuring than 1-inch diameter at ground level. Surveys shall be conducted in accordance with USFWS' Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999). If no elderberry shrubs with one or more stems measuring 1 inch or greater in diameter at ground level are documented, no further mitigation is required.

Mitigation Measure 3.5-2b: Establish a Construction Buffer and Initiate Consultation with USFWS (2019 SOIA EIR Mitigation Measure 3.5-2b).

If elderberry shrubs are detected with stems greater than 1 inch in diameter and with evidence of VELB occupancy in the project site or the off-site improvement areas, the following measures shall be implemented to avoid, minimize, or mitigate effects on VELB, in accordance with USFWS' *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999):

- Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the Service, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.
- Brief contractors and work crews about the status of the beetle and the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.
- Erect signs every 50 feet along the edge of the avoidance area with the following information: “This area is habitat of the VELB, a threatened species, and must not be disturbed. This species is protected by the ESA, as amended. Violators are subject to prosecution, fines, and imprisonment.” The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.
- If avoidance of an elderberry shrub and establishment of a 100-foot buffer is not practicable, initiate consultation with USFWS to determine if Incidental Take authorization need to be obtained from the USFWS, and if compensatory mitigation is required according to the guidelines identified in USFWS’ Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999). This may include, but is not limited to, establishment of a conservation area to be maintained in perpetuity, transplanting elderberry shrubs that cannot be avoided, planting elderberry seedlings, planting associated native vegetation, and monitoring and maintenance of the conservation area. With USFWS approval, payment to a mitigation bank or payment into an in-lieu fee fund may be used to satisfy this measure.

Significance after Mitigation

With implementation of Mitigation Measures 3.5-1a, 3.5-2a, and 3.5-2b, impacts would be reduced because these measures would minimize the off-site construction footprint, and elderberry shrubs in the Project site and the off-site improvement areas that could support VELB would be identified, avoided, and protected before construction activities occur, or potential loss of elderberry shrubs would be mitigated in accordance with USFWS guidelines. The drainage ditches that require improvement would be maintained by the City under a dedicated easement. With enforcement of the above mitigation and General Plan policies, future development would be designed to minimize potential impacts. Therefore, as with the 2019 SOIA EIR, the impact would be reduced to a **less-than-significant** level with mitigation.

Impact 3.5-3: Loss of Nesting and Foraging Habitat for Special-Status and Other Protected Raptors.

Swainson’s hawk is listed as threatened under CESA, white-tailed kite is a fully protected species, and northern harrier and burrowing owl are California species of special concern. All raptors and their active nests, including common species, are protected under Section 3503.5 of the California Fish and Game Code.

Land surrounding the off-site drainage improvements areas would continue to be used for agricultural and open space purposes. The agricultural ditches and ponds would continue to provide foraging habitat after the proposed improvements (i.e., widening and/or deepening) were completed. Therefore, direct loss of foraging habitat would not occur from the off-site improvements. However, the off-site drainage improvements could result in the direct loss of nesting habitat through tree removal, or indirect disturbance of nesting behavior due to noise generated during off-site construction.

Furthermore, as described in the 2019 SOIA EIR, converting land in the Project site from agricultural to urban land uses would result in removal of cropland that provides suitable foraging habitat for Swainson's hawk, white-tailed kite, northern harrier, and burrowing owl. Following the ultimate conversion of the Project site to urban uses, the Project site would retain zero foraging habitat value for all of these special-status raptor species.

Exhibit 3.5-2 shows Swainson's hawk, white-tailed kite, and burrowing owl occurrences in relation to the proposed off-site improvement areas (CNDDDB 2020). In addition, Swainson's hawk, red-tailed hawk, American kestrel, and Northern harrier were observed either foraging or flying over the off-site improvement areas and the adjacent cropland/annual grassland habitat during the AECOM 2020 site visit. At the conclusion of the short-term temporary construction activities associated with widening and/or deepening of the off-site agricultural ditches and ponds, foraging habitat would continue to be available for all of these special-status raptor species.

Conversion of 84 acres of cropland resulting from urban development on the City-owned parcel, and potential loss of up to 412 acres (408 acres of irrigated pasture and 6 acres of cropland) in the remainder of the Project site would remove high-value foraging habitat that is important to the local Swainson's hawk population. This loss could affect nesting success, survival rates, and availability of prey for the local Swainson's hawk population, or result in displacement of nesting pairs of Swainson's hawk, white-tailed kite, and northern harrier. Therefore, the loss of foraging habitat resulting from development of the Project site is considered a **potentially significant** impact on Swainson's hawk, special-status raptors and other nesting raptors.

Vegetation removal, grading, and other construction activities both on- and off-site could result in mortality of individuals and nest abandonment. If trees are to be removed during the raptor breeding season (March–August), mortality of eggs and chicks of tree nesting raptors could result, if an active nest were present. In addition, future development activities could disturb active nests near construction areas, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Ground disturbance or vegetation removal during the breeding season could result in loss of active northern harrier nests.

Burrowing owls need burrows at all times to survive, and displacing individuals from their burrows can result in indirect impacts such as predation, increased energetic costs, increased stress, and risks associated with having to find and compete for burrows, all of which can lead to take or reduced reproduction. Although burrowing owls are found within the agricultural landscape of Sacramento County and the species is known to inhabit agricultural field borders and forage in cultivated fields, the Project site is not modeled in the South Sacramento Habitat Conservation Plan (SSHCP) as either wintering or nesting habitat for western burrowing owl. However, burrowing owls may be present both on the Project site and adjacent to the off-site improvement areas.

Future development in the Project site and the off-site drainage improvements areas could result in direct destruction of an active Swainson's hawk, white-tailed kite, northern harrier, burrowing owl, or common raptor nests or disturb nesting raptors, resulting in nest abandonment by adult birds and abandonment of chicks and eggs, causing mortality. Therefore, direct and indirect impacts on active raptor nests or burrows are considered **potentially significant**.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Mitigation Measure 3.5-3a: Avoid Direct Loss of Swainson's Hawk and Other Raptors (2019 SOIA EIR Mitigation Measure 3.5-3a).

Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of nesting Swainson's hawks and other nesting raptors:

- Tree and vegetation removal shall be completed during the nonbreeding season for raptors (September 1–February 15).
- To avoid, minimize, and mitigate potential impacts on Swainson's hawk and other raptors (not including burrowing owl) nesting on or adjacent to the project site or off-site improvement areas, retain a qualified biologist to conduct preconstruction surveys and identify active nests on and within 0.5 mile of the project site for construction activities conducted during the breeding season (March 1–September 15). The surveys shall be conducted before the approval of grading and/or improvement plans (as applicable) and no less than 14 days and no more than 30 days before the beginning of construction. Guidelines provided in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) or future applicable updates to this guidance shall be followed for surveys for Swainson's hawk. If no nests are found, no further mitigation will be required.
- Impacts on nesting Swainson's hawks and other raptors shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. No project activity shall commence within the buffer areas until a qualified biologist has determined, in consultation with CDFW, the young have fledged, the nest is no longer active, or reducing the buffer would not result in nest abandonment. The buffer distance for Swainson's hawk nests shall be determined by a qualified biologist and the City, in consultation with CDFW, based on the distance required to avoid adversely affecting the nest(s).
- The appropriate no-disturbance buffer for other raptor nests (i.e., species other than Swainson's hawk) shall be determined by a qualified biologist based on site-specific conditions, the species of nesting bird, nature of the project activity, visibility of the disturbance from the nest site, and other relevant circumstances.
- Monitoring of all active raptor nests by a qualified biologist during construction activities will be required if the activity has potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The qualified biologist will have the authority to shut down construction activities within a portion or all of a construction site if necessary to avoid nest abandonment or take of individuals. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined appropriate by a qualified biologist.

Mitigation Measure 3.5-3b: Avoid Loss of Burrowing Owl (2019 SOIA EIR Mitigation Measure 3.5-3b).

Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of burrowing owl:

- To avoid, minimize, and mitigate potential impacts on burrowing owl, retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 1,500 feet of the project site. Surveys will be conducted before the start of construction activities and in accordance with Appendix F of CDFW's *Staff Report on Burrowing Owl Mitigation* (DFG 2012) or the most recent CDFW protocols.
- If no occupied burrows are found, a letter report documenting the survey methods and results will be submitted to the City and CDFW and no further mitigation will be required.
- If an active burrow is found during the nonbreeding season (September 1 through January 31), owls will be relocated to suitable habitat outside of the project area using passive or active methodologies developed, in consultation with CDFW, and may include active relocation to preserve areas if approved by CDFW and the preserve managers. No burrowing owls will be excluded from occupied burrows until a burrowing owl exclusion and relocation plan is developed and approved by CDFW.
- If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows will not be disturbed and will be provided with a 150- to 1,500-foot protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer will depend on the time of year and level of disturbance, as outlined in the CDFW Staff Report (DFG 2012:9) or the most recent CDFW protocols. Once the fledglings are capable of independent survival, the owls will be relocated to suitable habitat outside the project area, in accordance with a burrowing owl exclusion and relocation plan developed in consultation with CDFW and the burrow will be destroyed to prevent owls from reoccupying it. No burrowing owls will be excluded from occupied burrows until a burrowing owl exclusion and relocation plan is approved by CDFW. Following owl exclusion and burrow demolition, the site shall be monitored by a qualified biologist to ensure burrowing owls do not recolonize the site before construction.
- If active burrowing owl nests are found on the project site and these nest sites are lost as a result of implementing the project, the project applicant shall mitigate the loss through preservation of other known nest sites in Sacramento County, at a minimum ratio of 1:1, according to the provisions of a mitigation and monitoring plan for the compensatory mitigation areas.
- The mitigation and monitoring plan will include detailed information on the habitats present within the preservation areas, the long-term management and monitoring of these habitats, legal protection for the preservation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment). All burrowing owl mitigation lands shall be preserved in perpetuity and incompatible land uses shall be prohibited in habitat conservation areas.

- Burrowing owl mitigation land shall be transferred, through either conservation easement or fee title, to a third-party, nonprofit conservation organization (Conservation Operator), with the City and CDFW named as third-party beneficiaries. The Conservation Operator shall be a qualified conservation easement land manager that manages land as its primary function. Additionally, the Conservation Operator shall be a tax-exempt nonprofit conservation organization that meets the criteria of Civil Code Section 815.3(a) and shall be selected or approved by the City, after consultation with CDFW. The City, after consultation with CDFW and the Conservation Operator, shall approve the content and form of the conservation easement. The City and the Conservation Operator shall each have the power to enforce the terms of the conservation easement. The Conservation Operator shall monitor the easement in perpetuity to ensure compliance with the terms of the easement.

Mitigation Measure 3.5-3c: Implement the City of Elk Grove Swainson's Hawk Foraging Habitat Mitigation Program (2019 SOIA EIR Mitigation Measure 3.5-3c).

- Participate in the South Sacramento Habitat Conservation Plan through payment of the appropriate SSHCP Fee and/or dedication of land meeting SSCHP criteria and compliance with relevant Avoidance and Minimization Measures as detailed in the City's Memorandum of Agreement with the South Sacramento Conservation Agency for Becoming a Participating Special Entity in the South Sacramento Habitat Conservation Plan; OR
- Before the start of construction activities both on- and off-site, project applicants shall demonstrate compliance with the City's Swainson's Hawk Foraging Habitat Mitigation Program as it exists in Chapter 16.130 of the Municipal Code, or as it may be updated in the future. The City of Elk Grove will consult with the County of Sacramento to seek to develop an approach to mitigation for loss of Swainson's hawk foraging habitat that integrates with the SSHCP Conservation Strategy Biological Goals and Objectives for this species and with the interconnected landscape-level preserve system envisioned in the SSHCP.

Significance after Mitigation

Implementing Mitigation Measures 3.5-1a, 3.5-3a, 3.5-3b, and 3.5-3c would reduce potentially significant impacts on white-tailed kite, northern harrier, burrowing owl, and other raptors because it would minimize the off-site construction footprint, and ensure that these species are not disturbed during nesting so that construction would not result in nest abandonment and loss of eggs or young. These measures would also ensure that Swainson's hawk foraging habitat and burrowing owl habitat would be preserved at a 1:1 ratio of habitat lost. Preservation of Swainson's hawk foraging habitat would also benefit white-tailed kite, northern harrier, and other raptors, and would reduce the potential indirect effect of foraging habitat loss on these species.

Implementation of the City's Municipal Code Chapter 16.130 ensures purchase and preservation of replacement foraging habitat before the approval of grading and improvement plans or before any ground-disturbing activities by requiring project applicants to acquire conservation easements or other instruments to preserve suitable foraging habitat for the Swainson's hawk, as determined by CDFW. Municipal Code Chapter 16.130 requires 1:1 mitigation, and the location of mitigation parcels as well as the conservation instruments protecting them must be acceptable to the City. In deciding whether to approve the land proposed for preservation by the project applicant, the City must consider the benefits of preserving lands in proximity to other protected lands. The preservation of

land must be done prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first. In addition, the City's Code requires:

- ▶ The land to be preserved shall be deemed suitable Swainson's hawk foraging habitat.
- ▶ All owners of the mitigation land shall execute the document encumbering the land.
- ▶ The document shall be recordable and contain an accurate legal description of the mitigation land.
- ▶ The document shall prohibit any activity which substantially impairs or diminishes the land's capacity as suitable Swainson's hawk foraging habitat.
- ▶ If the land's suitability as foraging habitat is related to existing agricultural uses on the land, the document shall protect any existing water rights necessary to maintain such agricultural uses on the land covered by the document, and retain such water rights for ongoing use on the mitigation land.
- ▶ The applicant shall pay to the City a mitigation monitoring fee to cover the costs of administering, monitoring and enforcing the document in an amount determined by the receiving entity, not to exceed ten (10%) percent of the easement price paid by the applicant, or a different amount approved by the City Council, not to exceed fifteen (15%) percent of the easement price paid by the applicant.
- ▶ Interests in mitigation land shall be held in trust by an entity acceptable to the City in perpetuity. The entity shall not sell, lease, or convey any interest in mitigation land which it shall acquire without the prior written approval of the City.
- ▶ The City shall be named a beneficiary under any document conveying the interest in the mitigation land to an entity acceptable to the City.

Even with implementation of Mitigation Measures 3.5-1a, 3.5-3a, 3.5-3b, and 3.5-3c, the impact on loss of high-value Swainson's hawk foraging habitat may not be reduced to less-than-significant levels. Only a finite amount of suitable mitigation land is available within the foraging range of the local Swainson's hawk nesting population, and even with preservation of foraging habitat to compensate for losses that would occur, an overall net loss of foraging habitat available to the local nesting Swainson's hawk population would still occur. This conclusion is based on an assessment of the widespread loss of foraging habitat for this species in the region, the status of this local area as supporting a high breeding concentrations of Swainson's hawks, and on the challenges of securing sufficient foraging habitat mitigation lands in areas that would support the local nesting population. This net loss would undoubtedly result in reduced reproductive success and displacement of nesting pairs, thereby contributing to the decline of Swainson's hawk populations. There is no additional feasible mitigation available that would avoid this impact. As with the 2019 SOIA EIR, the impact on Swainson's hawk would remain **significant and unavoidable**.

As with the 2019 SOIA EIR, with implementation of Mitigation Measures 3.5-1a, 3.5-3a, 3.5-3b, and 3.5-3c, future development in the Project site and the off-site improvement areas would be designed to minimize potential impacts. With regard to the other species addressed in the mitigation above (burrowing owl, white-tailed kite, northern harrier, and other raptors), the impact is considered **less than significant with mitigation**.

Impact 3.5-4: Loss and Disturbance of Nesting Habitat for Special-Status Birds and Common Nesting Birds.

As presented in Table 3.5-1, construction of the off-site improvements has the potential to affect 10 species of special-status (non-raptor) bird species. As shown in Exhibit 3.5-2, there are numerous documented occurrences of tricolored blackbird, which is a State-listed endangered species, within 3 miles of the off-site improvement areas.

Construction could result in indirect disturbance of breeding birds causing nest abandonment by the adults and mortality of chicks and eggs. Vegetation removal and ground disturbances could also result in direct destruction of active nests of special-status birds, and of common birds protected under the MBTA or California Fish and Game Code. Loss of nests of common bird species (those not meeting the definition of special-status as provided above) would not be a significant impact under CEQA because it would not result in a substantial effect on their populations locally or regionally; however, destruction of bird nests is a violation of the MBTA and Section 3503 of the California Fish and Game Code and mitigation to avoid the loss of active nests of these species is required for compliance with these regulations.

Land surrounding the off-site drainage improvement areas would continue to be used for agricultural and open space purposes. The off-site agricultural ditches and ponds would continue to provide foraging habitat after the proposed improvements (i.e., widening and/or deepening) were completed. Therefore, direct loss of foraging habitat would not occur from the off-site improvements. However, the off-site drainage improvements could result in the direct loss of nesting habitat through habitat removal along the ditches or in the ponds, or indirect disturbance of nesting behavior due to noise generated during off-site project construction.

Furthermore, as discussed in the 2019 SOIA EIR, the Project site includes cropland and irrigated pasture. Both cropland and irrigated pasture provides suitable foraging habitat for special-status bird species, as well as other migratory species. Therefore, in addition to the off-site improvement areas, conversion of the on-site agricultural land to urban development would result in the loss of foraging habit and could result in the loss of nesting habitat. Therefore, this impact is considered **potentially significant**.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Mitigation Measure 3.5-4: Avoid Loss of Special-Status Birds and Protected Bird Nests (2019 SOIA EIR Mitigation Measures 3.5-4 and 3.5-5).

Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of special-status birds and protected bird nests:

- To the extent feasible, vegetation removal, grading, and other ground-disturbing activities will be carried out during the nonbreeding season for protected bird species in this region (generally September 1–January 31).
- For vegetation removal, grading, and other ground-disturbing activities that would occur during the nesting season (February 1–August 31), a qualified biologist shall conduct preconstruction surveys to determine if active special-status bird nests are present within an on- or off-site project footprint or within 500 feet of a project footprint. The biologist shall conduct preconstruction surveys within 30 days and within 3 days of ground-disturbing activities, and within the proposed project footprint and 500 feet of the proposed project footprint to determine the presence or absence of special-status birds. Preconstruction surveys shall be conducted during the breeding/nesting season. Surveys conducted in

February (to meet preconstruction survey requirements for work starting in March) must be conducted within 14 days and 3 days in advance of ground-disturbing activities.

- Surveys for least Bell's vireo shall be conducted according to USFWS' *Least Bell's Vireo Survey Guidelines* (USFWS 2001).
- If an active nest of a special-status bird species, or common bird species protected by the MBTA or California Fish and Game Code is found, the qualified biologist shall establish a buffer around the nest. No construction activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. The size of the buffer shall be determined in consultation with CDFW. Buffer size is anticipated to range from 50 to 500 feet, depending on the species of bird, nature of the project activity, the extent of existing disturbance in the area, and other relevant circumstances, as determined by a qualified biologist, in consultation with CDFW.
- A qualified biologist shall monitor the nest(s) throughout the nesting season and to determine when the young have fledged. The biologist will be on-site daily while construction-related activities are taking place near the disturbance buffer. Work within the nest disturbance buffer will not be permitted. If the approved biologist determines that birds are exhibiting agitated behavior, construction shall cease until the buffer size is increased to a distance necessary to result in no harm or harassment to the nesting birds. If the biologist determines that bird colonies are at risk, a meeting with CDFW will be held to determine the best course of action to avoid nest abandonment or take of individuals. The biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a special-status bird flies into an active construction zone (i.e., outside the buffer zone).

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a and 3.5-4 would reduce potentially significant impacts on special-status (non-raptor) birds and protected bird nests because it would minimize the off-site construction footprint, and ensure these birds are not disturbed during nesting so that project construction would not result in nest abandonment and loss of eggs or young. Therefore, as with the 2019 SOIA EIR, the impact is considered **less than significant with mitigation**.

Impact 3.5-5: Potential for Injury to or Mortality of American Badger.

The American badger is most common in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Badgers inhabit burrows, which are dug into friable soil for cover. Suitable soil for the construction of burrows and the presence of numerous ground squirrel burrows located throughout the project site suggest that American badgers have the potential to occur within the Project site and the off-site improvement areas.

Project-related construction activities could crush American badger burrows and kill or injure badgers occupying burrows. Although very little empirical data are available about American badger population status and trends in California, badger populations in the middle Central Valley have declined (County of Sacramento et al. 2018). Project-related injury or death to an American badger, particularly if a natal den was destroyed, is considered a **potentially significant** impact.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Mitigation Measure 3.5-5: Avoid Direct Loss of American Badgers (2019 SOIA EIR Mitigation Measure 3.5-6).

Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate potential impacts on American badgers:

- A qualified biologist shall conduct preconstruction surveys for American badger in areas that will be subject to ground-disturbing activities. The survey shall be conducted no more than 2 weeks before initiation of construction activities. If an American badger or active burrow, indicated by the presence of badger sign (i.e. suitable shape and burrow-size, scat) is found within the construction area during preconstruction surveys, CDFW will be consulted to obtain permission for animal relocation. If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers from reusing them during construction.
- If the qualified biologist determines that potential dens may be active, the entrances of the dens shall be blocked with soil, sticks, and debris for 3–5 days to discourage use of these dens before project disturbance. The den entrances shall be blocked to an incrementally greater degree over the 3- to 5-day period. After the qualified biologist determines that badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent reuse during construction.

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a and 3.5-5 would reduce impacts on badgers by minimizing the off-site construction footprint, identifying any badger dens that might occur in impact areas, and implementing measures to avoid impacts. With implementation of Mitigation Measure 3.5-5, construction would be designed to minimize potential impacts. Therefore, as with the 2019 SOIA EIR, the impact is considered **less than significant with mitigation**.

Impact 3.5-6: Potential for Injury to or Mortality of Western Pond Turtle and Giant Garter Snake.

Western pond turtles are found in rivers, streams, creeks, ponds, marshes, irrigation ditches, damp woodland and forest, and grassland. The turtles require logs, rocks, vegetation mats, or exposed banks to bask in the sun. Females lay their eggs between April and August in upland habitat, usually along stream or pond margins. Their diet consists of aquatic plants, invertebrates, worms, frog and salamander eggs and larvae, crayfish, carrion, and occasionally frogs and fish. Giant garter snake is found primarily in marshes, sloughs, drainage canals, and irrigation ditches, especially around rice fields, and occasionally in slow-moving creeks. During the spring and summer, giant garter snake can be found in vegetated upland areas within 200 feet of suitable aquatic habitat. The giant garter snake uses upland habitat for basking, cover, and mammal burrows, and crevices in the soil to escape predation and during ecdysis (shedding of skin). In the fall (October) giant garter snakes move underground into mammal burrows, crevices, or other voids in the ground to avoid potentially lethal cool autumn and winter temperatures.

Although there are no records of western pond turtle or giant garter snake occurrences within the Project site or the off-site improvement areas, the CNDDDB (2020) database indicates that western pond turtle and giant garter snake occurrences have been documented approximately 2.75 miles southwest and approximately 2 miles

southeast, respectively, of the off-site improvement areas. Suitable habitat for western pond turtle is present in the ponds associated with the off-site drainage improvement areas, and in Deer Creek. Suitable habitat for giant garter snake is present along Deer Creek in the areas where off-site widening of agricultural ditches is proposed. Both western pond turtle and giant garter snake could also occur in upland habitats in the off-site drainage improvements areas adjacent to suitable aquatic habitats. Both western pond turtle and giant garter snake are covered species under the SSHCP (County of Sacramento et al. 2018). Construction activities associated with the off-site improvements, such as vegetation clearing, excavation, and grading, could disturb western pond turtle and giant garter snake habitat. Furthermore, construction of the off-site improvements could result in habitat degradation and injury or mortality of western pond turtle or giant garter snake individuals (e.g., equipment strikes, crushing underground individuals), if present in the off-site project footprint during construction. Therefore, this impact is considered **potentially significant**.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Mitigation Measure 3.5-6a: Retain a Biological Monitor During Off-Site Construction Activities.

- The project applicant shall retain a qualified biologist to monitor construction activity in the off-site improvement areas for compliance with all project permits and the approved mitigation and monitoring program for the proposed project; and to report on monitoring activities as required by project permits.
- During construction activities, if an injured or dead special-status species is encountered, the work shall stop in the immediate vicinity. The project applicant shall notify the biological monitor, and the appropriate resource agency (e.g., USFWS or CDFW). Any measures required by these agencies shall be implemented, and proof of implementation shall be submitted to the agencies before construction is allowed to proceed.
- At the end of each work day, the biological monitor shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with exclusion fencing. If any wildlife species become entrapped, construction shall not occur until the animal has left the trench or been removed by a qualified biological monitor as feasible.
- Employees and contractors shall look under vehicles and equipment for the presence of wildlife before moving vehicles and equipment. If wildlife is observed, no vehicles or equipment would be moved until the animal has left voluntarily or is removed by the biological monitor. No listed species shall be handled without the appropriate permits.
- Vehicle speed limits shall not exceed 15 miles per hour during construction and operation of the proposed project. A speed limit sign shall be posted at all project site entry locations.

Mitigation Measure 3.5-6b: Avoid Western Pond Turtle and Giant Garter Snake During Off-Site Construction Activities.

Western Pond Turtle

- Where feasible, construction activities involving construction with heavy equipment (e.g., excavation, grading, contouring) in suitable western pond turtle upland habitat will avoid the western pond turtle egg-laying period (generally mid-May to early July).
- Prior to the start of construction in western pond turtle habitat (i.e., any undeveloped areas within 1,300 feet of riverine aquatic habitat, ponds, seasonal wetlands), the project applicant will retain a biologist approved by the CDFW to survey and handle western pond turtles and conduct preconstruction surveys. Surveys will be conducted at each habitat area no more than 7 days prior to the initiation of ground disturbance at that location.
- If ground-disturbing activities occur during the nesting or overwintering seasons, 1 week before and within 24 hours of beginning work in suitable aquatic habitat, a qualified biologist will conduct surveys for western pond turtle. The surveys will be timed to coincide with the time of day when turtles are most likely to be active (the cooler part of the day between 8:00 a.m. and 12:00 p.m. during spring and summer). Prior to conducting the surveys, the biologist will locate the microhabitats for turtle basking (logs, rocks, brush thickets) and determine a location to quietly observe turtles. Each survey will include a 30-minute wait time after arriving on the site to allow startled turtles to return to open basking areas. The survey will consist of a minimum 15-minute observation time per area where turtles could be observed. If western pond turtles are observed during either survey, a biological monitor will be present during construction activities in the aquatic habitat where the turtle was observed; and capture and relocate, if possible, any entrapped turtle. The biological monitor also will be mindful of suitable nesting and overwintering areas in proximity to suitable aquatic habitat, and periodically inspect these areas for nests and turtles.

Giant Garter Snake

- Where feasible, construction activities involving construction with heavy equipment use (e.g., excavation, grading, contouring) in suitable giant garter snake habitat (i.e., within 200 feet of Deer Creek) will avoid the snake's inactive/dormant period (generally October 2 to April 30).
- To the maximum extent possible, all construction activities in giant garter snake habitat will be conducted during the snake's active period (May 1 to October 1).
- To reduce the likelihood of snakes entering the active construction areas that include or are adjacent to freshwater wetlands, slow-moving riverine aquatic habitat, marshes, ditches, and canals in the off-site improvement areas during construction activities, the project applicant or the construction contractor will install exclusion fencing along the freshwater marsh, aquatic riverine features, and open water areas outside of the environmental footprint (areas within 200 feet of suitable habitat). The exclusion fencing will be installed and maintained for the duration of construction in or adjacent to these features. The fencing will consist of 3- to 4-foot-tall erosion fencing buried at least 6 to 8 inches below the ground. To ensure that construction equipment and personnel do not affect aquatic

habitat for giant garter snake outside the construction corridor, orange barrier fencing will be erected (in addition to the exclusion fencing) to clearly define the aquatic habitat to be avoided.

- A qualified biologist will conduct a preconstruction survey in suitable habitat no more than 24 hours before construction. Prior to construction each morning, construction personnel will inspect exclusion and orange barrier fencing to ensure they are in good condition. Observations of snakes in the environmental footprint and access routes will be immediately reported to the biologist, and all activities will cease until appropriate corrective measures have been completed; the snake leaves the construction site under its own volition; or the biologist determines that the snake will not be harmed. The area undergoing construction will be re-inspected and surveyed by the biologist whenever a lapse in construction activity of 2 weeks or more occurs.
- Any ground-disturbing activities within 200 feet of giant garter snake habitat that occur after October 1 will be monitored by a USFWS- and a CDFW-approved biologist for the duration of the work.
- Vegetation clearing within 200 feet of the banks of potential giant garter snake aquatic habitat will be limited to the minimum area necessary. Giant garter snake habitat outside of—but adjacent to—the construction areas will be flagged, and designated as an environmentally sensitive area to be avoided by all construction personnel.
- The movement of heavy equipment within 200 feet of the banks of potential giant garter snake aquatic habitat will be confined to designated access and haul routes to minimize habitat disturbance.
- Staging areas will be located at least 200 feet from suitable giant garter snake aquatic habitat.

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a, 3.5-6a, and 3.5-6b would reduce impacts on western pond turtle and giant garter snake by requiring avoidance and minimization of impacts on aquatic habitats, and requiring preconstruction surveys, biological monitoring, and avoidance measures for individuals of the species. With implementation of Mitigation Measures 3.5-1a, 3.5-6a, and 3.5-6b, project-related construction would be designed to minimize potential impacts on western pond turtle and giant garter snake. Therefore, the impact is considered **less than significant with mitigation**.

Impact 3.5-7: Potential Loss of Western Red Bat.

No surveys for bat roosts have been conducted in the Project area, but large trees and riparian habitats in the off-site improvement areas offer appropriate features to support individual and maternity bat roosts for western red bats. Western red bats tend to roost in trees in edge habitats near fields or streams. Suitable foraging habitat is present, and potential roosting habitat is present in large valley oaks, in and adjacent to the off-site drainage improvements areas. Western red bat is a Covered Species under the SSHCP (County of Sacramento et al. 2018).

Construction activities that would cause temporary disturbance or permanent removal of an occupied bachelor, migratory, maternity, or solitary bat roost could cause direct and indirect adverse effects on individual bats or groups. Potential adverse effects could include direct mortality during roost removal; dysfunctional allocation of time and energy to vigilance behaviors; increased energy costs for maintenance, growth, and reproduction;

degradation of physiological condition and social order; shifts in habitat use patterns, species distribution, and community structure; and roost abandonment (Caltrans 2016). Roost abandonment may cause pup mortality, expose bats to predation, require them to redirect their limited energy reserves to finding new roosts, and require bats to expend more energy for thermoregulation in suboptimal replacement roosts (Caltrans 2016).

However, western red bats change roosts frequently and mothers can move their young; therefore, they would have the capacity to fly away from disturbance. In addition, bats inhabiting bachelor and migratory roosts would be volant, and would be able to fly away from construction disturbances. None of the indirect adverse effects would be expected to cause mortality in large numbers of bats, and would not be expected to cause a local bat population to drop below self-sustaining levels.

A minor amount of grassland habitat and aquatic features may be lost during construction of the off-site drainage improvements, which could result in the loss of bat foraging habitat. Permanent loss of oak trees (and other large trees) could result in the permanent loss or degradation of nonessential roosts. Because abundant foraging habitat is available in the off-site drainage improvements area (along the Deer Creek corridor), the temporary and permanent loss or degradation of foraging habitat would not be expected to cause indirect mortality to large numbers of bats, or to substantially reduce their habitat. Likewise, nonessential roosts are not critical for sustaining bat populations, and the permanent loss of some nonessential roosts would not be expected to cause indirect mortality to large numbers of bats, reduce their number, or restrict their range. Although these impacts would be **less than significant**, implementation of the mitigation measures listed below would help to further reduce impacts to special-status bats.

Implement Mitigation Measure 3.5-1a (Minimize the Off-Site Construction Impact Footprint).

Implementation of Mitigation Measures 3.5-1a would help to avoid and further minimize **less-than-significant** impacts on special-status bats by minimizing the off-site construction areas (to avoid suitable roost habitats such as trees and riparian habitat) where feasible.

Impact 3.5-8: Potential Indirect Effects to Vernal Pool Crustacean Habitat.

Three special-status crustaceans endemic to vernal pool habitats have the potential to occur in the off-site improvement areas: vernal pool fairy shrimp (*Branchinecta lynchi*), Conservancy fairy shrimp (*Branchinecta conservatio*), and vernal pool tadpole shrimp (*Lepidurus packardii*). Fairy shrimp occur primarily in small, clear-water sandstone-depression vernal pools and grassed swales or basalt-flow depression vernal pools that fill with water during fall and winter rains, and dry up in the spring and summer. They typically hatch when the first rains of the season fill the vernal pools, and mature in about 41 days under typical winter conditions. Adult fairy shrimp live only for a single season, while there is water in the pools; and toward the end of their brief lifetime, females produce thick-shelled eggs or cysts. During the summer, these cysts become buried in the dried bottom mud of the vernal pools, and during the winter, they are frozen for varying lengths of time. These cysts hatch when the rains come again in the fall and winter. The Conservancy fairy shrimp is one of the rarest species of fairy shrimp in California and is known to occur only in several distinct populations, the closest of which is the Yolo Bypass Wildlife Area (USFWS 2017b).

Although there are no records of fairy shrimp occurrences within the project site or the off-site improvement areas, the CNDDDB (2020) database indicates that vernal pool fairy shrimp and vernal pool tadpole shrimp are present approximately 1 mile southeast and 2 miles southwest of the off-site improvement areas, respectively.

Suitable habitat for all three shrimp species is present within a vernal pool complex that is approximately 250 feet south of the 8-acre pond in the vicinity of the proposed off-site drainage improvements.

The vernal pool fairy shrimp, Conservancy fairy shrimp, and vernal pool tadpole shrimp are Covered Species under the SSHCP (County of Sacramento et al. 2018), and under the USFWS' *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005).

No direct impacts (i.e., fill) of the vernal pool complex would occur as a result of the proposed off-site drainage improvements. However, construction of the off-site improvements could result in indirect impacts from generation of fugitive dust, erosion and sedimentation, and/or pollution from accidental spills, as well as introduction of nonnative invasive plants that could reduce habitat quality for vernal pool crustaceans in the nearby vernal pool complex. This impact is considered **potentially significant**.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Implement Mitigation Measure 3.5-1d (Implement an Off-Site Revegetation and Weed Control Plan).

Mitigation Measure 3.5-8: Avoid and Minimize Potentially-Occupied Habitat for Vernal Pool Fairy Shrimp and Conservancy Fairy Shrimp During Off-Site Construction Activities.

- A qualified biologist shall monitor for impacts on potentially occupied vernal pool fairy shrimp and Conservancy fairy shrimp habitat during off-site construction activities to ensure that they are identified for avoidance on site plans and preserved and avoided during off-site construction activities.
- Vernal pool habitat shall be flagged and orange exclusionary fencing shall be erected prior to the start of off-site construction activities in the vicinity of the southern-most drainage ditch (along the UPRR tracks) and the 8-acre pond. The exclusionary fencing shall establish a 250-foot buffer from the vernal pool boundary.
- The project applicant shall obtain a Construction General Stormwater Permit from the Central Valley RWQCB, prepare a stormwater pollution prevention plan, and implement best management practices (BMPs) to reduce water quality effects during construction.
- USFWS consultation with USACE would occur during the CWA Section 404 permitting process that is required as mitigation for impacts on wetlands and other waters of the United States (see discussion under Impact 3.5-8, below).

Implement Mitigation Measure 3.4-1a (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a, 3.5-1d, 3.5-8, and 3.4-1a would reduce impacts on vernal pool crustaceans by because project applicants would be required to minimize the off-site disturbance areas; implement a revegetation and weed control plan; avoid impacts to vernal pools; and implement fugitive dust controls. With implementation of Mitigation Measures 3.5-1a, 3.5-1d, 3.5-8, and 3.4-1a, project-related construction would be

designed to minimize potential impacts on vernal pool crustaceans. Therefore, the impact is considered **less than significant with mitigation**.

Impact 3.5-9: Disturbance, Degradation, or Removal of Federally Protected Waters of the United States.

As discussed in the 2019 SOIA EIR, a total of ±0.707 acre of agriculture ditches and 0.257 acre of agricultural pond occur in the City-owned parcel. The ditches and pond are presumed to be nonjurisdictional because based on a review of aerial photographs and field investigation, the source of water in the City-owned parcel is a pump. Therefore, although these features drain to a ditch on Grant Line Road and eventually into Deer Creek, which is a jurisdictional waterway, the ditches and pond are primarily agricultural features sustained through groundwater pumping. USACE has determined that these on-site features do not constitute jurisdictional Waters of the U.S. under the CWA Section 404 (USACE).

The off-site improvement areas consist of several agricultural ditches, along with three ponds. All of these features are associated with active, ongoing agricultural operations including crop irrigation and stock watering. The water in these features is obtained from groundwater pumping. However, a wetland delineation has not been performed, and one or more of these features could be found to be a jurisdictional wetland. Furthermore, the off-site 8-acre and 15-acre ponds support freshwater emergent marsh, and a vernal pool complex is present near the 8-acre pond. A jurisdictional wetland delineation of the agricultural ditches and ponds in the off-site improvement areas has not yet been conducted. If aquatic features yet to be delineated are deemed jurisdictional by the USACE, construction activities could result in fill of waters of the United States. Waters that do not meet the criteria to qualify as waters of the U.S. and are disclaimed by the USACE could still be considered waters of the state subject to regulation by the Central Valley Regional Water Quality Control Board (RWQCB) under California's Porter-Cologne Act, because waters of the State are defined more broadly under California Water Code Section 13050(e) compared to waters of the U.S.

Deer Creek is a jurisdictional water of the United States. Channel improvements at the existing outfall from the 15-acre pond to Deer Creek may require grading or other improvements of the bed or bank of Deer Creek at this location, leading to fill of waters of the United States. In addition, increased flows to Deer Creek resulting from improvements to adjacent ponds and ditches would occur as a result of discharges of urban stormwater runoff from the project site once it is developed. Potential indirect effects to downstream waters include reduction in water quality caused by urban runoff, erosion, and siltation, and increased flow volumes/altered hydrology. For the reasons stated above, impacts related to disturbance, degradation, or removal of federally protected waters of the United States in the off-site improvement areas are considered **potentially significant**.

Construction-related direct and indirect impacts on riparian habitat at the proposed channel improvements where an existing outfall connects to Deer Creek south of the 15-acre pond, that would fall under the jurisdiction of Section 1600 of the California Fish and Game Code, would be **potentially significant**.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Implement Mitigation Measure 3.5-1d (Implement an Off-Site Revegetation and Weed Control Plan).

Mitigation Measure 3.5-9a: Avoid, Minimize, or Compensate for Loss of Waters of the United States and Waters of the State (2019 SOIA EIR Mitigation Measure 3.5-7).

Before the start of construction activities both on- and off-site, the following measures shall be implemented to mitigate the potential loss of waters:

- Conduct a delineation of waters of the United States according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and Arid West Supplement (Environmental Laboratory 2008) or applicable guidance manual that is in place at the time of application for proposed development that could adversely affect waters of the State or United States. The delineation shall map and quantify the acreage of all aquatic habitats and shall be submitted to USACE for verification and jurisdictional determination.
- Off-site improvements shall be planned and designed to avoid waters of the United States, including wetlands, and waters of the state to the maximum extent technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the habitat may be preserved while still obtaining the project purpose and objectives and if the preserved aquatic habitat could reasonably be expected to continue to provide the same habitat functions following project implementation.
- The function of all wetlands and other waters that would be removed as a result of implementing the project shall be replaced or restored on a “no-net-loss” basis. Wetland habitat will be restored or replaced at an acreage and location and by methods agreeable to USACE and the Central Valley RWQCB, depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes.
- Mitigation methods may consist of establishment of aquatic resources in upland habitats where they did not exist previously, reestablishment (restoration) of natural historic functions to a former aquatic resource, enhancement of an existing aquatic resource to heighten, intensify, or improve aquatic resource functions, or a combination thereof. The compensatory mitigation may be accomplished through purchase of credits from a USACE-approved mitigation bank, payment into a USACE-approved in-lieu fee fund, or through permittee-responsible on-site or off-site establishment, reestablishment, or enhancement, depending on availability of mitigation credits.
- If applicable, a USACE Section 404 Individual Permit and Central Valley RWQCB Section 401 water quality certification shall be obtained before any groundbreaking activity within 50 feet of waters of the United States or discharge of fill or dredge material into any water of the United States, or meet waste discharge requirements for impacts to waters of the state.
- A qualified biologist shall prepare a wetland mitigation plan to describe how the loss of aquatic functions for each project will be replaced. The mitigation plan will describe compensation ratios for acres filled, and mitigation sites, a monitoring protocol, annual performance standards and final success criteria for created or restored habitats, and corrective measures to be applied if performance standards are not met.
- Permittee-responsible mitigation habitat shall be monitored for a minimum of 5 years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer.

- Water quality certification pursuant to Section 401 of the CWA, or waste discharge requirements (for waters of the state), will be required before issuance of a Section 404 permit. Before construction in any areas containing aquatic features that are waters of the United States, the project applicant(s) shall obtain water quality certification for the project. Any measures required as part of the issuance of water quality certification and/or waste discharge requirements (for waters of the state), shall be implemented. Project applicant(s) shall obtain a General Construction Stormwater Permit from the Central Valley RWQCB, prepare a stormwater pollution prevention plan, and implement best management practices (BMPs) to reduce water quality effects during construction.

Mitigation Measure 3.5-9b: Comply with the Section 1600 Streambed Alteration Agreement

- Before construction, the project applicant shall obtain a Section 1600 Streambed Alteration Agreement from CDFW for any activities proposed in or near Deer Creek and/or associated riparian vegetation that could potentially fall under the jurisdiction of CDFW. The project applicant shall implement all conditions in the permit, including any requirements for compensatory mitigation for loss of riparian habitat as part of the Section 1600 Streambed Alteration Agreement. Where feasible, the compensatory mitigation requirement may be combined with those for other mitigation measures such as that required for the USACE CWA Section 404 permit. To comply with Sacramento County General Plan policies related to compensation for the loss of riparian habitats, impacts on riparian habitat shall be mitigated by the preservation riparian habitat at a minimum 1:1 ratio, in perpetuity.
- If on-site restoration is selected as compensatory mitigation for impacts on riparian habitat, the project applicant shall prepare and implement Mitigation Measure 3.5-1d “Develop and Implement an Off-Site Revegetation and Weed Control Plan” to include reestablishment of riparian habitat, including riparian vegetation subject to CDFW jurisdiction, and/or enhancement of existing habitat, on a per-acre basis. To offset the temporary loss of riparian habitat during construction, the minimum mitigation ratio shall be no less than 1.5 acres of riparian habitat restored/created/enhanced for each acre of permanent or temporary impact. The revegetation and weed control plan shall include the following provisions for the restoration of affected riparian habitat:
 - Baseline data collection at reference sites in the project site to establish expected ranges and minimum thresholds for species composition, relative species richness, and vegetative cover (i.e., herbaceous, shrub, and/or woody canopy) for each sensitive habitat that would be affected.
 - An appropriate species planting palette for each sensitive habitat that would be affected.
 - Minimum planting densities designed to achieve minimum performance standards for survival cover and density, while maintaining the natural character of the vegetation community being restored/created.
 - Minimum performance standards for percent survival, species composition, relative species richness, and vegetative cover (i.e., herbaceous, shrub, and/or woody canopy) based on data collected from nearby reference sites and life history traits of the plants being restored (i.e., herbaceous versus woody, fast-growing primary colonizers versus slow-growing successional species).

- Compensation for the temporal loss of habitat resulting from the removal of trees. Any trees removed from riparian habitat shall be replaced with the same or similar species at a ratio of 3:1 (three [3] trees planted for every one [1] tree removed). Tree replacement may be carried out concurrently on riparian habitats that are also being restored/created/enhanced on a per-acre compensatory basis.

Implement Mitigation Measure 3.4-1a: (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a, 3.5-1d, 3.5-9a, 3.5-9b, and 3.4-1a would reduce potentially significant impacts on waters of the United States and waters of the state because they would require minimization of the project footprint, no-net-loss of function of aquatic and riparian habitat, and development and implement a BMP and water quality maintenance plan that conforms to applicable State and local regulations restricting surface water runoff to minimize adverse effects on water quality and indirect effects to downstream waters. With implementation of Mitigation Measures 3.5-1a, 3.5-9a, 3.5-9b, on-site and off-site improvements would be designed to minimize potential impacts. Therefore, as with the 2019 SOIA EIR, the impact is considered **less than significant with mitigation**.

Impact 3.5-10: Interference with Wildlife Nursery Sites or Migratory Corridors.

No native wildlife nursery sites have been identified in the Project site or within the off-site drainage improvements areas. The Project site consists almost entirely of agricultural land cover types that do not provide suitable breeding or nesting habitat for most species. Little natural vegetation and few trees or shrubs are available within the Project site to support nesting bird colonies, rookeries, or fawning areas, and there are no suitable trees or structures to support bat maternity roosts. No established migratory routes have been identified within the Project site and converting land in the Project site from agricultural to urban land uses would not cause any areas of natural habitat to become isolated. According to the California Essential Habitat Connectivity Project, the Project site is not located within a Natural Landscape Block or Essential Habitat Connectivity area (Spencer et al. 2010). The California Essential Habitat Connectivity Project provides a comprehensive, statewide assessment of large, relatively natural habitat blocks that support native biodiversity (Natural Landscape Blocks) and areas essential for ecological connectivity between them (Essential Connectivity Areas).

The off-site improvement areas contain sensitive natural communities including wetlands that could provide breeding and nesting habitat for a variety of special-status species (see Table 3.5-1). However, Mitigation Measures 3.5-1 through 3.5-9 provide the appropriate avoidance, minimization, and mitigation measures necessary to reduce impacts to special-status species and habitats to a less-than-significant level.

The SSHCP (County of Sacramento et al. 2018) describes Laguna Creek and the Cosumnes River/Deer Creek corridor as two key wildlife movement corridors in the SSHCP plan area that should be preserved to maintain movement and resident habitat for wildlife, preserve riparian habitat, and maintain hydrologic connections between preserves. The proposed Project would not remove any habitat within the Deer Creek corridor. At the conclusion of Project-related off-site improvements (i.e., widening and/or deepening) to the agricultural ditches that convey water to the Deer Creek outfalls along the northeastern property boundary and southeast of the 15-acre pond, these features would continue to serve as habitat and maintain hydrologic connections between

cropland/annual grassland and the Deer Creek corridor. Construction activities in the agricultural ditches and at the 15-acre pond would be short-term and temporary, and any work that would affect the bed, bank or channel of Deer Creek and/or associated riparian vegetation will be conducted in accordance with a Streambed Alteration Agreement issued by CDFW (See Mitigation Measure 3.5-9b).

The Project site and the off-site improvement areas are within the Pacific flyway, which is a major north-south route for migratory birds along western North America. As such, large numbers of migrating birds may move through the area seasonally and may congregate and forage in wetlands, grasslands, and agricultural fields during winter or use them as resting grounds during longer migrations from the Arctic to Central or South America. While migrating birds may use agricultural fields in the Project site and the area around the off-site improvement areas as winter resting (stop-over) and foraging habitat, loss of agricultural habitat from urban development of the Project site would not create a barrier to movement of migratory species. Loss of agricultural habitat on the Project site would not alter the character of existing habitat available to migrating birds along the Pacific flyway such that it would no longer function as a migratory corridor because abundant agricultural habitat of equal or better value would be available to migrating birds surrounding the project site. This agricultural habitat, along with the Cosumnes River and Preserve, Stone Lakes Wildlife Refuge, and the Woodbridge Ecological Reserve, would continue to support the needs of migratory birds and provide wildlife movement opportunities for other native resident or migratory wildlife species in the area.

Project development would not interfere substantially with the movement of any native resident or migratory wildlife species because the Project site does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated, and converting land in the project site from agricultural to urban land uses would not cause any areas of natural habitat to become isolated. Furthermore, construction of the off-site improvements would be short-term and temporary, would not alter the Deer Creek migratory corridor, and would continue the existing hydrologic connections between the Deer Creek corridor and the cropland/annual grassland habitats to the west through the off-site agricultural ditches and ponds. Therefore, Project implementation would not have an adverse impact on wildlife movement or nursery sites, and this impact is considered **less than significant**.

Impact 3.5-11: Conflicts with Local Policies and Ordinances Protecting Biological Resources.

The Project site and the off-site improvement areas contain scattered native trees, including valley oaks, that would be considered trees of local importance under Section 19.12.040 of the City Code. In addition, as shown on Exhibits 3.5-1b and 3.5-1d, valley oak woodland habitat is present along Deer Creek where the conveyance channel from the 15-acre pond discharges to the creek, and at the eastern end of the northern-most drainage ditch. Both the conveyance ditch and the drainage ditch are proposed for widening and/or deepening.

Elk Grove General Plan Policy NR-2-1 acknowledges that trees can function as important natural habitat features and thus should be retained, to the extent possible. The large native oaks on- and off-site, as well as other large, nonnative, ornamental species in the eastern portion of the Project site, provide potential nest sites for raptors, including Swainson's hawk. Converting land within the Project site from agricultural to urban land uses, and construction of the off-site drainage improvements, could result in removal of trees protected under Chapter 19.12 of the Elk Grove Municipal Code ("Tree Preservation and Protection") and/or General Plan policy. The City's tree regulations and General Plan policies call for the preservation of large trees to the extent feasible; however, retaining trees on-site would still result in a loss of nesting habitat for Swainson's hawk and white-tailed kite

because these trees would be surrounded by urban land uses following development and would no longer be suitable for nesting by these species.

The off-site improvement areas consist of agricultural ditches and ponds. Removal of wetland or streamside habitat in off-site improvement areas could conflict with General Plan policies that call for the preservation of wetland and streamside habitats and habitat for special-status species (General Plan Policies NR-1-2, NR-1-5, and NR-1-7). In addition, General Plan Policy NR-1-3 recognizes open space lands of all types as important resources, which should be preserved in the region for a variety of uses, including for wildlife habitat. Because the Project site consists of agricultural open space that provides important habitat values for many species of wildlife, including the state-listed Swainson's hawk, loss of this on-site agricultural land to urban uses would conflict with this General Plan policy. In sum, there is a potential for conflict with the City's tree regulations and with General Plan policies through removal of large trees, aquatic habitat (canals and ditches, streamside habitat, and wetlands), and agricultural open space. Therefore, this impact is considered **potentially significant**.

Implement Mitigation Measure 3.5-3c (Implement the City of Elk Grove Swainson's Hawk Foraging Habitat Mitigation Program).

Implement Mitigation Measure 3.5-9a (Avoid, Minimize, or Compensate for Loss of Waters of the United States and Waters of the State).

Implement Mitigation Measure 3.5-9b (Comply with the Section 1600 Streambed Alteration Agreement).

Implement Mitigation Measure 3.2-2 (Prepare and Implement a Tree Mitigation Plan to Reduce Effects on Trees of Local Importance).

Significance after Mitigation

Implementation of Mitigation Measures 3.5-3c, 3.5-9a, 3.5-9b, and 3.2-2 would reduce potentially significant impacts related to conflicts with City ordinances and policies protecting biological resources because they would require avoidance of protected trees and aquatic and riparian habitats if technically feasible and would require compensation for loss of function of aquatic and riparian habitat and loss of agricultural habitat that provides habitat values for special-status species. With implementation of Mitigation Measures 3.5-3a, 3.5-9a, 3.5-9b, and 3.2-2, future development in the Project site and the off-site improvements area would be designed to minimize potential impacts. Therefore, as with the 2019 SOIA EIR, the impact is considered **less than significant with mitigation**.

Impact 3.5-12: Conflicts with the Provisions of an Adopted Habitat Conservation Plan.

The SSHCP, which was adopted in 2018, includes the Project site in its plan area; however, the City of Elk Gove is not a participant in the SSHCP.

As discussed in the 2019 SOIA EIR, the SSHCP identifies 67,618 acres of Urban Development Area (UDA), which corresponds with the County's USB, and 33,499 acres of planned impact within that UDA. The Project site is located within the UDA and therefore habitat loss within the Project site has been included in the SSHCP planned impact calculation. To offset the planned impacts that would occur within the UDA, the SSHCP Conservation Strategy calls for creation of an integrated preserve system that conserves the natural land covers, certain cropland, and irrigated pasture–grassland in the SSHCP plan area. The preserve system will preserve at

least 34,495 acres of existing habitat and reestablish or establish at least 1,787 acres of habitat for a total preserve system of 36,282 acres.

Mitigation Measures 3.5-1 through 3.5-9, including the option of mitigating through the City's Elk Grove Municipal Code Chapter 16.130 for Swainson's hawk impacts, are consistent with the avoidance, minimization, and mitigation measures for covered species described in the SSHCP. Therefore, development in the Project site and construction of the off-site drainage improvements would not conflict with the provisions of the SSHCP. Therefore, this impact is considered **less than significant**.

Impact 3.5-13: Loss of Riparian Habitat and Sensitive Natural Communities.

As shown in Exhibits 3.5-1a through 3.5-1d, riparian habitat and sensitive natural communities are present throughout the off-site improvement areas. Widening and/or deepening of existing off-site agricultural ditches and ponds could result in direct removal of sensitive natural communities or riparian habitats, as well as indirect effects from increased sedimentation and/or accidental spills during construction. Therefore, Project implementation could have a substantial adverse effect on riparian habitat and other sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS. Therefore, this impact is considered **potentially significant**.

Implement Mitigation Measure 3.5-1a (Minimize the Temporary Off-Site Construction Impact Footprint).

Implement Mitigation Measure 3.5-1d (Implement an Off-Site Revegetation and Weed Control Plan).

Mitigation Measure 3.5-13: Avoid, Minimize, or Compensate for Loss of Riparian Habitat and Sensitive Natural Communities (2019 SOIA EIR Mitigation Measure 3.5-11).

- Retain a qualified botanist to identify, map, and quantify riparian habitat and other sensitive natural communities in proposed off-site improvement areas before final project design is completed. Off-site improvements shall be planned and designed to avoid loss or substantial degradation of riparian habitat and other sensitive natural communities, if technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the features may be preserved while still obtaining the project purpose and objectives and if the preserved habitat/community could reasonably be expected to provide comparable habitat functions following project implementation. The avoidance measures shall include relocating off-site improvement components, as necessary and where practicable alternatives are available, to prevent direct loss of riparian habitats and other sensitive natural communities.
- If riparian habitat or other sensitive natural communities present in off-site improvement areas cannot feasibly be avoided, the project applicant shall coordinate with CDFW to determine appropriate mitigation for removal of riparian habitat and sensitive natural communities resulting from project implementation. Mitigation measures may include restoration of affected habitat, habitat restoration, or preservation and enhancement of existing habitat/natural community in other locations. The compensation habitat shall be similar in composition and structure to the habitat/natural community to be removed and shall be at ratios adequate to offset the loss of habitat functions in the affected off-site improvement area.

Implement Mitigation Measure 3.5-9b: (Comply with the Section 1600 Streambed Alteration Agreement)

Implement Mitigation Measure 3.4-1a: (Implement the SMAQMD Basic Construction Emission Control Practices and Enhanced Exhaust Control Practices).

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a, 3.5-1d, 3.5-9b, 3.5-13, and 3.4-1a would reduce potentially significant impacts related to riparian habitat and sensitive natural communities because they would require minimizing the off-site construction footprint, construction worker personnel training, implementing a revegetation and weed control plan, avoidance of sensitive riparian habitats if technically feasible, compensation for loss of riparian habitat and sensitive natural communities if they cannot be avoided, and control of fugitive dust during construction activities. With implementation of Mitigation Measures 3.5-1a, 3.5-1d, 3.5-9b, 3.5-13, and 3.4-1a, construction in the off-site improvement areas would be designed to minimize potential impacts. Therefore, as with the 2019 SOIA EIR, this impact is considered **less than significant with mitigation**.