

This section describes the existing biological resources, including special-status species and sensitive habitat, known to occur and/or have the potential to occur in the Project study area (Project area). A summary of the regulations and programs that provide protective measures to special-status species, an analysis of impacts to biological resources that could result from Project implementation, and a discussion of mitigation measures necessary to reduce impacts to a less than significant level, where feasible, are provided in this section.

### 5.4.1 EXISTING SETTING

A significant number of studies have been undertaken in the Project area over the last several years. The following Project-related documentation was reviewed to collect site-specific data regarding habitat suitability for special-status species, as well as the identification of potentially jurisdictional waters. These studies are provided in **Appendix D**.

- Jurisdictional Delineation and Special Status Species Evaluation, Wheatley Property (Gibson & Skordal 2003)
- Special-Status Species Assessment for Souza Dairy Property (ECORP 2004a)
- Wetland Delineation for Souza Dairy Project Area (ECORP 2004b)
- Wetland Delineation for South East Area Specific Plan, Kammerer Family Trust (ECORP 2006a)
- Biological Resource Evaluation Letter Report for Simas Property (Sycamore 2006a)
- Preliminary Jurisdictional Delineation Report for Simas Property (Sycamore 2006b)
- Wetland Delineation for South East Area Specific Plan, Reynen & Bardis Properties<sup>1</sup> (ECORP 2006b)
- Special-Status Species Assessment for South East Area Specific Plan (ECORP 2007)
- Jurisdictional Delineation & Special-Status Species Assessment, Souza Dairy (Gibson & Skordal 2013)

Preliminary database searches were performed on the following websites to identify special-status species with the potential to occur in the area:

- US Fish and Wildlife Service's (USFWS) Sacramento Office Species Lists (2014a)
- USFWS Critical Habitat Portal (2014b)
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (2014a)

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<sup>1</sup> Reynen & Bardis does not own land in the Project area, but the study is referred to as the Reynen & Bardis study because it was submitted as part of a previous application on the property.

## 5.4 BIOLOGICAL RESOURCES

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- California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (2014)

A search of the USFWS Sacramento Office's database was performed for the Florin, Sacramento West, Sacramento East, Carmichael, Clarksburg, Elk Grove, Galt, Bruceville, and Courtland, California US Geological Survey (USGS) 7.5-minute quadrangles to identify special-species within their jurisdiction that may be affected by the Project. The query of the USFWS Critical Habitat Portal did not identify any critical habitat within the Project area. A query of the CNDDDB provided a list of known occurrences for special-status species within a 1- and 5-mile radius of the Project area. Lastly, the CNPS database was queried to identify special-status plant species with the potential to occur in the Florin, California, USGS 7.5-minute quadrangle. Raw data from the database queries is provided in **Appendix D**. Refer to the "Special-Status Species" section for a summary of the database search results and conclusions regarding the potential for each species to be impacted by Project-related activities.

### REGIONAL SETTING

The Project site is located within the California Dry Steppe ecological province. This province occurs on the flat alluvial plain between the Sierra Nevada and Coast ranges in the Central Valley of California. The California Dry Steppe province is characterized by hot summers and mild winters with precipitation largely occurring during the winter months (December through February). The landscape consists of broad, flat valleys bordered by sloping alluvial fans, slightly dissected terraces, and the lower foothills of the surrounding mountain ranges (McNab et al. 2007).

The California Dry Steppe province comprises only one ecological section, the Great Valley; therefore, the geomorphology is the same as described for the province as a whole. The Great Valley, or Central Valley as its more commonly referred, was once dominated by natural grasses; however, a long history of plowing, fire suppression, and grazing related to agricultural conversion have eliminated these habitats with the exception of a few remaining areas. Many slow-moving rivers flow through the Central Valley to the delta region east of the San Francisco Bay. These river systems have been channelized, leveed, and dammed to regulate the flows throughout the year. This ecological section has been further subdivided into 26 subsections (McNab et al. 2007).

### PHYSICAL SETTING

The Project area is located within the Hardpan Terraces subsection of the Great Valley ecological section and comprises the terraces along the eastern edge of the Sacramento and San Joaquin valleys. Vegetation is largely characterized by the California annual grassland series, purple needlegrass series, northern hardpan vernal pools, cupleaf ceanothus-fremontia-oak series, blue oak series, California sycamore series, and foothill pine series. Mean annual precipitation is approximately 10 to 25 inches that falls primarily as rain, while mean annual temperature is approximately 58° to 62° Fahrenheit. Streams within this subsection either drain to the Sacramento River or the San Joaquin River or to closed watersheds in the San Joaquin Valley. There are no lakes; however, temporary ponding of water occurs on Pleistocene terraces forming vernal pools (Goudey and Miles 1998).

### BIOLOGICAL SETTING

The Project area comprises a mix of urban, cropland, irrigated hayfield, vineyard, deciduous orchard, annual grassland, freshwater emergent wetland, wet meadow, open water, and drainage/irrigation ditch cover types (**Figure 5.4-1**). In addition to the build out of the Project

area, off site infrastructure improvements will include deepening 3,200 feet of the existing channel west of the Project area running south of Kammerer Road (see **Figure 2.0-5**) Aquatic features were mapped using the above-referenced jurisdictional delineation data, combined with aerial photointerpretation for the remainder of the Project area. Each cover type is described below based on the data presented in the CDFW's *A Guide to Wildlife Habitats of California* (2014b).

## **5.4 BIOLOGICAL RESOURCES**

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### Urban/Ruderal (83.4 acres)

The urban/ruderal cover types consist of rural residential lots, maintained roads, and other altered habitats within the Project area. These properties typically contain residential structures along with various outbuildings and other structures utilized for farming operations. Vegetation within these lots is characterized by ornamental trees, shrubs, and maintained lawns. Weedy annual species, including shepherd's purse (*Capsella bursa-pastoris*), chickweed (*Stellaria media*), fiddleneck (*Amsinckia* spp.), and groundsel (*Senecio vulgaris*), grow in disturbed areas and along the edges of hardscape.

The rural nature of the urban cover types within the Project area, combined with the proximity of large expanses of cropland habitats, provides suitable habitat for a variety of species including coyote (*Canis latrans*), raven (*Corvus corax*), gopher snake (*Pituophis catenifer*), and western fence lizard (*Sceloporus occidentalis*), as well as other common migratory birds and raptors.

### Irrigated Row and Field Crops (124.4 acres)

Vegetation in irrigated row and field crops can include a variety of shapes, sizes, and growing patterns. Crop types vary in structure and can represent a wide range of heights, densities, and canopy covers. The majority of row crops are annual species, while others are perennials. Most annual crops are planted in spring and harvested in summer or fall. Crops may be planted in rotation resulting in multiple harvests per year. Crop rotation helps to conserve nutrients in the soil and maintain soil productivity.

Common irrigated row and field crops in the Project area include broccoli (*Brassica oleracea* Italica Group), cabbage (*Brassica oleraceae* Capitata Group), radish (*Raphanus sativus*), onion (*Allium cepa*), tomato (*Lycopersicon esculentum*), butternut squash (*Cucurbita moschata*), soybean (*Glycine max*), kohlrabi (*Brassica oleracea* Gonglodes Group), okra (*Abelmoschus esculentus*), snow peas (*Pisum sativum* var. *macrocarpon*), and Swiss chard (*Beta vulgaris* *flavescens*). In addition to the cultivated species, weedy annuals may grow in the fields, including shepherd's purse and mustard (*Brassica* spp.).

Several rodent and bird species have adapted to croplands, including raptors, doves, rabbits, mice, and ground squirrels. Except for insectivores, many birds and mammals can cause serious crop losses and may be controlled by fencing, trapping, and poisoning.

### Irrigated Hayfield (877.8 acres)

Irrigated hayfields are typically dense monocultures of alfalfa (*Medicago sativa*) or grass. Except for the initial growing period, this cover type is characterized by nearly 100 percent vegetative cover. The average height of crops is about 1.5 feet (0.46 meters) and structure is typically homogenous with no layering. Plowing may occur annually; however, alfalfa often remains unplowed for three years or more. Most grass hay fields are composed of introduced grass and forb species; however, some "native" hay fields will include naturally occurring species and are generally managed less intensively. Both alfalfa and grass hay fields are regularly irrigated. This cover type is characterized by perennial rye (*Lolium perenne*), alfalfa, oats (*Avena* sp.), dallis grass (*Paspalum dilatatum*), annual bluegrass (*Poa annua*), medusahead grass (*Taeniatherum caput-medusae*), and Kentucky fescue (*Festuca arundinacea*).

Irrigated hayfields provide high quality seasonal resources for blackbirds (*Agelaius phoeniceus*), deer (*Odocoileus* spp.), doves (*Zenaida* spp.), egrets (*Egretta* spp.), elk (*Cervus* spp.), foxes (*Vulpes* spp.), garter snakes (*Thamnophis* spp.), gophers (*Thomomys* spp.), gopher snakes

## 5.4 BIOLOGICAL RESOURCES

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(*Pituophis catenifer*), hawks (*Buteo* spp.), king snakes (*Lampropeltis* spp.), owls (*Stringiformes*), pronghorn (*Antilocapra americana*), sandhill cranes (*Grus canadensis*), voles (*Arvicolinae*), waterfowl, and other wildlife species.

### **Vineyard (0.2 acre)**

Vineyards are typically composed of a single species (e.g., grape, raspberry, kiwifruit), which are planted on wood/wire trellises in rows. The understory may be bare due to herbicide application or planted in domesticated herbaceous plants. Typical understory associates include Bermuda grass (*Cynodon dactylon*), soft chess (*Bromus hordeaceus*), annual ryegrass (*Lolium rigidum*), Johnson grass (*Sorghum halepense*), wild oats, red brome (*Bromus madritensis*), red fescue (*Festuca rubra*), barnyardgrass (*Echinochloa crusgalli*), wild mustard (*Sinapis arvensis*), fiddleneck, and filaree (*Erodium* spp.).

Conversion to vineyard has resulted in the loss of naturally diverse habitats that once supported various wildlife populations. However, some species of birds and mammals have become adapted to vineyard habitats. Deer and rabbit forage on vines, while squirrel and numerous bird species feed on fruits. In addition, vineyards may provide cover for wildlife during the hot summer months.

### **Deciduous Orchard (4.0 acres)**

Deciduous orchards typically comprise a single tree species such as almonds, apples, apricots, cherries, figs, nectarines, peaches, pears, pecans, pistachios, plums, pomegranates, prunes, or walnuts. The tree crowns typically touch, and trees are uniformly spaced in a linear pattern. The understory usually consists of herbaceous annuals and perennials similar to those found in vineyards. Wildlife utilization of deciduous orchards is similar to vineyards.

### **Annual Grassland (83.4 acres)**

Annual grassland habitats are open grasslands dominated by annual plant species found from the flat plains of the Central Valley to the coastal mountain ranges of Mendocino County and in scattered locations across the southern portion of the State. Species typically associated with this community include wild oats, soft chess, ripgut brome (*Bromus diandrus*), red brome, wild barley (*Hordeum* spp.), rat-tail fescue (*Festuca myuros*), broadleaf filaree (*Erodium botrys*), redstem filaree (*Erodium cicutarium*), turkey mullein (*Croton setigerus*), true clovers (*Trifolium* spp.), bur clover (*Medicago* spp), popcorn flower (*Cryptantha* spp.), and several other grasses and forbs.

In the Project area, this community is composed primarily of introduced grass species, including Italian ryegrass (*Festuca perennis*), wild oats, soft chess, ripgut brome, rat-tail fescue, medusahead (*Elymus caput-medusae*), and dallis grass. Several forb species can be found throughout the Project area, including field bindweed (*Convolvulus arvensis*), rose clover (*Trifolium hirtum*), vetch (*Vicia* spp), broadleaf filaree, spiny-fruit buttercup (*Ranunculus muricatus*), shepherd's purse, curly dock (*Rumex crispus*), cut-leaf geranium (*Geranium dissectum*), chicory (*Cichorium intybus*), dandelion (*Taraxacum officianale*), cheeseweed (*Malva parviflora*), wild radish (*Raphanus sativus*), spreading hedgeparsley (*Torilis arvensis*), yellow star-thistle (*Centaurea solstitialis*), spikeweed (*Centromadia fitchii*), smooth catsear (*Hypochaeris glabra*), prickly lettuce (*Lactuca serriola*), turkey mullein, Spanish lotus (*Acmispon americanus* var. *americanus*), centaury (*Zeltnera muehlenbergii*), and fireweed (*Epilobium brachycarpum*).

Annual grasslands provide foraging habitat for a wide variety of wildlife species including raptors, seed-eating birds, small mammals, amphibians, and reptiles. However, some require special habitat features such as cliffs, caves, ponds, or habitats with woody vegetation for breeding, resting, and escape cover. Reptiles commonly associated with this habitat type include western fence lizard, common garter snake (*Thamnophis sirtalis*), and western rattlesnake (*Crotalis viridis*). Black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), western harvest mouse (*Reithrodontomys megalotis*), Botta's pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*), badger (*Taxidea taxus*), and coyote are mammals commonly found in this habitat type. Common birds known to breed in annual grasslands are burrowing owl (*Athene cunicularia*), short-eared owl (*Asio flammeus*), horned lark (*Eremophila alpestris*), and western meadowlark (*Sturnella neglecta*).

### **Freshwater Emergent Wetland (3.0 acres)**

Freshwater emergent wetlands are typically composed of erect, rooted herbaceous hydrophytic perennial monocots. Emergent wetlands are flooded with enough frequency that the roots of the vegetation grow under anaerobic conditions. Common species include big leaf sedge (*Carex amplifolia*), Baltic rush (*Juncus balticus*), redroot nutgrass (*Cyperus erythrorhizos*), saltgrass (*Distichlis spicata*), cattail (*Typha* spp.), tule bulrush (*Schoenoplectus acutus*), river bulrush (*Scirpus fluviatilis*), and arrowhead (*Sagittaria* sp.). Within the Project area, rabbits-foot grass (*Polypogon monspeliensis*), tall flatsedge (*Cyperus eragrostis*), rough cocklebur (*Xanthium strumarium*), hard-stem bulrush (*Schoenoplectus acutus*), narrow-leaf cattail (*Typha angustifolia*), and curly dock are commonly associated with this cover type.

This community is considered one of the most productive wildlife habitats in California, since it provides food, cover, and water for more than 160 bird species, as well as for numerous mammals, reptiles, and amphibians. In addition, several species rely on freshwater emergent wetlands for their entire life cycle, including the federally and state threatened giant garter snake (*Thamnophis gigas*).

### **Wet Meadow (5.6 acres)**

This community is typically simple in structure (i.e., herbaceous layer only) and occurs as an ecotone between freshwater emergent wetland and perennial grassland communities. A wide variety of herbaceous species are associated with this community type. Wet meadow habitats within the Project area are characterized by seasonally saturated soils and/or standing water. Species associated with wet meadows in the Project area include Italian ryegrass, spiny-fruit buttercup, tall flatsedge, dallis grass, green bristlegrass (*Setaria viridis*), hyssop loosestrife (*Lythrum hyssopifolia*), iris-leaved rush (*Juncus xiphioides*), curly dock, clover, creeping spikerush (*Eleocharis macrostachya*), mannagrass (*Glyceria* spp.), prostrate knotweed (*Polygonum aviculare*), quillwort (*Isoetes* spp.), and barnyard grass (*Echinochloa crus-galli*).

Typically, wet meadow habitats support a diverse number of wildlife species. Waterfowl, especially mallards (*Anas platyrhynchos*), frequent streams flowing through wet meadows. Yellow-headed (*Xanthocephalus xanthocephalus*) and red-winged (*Agelaius phoeniceus*) blackbirds occasionally nest in wet meadows with tall vegetation and with adequate water to discourage predators.

## 5.4 BIOLOGICAL RESOURCES

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### Open Water (1.3 acres)

Open water in the Project area is associated with stock ponds. Dominant species found in these areas consist of woody species that include Fremont's cottonwood (*Populus fremontii*), arroyo willow (*Salix lasiolepis*), and valley oaks (*Quercus lobata*). Poison oak (*Toxicodendron diversilobum*) and Himalayan blackberry (*Rubus discolor*) are additional shrubby species observed in these areas. Wetland herbaceous species associated with these features includes broad-leaved cattail (*Typha latifolia*), yellow water primrose (*Ludwigia peploides*), and smartweed (*Polygonum lapathifolium*).

Wildlife species associated with this habitat would include many of the species occurring in the agricultural and freshwater emergent wetland habitats listed above, particularly foraging herons and egrets.

### Irrigation/Drainage Ditch (11.9 acres [including offsite channel improvements])

Irrigation/drainage ditches and their associated banks are found throughout the Project area. The drainages are highly modified channels that vary in species composition and persistence of water. Sloughs and irrigation channels may have been naturalized in the past; presently they are used as a means of irrigation.

Associated plant species include Fremont's cottonwood, valley oak, California walnut (*Juglans californica*), narrow-leaf willow (*Salix exigua*), Himalayan blackberry, dallis grass, rabbits-foot grass, Mediterranean barley (*Hordeum marinum*), creeping spikerush, rough cocklebur, tall flatsedge, hard-stem bulrush, narrow-leaf cattail, curly dock, Bermuda grass, cursed buttercup (*Ranunculus sceleratus*), and smartweed.

The banks and open water of these drainages provide habitat for a variety of wildlife. Birds such as great blue herons (*Ardea herodias*) and belted kingfishers (*Ceryle alcyon*) forage in these communities, primarily along the water's edge, and many species of insectivorous birds (e.g., swallows, swifts, and flycatchers) catch their prey over open water.

### SENSITIVE HABITATS

Sensitive habitats included are those that are of special concern to resource agencies or those that are protected under the California Environmental Quality Act (CEQA), Section 1600 of the California Fish and Game Code (FGC), and/or Sections 401 and 404 of the Clean Water Act (CWA).

### Waters of the United States and/or State

Jurisdictional waters of the State and United States along with isolated wetlands provide a variety of functions for plants and wildlife. Wetlands and other water features provide habitat, foraging, cover, and 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.

Jurisdictional delineations have been performed on the Wheatley, Kammerer, Simas, Reynen & Bardis, and Souza properties within the Project area (provided in **Appendix D**); however, only the delineation for the Souza property has been verified by the US Army Corps of Engineers (USACE) to date. The mapped extent of jurisdictional features presented in these reports was utilized in combination with aerial photointerpretation of the extent wetlands, surface waters, and drainages in the remainder of the Project area (**Figure 5.4-2**). Based on the data, 11.6 acres of irrigation/drainage ditches, 1.3 acres of open water, 2.97 acres of freshwater emergent wetlands, and 5.55 acres of wet meadow habitats potentially occur within the Project area.

The USACE continues to assert jurisdiction over all waters that are in use, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which may be subject to the ebb and flow of the tide and are defined as traditional navigable waters. Field observations and review of relevant aerial photographs and topographic maps reveal that the irrigation/drainage ditches within the Project area have an indirect connection, through a series of agricultural drainages, with Stone Lakes to the west. Based on the verified delineation for the Souza property, it is anticipated that the USACE may exert jurisdiction over some of the wetlands and other waters present within the Project area.

The term "waters of the United States" is essentially legal rather than biological. The Ninth Circuit Court of Appeals, whose jurisdiction includes California, has held that it is federal courts, not regulatory agencies, that are ultimately responsible for determining the extent of CWA section 404 jurisdiction. (Fairbanks North Star Borough v. U.S. Army Corps of Engineers, 2008.) Courts generally defer to agency determinations, however, and in the absence of a court proceeding, the USACE's determination serves as a working proxy for CWA section 404 jurisdiction.

Under Section 401 of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Act, the Central Valley Regional Water Quality Control Board (RWQCB) asserts jurisdiction over certain wetlands and non-isolated waters associated with traditional navigable waters. As the on-site drainages are hydrologically connected to Stone Lakes, they are likely subject to regulatory authority by the Central Valley RWQCB under CWA Section 401.

Under Section 1600 et seq. of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. The irrigation/drainage ditches within the Project area that have definable bed-and-bank features or ordinary high water mark (OHWM) indicators may be subject to regulatory authority by the CDFW.

### WILDLIFE MOVEMENT CORRIDORS

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented acres of undisturbed area. Maintaining the continuity of established wildlife corridors is important to (a) sustain species with specific foraging requirements, (b) preserve a species' distribution potential, and (c) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource.

A review of the Missing Linkages in California's Landscape [ds420] and Essential Connectivity Areas – CEHC [ds623] data layers available on the CDFW's BIOS 5 viewer revealed that the Project area is not located within identified corridors (CDFW 2014c).

## 5.4 BIOLOGICAL RESOURCES

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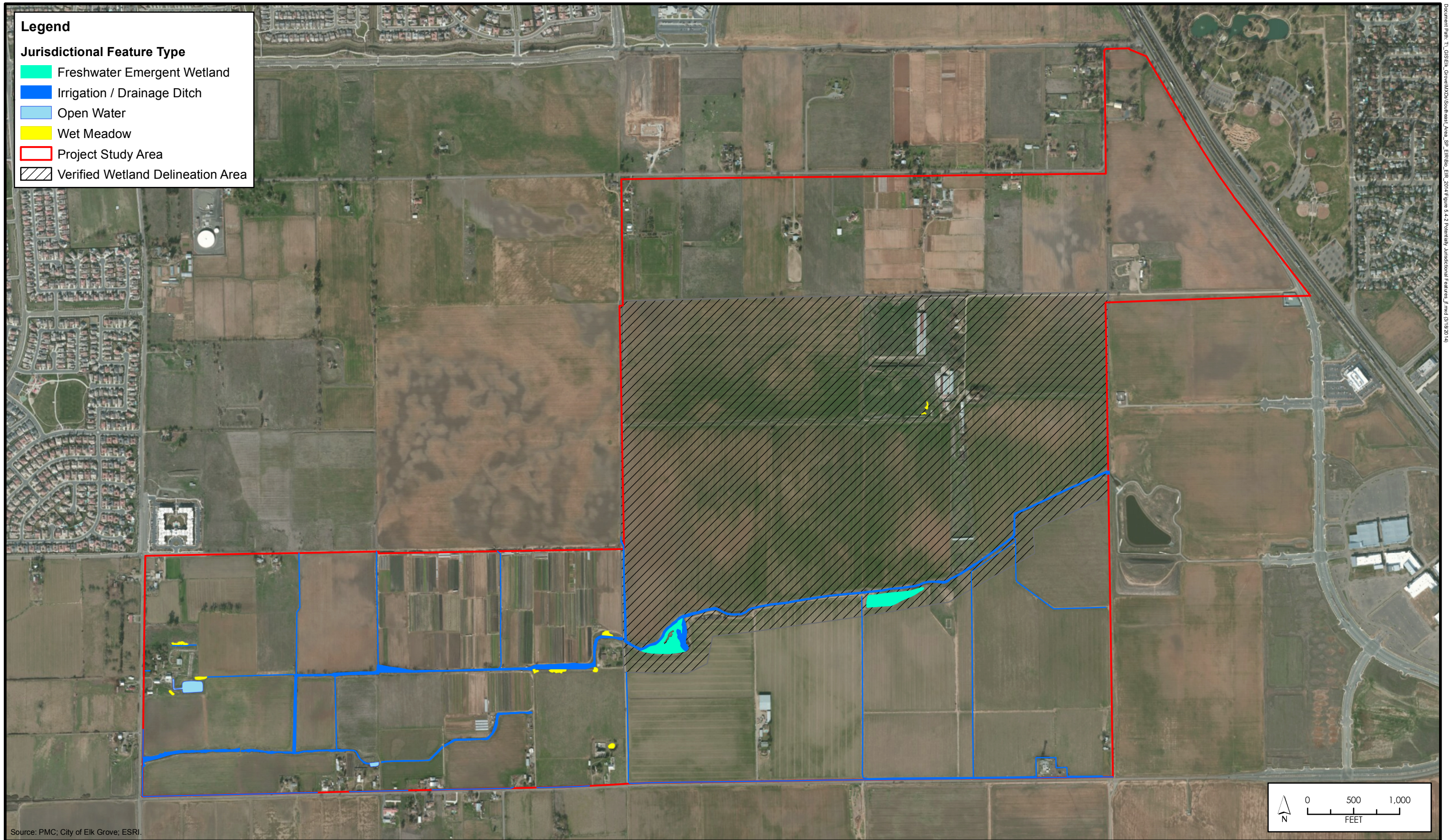
### SPECIAL-STATUS SPECIES

Candidate, sensitive, or special-status species are commonly characterized as species that are at potential risk or actual risk to their persistence in a given area or across their native habitat. These species have been identified and assigned a status ranking by governmental agencies such as the CDFW, the USFWS, and private organizations such as the CNPS. The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species' or population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this biological review, special-status species are defined by the following codes:

- Listed, proposed, or candidates for listing under the federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] 17.11 – listed; 61 Federal Register [FR] 7591, February 28, 1996, candidates)
- Listed or proposed for listing under the California Endangered Species Act (CESA) (FGC 1992 Section 2050 et seq.; 14 California Code of Regulations [CCR] Section 670.1 et seq.)
- Designated as Species of Special Concern by the CDFW
- Designated as Fully Protected by the CDFW (FGC Sections 3511, 4700, 5050, 5515)
- Species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380) including CNPS List Rank 1b and 2

The USFWS, CDFW, and CNPS database queries identified several special-status species with the potential to be impacted by Project-related activities. **Table 5.4-1** provides a summary of all special-status species identified in the database results, a description of the habitat requirements for each species, and conclusions regarding the potential for each species to be impacted by Project components. The CNDDDB results within 5 miles of the Project are depicted on **Figure 5.4-3**.





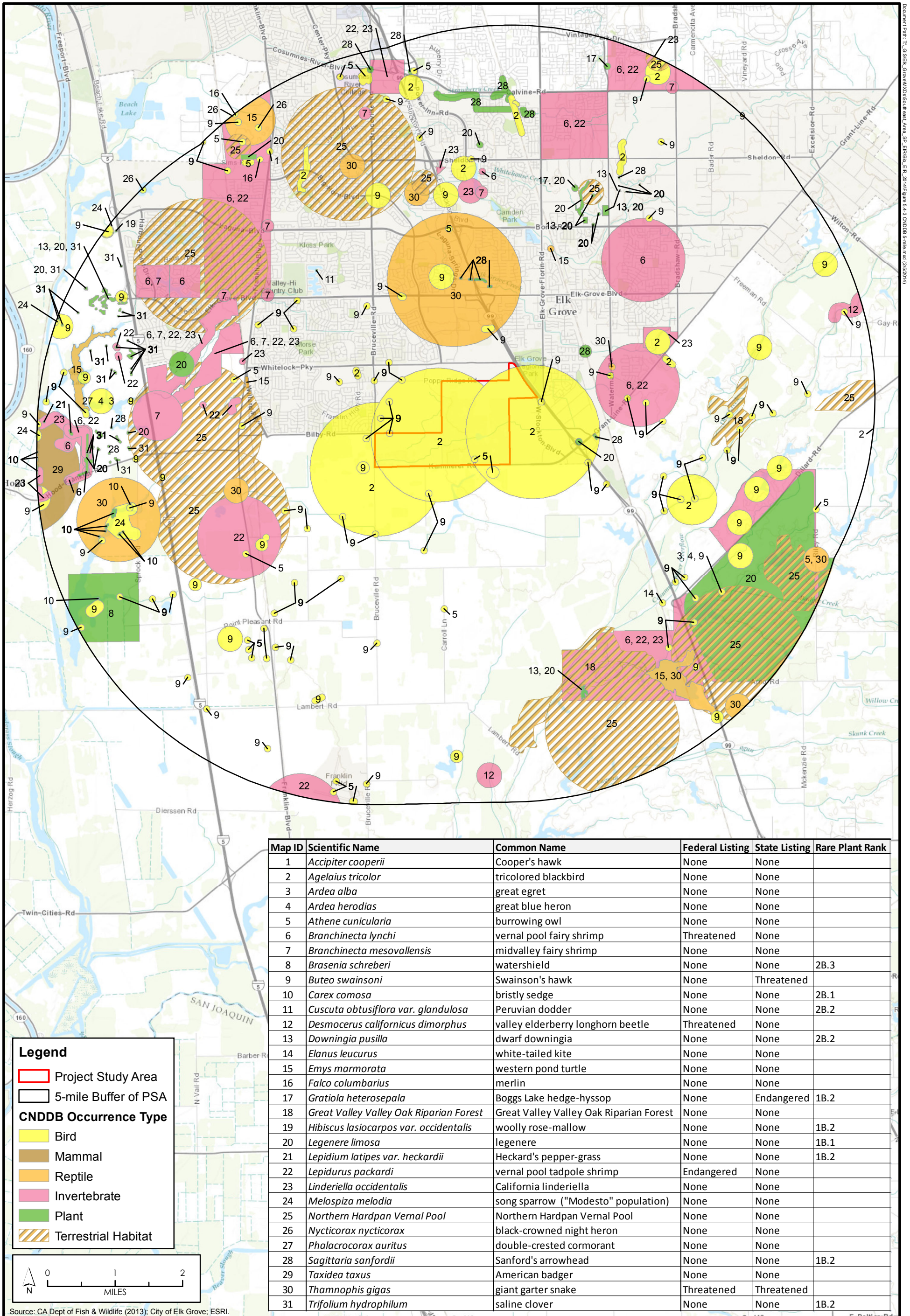
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**Figure 5.4-2**  
Potentially Jurisdictional Features Within Project Study Area













**TABLE 5.4-1  
SPECIAL-STATUS SPECIES OCCURRENCE DATA**

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Habitat Present/Absent	Rationale
<b>Plants</b>							
<i>Brasenia schreberi</i>	watershield	-	-	2.3	Freshwater marshes and swamps. Elev: 98–7,218 ft (30–2,200 m). Blooms: June–September. (CNPS 2014)	A	Project area (25-45 feet) is below species elevation range.
<i>Carex comosa</i>	bristly sedge	-	-	2.1	Coastal prairies, valley and foothill grasslands, as well as marshes, swamps and lake margins. Elev: 0–2,050 ft (0–625m). Blooms: May–September. (CNPS 2014)	P	Suitable habitat present.
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	Peruvian dodder	-	-	2.2	Freshwater marshes and swamps. Elev: 49–919 ft (15–280 m). Blooms: July–Oct. (CNPS 2014)	P	Suitable habitat present; however, Project area is just below species elevation range.
<i>Downingia pusilla</i>	dwarf downingia	-	-	2.2	Vernal pools and mesic valley and foothill grasslands. Elev: 3–1,459 ft (1–445 m). Blooms: Mar–May. (CNPS 2014)	P	Suitable habitat present.
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	-	SE	1B.2	Clay soils in marshes, swamps, lake margins, and vernal pools. Elev: 33–7,792 ft (10–2,375 m). Blooms: April–August. (CNPS 2014)	P	Suitable habitat present.
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	woolly rose-mallow	-	-	1B.2	Freshwater marshes and swamps. Elev: 0–394 ft (0–120 m). Blooms: June–September. (CNPS 2014)	P	Suitable habitat present.
<i>Juglans hindsii</i>	Northern California black walnut	-	-	1B.1	Riparian forest/woodland. Elev: 0–1,444 ft (0–440 m). Blooms: Apr–May. (CNPS 2014)	P	Suitable habitat present.
<i>Legenere limosa</i>	legenere	-	-	1B.1	Vernal pools. Elev: 3–2,887 ft (1–880	P	Suitable habitat present.

## 5.4 BIOLOGICAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Habitat Present/Absent	Rationale
					m). Blooms: Apr–June. (CNPS 2014)		
<i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard's pepper-grass	–	–	1B.2	Alkaline flats in valley and foothill grasslands and vernal pool edges. Elev: 7–656 ft (2–200 m). Blooms: March–May. (CNPS 2014)	P	Suitable habitat present.
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	–	–	1B.2	Assorted shallow freshwater marshes and swamps. Elev: 0–2,133 ft (0–650 m). Blooms: May–October. (CNPS 2014)	P	Suitable habitat present.
<i>Trifolium hydrophilum</i>	saline clover	–	–	1B.2	Marshes and swamps, valley & foothill grassland (mesic, alkaline), and vernal pools. Elev: 0–984 ft (0–300 m). Blooms: Apr–June. (CNPS 2014)	P	Suitable habitat present.
<b>Invertebrates</b>							
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	FE	–		Vernal pools, often large and turbid pools (USFWS 2005).	A	Outside of known range.
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	–		Found only in vernal pools and vernal pool-like habitats. Distributed throughout the Central Valley, including Sacramento County (USFWS 2005).	P	Vernal (seasonal) wetland features present.
	Critical Habitat, vernal pool fairy shrimp	X	–			A	Critical habitat not present.
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	FT	–		Dependent on host plant, elderberry ( <i>Sambucus</i> spp.), which generally grows in riparian woodlands and upland habitats of the Central Valley. Current beetle distribution in Central Valley ranges from Shasta County to Fresno County (USFWS 1999).	P	Suitable habitat present.
<i>Elaphrus viridis</i>	delta green ground beetle	FT	–		Grassland interspersed with vernal pools. Only documented in the greater Jepson Prairie in south-central Solano County (USFWS 2005).	A	Outside known species range.

5.4 BIOLOGICAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Habitat Present/Absent	Rationale
<i>Lepidurus packardii</i>	vernal pool tadpole shrimp	FE	-		Wide variety of ephemeral wetland habitats (vernal pools). Distributed throughout Central Valley and San Francisco Bay Area (USFWS 2005).	P	Vernal (seasonal) wetland features present.
	Critical Habitat, vernal pool tadpole shrimp	X	X			A	Critical habitat not present.
<b>Fish</b>							
<i>Acipenser medirostris</i>	green sturgeon	FT	SSC		Entire coast of California. Spawning occurs in Sacramento River and Klamath River (USFWS 1996a). Oceanic waters, bays, and estuaries during non-spawning season. Spawning habitat = deep pools in large, turbulent, freshwater mainstems (NMFS 2005).	A	Outside species range.
<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 (USFWS 1996a).	A	Outside species range.
	Critical habitat, delta smelt	X	-			A	Critical habitat not present.
<i>Oncorhynchus mykiss</i>	Central Valley steelhead	FT	-		Currently found in the upper Sacramento River and its tributaries, including Antelope, Deer, and Mill creeks and the Yuba River. May exist in Big Chico and Butte creeks. Small populations found in the American, Feather, Stanislaus, Mokelumne, and Calaveras rivers (NMFS 2009).	A	Outside species range.
	Critical Habitat, Central Valley steelhead	X	X			A	Critical habitat not present.
<i>Oncorhynchus tshawytscha</i>	Central Valley spring-run chinook salmon	FT	ST		Currently found in the Sacramento-San Joaquin River Delta, the Sacramento River and its tributaries, including American, Yuba, and Feather rivers,	A	Outside species range.
	Critical Habitat, Central	X	X			A	Critical habitat not present.

## 5.4 BIOLOGICAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Habitat Present/Absent	Rationale
	Valley spring-run chinook salmon				and Mill, Deer, and Butte creeks (NMFS 2009).		
	winter-run chinook salmon, Sacramento River	FE	SE		Currently found in the Sacramento River and its larger tributaries, including American, Yuba, and Feather rivers. Also found in San Joaquin rivers. Requires stream reaches with cold water sources for spawning (NMFS 2009).	A	Outside species range.
	Critical Habitat, winter-run chinook salmon	X	X			A	Critical habitat not present.
<b>Amphibians</b>							
<i>Ambystoma californiense</i>	California salamander, tiger central population	FT	ST		Breeding ponds are usually fish-free and ephemeral. Ponds form in winter and dry in summer. May also breed in slow streams and semi-permanent waters, including cattle ponds. Needs both suitable upland habitat and breeding ponds. Mostly fossorial and often utilizes mole/ground squirrel burrows. Typical habitat associations include grassland, oak savanna, and edges of mixed woodland and lower elevation coniferous forest (Nafis 2014).	A	Outside species range. Species has never been found north of the Cosumnes River (USFWS 2004).
<i>Rana draytonii</i>	California red-legged frog	FT	-		Ponds/streams in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover in lowlands or foothills. Breeding habitat = 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. From sea level to 5,000 ft (1,525 m) (Nafis 2014).	A	Outside species range. Species has been extirpated from the Central Valley floor (USFWS 2002).



5.4 BIOLOGICAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Habitat Present/Absent	Rationale
<b>Reptiles</b>							
<i>Emys marmorata</i>	western pond turtle	–	SSC		Found in a wide variety of habitats throughout California, but associated with permanent ponds, lakes, streams, irrigation ditches, and permanent pools along intermittent streams (CDFW 2014d).	P	Suitable habitat present.
<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 (USFWS 2012).	P	Suitable habitat present.
<b>Birds</b>							
<i>Agelaius tricolor</i>	tri-colored blackbird	–	SSC		Dominant nest substrate species includes cattails, bulrushes, Himalaya berry, and agricultural silage. Dense vegetation is preferred but heavily lodged cattails not burned in recent years may preclude settlement. Need access to open water. Strips of emergent vegetation along canals are avoided as nest sites unless they are about 10 or more meters wide but in some ponds, especially where associated with Himalayan blackberries and deep water, settlement may be in narrower fetches of cattails. If sites are hard for an observer to reach, the site it	P	Suitable habitat present.

## 5.4 BIOLOGICAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Habitat Present/Absent	Rationale
					is relatively suitable (Hamilton 2004).		
<i>Athene cunicularia</i>	burrowing owl	–	SSC		Nesting habitat includes open areas with mammal burrows, including rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub, vacant lots and human disturbed lands. Soils must be friable for burrows (Bates 2006).	P	Suitable habitat present.
<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 (CDFW 2014d).	P	Suitable habitat present.
<i>Elanus leucurus</i>	white-tailed kite	–	FP		Occurs in herbaceous and open stages of valley lowland habitats, usually near agricultural land. Forages in undisturbed, open grasslands, meadows, farmlands and emergent wetlands (CDFW 2014d).	P	Suitable habitat present.
<i>Grus canadensis tabida</i>	Greater sandhill crane	–	FP		Found in open, fresh water wetlands, particularly habitats that contain open sedge meadows in wetlands that are adjacent to short vegetation uplands.	A	Breeding and foraging behaviors of this species are not known to occur onsite.
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE	SE		Obligate riparian breeder. Cottonwood willow, oak woodlands, and mule fat scrub along watercourses (Kus 2002).	A	Suitable riparian habitat not present. Closest documented occurrence 14.5 miles northwest of the Project area (CDFW 2014a).

5.4 BIOLOGICAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Habitat Present/Absent	Rationale
<b>Mammals</b>							
<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 (CDFW 2014d).	P	Suitable habitat present.

Key	
Federal & State Status	CNPS Rare Plant Rank
(FE) Federal Endangered	<i>Rareness Ranks</i>
(FT) Federal Threatened	(1A) Presumed Extinct in California
(FC) Federal Candidate	(1B) Rare, Threatened, or Endangered in California and Elsewhere
(FD) Federally Delisted	(2) Rare, Threatened, or Endangered in California, but More Common Elsewhere
(SE) State Endangered	(3) More Species Information Needed
(ST) State Threatened	(4) Limited Distribution
(SSC) State Species of Special Concern	<i>Threat Ranks</i>
(SCT) State Candidate Threatened	(0.1) Seriously threatened in California
(FP) Fully Protected	(0.2) Fairly threatened in California
	(0.3) Not very threatened in California

## 5.4 BIOLOGICAL RESOURCES

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### Special-Status Plant Species

Based on database search results, 10 special-status plant species have the potential to occur in the Project area. Each special-status plant species that is considered in the impact analysis is described below based on the data obtained from the CNPS (2014) *Inventory of Rare, Threatened, and Endangered Plants of California*.

#### Bristly Sedge (*Carex comosa*)

Bristly sedge has a CNPS rare plant rank of 2B.1. It is not federally or State listed. This species is a perennial rhizomatous herb that blooms from May through September. It is found in a range of habitats, including coastal prairie, marshes and swamps along lake margins, and valley and foothill grassland. It occurs at elevations ranging from sea level to 2,051 feet (625 meters) above mean sea level (amsl). This species is threatened by marsh drainage and road maintenance. According to the CNDDDB, there are no occurrences of bristly sedge within 1 mile of the Project area; however, there are three records within 5 miles. The emergent wetland habitats and other mesic areas within the Project area provide potential habitat for this species. Due to the presence of suitable habitat, this species may occur in the Project area.

#### Peruvian Dodder (*Cuscuta obtusiflora* var. *glandulosa*)

Peruvian dodder is a parasitic annual vine with a CNPS rare plant rank of 2B.2. It has no federal or State listing. This species blooms from July through August. Peruvian dodder is associated with freshwater marshes and swamps at elevations ranging from 49 to 919 feet (15–280 meters) amsl. In California, this species is known from five extant occurrences, only one of which is from the last 20 years. In addition, the plants observed in Sacramento County were never verified to be this species. There are no records of Peruvian dodder within 1 mile of the Project area, but there is one occurrence within a 5-mile radius of the Project area. The emergent wetland habitats and other mesic areas within the Project area provide potential habitat for Peruvian dodder. This species may occur in the Project area due to the presence of potential suitable habitat; however, due to the uncertain identity of the nearby occurrence, it is unlikely.

#### Dwarf Downingia (*Downingia pusilla*)

Dwarf downingia is an annual herb with a CNPS rare plant rank of 2B.2. It is not federally or State listed. This species blooms from March through May. It is typically found growing in vernal pools or in mesic areas of valley and foothill grassland. This species ranges from sea level to 1,460 feet (445 meters) amsl. Dwarf downingia is threatened by urbanization, development, agriculture, grazing, non-native plants, vehicles, and industrial forestry. There are no records of dwarf downingia within 1 mile of the Project area, but there are four occurrences within a 5-mile radius of the Project area. The seasonally mesic areas within the Project area provide potential habitat for dwarf downingia. This species may occur within the Project area due to the presence of potential suitable habitat.

#### Boggs Lake Hedge-Hyssop (*Gratiola heterosepala*)

Boggs Lake hedge-hyssop is an annual herb with a CNPS rare plant rank of 1B.2. This species has no federal listing, but is listed as endangered under the CESA. Boggs Lake hedge-hyssop blooms between April and August. It typically grows on clay soils in vernal pools and in marshes and swamps along lake margins. This species ranges from 33 to 7,792 feet (10–2,375 meters) amsl and is threatened by development, agriculture, grazing, trampling, and vehicles. According to the CNDDDB, there are no occurrences of Boggs Lake hedge-hyssop within 1 mile of the Project area;

however, there are two records within 5 miles. The vernal mesic areas in the Project area provide potential habitat for this species. Due to the presence of suitable habitat, this species may occur in the Project area.

### Woolly Rose-Mallow (*Hibiscus lasiocarpus* var. *occidentalis*)

Woolly rose-mallow is a perennial rhizomatous herb endemic to California. It has a CNPS rare plant rank of 1B.2 and has no federal or State listing. This species blooms from June through September and ranges in elevation from sea level to 394 feet (120 meters) amsl. It is typically found growing near freshwater marshes swamps and is often found in riprap on the sides of levees. Woolly rose-mallow is seriously threatened by habitat disturbance, development, agriculture, recreational activities, and channelization of the Sacramento River and its tributaries. Other threats include erosion and weed control measures. There is no record of woolly rose-mallow within 1 mile of the Project area, but there is one occurrence within 5 miles of the Project area. The emergent wetlands and drainages within the Project area provide potential habitat for woolly rose-mallow. This species may occur in the Project area due to the presence of potential suitable habitat.

### Northern California black walnut (*Juglans hindsii*)

Northern California black walnut is a perennial deciduous tree with a CNPS rare plant rank of 1B.1 and no State or federal listing. This species blooms from April through May and ranges in elevation from sea level to 1,444 feet (440 meters) amsl. The native habitat for Northern California black walnut includes riparian forest and riparian woodland. This species has been historically cultivated as rootstock for English walnut (*Juglans regia*) orchards and very few native occurrences remain. This species is threatened by urbanization, agriculture, and hybridization with orchard trees. The single occurrence from Sacramento County does not lie within 5 miles of the Project area; this occurrence was determined extirpated in 2002. The stand of large trees along the main east-west drainage channel in the Project area is the only area where potential habitat occurs for this species. Due to the absence of nearby occurrences and the lack of native riparian habitat, it is highly unlikely that a native occurrence of Northern California black walnut occurs within the Project area.

### Legenere (*Legenere limosa*)

Legenere is an annual herb endemic to California. It has a CNPS rare plant rank of 1B.1 and has no federal or State listing. This species blooms from April to June and ranges in elevation from sea level to 2,887 feet (880 meters) amsl. It is typically found growing in vernal pools. Legenere is threatened by grazing, road widening, non-native plants, and development. There is one record of legenere within 1 mile of the Project area, and a total of 10 occurrences within 5 miles. The vernal mesic areas in the Project area provide potential habitat for legenere. This species may occur within the Project area due to the presence of potential suitable habitat and previous occurrences in the vicinity.

### Heckard's Pepper-Grass (*Lepidium latipes* var. *heckardii*)

Heckard's pepper-grass is an annual herb endemic to California. It has a CNPS rare plant rank of 1B.2 and has no federal or State listing. This species blooms from March to May and ranges in elevation from 7 to 656 feet (2–200 meters) amsl. It is typically found growing on mesic, alkaline flats in valley and foothill grassland and along the edges of vernal pools. Heckard's pepper-grass is known from less than 15 occurrences, two of which are within 5 miles of the Project area. The edges of vernal mesic areas in the Project area provide potential habitat for Heckard's

## 5.4 BIOLOGICAL RESOURCES

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pepper-grass. This species may occur within the Project area due to the presence of potential suitable habitat.

### Sanford's Arrowhead (*Sagittaria sanfordii*)

Sanford's arrowhead is a California endemic and has a CNPS rare plant rank of 1B.2. This species has no federal or State listing. Sanford's arrowhead is a perennial rhizomatous herb that blooms between May and October. It is typically found in assorted shallow freshwater marshes and swamps at elevations ranging from sea level to 2,133 feet (650 meters) amsl. Sanford's arrowhead is threatened by grazing, development, recreational activities, non-native plants, road widening, and channel alteration and maintenance. There are two records of Sanford's arrowhead within 1 mile of the Project area and a total of nine previous occurrences within 5 miles of the Project area. The emergent wetlands and drainages within the Project area provide potential habitat for Sanford's arrowhead. This species may occur within the Project area due to the presence of potential suitable habitat and previous occurrences within the vicinity.

### Saline Clover (*Trifolium hydrophilum*)

Saline clover is an annual herb endemic to California. It has a CNPS rare plant rank of 1B.2 and has no federal or State listing. This species blooms from April through June and is found at elevations ranging from sea level to 984 feet (300 meters) amsl. Saline clover can be found growing in marshes and swamps, vernal pools, and mesic, alkaline valley, and foothill grasslands. This species is threatened by development, trampling, road construction, and vehicles. There are no records of saline clover within 1 mile of the Project area; however, there are five occurrences within a 5-mile radius of the Project area. The emergent wetlands and vernal mesic areas within the Project area provide potential habitat for saline clover. This species may occur within the Project area due to the presence of potential suitable soils and habitat.

## **Special-Status Wildlife Species**

Based on database search results, 10 special-status wildlife species have the potential to occur in the Project area. Each species considered in the impact analysis is described below based on the data obtained from various published data sources.

### Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)

The vernal pool fairy shrimp is a federally listed threatened species. The vernal pool fairy shrimp are found in disjunct, fragmented habitats distributed across the Central Valley from Shasta County to Tulare County and across the central and southern Coast Ranges from northern Solano County to Ventura County. Additional isolated occurrences have been identified in Southern California and in Oregon. Vernal pool fairy shrimp occupy a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, and alkaline grassland valley floor pools. Although the species has been collected from large vernal pools, including one exceeding 25 acres, it tends to occur in smaller pools and is most frequently found in pools measuring less than 0.05 acres (USFWS 2003).

There is one record of vernal pool fairy shrimp within 1 mile of the Project area and a total of 11 occurrences within a 5-mile radius of the Project area. The seasonal wetlands in the Project area may provide suitable habitat for this species. Thus, there is the potential for this species to be affected by Project-related activities.

### Vernal Pool Tadpole Shrimp (*Lepidurus packardii*)

The vernal pool tadpole shrimp is federally listed as an endangered species. Vernal pool tadpole shrimp are found in the Central Valley from Shasta County to northern Tulare County and in the central coast range from Solano County to Alameda County. This species inhabits vernal pool or other seasonally ponded habitats. Vernal pool tadpole shrimp have been collected from vernal pools ranging in size from 6.5 square feet to 88 acres. Inhabited pools have also varied widely in temperature, pH, soil type, and geologic formation (USFWS 2005).

There is one record of vernal pool tadpole shrimp within 1 mile of the Project area and a total of 13 occurrences within a 5-mile radius of the Project area. The seasonally ponded areas in the Project area may provide suitable habitat for this species. Thus, there is the potential for this species to be affected by Project-related activities.

### Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)

The valley elderberry longhorn beetle (VELB) is federally listed as a threatened species. This insect is endemic to the Central Valley of California and inhabits riparian and associated upland habitats where elderberry (*Sambucus mexicana* or *Sambucus racemosa* var. *microbotrys*), its host plant, grows. Specifically, its range includes the upper Sacramento Valley to the central San Joaquin Valley. The beetle's habitat consists of riparian forests whose dominant plant species include cottonwood (*Populus spp.*), sycamore (*Platanus racemosa*), valley oak, and willow (*Salix spp.*), with an understory of elderberry shrubs. Blue elderberry shrubs in the Central Valley with basal stem diameters larger than 1 inch are considered potential VELB habitat by the USFWS.

No elderberry shrubs have been observed in the Project area; however, the entire Project area has not been surveyed. There is the potential for elderberry shrubs to occur along the drainages in the Project area; this, combined with the presence of nearby occurrences, results in the potential for VELB to be impacted by Project-related activities.

### Western Pond Turtle (*Emys marmorata*)

Western pond turtles are a designated California species of special concern. This species is associated with aquatic habitats throughout California, west of the Sierra-Cascade crest, at elevations from near sea level to 4,690 feet (1,430 meters). They are mostly absent from California's desert regions, with the exception of the Mojave River and its tributaries. The western pond turtle is found in the quiet waters of ponds, marshes, creeks, and irrigation ditches. This species requires basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. Nests are located in an upland location that may be a considerable distance (up to 0.25 mile) from the aquatic site (CDFW 2014b).

There are no records of western pond turtle within 1 mile of the Project area; however, there are five previous occurrences within 5 miles of the Project area. The emergent wetlands and drainages in the Project area may provide suitable habitat for western pond turtle. This species may occur within the Project area due to the presence of potential suitable habitat.

### Giant Garter Snake (*Thamnophis gigas*)

The giant garter snake is a State and federally listed threatened species. The giant garter snake (GGS) is endemic to the Sacramento and San Joaquin valleys. This species inhabits agricultural wetlands and associated waterways which includes irrigation and drainage canals, rice fields,

## 5.4 BIOLOGICAL RESOURCES

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marshes, sloughs, ponds, small lakes, low-gradient streams, and adjacent uplands. Features of these habitats important to giant garter snakes include:

- Sufficient water during the snake's active season (early spring through mid-fall) to maintain an adequate prey base;
- Emergent vegetation such as cattails (*Typha* spp.) and bulrushes (*Schoenoplectus* spp.) for escape cover and foraging habitat;
- Upland habitat with grassy banks and openings to waterside vegetation for basking; and
- Adjacent upland areas that contain cover and refuge from floodwaters during the species' inactive season. (USFWS 2012)

There is one GGS record within 1 mile of the Project area and a total of nine previous occurrences within 5 miles of the Project area. The main east-west drainage in the Project area and its adjacent uplands may provide suitable habitat for GGS. This species may occur within the Project area due to the presence of potential suitable habitat and previous occurrences within the Project area and vicinity.

### Tricolored Blackbird (*Agelaius tricolor*)

The tricolored blackbird is a California species of special concern and mostly a resident in California. This species is common throughout the Central Valley and coastally from Sonoma County south. Tricolored blackbirds breed near fresh water and feed in nearby grassland and cropland habitats. They prefer to nest in emergent wetlands with dense tule (*Schoenoplectus* spp.) or cattails, but will also nest in dense thickets of blackberry (*Rubus* spp.), willow, wild rose (*Rosa californica*), or tall herbs. Tricolored blackbirds are colonial, so nesting sites must be relatively large (CDFW 2014d).

There are four records of tricolored blackbird within 1 mile of the Project area, one of which is within the boundaries of the Project area. A total of 15 occurrences have been recorded within a 5-mile radius of the Project area. The emergent wetlands and dense vegetation along the drainages in the Project area may provide suitable habitat for this species. This species may occur within the Project area due to the presence of potential suitable habitat and previous occurrences within the Project area and vicinity.

### Burrowing Owl (*Athene cunicularia*)

The burrowing owl is a California species of special concern and is federally protected under the Migratory Bird Treaty Act and as a bird of prey under the Raptor Recovery Act. Burrowing owls prefer nesting in mammal burrows in open areas of dry, open, rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub with gullies, washes, arroyos, and along the edges of human-disturbed lands. This species can also be found inhabiting golf courses, airports, cemeteries, vacant lots, and road embankments with friable soils for nesting. The elevation range for this species extends from 200 feet (60 meters) below mean sea level (bmsl) to 12,000 feet (3,636 meters) amsl at the Dana Plateau in Yosemite (Bates 2006).

There are two records of burrowing owls within 1 mile of the Project area, one of which is within the boundaries of the Project area, and a total of 13 previous occurrences within 5 miles of the Project area. This species may occur within the Project area due to the presence of potential suitable habitat and previous occurrences within the Project area and vicinity.



### Swainson's Hawk (*Buteo swainsoni*)

Swainson's hawks are listed by the State of California as threatened. Swainson's hawks are typically complete migrants in that they breed in North America and winter in South America. They typically arrive at their breeding grounds in early to mid-April and begin their southern migration in early September. The majority of breeding Swainson's hawk occurs in two disjunct populations in California—the Great Basin and the Central Valley—although they can be found in desert, shrubsteppe, grassland, and agricultural habitats across the State. This species is not an obligate riparian species; the correlation with riparian habitat is variable and dependent on the availability and distribution of suitable nest sites in proximity to high-value foraging habitat (Woodbridge 1998).

High-value foraging habitat is largely a function of prey abundance and availability. Different crop types support different levels of prey abundance, and the timing of tilling and harvest affects prey availability within each crop type. Alfalfa fields contain low prey abundance, but prey are accessible throughout the growing season due to the low stature of this crop type. Tomato and beet crops support a high prey density, but due to crop heights and density, prey access is limited to harvest periods. Fallow fields along with dry and irrigated pastures also provide important foraging habitat, whereas vineyards, mature orchards, and cotton fields contain low prey abundance and availability (Woodbridge 1998).

There are 10 records of Swainson's hawks within 1 mile of the Project area, one of which is within the boundaries of the Project area and many of which are immediately adjacent to the Project area. A total of 85 previous records occur within 5 miles of the Project area. This species occurs within the Project area due to the presence of suitable foraging and nesting habitat, as well as the presence of previous occurrences within the Project area and vicinity.

### Greater sandhill crane (*Grus canadensis tabida*)

Greater sandhill crane, a California protected species, are not known to occur within the Project area. Greater sandhill crane prefer open habitats such as cropland, irrigated pasture-grassland and valley grassland for foraging, and vernal pools, vernal swales, seasonal wetlands, seasonal impoundments and freshwater marshes for roosting.

### White-Tailed Kite (*Elanus leucurus*)

The white-tailed kite can be found in association with the herbaceous and open stages of a variety of habitat types. The white-tailed kite is found year-round in both the coastal zones and lowlands of the Central Valley in California. Nests are constructed near the top of dense oaks (*Quercus* spp.), willows, or other tree stands located adjacent to foraging areas. The species forages in undisturbed, open grasslands, meadows, farmlands and emergent wetlands. White-tailed kites are seldom observed more than 0.5 mile (0.8 km) from an active nest during the breeding season (CDFW 2014d).

There are no records of white-tailed kites within 1 mile of the Project area; however, there is one previous occurrence within 5 miles of the Project area. This species may occur within the Project area due to the presence of potential suitable nesting and foraging habitat.

### American Badger (*Taxidea taxus*)

The American badger is a California species of special concern and an uncommon resident throughout the State, except in the northern North Coast area. This species is typically associated

## 5.4 BIOLOGICAL RESOURCES

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with drier open stages of most forest, shrub, and herbaceous habitats with friable soils. Badgers find cover in burrows. American badgers regularly reuse old burrows, but some may dig a new den each night (CDFW 2014d).

There are no records of American badgers within 1 mile of the Project area; however, there is one previous occurrence within 5 miles of the Project area. This species may occur within the Project area though it would be expected to disperse into adjacent habitats when construction activities commence.

### 5.4.2 REGULATORY FRAMEWORK

This section identifies environmental review and consultation requirements, as well as permits and approvals that must be obtained from local, State, and federal agencies before implementation of the Project.

#### FEDERAL

##### **Endangered Species Act**

The Endangered Species Act of 1973 (ESA), as amended, provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 United States Code (USC) Sections 1531–1544). The ESA defines “take” to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Title 50, Part 222, of the Code of Federal Regulations (50 CFR Section 222) further defined “harm” to include “an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns including feeding, spawning, rearing, migrating, feeding, or sheltering.”

ESA Section 7(a)(1) requires federal agencies to utilize their authority to further the conservation of listed species. ESA Section 7(a)(2) requires consultation with the USFWS or the National Marine Fisheries Service (NMFS) if a federal agency undertakes, funds, permits, or authorizes (termed the federal nexus) any action that may affect endangered or threatened species, or designated critical habitat. For projects that may result in the incidental “take” of threatened or endangered species, or critical habitat, and that lack a federal nexus; a Section 10(a)(1)(b) incidental take permit can be obtained from the USFWS and/or the NMFS.

##### **Clean Water Act**

The basis of the Clean Water Act (CWA) was established in 1948; however, it was referred to as the Federal Water Pollution Control Act. The act was reorganized and expanded in 1972 (33 USC Section 1251), and at this time the Clean Water Act became the act’s commonly used name. The basis of the CWA is the regulation of pollutant discharges into waters of the United States, as well as the establishment of surface water quality standards.

##### Section 404

The Section 404(b)(1) Guidelines (40 CFR Part 230) are mandatory criteria used for evaluating discharges of dredged or fill material into waters of the U.S. The Guidelines prohibit discharges to waters of the U.S. where a practicable alternative exists that would have less adverse effects on the environment, so long as the alternative does not have other significant adverse environmental effects. Project applicants must demonstrate that impacts to waters of the U.S.

have been avoided to the extent possible. Compensatory mitigation is not considered during the evaluation of potentially practicable alternatives, but is typically required for unavoidable impacts to waters of the U.S.

The primary objective of this program is to ensure that the discharge of dredged or fill material is not permitted if a practicable alternative to the proposed activities exists that results in less impact to waters of the United States or the proposed activity would result in significant adverse impacts to these waters. To comply with these objectives, a permittee must document the measures taken to avoid and minimize impacts to waters of the United States and provide compensatory mitigation for any unavoidable impacts.

The US Environmental Protection Agency (EPA) and the USFWS are assigned roles and responsibilities in the administration of this program; however, the USACE is the lead agency in the administration of day-to-day activities, including issuance of permits. The agencies will typically assert jurisdiction over the following waters: (1) traditional navigable waters (TNW); (2) wetlands adjacent to TNWs; (3) relatively permanent waters (RPW) that are non-navigable tributaries to TNWs and have relatively permanent flow or seasonally continuous flow (typically three months); and (4) wetlands that directly abut RPWs. Case-by-case investigations are usually conducted by the agencies to ascertain their jurisdiction over waters that are non-navigable tributaries and do not contain relatively permanent or seasonal flow, wetlands adjacent to the aforementioned features, and wetlands adjacent to but not directly abutting RPWs (USACE 2007). Jurisdiction is not generally asserted over swales or erosional features (e.g., gullies or small washes characterized by low-volume/short-duration flow events) or ditches constructed wholly within and draining only uplands that do not have relatively permanent flows.

The extent of jurisdiction within waters of the United States, which lack adjacent wetlands, is determined by the ordinary high water mark (OHWM). The OHWM is defined in 33 CFR Section 328.3(e) as the “line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” Wetlands are further defined under 33 CFR Section 328.3 and 40 CFR Section 230.3 as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions”; and typically include “swamps, marshes, bogs, and similar areas.” The USACE (1987) *Corps of Engineers Wetland Delineation Manual* (1987 Manual) sets forth a standardized methodology for delineating the extent of wetlands under federal jurisdiction.

The 1987 Manual outlines three parameters that all wetlands, under normal circumstances, must contain positive indicators for to be considered jurisdictional. These parameters include (1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils (USACE 1987). In 2006, the USACE issued a series of regional supplements to address regional differences that are important to the functioning and identification of wetlands. The supplements present “wetland indicators, delineation guidance, and other information” that is specific to the region. The USACE requires that wetland delineations submitted after June 5, 2007, be conducted in accordance with both the 1987 Manual and the applicable supplement.

### Section 401

Under CWA Section 401 (33 USC Section 1341), federal agencies are not authorized to issue a permit and/or license for any activity that may result in discharges to waters of the United States,

## **5.4 BIOLOGICAL RESOURCES**

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unless a State or tribe where the discharge originates either grants or waives CWA Section 401 certification. CWA Section 401 provides states or tribes with the ability to grant, grant with conditions, deny, or waive certification. Granting certification, with or without conditions, allows the federal permit/license to be issued and remain consistent with any conditions set forth in the CWA Section 401 certification. Denial of the certification prohibits the issuance of the federal license or permit, and waiver allows the permit/license to be issued without State or tribal comment. Decisions made by states or tribes are based on the proposed Project's compliance with EPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the State Water Resources Control Board is the primary regulatory authority for CWA Section 401 requirements (additional details below).

### **Migratory Bird Treaty Act**

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Section 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Section 21). The majority of birds found in the Project vicinity would be protected under the MBTA.

### **Bald and Golden Eagle Protection Act**

The bald eagle and golden eagle are federally protected under the Bald and Golden Eagle Protection Act (16 USC Sections 668–668c). Under the act, it is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export, or import at any time or in any manner a bald or golden eagle, alive or dead, or any part, nest, or egg of these eagles, unless authorized by the Secretary of the Interior. Violations are subject to fines and/or imprisonment for up to one year. Active nest sites are also protected from disturbance during the breeding season.

### **Executive Order 13112 – Invasive Species**

This executive order directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. As part of the proposed action, the USFWS and the USACE would issue permits and therefore would be responsible for ensuring that the proposed action complies with Executive Order 13112 and does not contribute to the spread of invasive species.

### **Fish and Wildlife Coordination Act of 1958 (16 USC 661 et seq.)**

The Fish and Wildlife Coordination Act requires that whenever any body of water is proposed or authorized to be impounded, diverted, or otherwise controlled or modified, the lead federal agency must consult with the USFWS, the State agency responsible for fish and wildlife management, and the National Marine Fisheries Service. Section 662(b) of the act requires the lead federal agency to consider the recommendations of the USFWS and other agencies. The recommendations may include proposed measures to mitigate or compensate for potential damages to wildlife and fisheries associated with a modification of a waterway.

### **Executive Order 11990 Protection of Wetlands (42 FR 26961, May 25, 1977)**

Executive Order 11990 requires federal agencies to provide leadership and take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities of these lands. Federal agencies are required to avoid undertaking or providing support for new construction located in wetlands unless (1) no practicable alternative exists and (2) all practical measures have been taken to minimize harm to wetlands.

#### STATE

### **California Endangered Species Act**

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC Section 2070). The CDFW also maintains a list of "candidate species," which are species formally noticed as being under review for potential addition to the list of endangered or threatened species, and a list of "species of special concern," which serve as species "watch lists."

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from the CDFW would be in the form of an incidental take permit.

### **California Fish and Game Code**

#### Streambed Alteration Agreement (FGC Sections 1600–1607)

State and local public agencies are subject to FGC Section 1602, which governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated as waters of the State by the CDFW. Under FGC Section 1602, a discretionary Streambed Alteration Agreement must be issued by the CDFW to a project proponent prior to the initiation of construction activities within lands under CDFW jurisdiction. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

#### Native Plant Protection Act

The Native Plant Protection Act (FGC Sections 1900–1913) prohibits the taking, possessing, or sale within the State of any plants with a State designation of rare, threatened, or endangered (as defined by the CDFW). An exception in the act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give that State agency at least 10 days to retrieve the plants before they are plowed under or otherwise destroyed (FGC Section 1913). Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of a proposed project.

## 5.4 BIOLOGICAL RESOURCES

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### Birds of Prey

Under FGC Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

### “Fully Protected” Species

California statutes also afford “fully protected” status to a number of specifically identified birds, mammals, reptiles, and amphibians. These species cannot be “taken,” even with an incidental take permit. FGC Section 3505 makes it unlawful to take “any egret or egret, osprey, bird of paradise, goura, numidi, or any part of such a bird.” FGC Section 3511 protects from take the following fully protected birds: (a) American peregrine falcon (*Falco peregrinus anatum*); (b) brown pelican (*Pelecanus occidentalis*); (c) California black rail (*Laterallus jamaicensis coturniculus*); (d) California clapper rail (*Rallus longirostris obsoletus*); (e) California condor (*Gymnogyps californianus*); (f) California least tern (*Sterna albifrons browni*); (g) golden eagle; (h) greater sandhill crane (*Grus canadensis tabida*); (i) light-footed clapper rail (*Rallus longirostris levipes*); (j) southern bald eagle (*Haliaeetus leucocephalus leucocephalus*); (k) trumpeter swan (*Cygnus buccinator*); (l) white-tailed kite (*Elanus leucurus*); and (m) Yuma clapper rail (*Rallus longirostris yumanensis*).

FGC Section 4700 identifies the following fully protected mammals that cannot be taken: (a) Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*); (b) bighorn sheep (*Ovis canadensis*), except Nelson bighorn sheep (subspecies *Ovis canadensis nelsoni*); (c) northern elephant seal (*Mirounga angustirostris*); (d) Guadalupe fur seal (*Arctocephalus townsendi*); (e) ring-tailed cat (genus *Bassariscus*); (f) Pacific right whale (*Eubalaena sieboldi*); (g) salt-marsh harvest mouse (*Reithrodontomys raviventris*); (h) southern sea otter (*Enhydra lutris nereis*); and (i) wolverine (*Gulo gulo*).

FGC Section 5050 protects from take the following fully protected reptiles and amphibians: (a) blunt-nosed leopard lizard (*Crotaphytus wislizenii silus*); (b) San Francisco garter snake (*Thamnophis sirtalis tetrataenia*); (c) Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*); (d) limestone salamander (*Hydromantes brunus*); and (e) black toad (*Bufo boreas exsul*).

FGC Section 5515 identifies certain fully protected fish that cannot lawfully be taken, even with an incidental take permit. The following species are protected in this fashion: (a) Colorado River squawfish (*Ptychocheilus lucius*); (b) thicketail chub (*Gila crassicauda*); (c) Mohave chub (*Gila mohavensis*); (d) Lost River sucker (*Catostomus luxatus*); (e) Modoc sucker (*Catostomus microps*); (f) shortnose sucker (*Chasmistes brevirostris*); (g) humpback sucker (*Xyrauchen texanus*); (h) Owens River pupfish (*Cyprinodon radiosus*); (i) unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); and (j) rough sculpin (*Cottus asperimus*).

### **California Wetlands and Other Waters Policies**

The California Resources Agency and its various departments do not authorize or approve projects that fill or otherwise harm or destroy coastal, estuarine, or inland wetlands. Exceptions may be granted if all of the following conditions are met:

- The project is water-dependent.

- No other feasible alternative is available.
- The public trust is not adversely affected.
- Adequate compensation is proposed as part of the project.

### Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary State regulation that addresses water quality. The requirements of the Act are implemented by the State Water Resources Control Board at the State level and by the Regional Water Quality Control Board (RWQCB) at the local level. The RWQCB carries out planning, permitting, and enforcement activities related to water quality in California. The act provides for waste discharge requirements and a permitting system for discharges to land or water. Certification is required by the RWQCB for activities that can affect water quality.

### Clean Water Act, Section 401 Water Quality Certification

CWA Section 401 (33 USC Section 1341) requires that any applicant for a federal license or permit, which may result in a pollutant discharge to waters of the United States, obtain a certification that the discharge will comply with EPA water quality standards. The State or tribal agency responsible for issuance of the Section 401 certification may also require compliance with additional effluent limitations and water quality standards set forth in State/tribal laws. In California, the RWQCB is the primary regulatory authority for CWA Section 401 requirements.

The Central Valley RWQCB is responsible for enforcing water quality criteria and protecting water resources in the Project area. In addition, the RWQCB is responsible for controlling discharges to surface waters of the State by issuing waste discharge requirements (WDR) or commonly by issuing conditional waivers to WDRs. The RWQCB requires that a project proponent obtain a CWA Section 401 water quality certification for CWA Section 404 permits issued by the USACE. A request for water quality certification (including WDRs) by the RWQCB and an application for a General Permit for Storm Water Discharges Associated with Construction Activities are prepared and submitted following completion of the CEQA environmental document and submittal of the wetland delineation to the USACE.

### Delegated Permit Authority

California has been delegated permit authority for the National Pollutant Discharge Elimination System (NPDES) permit program, including stormwater permits for all areas except tribal lands. Issuance of CWA Section 404 dredge and fill permits remains the responsibility of the USACE; however, the State actively uses its CWA Section 401 certification authority to ensure CWA Section 404 permits are in compliance with State water quality standards.

### State Definition of Covered Waters

California Water Code Section 13050(e) defines waters of the State as "any surface water or groundwater, including saline waters, within the boundaries of the state." Therefore, water quality laws apply to both surface water and groundwater. After the US Supreme Court decision in *Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers*, the Office of Chief Counsel of the State Water Resources Control Board released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under

## 5.4 BIOLOGICAL RESOURCES

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the California Porter-Cologne Water Quality Control Act (Porter-Cologne), discharges to wetlands and other waters of the State are subject to State regulation, and this includes isolated wetlands. In general, the Board regulates discharges to isolated waters in much the same way as they do for waters of the United States, using Porter-Cologne rather than Clean Water Act authority.

### LOCAL

#### **City of Elk Grove Tree Preservation and Protection Code**

Chapter 19.12 of the City Municipal Code, Tree Preservation and Protection, strives to protect and preserve trees of local importance, including coast live oak, valley oak, blue oak, interior live oak, oracle oak, California sycamore, and California black walnut with a single trunk 6 inches diameter at breast height (dbh) or greater or multiple trunks with a combined dbh of 6 inches or greater. Chapter 19.12 requires mitigation for the removal of trees of local importance with dimensions described above, trees that have been selected for preservation, all portions of adjacent off-site native trees that have driplines that extend onto a project site, and all off-site native trees that may be impacted by utility installation and/or improvements associated with a project. Current policies require that every inch lost will be mitigated by an inch planted or equivalent credit obtained from a tree mitigation bank.

#### **City of Elk Grove Swainson's Hawk Impact Mitigation Fees**

Chapter 16.130 of the City Municipal Code, Swainson's Hawk Impact Mitigation Fees, 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. This chapter of the City's Municipal Code is aimed at mitigating impacts from typical urban development projects.

#### **City of Elk Grove General Plan**

The City's General Plan identifies specific goals, objectives, and policies regarding natural resources (City of Elk Grove 2003). The General Plan serves as the overall guiding policy document for land use, development, and environmental quality for the City. The Conservation and Air Quality elements of the General Plan include goals and policies to preserve, protect, enhance, and promote the City's valuable natural resources. The General Plan identifies specific goals and policies regarding biological and natural resources. The following policies are applicable to the proposed Project.

**"CAQ-8:** Large trees of all species are an important aesthetic (and, in some cases, biological) resource. Trees which function as an important part of the City's or a neighborhood's aesthetic character or as natural habitat should be retained during the development of new structures, roadways (public and private, including roadway widening), parks, or other uses."

**"CAQ-9:** Wetlands, vernal pools, marshland and riparian (streamside) areas are considered to be important resources. Impacts to these resources shall be avoided whenever technically feasible."



**“PRO-5:** The City views open space lands of all types as important resource which should be preserved in the region, and supports the establishment of multi-purpose 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
- 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.”

### **Proposed South Sacramento County Habitat Conservation Plan**

The South Sacramento County Habitat Conservation Plan is in the process of being prepared and will address the conservation and development of lands within this portion of the county. The purpose of the plan is to encourage and simplify the process of conserving sensitive habitats for special-status species. Once the plan is approved, it will allow for incidental take of covered species with the requirement of mitigation for lost habitat at approved ratios. Some of the species analyses of the plan are complete and include white-tailed kite, northern harrier (*Circus cyaneus*), tri-colored blackbird, giant garter snake, vernal pool fairy shrimp, and Sanford’s arrowhead. The complete list can be found on the Sacramento County Planning and Community Development Department website (Sacramento County 2006).

### **OTHER**

#### **California Native Plant Society**

The California Native Plant Society is a nongovernmental agency that classifies native plant species according to current population distribution and threat level in regard to extinction. These data are utilized by the CNPS to create/maintain a list of native California plants that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare, Threatened, and Endangered Vascular Plants of California* (CNPS 2014). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review.

The following identifies the definitions of the CNPS listings:

- List 1A: Plants believed to be extinct
- List 1B: Plants that are rare, threatened, or endangered in California and elsewhere
- List 2: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere

## 5.4 BIOLOGICAL RESOURCES

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All of the plant species on List 1 and 2 meet the requirements of the Native Plant Protection Act Section 1901, Chapter 10, or FGC Section 2062 and Section 2067 and are eligible for State listing. Plants appearing on List 1 or 2 are considered to meet the criteria of CEQA Section 15380, and effects on these species are considered "significant." Classifications for plants on List 3 (plants about which we need more information and/or List 4 (plants of limited distribution), as defined by the CNPS, are not currently protected under State or federal law. Therefore, no detailed descriptions or impact analysis was performed on species with these classifications.

### 5.4.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance:

- 1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS.
- 2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or the USFWS.
- 3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- 5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- 6) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.
- 7) Reduce the number or restrict the range of an endangered, rare, or threatened plant or animal species or biotic community, thereby causing the species or community to drop below self-sustaining levels.

#### METHODOLOGY

The impact assessment below discusses impacts from implementation of Project activities. The impact assessment was based on the Project Description (Section 2.0), information described in the environmental setting, and the standards of significance described above. In addition, the impact analysis is organized by the significance criteria noted above: special-status plant and wildlife species, sensitive vegetation communities, federally protected wetlands, wildlife movement corridors, and compliance with local plans and policies or existing habitat conservation plans. Each impact category includes a description of the specific potential impacts as well as avoidance, minimization, and mitigation measures that can potentially reduce and mitigate potentially significant impacts. The reader is referred to Section 2.0, Project

Description, for specific details on the Project. Off-site improvements required to serve the Southeast Policy Area include necessary wastewater infrastructure and channel improvements downstream of Bruceville Road. The impacts to off-site facility improvements have been evaluated as Project-related impacts.

### **Sports Complex**

The proposed Project includes a Sports Complex Overlay; however, a location for the overlay is not defined by the Project. Because the analysis for biological resources assumes that any part of the Project area could be developed, the construction for specific use, including a sports complex, would not substantially alter the impact on biological resources compared to the Project without a sports complex. However, operational characteristics of a sports complex with a stadium and tall light standards to illuminate a stadium could differ from other land uses in the Project area. Tall structures could result in bird collisions, which could lead to mortality, and stadium lighting could affect bats and interfere with breeding of nesting birds. Because the design of a sports complex is not known at this time, the extent to which these impacts would occur cannot be determined. Pursuant to CEQA Guidelines Section 15145, if the impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact. No further discussion is feasible at this time.

### IMPACTS AND MITIGATION MEASURES

#### **Impacts to Candidate, Sensitive, or Special-Status Plant Species (Standard of Significance 1 and 7)**

**Impact 5.4.1** Implementation of Project-related activities could result in substantial adverse effects, either directly or through habitat modification, to special-status plant species, which would be considered a **potentially significant** impact.

Suitable habitat for 10 listed plant species (**Table 5.4-2**) occurs within the Project area. These species are associated with wetland habitat. Since all habitats within the Project area are anticipated to be impacted by future development activities or restoration efforts, adverse impacts to special-status plant species would occur if they are present in the Project area. This impact is considered **potentially significant**.

#### Mitigation Measures

**MM 5.4.1** Applicants for any subsequent projects shall retain qualified biologists to conduct a preliminary evaluation of the specific project site to determine whether wet meadow, freshwater emergent wetland, or irrigation/drainage ditch vegetative communities occur within the specific project site. If any of these habitats are identified within the specific project site, surveys in and adjacent to (within 100 feet, where appropriate) the proposed impact area, including new construction access routes, shall be conducted to determine the presence/absence of the following special-status plant species

**TABLE 5.4-2  
SPECIAL-STATUS PLANT SPECIES (AND ASSOCIATED HABITAT)  
WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA**

Vegetative Community	Special-Status Plant Species Survey Requirements
Wet Meadow	dwarf downingia Boggs Lake hedge-hyssop legenere Heckard's pepper-grass saline clover
Freshwater Emergent Wetland	bristly sedge Peruvian dodder Boggs Lake hedge-hyssop woolly rose-mallow Sanford's arrowhead saline clover
Irrigation/Drainage Ditch	bristly sedge Peruvian dodder woolly rose-mallow Northern California black walnut Sanford's arrowhead

Surveys shall be conducted in accordance with CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009). These guidelines require that rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Field surveys shall be scheduled to coincide with known flowering periods and/or during appropriate developmental periods that are necessary to identify the plant species of concern. Survey results shall be submitted to the City for review and approval.

If none of the species identified in **Table 5.4-2** are found in or adjacent to (within 100 feet) proposed impact areas, no further mitigation is required.

If any of the species identified in **Table 5.4-2** are found in or adjacent to (within 100 feet) proposed impact areas during the surveys, these plant species shall be avoided to the greatest extent feasible. Any special-status plant species that are identified adjacent to the Project area, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on site plans and/or, tentative subdivision maps.

If Project-related impacts will result in the loss of greater than 10 percent of occupied habitat for a special-status plant species, mitigation shall be required for all impacts that exceed the 10 percent threshold. For example, if 18 percent of occupied habitat will be impacted, mitigation shall only be required for the 8 percent that exceeds the 10 percent threshold. Mitigation

for permanent impacts to special-status plant species shall include the preservation of occupied habitat at a 1:1 ratio (i.e., 1 acre preserved for each acre impacted). Temporarily disturbed special-status plant species sites shall be restored to original function and value.

Preservation areas may include undisturbed areas of the site that will be preserved and managed in perpetuity, off-site mitigation lands, or a combination of both. The preserved habitat shall be of equal or greater habitat quality to the areas impacted in terms of soil features, extent of disturbance, and vegetation structure, and contain extant populations of the same or greater size as the area impacted.

Plans for avoidance, minimization, and mitigation (if appropriate) shall be prepared and submitted to the City of Elk Grove Planning Department at the time of application for the City's review and approval. Surveys shall occur no more than two years prior to ground breaking of the subsequent project.

Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measure **MM 5.4.1**.

*Timing/Implementation: Prior to approval of final map. Protection of plant resources and restoration of temporarily affected plant population shall occur throughout construction*

*Enforcement/Monitoring: City of Elk Grove Planning Department*

Implementation of mitigation measure **MM 5.4.1** will minimize loss of special-status plant populations to below the 10 percent threshold. Therefore, this potential impact is **less than significant**.

### **Impacts to Vernal Pool Fairy Shrimp and/or Vernal Pool Tadpole Shrimp (Standard of Significance 1 and 7)**

**Impact 5.4.2** Implementation of Project-related activities could result in impacts, either directly or through habitat modification, to vernal pool fairy shrimp and/or vernal pool tadpole shrimp. These effects would be considered a **potentially significant** impact.

Marginal habitat for vernal pool fairy shrimp and/or vernal pool tadpole shrimp occurs on the Project site in the form of ephemeral elements of fresh emergent wetland and wet meadow. One occurrence of vernal pool fairy shrimp and tadpole shrimp has been reported within 1 mile of the Project area, and more than 10 occurrences of each species have been reported within 5 miles of the Project area (CDFW 2014a). Due to the proximity of known occurrences and the presence of suitable habitat within the Project area, the potential exists for adverse impacts to listed vernal pool branchiopods due to implementation of Project-related activities. Loss of individuals of these species would be considered **potentially significant**.

## 5.4 BIOLOGICAL RESOURCES

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### Mitigation Measures

**MM 5.4.2** Applicants shall retain qualified biologists to conduct a preliminary evaluation of the specific project site to determine whether vernal pool fairy shrimp and/or vernal pool tadpole shrimp habitat occurs on or within 250 feet of the project area. If habitat is not present, project applicants shall submit a letter of their findings to the City and the USFWS for concurrence. If the USFWS concurs with the negative survey findings, project applicants shall submit proof of concurrence to the City with their application, and no further mitigation is required. If the USFWS does not concur, applicants shall undertake surveys or assume presence based on the USFWS's direction.

If it is determined that listed vernal pool branchiopods are present, the following mitigation is required.

For every acre of vernal pool habitat directly affected, project applicants shall replace the affected acreage at a 1:1 ratio (1 acre creation for each acre of impact) through the dedication of vernal pool creation credit(s) within a USFWS-approved mitigation bank.

For every acre of vernal pool habitat directly and indirectly affected, the project applicant shall replace the affected acreage at a 2:1 ratio (2 acres of preservation for every 1 acre of impact) through the dedication of vernal pool preservation credit(s) within a USFWS-approved mitigation bank. Other conservation measures may be required by the USFWS.

Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measure **MM 5.4.2**.

*Timing/Implementation:* Prior to approval of final map

*Enforcement/Monitoring:* City of Elk Grove Planning Department

Implementation of mitigation measures **MM 5.4.2** would reduce potential impacts to a **less than significant** level by ensuring that impacts to vernal pool branchiopods are fully mitigated.

### **Impacts to Valley Elderberry Longhorn Beetle (Standard of Significance 1 and 7)**

**Impact 5.4.3** Implementation of Project-related activities could result in substantial adverse effects, either directly or through habitat modifications, to VELB, which would be considered a **potentially significant** impact.

None of the biological surveys conducted to date within the Project area have identified the host plant (elderberry); however, not all of the Project area has been surveyed for the presence of elderberry shrubs. Elderberry shrubs are known to occur within 1 mile of the Project area, and two occurrences of VELB have been reported within 5 miles of the Project area (CDFW 2014a). In addition, aquatic features with longer hydroperiods (e.g., large irrigation/drainage ditches, open water, and freshwater marsh) provide suitable conditions for elderberry establishment (**Figure 5.4-4**). Because of the proximity of elderberry shrubs and known occurrences, combined with the presence of suitable habitat in the Project area, VELB may be adversely impacted by implementation of Project-related activities. Loss of individuals of this species due to presence within areas proposed for impact would be considered **potentially significant**.

### Mitigation Measures

#### MM 5.4.3

Applicants shall retain a qualified biologist to survey for the presence of elderberry shrubs with stems measuring greater than 1-inch diameter at ground level. Surveys shall be conducted in accordance with the USFWS 1999 *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. 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. Survey results shall be submitted to the City for review and approval.

If an elderberry shrub(s) with one or more stems measuring 1 inch or greater in diameter at ground level is documented, and a 100-foot avoidance buffer can be maintained around the shrub, the following protective measures shall be implemented:

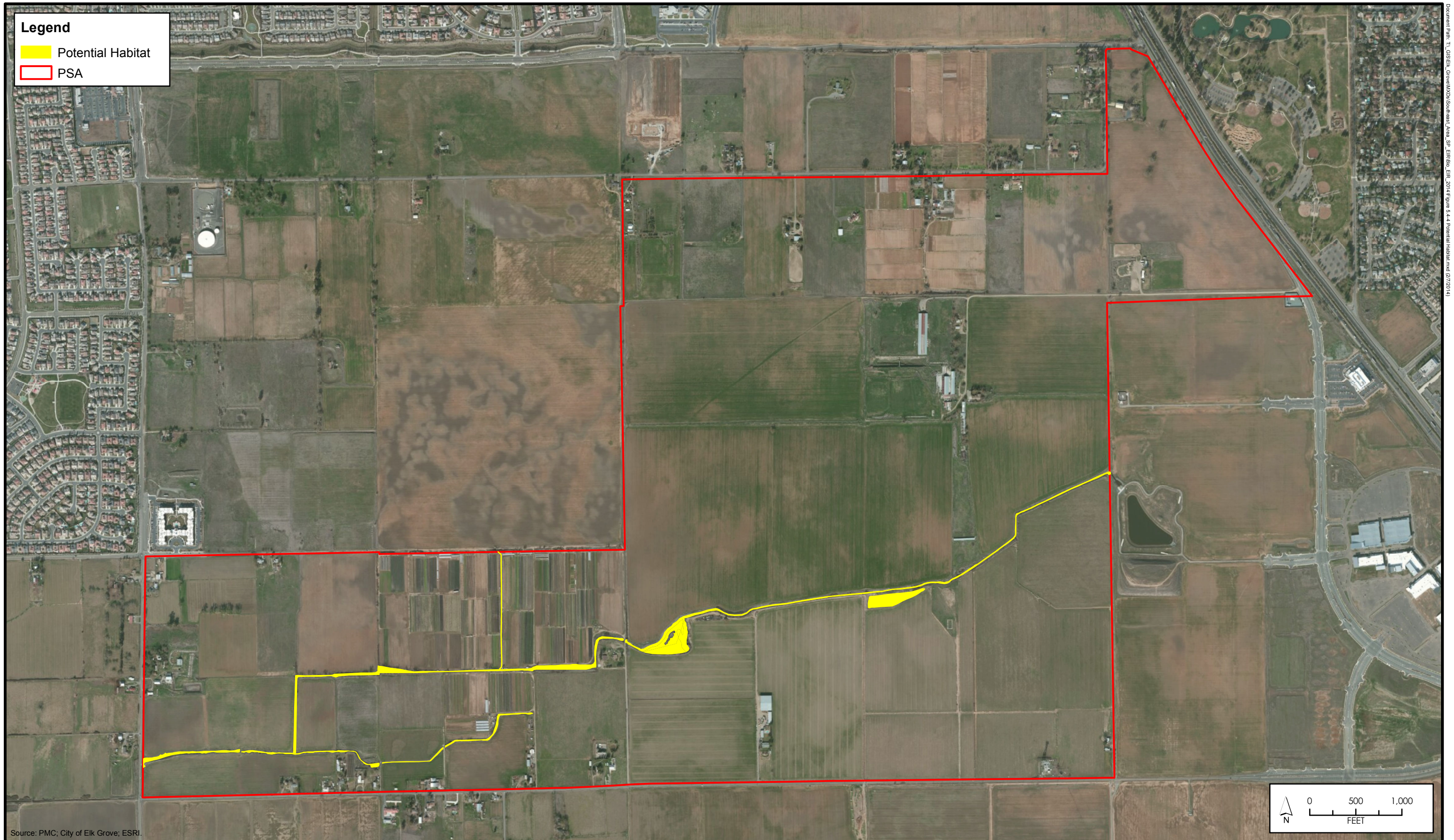
- 1) Fence and flag all areas to be avoided during construction activities. In areas where encroachment into the 100-foot buffer has been approved by the USFWS, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.
- 2) Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.
- 3) Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, 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.
- 4) Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.
- 5) Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and revegetate with appropriate native plants.
- 6) Continue to protect buffer areas after construction from adverse effects of the Project. Measures such as fencing, signs, weeding, and trash removal are usually appropriate.
- 7) Do not use insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant in the buffer areas or within 100 feet of any elderberry plant with one or more stems measuring 1 inch or more in diameter at ground level.

## **5.4 BIOLOGICAL RESOURCES**

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Document Path: T:\GIS\ELK\_Groves\GIS\Source\Map\_Area\_SIP\_SIP08\_EIR\_2014\Figure 5.4-4 Potential Habitat.mxd (2/2/2014)

**Figure 5.4-4**  
 Potential Habitat for Valley Elderberry Longhorn Beetle, Giant Garter Snake, and Western Pond Turtle within the PSA





- 8) Project applicants shall provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed to the USFWS and the City of Elk Grove Planning Department.
- 9) Mowing of grasses/ground cover shall only occur from July through April to reduce fire hazard. No mowing shall occur within 5 feet of elderberry plant stems. Mowing shall be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment).

If elderberry plants cannot be avoided, they must be transplanted to a conservation area in accordance with the 1999 USFWS guidelines, with USFWS approval. A plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation through consultation with the USFWS. In addition to transplanting all elderberry shrubs, additional elderberry seedlings or cuttings shall be planted at a 1:1 ratio (new plantings to affected stems). Native plants shall also be planted at a 1:1 ratio (native tree/plant species to each elderberry seedling or cutting). Stock of saplings, cuttings, and seedlings shall be obtained from local sources. If the parent stock is obtained from a distance greater than 1 mile from the conservation area, the USFWS must approve the plant donor sites prior to initiation of revegetation work. Planting or seeding the conservation area with native herbaceous species is encouraged.

Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measure **MM 5.4.3**.

*Timing/Implementation:* Prior to approval of final maps on parcels proposed for development that contain VELB habitat, as depicted on **Figure 5.4-4** of the Draft EIR. Construction minimization measures shall occur during construction activities

*Enforcement/Monitoring:* City of Elk Grove Planning Department

Implementation of mitigation measure **MM 5.4.3** would reduce potential impacts to a **less than significant** level by ensuring that impacts to VELB are fully mitigated.

### **Impacts to Western Pond Turtle (Standard of Significance 1 and 7)**

**Impact 5.4.4** Implementation of Project-related activities could result in substantial adverse effects, either directly or through habitat modifications, to western pond turtle. These effects would be considered a **potentially significant** impact.

Five occurrences of western pond turtle have been reported within 5 miles of the Project area (CDFW 2014a). In addition, the aquatic features with longer hydroperiods may provide suitable conditions for this species (**Figure 5.4-4**). Due to the proximity of known occurrences and the presence of suitable habitat in the Project area, western pond turtle may be adversely impacted by implementation of Project-related activities. Loss of western pond turtle due to presence within areas proposed for impact would be considered **potentially significant**.

## 5.4 BIOLOGICAL RESOURCES

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### Mitigation Measures

**MM 5.4.4a** Protective silt fencing shall be installed between the aquatic habitats and the construction area limits to prevent accidental disturbance and to protect water quality within aquatic habitat during construction.

*Timing/Implementation:* Prior to approval of final map for development that contains western pond turtle habitat, as depicted on **Figure 5.4-4** of the Draft EIR. Construction minimization measures shall occur during construction

*Enforcement/Monitoring:* City of Elk Grove Planning Department

**MM 5.4.4b** Standard best management practices shall be implemented during and after construction to protect water quality in sensitive habitat areas during construction.

*Timing/Implementation:* Prior to approval of final map for development that contains western pond turtle habitat, as depicted on **Figure 5.4-4** of the Draft EIR. Construction minimization measures shall occur during construction

*Enforcement/Monitoring:* City of Elk Grove Planning Department

**MM 5.4.4c** Prior to implementation of construction activities, the project applicants with specific project sites within 100 feet of aquatic features identified on **Figure 5.4-4** shall retain qualified biologists to conduct a survey for western pond turtle no more than 3 days prior to initiation of construction activities. If this species is documented near any proposed construction areas, the individual(s) shall be moved at least 500 feet downstream to suitable habitat. If individuals are observed during construction activities, all construction activities shall be halted, a qualified biologist shall be notified, and the qualified biologist shall relocate the individual prior to continuing construction activities.

If active nest sites are identified during the survey, the project applicant shall impose a construction setback of 100 feet for all active nest sites prior to commencement of any construction activities to avoid construction or access-related disturbances to western pond turtles until the eggs hatch or the nest is moved to an appropriate location as authorized by the CDFW.

Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measures **MM 5.4.4a-c**.

*Timing/Implementation:* Prior to approval of final map for development that contains western pond turtle habitat, as depicted on **Figure 5.4-4** of the Draft EIR. Construction minimization measures shall occur during construction

*Enforcement/Monitoring:* City of Elk Grove Planning Department

Implementation of mitigation measures **MM 5.4.4a** through **5.4.4c** would ensure that there is no net loss of VELB and therefore reduces potential impacts to a **less than significant**.

**Impacts to Giant Garter Snake (Standard of Significance 1 and 7)**

**Impact 5.4.5** Implementation of Project-related activities could result in substantial adverse effects, either directly or through habitat modifications, to giant garter snake. These effects would be considered a **potentially significant** impact.

One (GGS) occurrence has been reported within 1 mile of the Project area, and nine occurrences have been reported within 5 miles of the Project area. The main east-west drainage (Shed C Channel) and associated freshwater emergent wetlands are considered suitable habitat for GGS. As a result, the proposed Project is anticipated to affect 7 acres of aquatic habitat and 130 acres of upland agricultural habitat within 200 feet of the channel banks. This is considered a **potentially significant** impact.

The Project would restore the Shed C Channel to accommodate future development in the watershed and create and enhance the natural stream and habitat values. At key points along the drainage, detention basins would be constructed to provide storage volume to mitigate for potential flood flow and hydromodification impacts. The restored drainage would include a low-flow channel that is stable and self-sustaining, and meanders within a larger floodway corridor that provides flood conveyance as well as seasonal marsh/riparian habitat (see **Figure 5.4-5** for a typical cross section). The low-flow channel would range in width from 18 to 27 feet, while the floodway top-of-bank width would range from 153 to 237 feet (West Yost Associates 2014). The restored Shed C Channel would cover approximately 65 acres and consist of a landscaped corridor and trail along with ±47.8 acres of floodway and ±8.8 acres of low-flow channel habitat. Based on this data, it is anticipated that the impacts to giant garter snake habitat within the Project area will be fully mitigated through this restoration effort.

In order to ensure that the development and restoration activities within the Project area avoid and minimize impacts to the greatest extent feasible, mitigation measure **MM 5.4.5a** shall apply to all future projects in the Project area. The restoration of the Shed C Channel shall comply with mitigation measure **MM 5.4.5b**, and if the restoration of the Shed C Channel is deemed inadequate compensatory mitigation for impacts to GGS habitat, mitigation measure **MM 5.4.5c** shall be implemented.

Mitigation Measures

**MM 5.4.5a** All projects within the SEPA affecting potential GGS habitat shall implement the avoidance and minimization measures outlined in *Appendix C Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (Thamnophis gigas) Habitat* (USFWS 1997).

*Timing/Implementation:* Prior to approval of final map for proposed developments that contain giant garter snake habitat. Construction minimization measures shall occur during construction

*Enforcement/Monitoring:* City of Elk Grove Planning Department

## 5.4 BIOLOGICAL RESOURCES

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**MM 5.4.5b** The Shed C Channel restoration project shall implement the guidelines for outlined in *Appendix A Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat* (USFWS 1997).

*Timing/Implementation:* During the Shed C Channel restoration project.

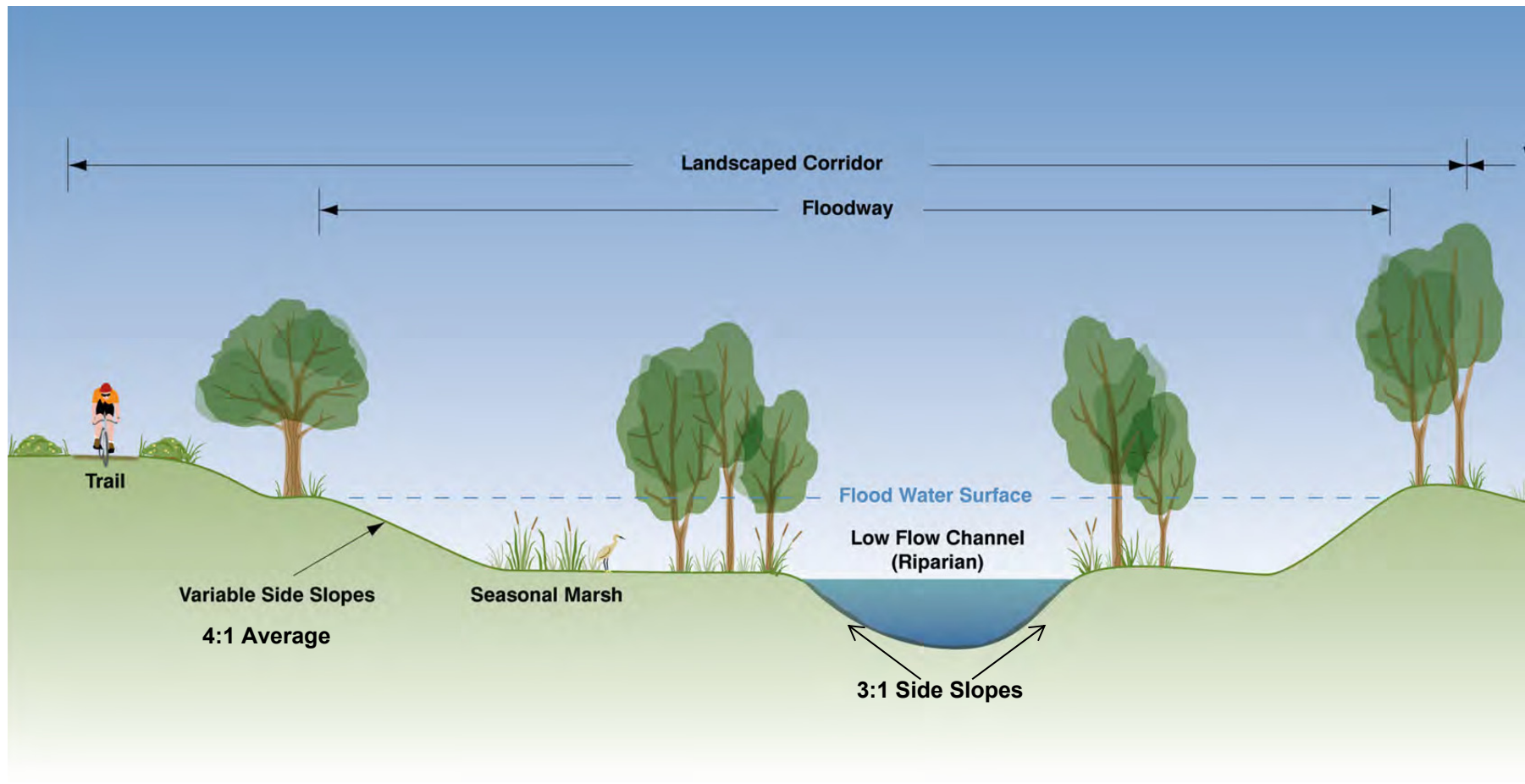
*Enforcement/Monitoring:* City of Elk Grove Planning Department

**MM 5.4.5c** If USFWS determines that replacement of GGS habitat is not fulfilled in association with the Shed C Channel restoration effort shall be implemented in accordance with Table 1 – Summary of Giant Garter Snake Conservation Measures found in *Appendix C Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (Thamnophis gigas) Habitat* (USFWS 1997).

Alternatively, if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measure **MM 5.4.5a-c**

*Timing/Implementation:* Prior to approval of final map for proposed developments that contain giant garter snake habitat

*Enforcement/Monitoring:* City of Elk Grove Planning Department



Source: West Yost Associates; January 2014

**Figure 5.4-5**  
Shed C Channel Cross Section







Implementation of mitigation measures **MM 5.4.5a** through **5.4.5c** would reduce potential impacts to a **less than significant** level by ensuring that impacts to giant garter snake are fully mitigated.

**Impacts to Burrowing Owl (Standard of Significance 1 and 7)**

**Impact 5.4.6** Implementation of Project-related activities could result in substantial adverse effects, either directly or through habitat modifications, to burrowing owl. These effects would be considered a **potentially significant** impact.

Focused surveys for this species have not been conducted to date. The presence of potentially suitable habitat and the presence of CNDDDB records within 1 mile of the Project result in the potential for this species to be impacted by Project-related activities. This is a **potentially significant** impact.

Mitigation Measures

**MM 5.4.6** Applicants shall retain a qualified biologist to determine whether suitable nesting habitat occurs within 500 feet of the specific project site. If suitable habitat exists, focused surveys must be performed by a qualified biologist in accordance with the CDFW's *Staff Report on Burrowing Owl Mitigation*, published March 7, 2012. Surveys shall be repeated if project activities are suspended or delayed more than 15 days during nesting season.

If no burrowing owls are detected, no further mitigation is required. If active burrowing owl nest sites are detected, the project applicant shall implement the avoidance, minimization, and mitigation methodologies outlined in the CDFW's *Staff Report on Burrowing Owl Mitigation* prior to initiating project-related activities that may impact burrowing owls. Burrowing owl surveys are valid for one year from the date of the survey.

Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measure **MM 5.4.6**.

*Timing/Implementation:* Prior to approval of final maps. Construction minimization measures shall occur throughout construction

*Enforcement/Monitoring:* City of Elk Grove Planning Department

Implementation of mitigation measure **MM 5.4.6** would reduce potential impacts to a **less than significant** level by ensuring that impacts to burrowing owl are fully mitigated.

**Impacts to Swainson's Hawk, White-Tailed Kite, and Other Raptors (Standard of Significance 1 and 7)**

**Impact 5.4.7** Implementation of Project-related activities could result in substantial adverse effects, either directly or through habitat modifications, to foraging and nesting Swainson's hawk, nesting white-tailed kites, and other protected raptor species. These effects would be considered a **potentially significant** impact.

## 5.4 BIOLOGICAL RESOURCES

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Ten occurrences of Swainson's hawks have been reported within 1 mile of the Project area, and one occurrence of a white-tailed kite has been reported within 5 miles of the Project area. The 1,090 acres of irrigated row and field crops, irrigated hayfields, and annual grassland habitats provide suitable nesting and/or foraging habitat for Swainson's hawks, white-tailed kites, and other raptor species not identified in **Table 5.4-1**. As a result, vegetation clearing during the nesting season could result in direct impacts to nesting birds should they be present. Furthermore, noise and other human activity may result in nest abandonment if nesting birds are present within 500 feet of a work site. Due to the presence of suitable habitat for these species, implementation of Project-related activities may result in adverse impacts should they be present in areas proposed for disturbance. This impact would be considered **potentially significant**.

### Mitigation Measures

**MM 5.4.7a** If clearing and/or construction activities would occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active raptor nests shall be conducted by a qualified biologist within 14 days of construction initiation in specific project sites. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 1,000-foot buffer. If no active nests are found, no further mitigation is required. Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.

*Timing/Implementation:* Prior to approval of final maps. Minimization measures shall occur throughout construction

*Enforcement/Monitoring:* City of Elk Grove Planning Department

**MM 5.4.7b** If active white-tailed kite or other raptor (excluding Swainson's hawk) nest sites are identified within 1,000 feet of Project activities, the applicant shall impose a 500-foot setback of all active nest sites prior to commencement of any Project construction activities to avoid construction or access-related disturbances to nesting raptors. Project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur within the setback until the nest is deemed inactive. Activities permitted within setbacks and the size of setbacks may be adjusted through consultation with the CDFW and/or the City.

If active Swainson's hawk nest sites are identified within 1,000 feet of project activities, the applicant shall impose a 1,000-foot setback of all active nest sites prior to commencement of any construction activities to avoid construction or access-related disturbances to nesting raptors. Project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur within the setback until the nest is deemed inactive. Activities permitted within setbacks and the size of setbacks may be adjusted through consultation with the CDFW and/or the City.

*Timing/Implementation:* Prior to approval of final maps. Minimization measures shall occur throughout construction

*Enforcement/Monitoring:* City of Elk Grove Planning Department

**MM 5.4.7c** Trees containing white-tailed kite or other raptor (excluding Swainson’s hawk) nests that must be removed as a result of Project implementation shall be removed during the non-breeding season (September 1–January 1). Swainson’s hawks are State and federally listed as a threatened species; therefore, impacts to Swainson’s hawk nest trees require regulatory authorization from the USFWS and the CDFW prior to removal.

*Timing/Implementation:* Prior to approval of final maps. Construction minimization measures shall occur throughout construction

*Enforcement/Monitoring:* City of Elk Grove Planning Department

**MM 5.4.7d** Project applicants shall mitigate for the loss of Swainson’s hawk foraging habitat at a 1:1 ratio consistent with Elk Grove Municipal Code (EGMC) Chapter 16.130, *Swainson’s hawk Impact Mitigation Fees*. Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of the Code Chapter 16.130.

*Timing/Implementation:* Prior to approval of final maps

*Enforcement/Monitoring:* City of Elk Grove Planning Department

Implementation of mitigation measures **MM 5.4.7a** through **5.4.7d** would reduce potential impacts to a **less than significant** level by ensuring that impacts to nesting Swainson’s hawks, white-tailed kites, and other raptors are minimized. EGMC Chapter 16.130 requires implementation of the following measures for any project forty (40) acres and greater:

“The project applicant shall acquire conservation easements or other instruments to preserve suitable foraging habitat for the Swainson’s hawk, as determined by the California Department of Fish and Game. The location of mitigation parcels as well as the conservation instruments protecting them shall be acceptable to the City and to the California Department of Fish and Game. The amount of land preserved shall be governed by a one-to-one (1:1) mitigation ratio for each acre developed at the project site. In deciding whether to approve the land proposed for preservation by the project applicant, the City shall consider the benefits of preserving lands in proximity to other protected lands. The preservation of land shall 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 shall impose the following minimum conservation easement content standards:

- 1) The land to be preserved shall be deemed suitable Swainson’s hawk foraging habitat by the California Department of Fish and Game (sic).
- 2) All owners of the mitigation land shall execute the document encumbering the land.
- 3) The document shall be recordable and contain an accurate legal description of the mitigation land.
- 4) The document shall prohibit any activity which substantially impairs or diminishes the land’s capacity as suitable Swainson’s hawk foraging habitat.

## 5.4 BIOLOGICAL RESOURCES

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- 5) 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.
- 6) 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.
- 7) 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.
- 8) The City shall be named a beneficiary under any document conveying the interest in the mitigation land to an entity acceptable to the City.
- 9) If any qualifying entity owning an interest in mitigation land ceases to exist, the duty to hold, administer, monitor and enforce the interest shall be transferred to another entity acceptable to the City."

Compliance with Code Chapter 16.130 will assure that the loss of Swainson's hawk foraging habitat is mitigated through preservation of foraging habitat in perpetuity (at 1 1:1 ratio). In addition, water availability would be ensured to continue farming operations to support foraging habitat. Finally, compliance with the Code would provide financial assurances to support monitoring and enforcement of easement conditions. Thus, the impact on Swainson's hawk foraging habitat is less than significant.

### Impacts to Tricolored Blackbird and Other Migratory Birds (Standard of Significance 1 and 7)

**Impact 5.4.8** Implementation of Project-related activities could result loss of populations or essential habitat for tricolored blackbird and other special-status avian species, which would be considered a **potentially significant** impact.

The Project area may provide nesting and/or foraging habitat for tricolored blackbirds and other migratory birds not identified in **Table 5.4-1**. All native breeding birds (except game birds during the hunting season), regardless of their listing status, are protected under the MBTA. Vegetation clearing during the nesting season could result in direct impacts to nesting birds should they be present. Furthermore, noise and other human activity may result in nest abandonment if nesting birds are present within 200 feet of a work site. Due to the presence of suitable habitat for these species, implementation of Project-related activities may result in adverse impacts should they be present in areas proposed for disturbance. This impact would be considered **potentially significant**.

#### Mitigation Measures

**MM 5.4.8** If clearing and/or construction activities would occur during the migratory bird nesting season (March 15–August 15), preconstruction surveys to identify active bird nests shall be conducted by a qualified biologist within 14 days of construction initiation on specific project sites. Focused surveys must be performed by a qualified biologist for the purpose of determining the

presence/absence of active nest sites within the proposed impact area and a 200-foot buffer (if accessible). Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.

If active nest sites are identified within 200 feet of project activities, project applicants shall impose a 100-foot setback for all active nest sites prior to commencement of any project construction activities to avoid construction or access-related disturbances to bird nesting activities. Project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur within setbacks until the nest is deemed inactive. Activities permitted within and the size (i.e., 100 feet) of setbacks may be adjusted through consultation with the CDFW and/or the City.

*Timing/Implementation:* Prior to approval of final maps. Construction minimization measures shall occur throughout construction

*Enforcement/Monitoring:* City of Elk Grove Planning Department

Implementation of mitigation measure **MM 5.4.8** would reduce potential impacts to a less than significant level by ensuring that impacts to migratory birds are **less than significant**.

**Impacts to Riparian Habitat, Sensitive Natural Communities, or Federally Protected Wetlands (Standards of Significance 2 and 3)**

**Impact 5.4.9** Implementation of Project activities could result in the loss of riparian vegetation, sensitive natural communities, and/or federally protected wetlands, which would be considered a **potentially significant** impact.

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under CEQA, Section 1600 of the FGC, and Section 404 of the CWA. Project-related activities are likely to substantially adversely affect riparian habitat, federally protected wetlands, and/or other sensitive natural communities identified in local or regional plans, policies, or regulations, by the CDFW, or by the USFWS. Impacts to these resources would be considered **potentially significant**.

The Project is anticipated to result in permanent impacts to 21.4 acres of potentially jurisdictional wetlands and other waters within the Project area. In addition, excavation is proposed within the existing channel downstream of Bruceville Road to eliminate existing high points. The off-site excavation would extend 3,200 feet downstream, with an average depth of excavation at 1.8 feet, which would result in approximately 0.3 acre of additional impacts to waters.

The City is proposing to restore the main east-west drainage (Shed C Channel) to accommodate future development in the watershed and to create and enhance the natural stream and habitat values. At key points along the drainage, detention basins would be constructed to provide storage volume to mitigate for potential flood flow and hydromodification impacts. The restored drainage will include a low-flow channel that is stable and self-sustaining and meanders within a larger floodway corridor that will provide flood conveyance as well as seasonal marsh/riparian habitat (see **Figure 5.4-5** for a typical cross section). The low-flow channel would range in width from 18 to 27 feet, while the floodway top-of-bank width would range from 153 to 237 feet (West Yost Associates 2014). The restored Shed C

## 5.4 BIOLOGICAL RESOURCES

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Channel would cover approximately 65 acres and consist of a landscaped corridor and trail along with ±47.8 acres of floodway and ±8.8 acres of low-flow channel habitat.

The restored drainage would allow for the potential to create a mix of seasonal marsh, upland, and riparian habitat. Based on this data, it is anticipated that the impacts to aquatic features within the Project area could be fully mitigated through this restoration effort. Additional measures may be required as by the CDFW, the Regional Water Quality Control Board, and the USACE as permitting occurs.

All project applicants shall implement mitigation measure **MM 5.4.9a** to determine the acreage of jurisdictional wetlands and waters impacted by the proposed Project. If do not concur that the restoration of the Shed C Channel will adequately mitigate for impacts to jurisdictional features within the Project area, mitigation measures **MM 5.4.9b** and **5.4.9c** shall be implemented.

### Mitigation Measures

**MM 5.4.9a** Applicants shall retain a qualified wetland consultant to determine if potentially jurisdictional waters are present. If potentially jurisdictional features are identified, the project applicant shall submit a preliminary jurisdictional determination to the USACE for verification. The verified delineation will be submitted to the City for its records.

*Timing/Implementation:* Prior to approval of final maps.

*Enforcement/Monitoring:* City of Elk Grove Planning Department

**MM 5.4.9b** Applicants shall ensure there is no net loss of riparian vegetation. Mitigation as required in regulatory permits issued through the CDFW, the USACE, or the RWQCB may be applied to satisfy this measure.

Evidence of compliance with this mitigation measure shall be provided to the City prior to construction and grading activities for the proposed Project.

*Timing/Implementation:* Prior to approval of final maps. Construction minimization measures shall occur throughout construction

*Enforcement/Monitoring:* City of Elk Grove Planning Department

**MM 5.4.9c** Project applicants shall ensure that their specific projects would result in no net loss of federally protected waters through impact avoidance, impact minimization, and/or compensatory mitigation, as determined in CWA Section 404 and 401 permits and/or a 1602 Streambed Alteration Agreement. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for each proposed project.

*Timing/Implementation:* Prior to approval of final maps.

*Enforcement/Monitoring:* City of Elk Grove Planning Department

Implementation of mitigation measures **MM 5.4.9a** through **MM 5.4.9c** would ensure that impacts to riparian habitat, federally protected wetlands, or sensitive natural communities are **less than significant** by ensuring that impacts to these communities are fully mitigated.

### Impacts to Wildlife Movement (Standard of Significance 4)

**Impact 5.4.10** Implementation of the proposed Project would not interfere with the movement of native resident or migratory wildlife species. This would be considered a **less than significant** impact.

Available data on movement corridors and linkages was accessed via the CDFW BIOS Viewer. Data reviewed included the Essential Connectivity Areas [ds623] layer and the Missing Linkages in California [ds420] layer. The Project area is not located within an identified corridor, and the restoration of the Shed C Channel would provide a movement corridor for local wildlife. Therefore, impacts to the movement of native resident or migratory wildlife species will be **less than significant** as a result of the Project.

#### Mitigation Measures

None required.

### Conflict with Local Policies and Ordinances (Standard of Significance 5)

**Impact 5.4.11** Development of the Project area could result in the loss of protected tree species and removal of Swainson's hawk habitat, which could conflict with the City's Municipal Code. This is considered to have **no impact**.

The City's Municipal Code includes Chapter 19.12, Tree Preservation and Protection, and Chapter 16.130, Swainson's Hawk Impact Mitigation Fee. Chapter 19.12 requires mitigation for impacts to trees of local importance, which include coast live oak, valley oak, blue oak, interior live oak, oracle oak, California sycamore, and California black walnut with a single trunk 6 inches dbh or greater or multiple trunks with a combined dbh of 6 inches or greater. Chapter 16.130 requires mitigation for the loss of Swainson's hawk habitat at a 1:1 ratio. Development of the proposed Project would be required to be consistent with all local policies and codes protecting biological resources. Therefore, **no impact** would occur with regard to consistency with local ordinances or policies protecting biological resources.

#### Mitigation Measures

None required.

### Conflict with Conservation Plans (Standard of Significance 6)

**Impact 5.4.12** Implementation of the proposed Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, **no impact** will occur.

The Project area is within the plan area for the South Sacramento County Habitat Conservation Plan (HCP). The HCP is in the process of being prepared and will address the conservation and development of lands in this portion of the county. The purpose of the plan is to encourage and simplify the process of conserving sensitive habitats for special-status species. Once the plan is

## 5.4 BIOLOGICAL RESOURCES

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approved, it will allow for incidental take of covered species with the requirement of mitigation for lost habitat at approved ratios. Only some of the total listed species analysis that will be included in the plan are complete and include white-tailed kite, northern harrier, tricolored blackbird, giant garter snake, vernal pool fairy shrimp, and Sanford's arrowhead. The complete list can be found on the Sacramento County Planning and Community Development Department website (Sacramento County 2006).

### Mitigation Measures

None required.

## 5.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

### CUMULATIVE SETTING

The region is predominantly characterized by agricultural uses including vineyards, irrigated row/field crops, irrigated hayfields, orchards, and associated irrigation/drainage ditches. Fremont cottonwood, arroyo willow, valley oak, poison oak, and Himalayan blackberry are commonly found adjacent to ditches. Freshwater emergent wetlands and farmed seasonal wetlands are also prevalent in the region, which support cattails, tule, Himalayan blackberry, and willow, as well as various grasses and forbs. Several species of oak, California black walnut, sycamore, and other native and ornamental tree species grow in the area. The agricultural lands, wetlands, ditches, and trees provide nesting and foraging habitat for several special-status species including Sanford's arrowhead, valley elderberry longhorn beetle, vernal pool branchiopods, giant garter snake, western pond turtle, Swainson's hawks, burrowing owl, and tricolored blackbirds.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

#### **Cumulative Impacts to Biological Resources**

**Impact 5.4.13** Implementation of the proposed Project would contribute to the loss of biological resources in the region, as well as ongoing urbanization in southern Sacramento County. The proposed Project's contribution to this impact would be **cumulatively considerable**.

The cumulative context associated with the proposed Project includes proposed, planned, reasonably foreseeable, and approved projects in the City's Sphere of Influence and Sacramento County. The character and landscape of this region has been gradually changing from agricultural to residential and commercial uses since the 1970s. The continuing urbanization of the region will result in additional loss of habitat and impacts on sensitive species. This is considered a significant cumulative impact.

In addition to the Project, several other developments in southern Sacramento County are currently approved, proposed, under construction, or in the preliminary planning stages. These projects include Kammerer Road Extension, Sterling Meadows, Lent Ranch Marketplace, Franklin Crossing, and potential future development of lands north of the Southeast Policy Area, which have the potential to adversely affect regional biological resources. Future developments would require on- and off-site improvements to provide water, wastewater, stormwater drainage/storage, solid waste disposal, and other services at the City's required level of service. Such improvements could contribute to the loss of potential habitat within the region. On a



cumulative level, the change in land uses would contribute to a loss of habitat for special-status species that currently inhabit the Project area or that could potentially inhabit the Project area in the future. Although the Project area is generally degraded and disturbed as a result of recurring agricultural activities, it provides habitat for a variety of common wildlife species as well as for special-status species.

Other cumulative impacts could result from increased stormwater runoff. The restored Shed C Channel would be constructed to mitigate for increased stormwater runoff from the Project area and other projects in the area. Each project will be required to participate in the NPDES permit program for stormwater runoff, which effectively reduces water quality impacts to a less than significant level. Planned urbanization of the Project area would create new sources of light and glare. While Project-specific measures would be undertaken to orient or shield lights to minimize illumination of adjacent lands, the combined effect of all new development on and adjacent to the Project area would create a significant and unavoidable impact associated with increased human presence.

The General Plan EIR addressed the cumulative loss of biological resources resulting from the City's build out, which included development of the Project area. The General Plan EIR determined the General Plan's contribution to impacts to biological resources would be cumulatively considerable. The proposed Project would not result in any new or more severe biological resource impacts than what was identified in the General Plan EIR, but the Project would result in the conversion of agricultural land to urban uses, which would contribute to the loss of habitat for common wildlife species as well as for special-status species. Therefore, the Project's contribution to the cumulative impact would be **cumulatively considerable**.

### Mitigation Measures

Implementation of mitigation measures **MM 5.4.1** through **MM 5.4.9.c** would reduce the direct Project-specific impacts on special-status plants and wildlife, native trees, and jurisdictional wetlands and/or waters to a less than significant level. However, on a cumulative level, the Project's contribution to direct and indirect impacts would remain **cumulatively considerable** and be considered **significant and unavoidable**.

## 5.4 BIOLOGICAL RESOURCES

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## 5.4 BIOLOGICAL RESOURCES

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