4.3 BIOLOGICAL RESOURCES

4.3.1 INTRODUCTION

Pursuant to CEQA Guidelines Section 15162, the Biological Resources chapter of the Subsequent Environmental Impact Report (SEIR) assesses whether the proposed project would result in a new significant impact not previously identified in the Wildhorse Ranch Project EIR (2009 EIR) or a substantial increase in the severity of a significant impact previously identified in the 2009 EIR. The City of Davis has prepared the SEIR to analyze new or substantially more severe potential adverse effects that could occur as a result of the changes from the former Wildhorse Ranch Project to the currently proposed project. For further details related to the proposed project, refer to Chapter 3, Project Description, of this SEIR.

This chapter describes the existing plant communities, wetlands, wildlife habitats, and potential for special-status species and communities that could occur within the project region. In addition, the chapter evaluates the currently proposed project's potential impacts to biological resources and identifies measures to eliminate or substantially reduce impacts to a less-than-significant level. The information contained in the analysis is primarily based on a Biological Resources Assessment (BRA) prepared for the proposed project by Madrone Ecological Consulting (Madrone) (see Appendix D of this SEIR).[1] Further information was sourced from the City of Davis General Plan,[2] the City of Davis General Plan EIR,[3] the Yolo Habitat Conservation Plan/Natural Community Conservation Plan (Yolo HCP/NCCP),[4] and the 2009 EIR.

4.3.2 EXISTING ENVIRONMENTAL SETTING

The following sections describe the regional biological setting in which the project site is located, the biological setting of the project site, and the special-status species known to occur within the project site and surrounding environs.

Regional Setting

The project site consists of approximately 25.8 acres on an existing property known as the Wildhorse Ranch and/or Duffel Horse Ranch, located north of East Covell Boulevard in the City of Davis, California. The City of Davis experiences a Mediterranean-type climate with cool, wet winters, and hot, dry summers. Temperatures in the project region fluctuate from average highs in July of 93 degrees Fahrenheit, with average lows in December of 39 degrees Fahrenheit.[5] Nearly all precipitation occurs between October and April in the form of rainfall, with February typically the wettest month, averaging 4.1 inches.

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1 Madrone Ecological Consulting. *Biological Resources Assessment, Palomino Place, Yolo County, California*. June 13, 2024.
2 City of Davis. *City of Davis General Plan*. Adopted May 2001, Amended January 2007.
3 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School*. Certified May 2001.
4 Yolo Habitat Conservancy. *Yolo Habitat Conservation Plan/Natural Community Conservation Plan.* April 2018.
5 Weather Spark. *Climate and Average Weather Year Round in Davis*. Available at: https://weatherspark.com/y/1120/Average-Weather-in-Davis-California-United-States-Year-Round. Accessed April 2024.

The City of Davis is located within the Central Valley region of California, within southeastern Yolo County. The Central Valley is a north-south oriented valley that extends approximately 430 miles from southern Tehama County to south-central Kern County in southern California. Elevations in the Central Valley range from approximately zero to 400 feet above mean sea level (amsl). In general, the borders of the Central Valley are areas where alluvial soils grade into bedrock features. Biological communities in the Central Valley once supported vast areas of grassland, marshes, and riparian woodland. The landscape is currently dominated by woodland biological communities, typically referred to as the foothills, with land uses that are predominantly agricultural. In addition, the Central Valley is situated in the Pacific Flyway, a major migration route for waterfowl and other birds in North America.

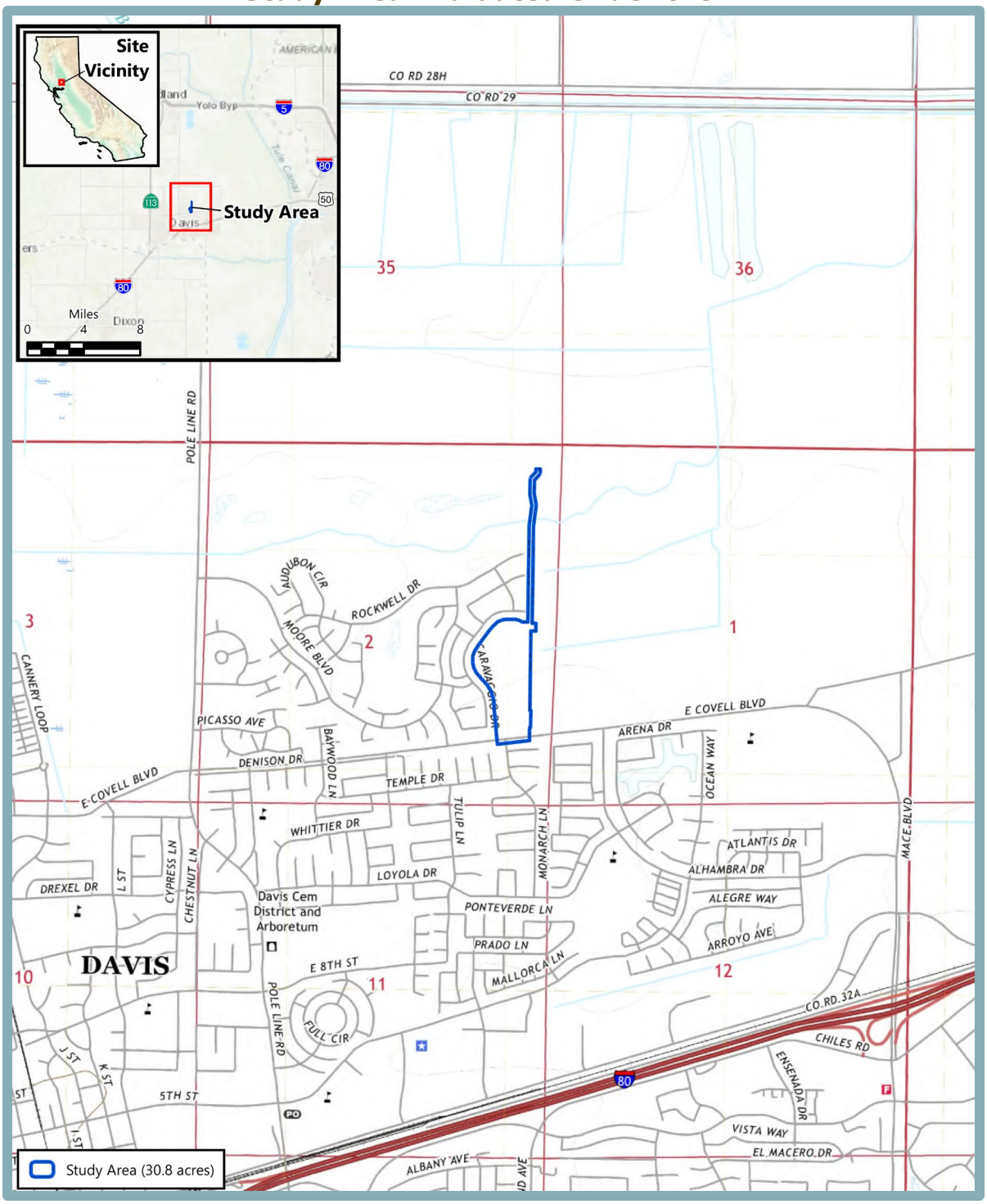
Project Setting

The approximately 31-acre study area evaluated as part of the project-specific BRA consists of the 25.8-acre project site, as well as off-site improvement areas, including the segment of East Covell Boulevard immediately south of the project site and an approximately three-acre portion of the Wildhorse Agricultural Buffer. The portion of the Wildhorse Agricultural Buffer was included within the BRA study area due to the proposed installation of an obstacle course adjacent to the project site boundaries, as well as 2,270 lineal feet of new 12-inch sewer line necessary for establishing sewer service to the proposed project (see Figure 4.3-1). Within the central portion of the project site, the site includes a ranch home, two duplexes, a horse barn, and an equestrian training facility that is not currently in use. The remaining portion of the property was previously used as pasture/grazing land, but now supports ungrazed ruderal vegetation that has been partially mowed for fire-control purposes. Based on review of aerial imagery and the presence of substantial existing infrastructure, the study area was likely used to support horses and potentially other livestock, with the majority of the ruderal portions of the site historically grazed. The terrain within the study area is mostly flat at an elevation of approximately 30 to 40 feet amsl.

Vegetation within the on-site ruderal areas is dominated by non-native ruderal grasses and forbs, including wild oats (*Avena barbata* and *Avena fatua*), black mustard (*Brassica nigra*), Italian thistle (*Carduus pycnocephalus*), yellow star-thistle (*Centaurea solstitialis*), shortpod mustard (*Hirschfeldia incana*), perennial pepperweed (*Lepidium latifolium*), and milk thistle (*Silybum marianum*). Other vegetation growing within the ruderal areas includes field bindweed (*Convolvulus arvensis*), Bermuda grass (*Cynodon dactylon*), stinkwort (*Dittrichia graveolens*), and fennel (*Foeniculum vulgare*). Numerous planted trees occur throughout the ruderal area, including Italian cypress (*Cupressus sempervirens*), fig trees (*Ficus carica*), English walnut (*Juglans regia*), olive trees (*Olea europaea*), Chinese pistache (*Pistacia chinensis*), plum trees (*Prunus* sp.), pomegranate trees (*Punica granatum*), and Mexican fan palm (*Washingtonia robusta*).

The northern portion of the BRA study area is comprised of the Wildhorse Agricultural Buffer, which is an Urban Agricultural Transition Area created pursuant to Davis Municipal Code Article 40A.01.050 as a buffer between the existing residential development north of the project site and the adjacent farmland to the east of the site and includes native landscaping, wildlife habitat, and a pedestrian trail. The Wildhorse Agricultural Buffer area consists of annual grassland dominated by non-native annual grasses and forbs, such as wild oats, ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), Medusa head grass (*Elymus caput-medusae*), perennial ryegrass (*Festuca perennis*), wall barley (*Hordeum murinum*), rose clover (*Trifolium hirtum*), and winter vetch (*Vicia villosa*).

Figure 4.3-1
Study Area Evaluated Under the BRA



Other species within the annual grassland include native perennial bunchgrasses, such as creeping wildrye (*Leymus triticoides*), purple needle grass (*Nassella pulchra*), deer grass (*Muhlenbergia rigens*), and slender wheatgrass (*Elymus trachycaulus*). In addition, the BRA identifies grasses such as yellow star-thistle, perennial pepperweed, field bindweed, narrow-leaf milkweed (*Asclepias fascicularis*), horseweed (*Erigeron canadensis*), prickly lettuce (*Lactuca serriola*), and alkali mallow (*Malvella leprosa*). Scattered trees occur along the trail, dominated by Valley oak (*Quercus lobata*).

Other associated tree and shrub species include California buckeye (*Aesculus californica*), toyon (*Heteromeles arbutifolia*), Northern California black walnut (*Juglans hindsii*), western sycamore (*Platanus racemosa*), interior live oak (*Quercus wislizeni*), and California rose (*Rosa californica*).

Yolo HCP/NCCP Land Cover Types

Madrone identified the following Yolo HCP/NCCP land covers within the study area: Bulrush-Cattail Freshwater Marsh Alliance, Mixed Willow Alliance, Urban, Urban Ruderal with Covered Species Habitat (ruderal areas), Vegetated Corridor, and California Annual Grassland Alliance, as shown in Figure 4.3-2 and summarized in Table 4.3-1. The study area's land cover types are discussed in further detail below. It should be noted that, subsequent to the certification of the 2009 EIR, the Yolo HCP/NCCP was adopted in January 2019 (as discussed further in the Regulatory Context section of this chapter). Thus, the 2009 EIR did not include discussions of Yolo HCP/NCCP land cover types.

Table 4.3-1
Yolo HCP/NCCP Land Cover Types Within the Study Area

Land Covers	Acres
Bulrush-Cattail Freshwater Marsh Alliance	0.05
Mixed Willow Alliance	0.04
Urban	4.9
Urban Ruderal with Covered Species Habitat	22.6
Vegetated Corridor	0.3
California Annual Grassland Alliance	3.0
Total	**30.8**

Source: Madrone Ecological Consulting, 2024.

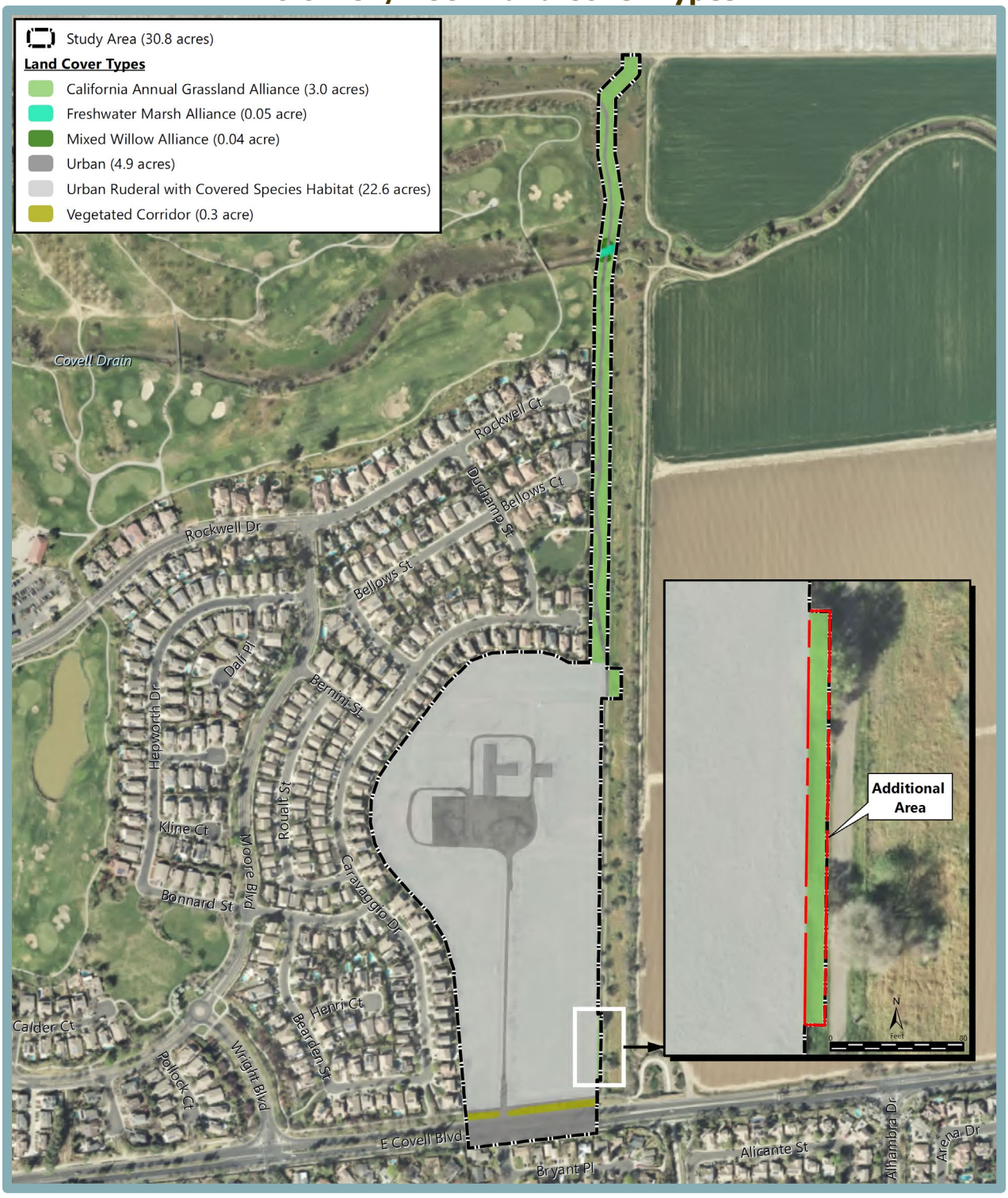
Bulrush-Cattail Freshwater Marsh Alliance

A total of 0.05-acre of aquatic resources occurs within the off-site portion of the study area to the north of the project site. The Bulrush-Cattail Freshwater Marsh Alliance land cover occurs within an intermittent drainage known as Channel A and is dominated by emergent wetland vegetation, including Baltic rush (*Juncus balticus*) and common tule (*Schoenoplectus acutus*). Other species within the drainage include tall nut-sedge (*Cyperus eragrostis*), panicled willowherb (*Epilobium brachycarpum*), common knotweed (*Persicaria lapathifolia*), curly dock (*Rumex crispus*), and cattail (*Typha* sp.).

Mixed Willow Alliance

Small patches of Mixed Willow Alliance land cover totaling 0.04-acre occur off-site, along Channel A where the drainage crosses through the study area. The areas are dominated by Goodding's black willow (*Salix gooddingii*), along with other riparian vegetation, including Fremont cottonwood (*Populus fremontii*) and California wild grape (*Vitis californica*).

Figure 4.3-2
Yolo HCP/NCCP Land Cover Types



Urban
The Urban land cover type consists of several patches of mostly unvegetated development within the central portion of the study area, including the on-site residences and structures, paved/gravel roads, grass lawns, and other associated infrastructure. In addition, a portion of East Covell Boulevard occurs at the southern portion of the study area, and a gravel walking trail extends through the Wildhorse Agricultural Buffer. The Urban land cover totals approximately 4.9 acres.

Urban Ruderal with Covered Species Habitat
Approximately 22.6 acres of the ruderal areas are located within the study area. The ruderal areas appear to be regularly disturbed and occur throughout the main portion of the project site. Vegetation is predominantly dominated by non-native ruderal grasses and forbs, including wild oats, black mustard, Italian thistle, yellow star-thistle, shortpod mustard, perennial pepperweed, and milk thistle. Several species of planted ornamental trees also occur within the ruderal areas. Portions of the ruderal areas contain extremely tall and robust vegetation (likely due to an absence of livestock grazing), while other areas contain shorter vegetation that appears to be regularly mowed.

Vegetated Corridor
Approximately 0.3-acre of Vegetated Corridor land cover occurs within the study area. The Vegetated Corridor land cover areas consist of maintained ornamental tree and shrub species planted along East Covell Boulevard along the southern boundary of the project site.

California Annual Grassland Alliance
The approximately three acres of California Annual Grassland Alliance land cover occurs throughout the northern portion of the study area within the Wildhorse Agricultural Buffer, outside of the project site boundaries. The understory includes non-native annual grasses such as wild oats, ripgut brome, perennial ryegrass, and perennial pepperweed. Native California grasses and forbs such as purple needlegrass, creeping wildrye, blue wildrye, narrow-leaf milkweed and Spanish clover are also found on-site. Although portions of the annual grassland adjacent to the walking trail that extends through the Wildhorse Agricultural Buffer have been mowed, the three acres of California Annual Grassland Alliance land cover is significantly less disturbed and features less ruderal vegetation than the ruderal areas in the project site. Native trees and shrubs have been planted throughout the site, including along the walking trail within the Wildhorse Agricultural Buffer.

Aquatic Resources
Pursuant to the BRA, a total of 0.052-acre of aquatic resources has been mapped within the study area as part of two Aquatic Resources Delineations (ARDs) (see Figure 4.3-3 and Table 4.3-2), as discussed further below. It should be noted that the 2009 EIR did not identify the need for an off-site sewer line connection to the north, the alignment for which crosses Channel A. Thus, the 2009 EIR did not identify aquatic resources within the biological resources study area, as inclusion of the Wildhorse Agricultural Buffer within the previous study area was not warranted.

Table 4.3-2
Aquatic Resources Delineated Within the Study Area

Resource Type	Acreage
Intermittent Drainage (Channel A)	0.052

Source: Madrone Ecological Consulting, 2024.

Figure 4.3-3
Aquatic Resources

Channel A – Intermittent Drainage

Channel A flows from west to east through a northerly portion of the study area outside of the project site boundaries, and is generally sparsely vegetated, although dense patches of vegetation occur in portions of the drainage and along the edges of the channel. A wooden plank bridge crosses Channel A within the study area as part of the walking trail within the Wildhorse Agricultural Buffer. Riparian vegetation occurs at the bridge crossing and is dominated by Goodding's black willow, along with Fremont cottonwood and California wild grape (*Vitis californica*). The upland areas along the banks of the Channel Aconsist of mugwort (*Artemisia douglasiana*) and Dallis grass (*Paspalum dilatatum*), as well as vegetation similar to the annual grasslands within the Wildhorse Agricultural Buffer.

Special-Status Species

Special-status species are species that have been listed as threatened or endangered under the federal Endangered Species Act (FESA), California Endangered Species Act (CESA), or are of special concern to federal resource agencies, the State, or private conservation organizations. A species may be considered to have special status due to declining populations, vulnerability to habitat change, or restricted distributions. A general description of the criteria and laws pertaining to special-status classifications is described below.

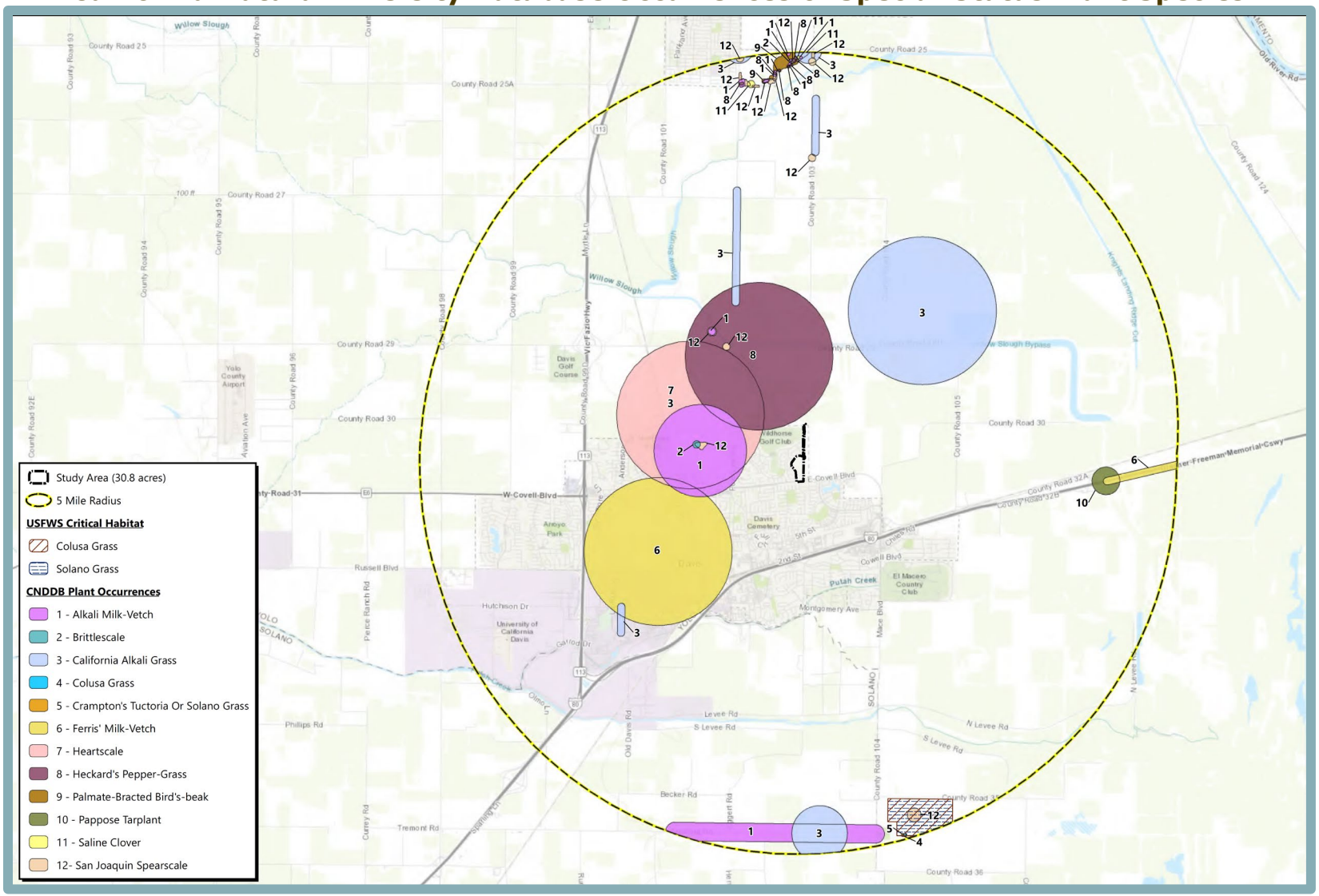
Special-status plant and wildlife species may meet one or more of the following criteria:

1. Listed as threatened or endangered, or proposed or candidates for listing by the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS);
2. Listed as threatened or endangered and candidates for listing by the California Department of Fish and Wildlife (CDFW);
3. Identified as Fully Protected species, Species of Special Concern, or Watch List species by CDFW;
4. Identified as a Bird of Conservation Concern by the USFWS;
5. Identified as Medium or High priority species by the Western Bat Working Group (WBWG);
6. Plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (CNPS) and CDFW (California Rare Plant Rank [CRPR] 1, 2, and 3):
    a. CRPR 1A: Plants presumed extinct.
    b. CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
    c. CRPR 2A: Plants extirpated in California, but common elsewhere.
    d. CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
    e. CRPR 3: Plants about which the CNPS needs more information – a review list.
7. Identified as a Covered Species in the Yolo HCP/NCCP.

Listed and Special-Status Plant Species

According to the records of the California Natural Diversity Database (CNDDB) maintained by the CDFW, 23 special-status plant species have the potential to occur on or within five miles of the study area (see Figure 4.3-4). Based on field observations and literature review (detailed further in this chapter in the Method of Analysis section), two of the 23 special-status plant species have potential to occur within the study area.

Figure 4.3-4
California Natural Diversity Database Occurrences of Special-Status Plant Species



As part of determining the potential for special-status plant and wildlife species to occur within the study area, the following set of criteria was used:

- Present: Species occurs within the study area based on CNDDB records and/or was observed within the study area during the field surveys;
- High: The study area is within the known range of the species and suitable habitat exists within the study area;
- Moderate: The study area is within the known range of the species and very limited suitable habitat exists within the study area;
- Low: The study area is within the known range of the species and marginally suitable habitat exists within the study area or the species was not observed during protocol-level surveys conducted within the study area; or
- Absent/Habitat Not Present: The study area does not contain suitable habitat for the species, or the study area is outside the known range of the species.

As shown below in Table 4.3-3, based on protocol-level plant surveys and literature review (detailed further in this chapter under the Method of Analysis section), two of the 23 special-status plant species were determined to have potential to occur within the study area. The species considered to have *low* potential to occur in the project study area include bristly sedge and San Joaquin spearscale. It should be noted that the 2009 EIR did not identify any special-status plant species with potential for occurrence within the project site. The following discussions provide further details of the two special-status plant species identified by the BRA with potential to occur within the study area.

Bristly Sedge

Bristly sedge (*Carex comosa*) is not listed pursuant to either FESA or CESA and is not covered under the Yolo HCP/NCCP, but is designated as a CRPR List 2B.1 species. Bristly sedge is a rhizomatous perennial that occurs in coastal prairie and in marshy lake margins at elevations ranging from sea level to approximately 2,050 feet amsl. The species blooms from May through September (although sedges are only identifiable when in fruit in late summer and early fall).

Marginally suitable habitat for the species is present in the Channel A, which is located off-site. Pursuant to the CNDDB, the species has not been documented within five miles of the study area. In addition, bristly sedge was not observed during the protocol-level plant surveys of the study area, which were conducted in September 2022 when the species would have been identifiable. Thus, bristly sedge has *low* potential for occurrence within the study area.

San Joaquin Spearscale

San Joaquin spearscale (*Extriplex joaquinana*) is not listed pursuant to either FESA or CESA and is not covered under the Yolo HCP/NCCP. The species is classified as a CRPR List 1B.2 plant. San Joaquin spearscale is an annual herbaceous species endemic to California. The species occurs in chenopod scrub, meadows and seeps, playas, and grasslands, often in alkaline soils at elevations ranging from sea level to approximately 2,740 feet amsl. San Joaquin spearscale blooms from April through October.

Marginally suitable habitat for this species is present in ruderal areas in the southeastern portion of the study area, which feature Tyndall soils. Ten CNDDB records of San Joaquin spearscale occur within five miles of the study area, the nearest of which is located approximately one mile west of the study area (CNDDB Occurrence #40).

Table 4.3-3
Special-Status Species with Potential to Occur Within the Study Area

Scientific Name (Common Name)	Federal Status	State Status	Yolo HCP/NCCP Covered Species	Habitat Requirements	Potential for Occurrence
Plants					
Astragalus tener var. *ferrisiae* Ferris' milk-vetch	--	CRPR 1B.1	No	Occurs in alkaline flats and vernally moist meadows within valley/foothill grasslands. Usually occurs in wetlands.	**Habitat Not Present.** Mesic alkaline areas are not present within the study area.
Astragalus tener var. *tener* Alkali milk-vetch	--	CRPR 1B.2	No	Favors alkaline playas and vernal pools within valley and foothill grasslands with adobe clays. Also occurs in open, alkaline and seasonally moist meadows from zero to 200 feet amsl. Usually occurs in wetlands.	**Habitat Not Present.** Mesic alkaline areas are not present within the study area.
Atriplex cordulata var. *cordulata* Heartscale	--	CRPR 1B.2	No	Occurs in saline or alkaline chenopod scrub, meadows and seeps, or grasslands with sandy soils.	**Habitat Not Present.** Soils within the study area do not have sufficient alkalinity for the species.
Atriplex depressa Brittlescale	--	CRPR 1B.2	No	Prefers meadows or grasslands with alkaline or saline clay soils.	**Habitat Not Present.** Soils within the study area do not have sufficient alkalinity for the species.
Carex comosa Bristly sedge	--	CRPR 2B.1	No	Occurs in coastal prairie and marshy lake margins.	**Low**. Channel A within the study area represents marginally suitable habitat for the species. Protocol-level surveys for the species were negative.
Centromadia parryi var. *parryi* Pappose tarplant	--	CRPR 1B.2	No	Found on alkaline soils in coastal prairie, meadows, seeps, coastal salt marshes, and vernally mesic areas in valley/foothill grasslands.	**Habitat Not Present.** Mesic alkaline areas are not present within the study area.
Chloropyron palmatum Palmate-bracted bird's beak	FE	CE, CRPR 1B.1	Yes	Prefers alkaline chenopod scrub or valley/foothill grasslands.	**Habitat Not Present.** Soils within the study area do not have sufficient alkalinity for the species.
Eryngium jepsonii Jepson's coyote-thistle	--	CRPR 1B.2	No	Clay soils of valley and foothill grassland and vernal pools from 10 to 9,850 feet amsl.	**Habitat Not Present.** Clay soils are not present within the study area.

(Continues on next page)

Table 4.3-3
Special-Status Species with Potential to Occur Within the Study Area

Scientific Name (Common Name)	Federal Status	State Status	Yolo HCP/NCCP Covered Species	Habitat Requirements	Potential for Occurrence
Etriplex joaquinana San Joaquin spearscale	--	CRPR 1B.2	No	Found on alkaline soils in chenopod scrub, meadows and seeps, playas, and valley/foothill grasslands.	**Low.** Ruderal areas within Tyndall soils represent marginally suitable habitat for the species. Protocol-level surveys for the species were negative.
Fritillaria pluriflora Adobe-lily	--	CRPR 1B.2	No	Grows in chaparral, cismontane woodland, or foothill grasslands with clay or serpentine soils.	**Habitat Not Present.** Serpentine and clay soils are not present within the study area.
Hibiscus lasiocarpos var. *occidentalis* Woolly rose-mallow	--	CRPR 1B.2	No	Occurs in freshwater marshes along the edges of rivers and sloughs in the Central Valley. Often found in riprap on the sides of levees.	**Habitat Not Present.** The species requires perennial moisture, which does not occur within the study area.
Lepidium latipes var. *heckardii* Heckard's pepper-grass	--	CRPR 1B.2	No	Prefers mesic areas in valley and foothill grasslands with alkaline soils.	**Habitat Not Present.** Mesic alkaline areas are not present within the study area.
Lessingia hololeuca Wooly-headed lessingia	--	CRPR 3	No	Found in coastal scrub, broad-leafed upland forest, montane coniferous forest, and grassland, on serpentine and clay soils ranging from 50 to 1,000 feet amsl.	**Habitat Not Present.** Serpentine and clay soils are not present within the study area.
Lilaeopsis masonii Mason's lilaeopsis	--	CRPR 1B.1	No	Prefers brackish or freshwater swamps, intertidal marshes, and riparian scrub at or 35 feet below amsl.	**Habitat Not Present.** The species occurs in tidally influenced areas, which are not present within the study area.
Myosurus minimus spp. *apus* Little mousetail	--	CRPR 3.1	No	Occurs in alkaline vernal pools.	**Habitat Not Present.** Alkaline depressional wetlands are not present within the study area.
Navarretia leucocephala spp. *bakeri* Baker's navarretia	--	CRPR 1B.1	No	Grows in vernal pools and mesic areas in cismontane woodland, lower montane coniferous forest, meadows and seeps, and valley and foothill grasslands.	**Habitat Not Present.** Depressional wetlands (vernal pools or seasonal wetlands) are not present within the study area.

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Table 4.3-3
Special-Status Species with Potential to Occur Within the Study Area

Scientific Name (Common Name)	Federal Status	State Status	Yolo HCP/NCCP Covered Species	Habitat Requirements	Potential for Occurrence
Neostapfia colusana Colusa grass	FT	CE, CRPR 1B.1	No	Occurs in the dry bottoms of large/deep vernal pools and other seasonally flooded features.	**Habitat Not Present.** Depressional wetlands (vernal pools or seasonal wetlands) are not present within the study area.
Plagiobothrys hystriculus Bearded popcornflower	--	CRPR 1B.1	No	Occurs in vernal pools or other seasonal wetlands.	**Habitat Not Present.** Depressional wetlands (vernal pools or seasonal wetlands) are not present within the study area.
Puccinellia simplex California alkali grass	--	CRPR 1B.2	No	Grows on alkaline sinks, flats, and lake margins, vernal pools, meadows, seeps, and riparian wetlands.	**Habitat Not Present.** Mesic alkaline areas are not present within the study area.
Sidalcea keckii Keck's checkerbloom	FE	CRPR 1B.1	No	Found in cismontane woodland, valley/foothill grasslands. Also often found in serpentine soils at elevations between 240 and 2,150 feet amsl.	**Habitat Not Present.** Serpentine soils are not present within the study area.
Symphyotrichum lentum Suisun Marsh aster	--	CRPR 1B.2	No	Grows in brackish, tidally influenced marshes and adjacent mesic areas at elevations of zero to 10 feet amsl.	**Habitat Not Present.** Brackish, tidally influenced marshes are not present within the study area.
Trifolium hydrophilum Saline clover	--	CRPR 1B.2	No	Grows in marshes, swamps, and vernal pools with alkaline soils.	**Habitat Not Present.** Mesic alkaline areas are not present within the study area.
Tuctoria mucronate Solano grass	FE	CE, CRPR 1B.1	No	Occurs in the dry bottoms of large/deep vernal pools and other seasonally flooded features.	**Habitat Not Present.** Depressional wetlands (vernal pools or seasonal wetlands) are not present within the study area.
Invertebrates					
Bombus crotchii Crotch's bumble bee	--	CC	No	Occurs in the State's Mediterranean region, Pacific Coast, Western Desert, and Great Valley and adjacent foothills in open grasslands or scrub habitats. Was common in the Central Valley, now appears absent from its historic range.	**Moderate**. Much of the study area is disturbed. However, the California Annual Grassland Alliance land cover may provide suitable habitat for the species, and ruderal areas represent marginal potential habitat.

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Table 4.3-3
Special-Status Species with Potential to Occur Within the Study Area

Scientific Name (Common Name)	Federal Status	State Status	Yolo HCP/NCCP Covered Species	Habitat Requirements	Potential for Occurrence
Branchinecta conservatio Conservancy fairy shrimp	FE	--	No	Occurs in vernal pools.	**Habitat Not Present.** Depressional wetlands (vernal pools or seasonal wetlands) are not present within the study area.
Branchinecta lynchi Vernal pool fairy shrimp	FT	--	No	Occurs in vernal pools.	**Habitat Not Present.** Depressional wetlands (vernal pools or seasonal wetlands) are not present within the study area.
Danus plexippus Monarch butterfly	FC	--	No	During the breeding season, the species lays their eggs on their obligate milkweed host plant (primarily *Asclepias* sp.)	**High.** Scattered milkweed growth was observed within the study area and represents marginal potential habitat for the species.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT	--	Yes	Dependent upon elderberry *(Sambucus* sp.) shrubs as primary host species.	**Moderate.** Isolated elderberry shrubs within the northern portion of the study area represent potential habitat for the species.
Lepidurus packardi Vernal pool tadpole shrimp	FE	--	No	Occurs in vernal pools.	**Habitat Not Present.** Depressional wetlands (vernal pools or seasonal wetlands) are not present within the study area.
Fish					
Acipenser medirostris Green sturgeon – Southern Distinct Population Segment (DPS)	FT	--	No	The species spends most of its life in marine waters and migrates into the freshwater reaches of large coastal rivers to spawn. The species spawns in cool, deep, swift-flowing river reaches over gravel and cobble bottoms.	**Habitat Not Present.** Suitable freshwater or saltwater habitat is not present within the study area.

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Table 4.3-3
Special-Status Species with Potential to Occur Within the Study Area

Scientific Name (Common Name)	Federal Status	State Status	Yolo HCP/NCCP Covered Species	Habitat Requirements	Potential for Occurrence
Hypomesus transpacificus Delta smelt	FT	CE	No	Adults are found in the brackish, open surface waters of the Sacramento-San Joaquin River Delta and Suisun Bay. Though never observed, spawning is believed to occur in tidally influenced sloughs and drainages on the freshwater side of the mixing zone.	**Habitat Not Present.** Tidally influenced sloughs or drainages are not present within the study area.
Amphibians					
Ambystoma californiense California tiger salamander	FT	CT	Yes	Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	**Habitat Not Present.** Suitable ponds or wetland habitat are not present within the study area.
Reptiles					
Actinemys marmorata Northwestern pond turtle	--	CSC	Yes	Occurs in ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	**Low.** The intermittent drainage within the study area provides marginal potential habitat for the species.
Thamnophis gigas Giant garter snake	FT	CT	Yes	Found in rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow-moving water and heavy emergent vegetation.	**Low.** The intermittent drainage within the study area provides marginal potential habitat for the species.
Birds					
Agelaius tricolor Tricolored blackbird	--	CT, CSC	Yes	Colonial nester in cattails, bulrush, or blackberries associated with marsh habitats.	**Low.** Dense bulrush growth within the intermittent drainage in the study area provides marginal potential nesting habitat for the species.

(Continues on next page)

Table 4.3-3
Special-Status Species with Potential to Occur Within the Study Area

Scientific Name (Common Name)	Federal Status	State Status	Yolo HCP/NCCP Covered Species	Habitat Requirements	Potential for Occurrence
Athene cunicularia Burrowing owl	--	CSC	Yes	Nests in man-made refugia and abandoned mammal burrows associated with open grassland habitats.	**High.** Large complexes of California ground squirrel burrows occur throughout the study area and represent potential habitat for the species. In addition, the species has been recorded within the CNDDB as having occurred on-site.
Buteo swainsoni Swainson's hawk	--	CT	Yes	Nests in large trees, preferably in riparian areas. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	**Present**. The species was observed foraging within the study area. Several large trees within the study area and immediate vicinity represent potential nesting habitat for the species.
Charadrius nivosus nivosus Western snowy plover	FT	CSC	No	Found in barren to sparsely vegetated open areas near water.	**Habitat Not Present.** The study area lacks appropriate sparsely vegetated open areas adjacent to water.
Circus hudsonius Northern harrier	--	CSC	No	Nests in emergent wetland/marsh, open grasslands, or savannah habitats. Forages in open areas such as marshes, agricultural fields, and grasslands.	**Moderate.** The annual grasslands and ruderal areas provide marginal potential nesting and foraging habitat for the species.
Elanus leucurus White-tailed kite	--	CFP	Yes	Open grasslands, fields, and meadows are used for foraging. Isolated trees in close proximity to foraging habitat are used for perching and nesting.	**High.** Trees throughout the study area represent potential nesting habitat for the species.

(Continues on next page)

Table 4.3-3
Special-Status Species with Potential to Occur Within the Study Area

Scientific Name (Common Name)	Federal Status	State Status	Yolo HCP/NCCP Covered Species	Habitat Requirements	Potential for Occurrence
Mammals					
Antrozous pallidus Pallid bat	--	CSC, WBWG H	No	Roosts in crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating bark, deciduous trees in riparian areas, and fruit trees in orchards), bridges, barns, porches, bat boxes, and human-occupied, as well as vacant, buildings.	**High.** Several derelict sheds, barns, and other structures, as well as trees within the study area provide potential roosting habitat for the species.
Lasionycteris noctivagans Silver-haired bat	--	WBWG M	No	Roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. The silver-haired bat forages in open, wooded areas near water features.	**High.** The trees throughout the study area represent potential roosting habitat for the species.
Lasiurus cinereus Hoary bat	--	WBWG M	No	Roosts in dense foliage of medium to large trees within close proximity to water.	**Moderate.** The large trees associated with the intermittent drainage within the study area provide potential roosting habitat for the species.
Taxidea taxus American badger	--	CSC	No	The species prefers dry open fields, grasslands, and pastures.	**Moderate.** The ruderal areas and annual grassland within the study area provide potential habitat for the species; however, frequent disturbances and other human activity could dissuade the species.

Status Codes:
CT: California Threatened
CE: California Endangered
CFP: CDFW Fully Protected
CRPR: California Rare Plant Rank
CSC: CDFW Species of Special Concern
FC: Federal Listing Candidate Species
FE: Federally Endangered
FT: Federally Threatened
WBWG: Western Bat Working Group

Source: Madrone Ecological Consulting, 2024.

San Joaquin spearscale was not observed during the protocol-level plant surveys conducted in September 2022, nor during the April 2024 survey. Both surveys occurred during when the plant would have been identifiable. Thus, San Joaquin spearscale has *low* potential for occurrence within the study area.

Listed and Special-Status Wildlife Species

According to the records search conducted as part of the BRA, 20 special-status wildlife species have the potential to occur on-site or within five miles of the study area (see Figure 4.3-5). Based on field observations and literature review (detailed further in the Method of Analysis section), 13 of the 20 special-status wildlife species were determined to have the potential to occur within the study area. Species that are considered *present* include Swainson's hawk. Species that are considered to have *high* potential to occur include monarch butterfly, burrowing owl, white-tailed kite, pallid bat, and silver-haired bat. Species that are considered to have *moderate* potential to occur include valley elderberry longhorn beetle (VELB), Crotch's bumble bee, northern harrier, hoary bat, and American badger. Species that are considered to have *low* potential to occur include northwestern pond turtle, giant garter snake, and tricolored blackbird.

The following discussions provide further details of the 13 special-status wildlife species with potential to occur within the study area. Table 4.3-3 above lists all 20 special-status wildlife species with potential to occur in the vicinity of the study area. It should be noted that the 2009 EIR did not identify monarch butterfly, northwestern pond turtle, giant garter snake, or silver-haired bat as having potential to occur within the study area.

Monarch Butterfly

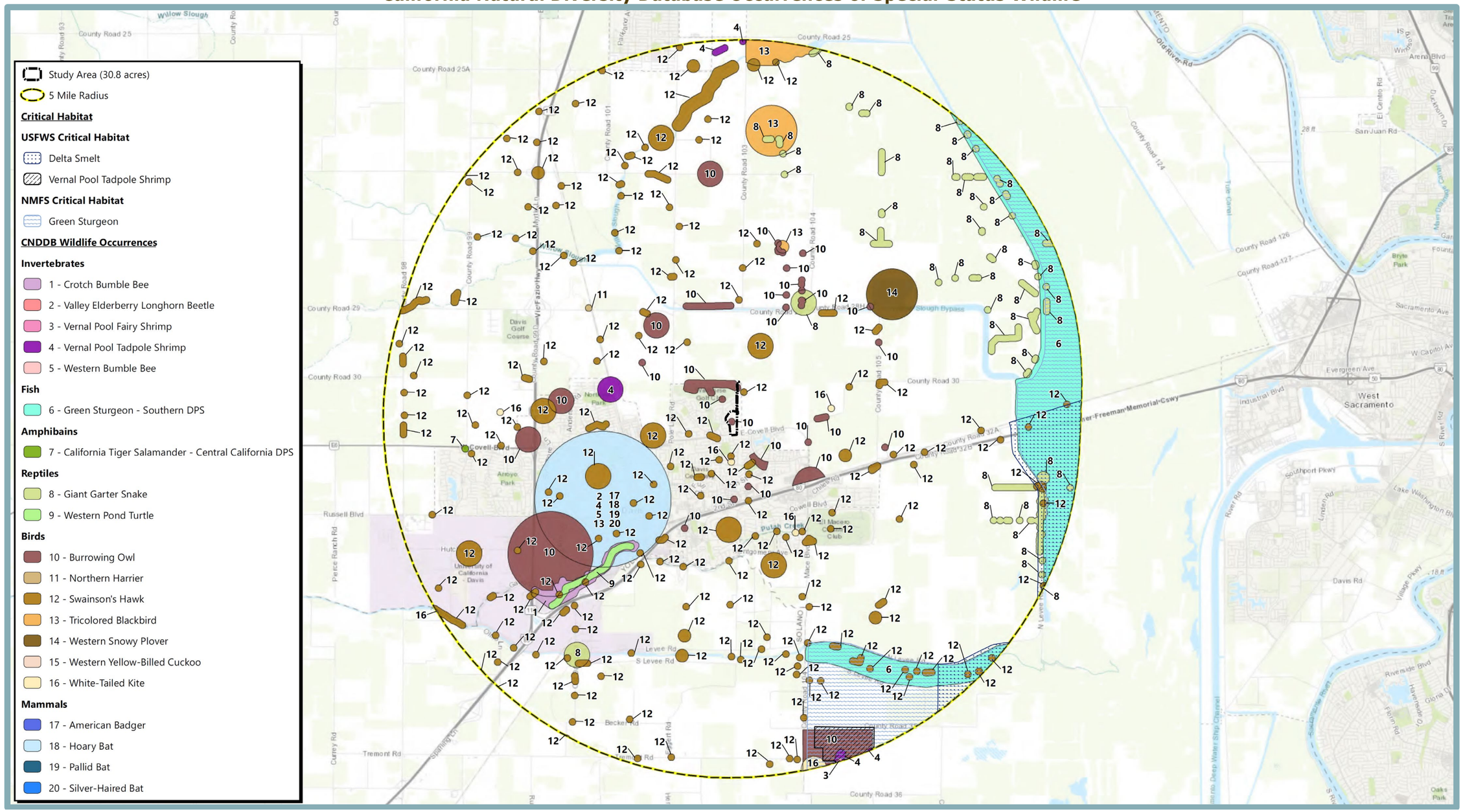
The monarch butterfly (*Danus plexippus*) is currently a candidate species for listing under FESA and is not covered under the Yolo HCP/NCCP. The species can occur in fields, roadside areas, open areas, wet areas, or urban gardens and requires flowering plants as a food source and healthy and abundant milkweed (generally *Asclepius* sp.) for laying eggs on as larval host plants. The monarch butterfly life cycle varies by geographic location. In many regions, monarch butterflies breed year-round.

During the August field survey, several scattered narrowleaf milkweed plants (*Asclepius fascicularis*) were documented within the study area. In addition, other flowering plants within the study area could provide nectar for foraging adults. The study area provides marginal habitat for monarch butterflies. The CNDDB does not track monarch butterfly breeding, but a query of the Western Monarch Milkweed Database yielded an observation of monarch breeding in 2020 approximately 1.9 miles southwest of the study area. Monarch butterflies, eggs, or caterpillars were not observed during the field survey. Similarly, evidence of monarch use was not observed on the milkweed plants. However, the City's wildlife biologist has observed the species multiple times on and adjacent to the project site. Thus, monarch butterflies have *high* potential for occurrence within the study area.

Valley Elderberry Longhorn Beetle

VELB (*Desmocerus californicus dimorphus*) is listed as threatened, pursuant to FESA, and is a Yolo HCP/NCCP Covered Species. The historic range of VELB is limited to moist Valley oak woodlands, along margins of rivers and streams in the lower Sacramento and lower San Joaquin valleys. At the time of its listing, the beetle was known from less than 10 localities in Merced, Sacramento, and Yolo counties. VELB's current distribution is patchy throughout the Central Valley and associated foothills.

Figure 4.3-5
California Natural Diversity Database Occurrences of Special-Status Wildlife



VELB is completely dependent on its host plant, the elderberry (*Sambucus* sp.), which occurs in riparian and other woodland communities in the Central Valley and associated foothills. Female beetles lay their eggs in crevices on the stems or on the leaves of living elderberry plants. When the eggs hatch, larvae bore into the stems. The larval stages last for one to two years. The fifth instar larvae create emergence holes in the stems and then plug the holes and remain in the stems through pupation. Adults emerge through the emergence holes from late March through June. The short-lived adult beetles forage on leaves and flowers of elderberry shrubs.

One isolated elderberry shrub with stems one inch diameter or greater is located within the northern portion of the study area, and an additional two shrubs are located within 100 feet of the study area (see Figure 4.3-6). The three elderberry shrubs represent suitable habitat for VELB. In addition, one documented CNDDB record of VELB occurs within five miles of the study area, located approximately 1.1 miles to the southwest of the project site (CNDDB Occurrence #270). VELB were not observed during the field surveys. Thus, VELB has *moderate* potential for occurrence within the study area.

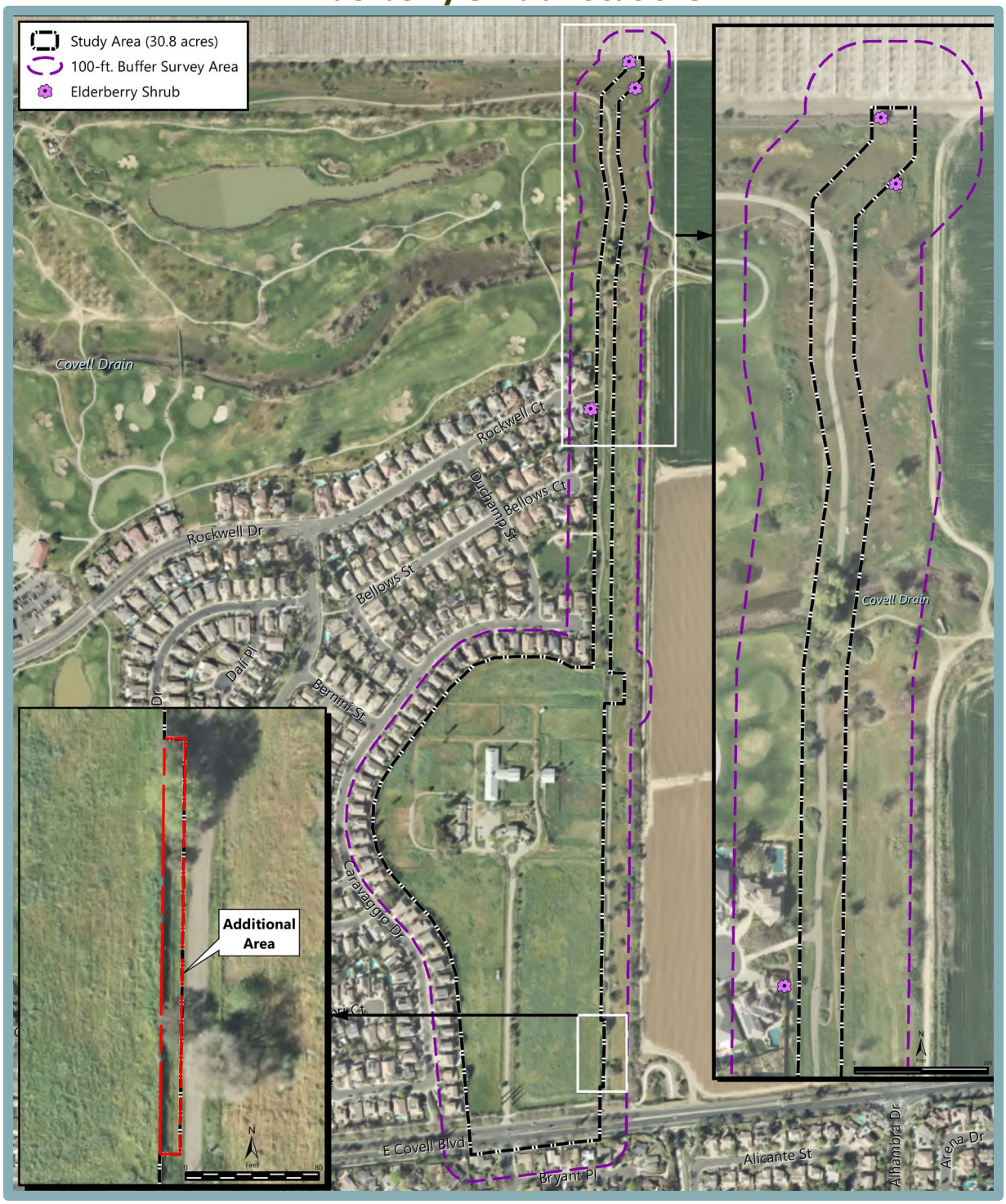
Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a candidate for listing under the CESA, and is not covered by the Yolo HCP/NCCP. The species has a limited distribution in southwestern North America, including Mexico, Baja California, Baja California Sur, and has been documented in southwest Nevada near the California border. Crotch's bumble bee was historically common in the Central Valley of California, but now appears to be absent from most of the valley, especially in the center of its historic range. In California, Crotch's bumble bee inhabits open grasslands and scrub habitats.

All bumble bees have three basic requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the entirety of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens. Nests are often located underground in abandoned holes made by ground squirrels, mice, and rats or occasionally abandoned bird nests. Some species nest on the surface of the ground (in tufts of grass) or in empty cavities. Bumble bees that nest aboveground may require undisturbed areas with nesting resources such as grass and hay to protect nests. Furthermore, areas with woody cover, or other sheltered areas provide bumble bees sites to build their nests (e.g., downed wood, rock walls, brush piles, etc.).

Bumble bees depend on the availability of habitats with a rich supply of floral resources that bloom continuously during the entirety of the colony's life. The queen collects nectar and pollen from flowers to support the production of her eggs, which are fertilized by sperm she has stored from mating the previous fall. As generalist foragers, bumble bees do not depend on any one flower type. They generally prefer flowers that are purple, blue or yellow and are essentially blind to the color red. The plant families most commonly associated with Crotch's bumble bee observations in California include Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae. Very little is known about hibernacula, or overwintering sites used by most bumble bees. Generally, bumble bees overwinter in soft, disturbed soil, under leaf litter or other debris, in abandoned holes made by fossorial mammals or occasionally in abandoned bird nests. Some species nest on the surface of the ground (in grassy tussocks) or in empty cavities (hollow logs, dead trees, under rocks, etc.). Queens most likely overwinter in small cavities just below or on the ground surface.

Figure 4.3-6
Elderberry Shrub Locations



The California Annual Grassland Alliance land cover within the study area represents suitable habitat for Crotch's bumble bee, and the on-site ruderal areas represent marginal potential habitat. One documented occurrence of the species has been recorded in the CNDDB (CNDDB Occurrence #11), located approximately 2.1 miles from the study area. Based on the above, Crotch's bumble bee has *moderate* potential for occurrence in the study area.

It should be noted that as a candidate for listing, Crotch's bumble bee is temporarily afforded the same protections as a State-listed endangered or threatened species. After CDFW's status report on Crotch's bumble bee is complete, the California Fish and Game Commission must decide at a public meeting whether the petitioned action (listing of the Crotch's bumble bee) is warranted. If the California Fish and Game Commission finds that the petitioned action is not warranted, the process would end and the Crotch's bumble bee would be removed from the list of candidate species. If the California Fish and Game Commission finds that the petitioned action is warranted, the species would be added to the list of threatened or endangered species under CESA.

Northwestern Pond Turtle

The northwestern pond turtle (*Emys marmorata*) is not listed under FESA or CESA. The species is a CDFW Species of Special Concern and a Yolo HCP/NCCP Covered Species. Northwestern pond turtle's favored habitats include streams, large rivers, and canals with slow-moving water, aquatic vegetation, and open basking sites. Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. The species feeds mainly on invertebrates, such as insects and worms, but will also consume small fish, frogs, mammals, and some plants. Northwestern pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. The species breeds from mid to late spring in adjacent open grasslands or sandy banks. It should be noted that the northwestern pond turtle was previously known as the western pond turtle (*Emys marmorata*). This SEIR reflects the species' current taxonomy.

Channel A, which is located within the off-site sewer improvement area, provides marginal potential habitat for northwestern pond turtles, which could use Channel A as a dispersal corridor if the drainage is inundated during the species' active season. Channel A was dry during the field surveys.

The annual grasslands within the Wildhorse Agricultural Buffer portion of the study area provide marginal potential upland habitat. One occurrence of northwestern pond turtle has been recorded within five miles of the study area (CNDDB Occurrence #362), which is approximately 2.1 miles to the southwest of the project site along Putah Creek. Northwestern pond turtles were not observed during the field surveys conducted as part of the BRA. Based on the above, northwestern pond turtle has *low* potential for occurrence within the study area.

Giant Garter Snake

The giant garter snake (*Thamnophis gigas*) is listed as threatened pursuant to FESA and is a Yolo HCP/NCCP Covered Species. The historic range of giant garter snake extended from the vicinity of Sacramento and Contra Costa counties southward to Buena Vista Lake, near the City of Bakersfield in Kern County; however, by the 1950s, agricultural conversion appeared to have resulted in the extirpation of the species from the southern third of its range. Currently, the range of the species is restricted to rice-production zones of Sacramento, Sutter, Butte, Colusa, and Glenn counties, portions of Yolo County, and along the eastern fringes of the Sacramento-San Joaquin River Delta.

Giant garter snakes inhabit marshes, sloughs, ponds, small lakes, low-gradient streams, other waterways, and agricultural wetlands, including irrigation canals, drainage canals, and rice fields. Habitat requirements for giant garter snake include adequate water during the snake's active period (from early spring to mid-fall), emergent herbaceous wetland vegetation for cover and foraging, grassy banks and openings for basking, and higher elevation uplands for cover and refuge from flood waters in the winter. The species is typically absent from larger rivers and other water bodies that have been highly channelized and support predatory fish.

The off-site Channel A provides marginal potential habitat for the giant garter snake, which may use the drainage during the species' active season (May 1 through October 1), if the drainage is inundated. Channel A was dry during field surveys. The annual grasslands within the Wildhorse Agricultural Buffer provide marginal potential upland habitat. Several documented CNDDB occurrences of giant garter snake occur within five miles of the study area; the nearest occurrence is located approximately 1.3 miles to the northeast of the study area, along the Willow Slough Bypass (CNDDB Occurrence #80). Giant garter snakes were not observed during the field surveys. Based on the above, giant garter snake has *low* potential for occurrence within the study area.

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is not federally listed. The species is State listed as threatened and a Yolo HCP/NCCP Covered Species. Tricolored blackbird has been in decline throughout the State. Tricolored blackbirds are colonial nesters, and historically, established colonies in freshwater marshes dominated by cattails (*Typha* sp.) and bulrushes (*Scirpus* or *Schoenoplectus* sp.). More recently, the species has utilized non-native mustards (*Brassica* sp.), blackberries (*Rubus* sp.), thistles (*Circium* sp.), and mallows (*Malva* sp.) as nesting substrate. Since the 1980s, the largest colonies have been observed in the San Joaquin Valley in cultivated fields of triticale, which is a hybrid of wheat and rye often grown as livestock fodder. Nesting in active agricultural fields has further imperiled the species, given that nestlings typically are not fledged by the time the triticale is harvested.

Small stands of bulrush within the off-site portion of the study area containing the Channel A represent marginal potential nesting habitat for tricolored blackbird. Four documented CNDDB occurrences of tricolored blackbird have been recorded within five miles of the study area. The nearest occurrence is located approximately 1.1 miles to the southwest of the project site (CNDDB Occurrence #488). Tricolored blackbirds were not observed during the field surveys. Based on the above, tricolored blackbird has *low* potential for occurrence within the study area.

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is not listed under FESA or CESA. The species is designated as a CDFW Species of Special Concern and is a Yolo HCP/NCCP Covered Species. Burrowing owls typically inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. The species typically uses burrows created by fossorial mammals, most notably the California ground squirrel (*Otospermophilus beecheyi*), but may also use man-made structures, such as culverts, cement, asphalt, or wood debris piles or openings beneath cement or asphalt pavement. The species' breeding season extends from February 1 through August 31.

Extensive complexes of California ground squirrel burrows occur throughout the study area, as well as several debris piles associated with the on-site development, which could provide suitable potential habitat for burrowing owl. The annual grassland and ruderal areas within the study area

also provide suitable foraging habitat for the species. Numerous CNDDB occurrences of burrowing owl have been documented within five miles of the study area, including two occurrences which are completely or partially located on-site. In 2006, CNDDB Occurrence #1027 was recorded within the central portion of the site, and CNDDB Occurrence #613 was recorded in 2009 within the northernmost portion of the study area and to the west within the Wildhorse Golf Club course. Madrone is currently conducting protocol-level breeding season and non-breeding season surveys for burrowing owl within the study, which commenced at the start of 2024. The species has not been documented as part of the surveys. Based on the above, burrowing owl has *high* potential for occurrence within the study area.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a raptor species that is not federally listed, but is State listed as threatened. The species is also a Yolo HCP/NCCP Covered Species. Breeding pairs typically nest in tall trees associated with riparian corridors, and forage in grassland, irrigated pasture, and cropland with a high density of rodents. The Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter.

Swainson's hawk was observed foraging within the study area during the August and September 2022 field surveys. In addition, several large trees within the study area and immediate vicinity represent suitable potential nesting habitat, and the annual grassland and ruderal areas on-site represent suitable foraging habitat. Out of the many documented CNDDB occurrences of Swainson's hawk within five miles of the study area, the nearest was recorded in 2004 (CNDDB Occurrence #1417), with the species documented nesting within a tree along the off-site Channel A. Based on the above, Swainson's hawk is *present* within the study area.

Northern Harrier

The northern harrier *(Circus hudsonius)* is not listed pursuant to either FESA or CESA and is not covered by the Yolo HCP/NCCP. The species is a CDFW Species of Special Concern. Northern harrier, a ground-nesting species, is known to nest within the Central Valley, along the Pacific Coast, and in northeastern California, typically in emergent wetland/marsh, open grasslands, or savannah habitats. Foraging occurs within a variety of open habitats, such as marshes, agricultural fields, and grasslands.

The annual grasslands and ruderal areas within the study area provide marginal potential nesting and foraging habitat for the northern harrier. One documented CNDDB occurrence of northern harrier is recorded within five miles of the study area (CNDDB Occurrence #51), which is located approximately 2.5 miles to the northwest of the project site, near the intersection of County Road (CR) 29 and CR 101A. Northern harriers were not observed within the study area during the 2022 field surveys. Based on the above, northern harrier has *moderate* potential for occurrence within the study area.

White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is not listed pursuant to either FESA or CESA. The raptor is a CDFW Fully Protected species and a Yolo HCP/NCCP Covered Species. White-tailed kite is a yearlong resident of the Central Valley and is primarily found in or near foraging areas, such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands. White-tailed kites typically nest from March through June in trees within riparian, oak woodland, and savannah habitats of the Central Valley and Coast Range.

Trees throughout the study area represent suitable potential nesting habitat, and the annual grasslands off-site and ruderal areas on-site represent suitable foraging habitat for white-tailed kite. Seven CNDDB occurrences of white-tailed kite have been documented within five miles of the study area, the nearest of which is located approximately 0.3-mile south of the project site within a residential neighborhood (CNDDB Occurrence #64). White-tailed kites were not observed within the study area during the field survey. Based on the above, white-tailed kite has *high* potential for occurrence within the study area.

Pallid Bat

Pallid bat (*Antrozous pallidus*) is not listed pursuant to either FESA or CESA and is not covered by the Yolo HCP/NCCP. The species is a CDFW Species of Special Concern and classified by the WBWG as a High priority species. Pallid bat favors roosting sites in crevices in rock outcrops, caves, abandoned mines, hollow trees, and man-made structures, such as barns, attics, and sheds. Though pallid bats are gregarious, they tend to group in smaller colonies of 10 to 100 individuals. The bat is a nocturnal hunter and captures prey in flight, but unlike most American bats, the species has been observed foraging for flightless insects, which the bat seizes after landing.

Several derelict sheds, barns, and other structures, as well as trees, located throughout the study area represent suitable roosting habitat for pallid bat. One CNDDB occurrence of pallid bat has been documented within five miles of the study area (CNDDB Occurrence #312), which is located approximately 1.1 miles to the southwest of the project site. Pallid bats were not observed within the study area during the field surveys. Based on the above, pallid bat has *high* potential for occurrence within the study area.

Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) is not listed under FESA or CESA and is not covered by the Yolo HCP/NCCP. The species is classified by the WBWG as a Medium priority species. Primarily considered a coastal and montane forest species, the silver-haired bat occurs in drier environments during winter and seasonal migrations. The bat roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. The insectivore's favored foraging sites include open wooded areas near water features.

The trees throughout the study area represent suitable roosting habitat for the silver-haired bat. One documented CNDDB occurrence of silver-haired bat has been recorded within five miles of the study area (CNDDB Occurrence #88), which is located approximately 1.1 miles to the southwest of the site. Silver-haired bats were not observed within the study area during the field surveys. Based on the above, silver-haired bat has *high* potential for occurrence within the study area.

Hoary Bat

The hoary bat (*Lasiurus cinereus*) is not listed under FESA or CESA and is not covered by the Yolo HCP/NCCP. The species is classified by the WBWG as a Medium priority species. Hoary bats, considered to be one of the most widespread North American bats, are solitary and can be found in any region of California. The species roosts primarily in the dense foliage of medium to large trees. Preferred roosting sites are hidden from above, with few branches below and a ground cover of low reflectivity. The species prefers open habitats or habitat mosaics with access to trees for cover and open areas or habitat edges for feeding.

Larger trees within the study area represent potential roosting habitat for hoary bat. One documented CNDDB occurrence has been recorded within five miles of the study area (CNDDB Occurrence #136), which is located approximately 1.1 miles to the southwest of the project site. Additionally, a dead hoary bat was documented on iNaturalist along the Wildhorse Agricultural Buffer, just east of the study area, in April 2022. Based on the above, hoary bat has *moderate* potential for occurrence within the study area.

American Badger

American badger (*Taxidea taxus*) is not listed pursuant to either FESA or CESA and is not covered by the Yolo HCP/NCCP. The species is designated as a CDFW Species of Special Concern. American badger historically ranged throughout much of the State, except in humid coastal forests, and were once numerous in the Central Valley. However, populations now occur in low numbers in the surrounding peripheral parts of the valley and in the adjacent lowlands of eastern Monterey, San Benito, and San Luis Obispo counties. American badgers occupy a variety of habitats, including grasslands and savannahs, and primarily require food supply, friable soils, and relatively open uncultivated ground.

The annual grasslands and ruderal areas within the study area provide potential habitat for the species; however, frequent disturbances and other human activity throughout the project site could dissuade their presence. One CNDDB occurrence of American badger has been documented within five miles of the study area (CNDDB Occurrence #329), which is located approximately 1.1 miles to the southwest of the project site. American badgers were not observed within the study area during the field surveys. Based on the above, American badger has *moderate* potential for occurrence within the study area.

Trees

As discussed further in the Regulatory Context section of this chapter, the City of Davis Tree Ordinance protects various categories of trees. According to the BRA, which included an inventory of the trees throughout the study area as part of the September 2022 and April 2024 field surveys, a total of 128 trees with a diameter at breast height (DBH) of five inches or greater were inventoried within the study area. The foregoing trees are protected by the City of Davis Tree Ordinance and could require removal during project construction (see Figure 4.3-7). The following protected trees occur in the study area:

- Street Trees: Street trees are any tree planted and/or maintained by the City, or recorded as a street tree, adjacent to a street or within a City easement or right-of-way on private property, within the street tree easement. The Street Tree Easement is the 10-foot zone behind the sidewalk or between curb and sidewalk. Street trees occur along either side of East Covell Boulevard, and in the median.
- City Trees: City trees are trees in parks, greenbelts, open spaces, on City property or easements, etc. City trees occur in the northern portion of the study area.
- Trees of Significance/Private Trees: Trees of significance/private trees are all trees greater than five inches DBH. Such trees that occur on unimproved property zoned for single-family or duplex development are considered “trees of significance,” and trees that occur on properties with single-family or duplex dwellings already present are considered “private trees.” Both categories are subject to the same requirements if a grading permit or other discretionary permit application is submitted. Trees of significance/private trees occur in the remainder of the study area.

Figure 4.3-7
Tree Inventory

Trees to be Impacted				
Number	**Common Name**	**DBH (in)**	**Dripline Radius (ft)**	**Condition**
0	TOYON	29.1	0	POOR TO DEAD
401	EUROPEAN OLIVE	19.0	15	FAIR OR BETTER
402	CALIFORNIA BLACK WALNUT	7.8	16	FAIR OR BETTER
403	HOLM OAK	10.0	7	POOR TO DEAD
404	CALIFORNIA BLACK WALNUT	11.2	14	FAIR OR BETTER
405	CALIFORNIA BLACK WALNUT	28.0	15	FAIR OR BETTER
406	ENGLISH WALNUT	16.0	0	POOR TO DEAD
407	ENGLISH WALNUT	16.5	18	POOR TO DEAD
408	ENGLISH WALNUT	20.3	20	POOR TO DEAD
409	ENGLISH WALNUT	16.6	20	POOR TO DEAD
410	EUROPEAN OLIVE	28.5	15	POOR TO DEAD
411	ENGLISH WALNUT	16.9	23	POOR TO DEAD
412	EUROPEAN OLIVE	9.5	10	FAIR OR BETTER
413	HOLM OAK	6.2	8	FAIR OR BETTER
414	CALIFORNIA BLACK WALNUT	55.6	35	FAIR OR BETTER
415	ENGLISH WALNUT	14.7	22	FAIR OR BETTER
416	ENGLISH WALNUT	15.0	25	POOR TO DEAD
417	MEXICAN FAN PALM	22.0	7	FAIR OR BETTER
418	FIG	22.3	22	POOR TO DEAD
419	ENGLISH WALNUT	11.7	20	FAIR OR BETTER
420	CANARY ISLAND PINE	24.7	26	POOR TO DEAD
421	MEXICAN FAN PALM	100.0	12	FAIR OR BETTER
422	MEXICAN FAN PALM	19.8	8	FAIR OR BETTER
423	MEXICAN FAN PALM	21.7	7	FAIR OR BETTER
424	MEXICAN FAN PALM	23.0	7	FAIR OR BETTER
425	MEXICAN FAN PALM	18.5	6	FAIR OR BETTER
426	MEXICAN FAN PALM	20.5	7	FAIR OR BETTER
427	EUROPEAN OLIVE	23.3	18	FAIR OR BETTER
428	MEXICAN FAN PALM	22.0	7	FAIR OR BETTER
429	ENGLISH WALNUT	17.1	25	FAIR OR BETTER
430	ENGLISH WALNUT	18.4	20	FAIR OR BETTER
431	ENGLISH WALNUT	9.7	16	FAIR OR BETTER
433	COMMON HACKBERRY	46.8	20	FAIR OR BETTER
434	MYOPONUM	35.4	25	POOR TO DEAD
435	FIG	20.9	18	FAIR OR BETTER
437	CALIFORNIA BLACK WALNUT	16.6	20	FAIR OR BETTER
438	CALIFORNIA BLACK WALNUT	26.6	18	FAIR OR BETTER
439	ENGLISH WALNUT	15.1	20	POOR TO DEAD
440	CALIFORNIA BLACK WALNUT	30.8	18	FAIR OR BETTER
441	ENGLISH WALNUT	14.1	20	POOR TO DEAD
442	MYOPORUM	23.2	8	FAIR OR BETTER
443	MYOPORUM	46.3	20	POOR TO DEAD
444	ENGLISH WALNUT	17.1	25	POOR TO DEAD
445	MEXICAN FAN PALM	17.2	6	FAIR OR BETTER
446	MEXICAN FAN PALM	20.6	6	FAIR OR BETTER
447	MEXICAN FAN PALM	20.0	6	FAIR OR BETTER
448	BLACK WILLOW	20.7	15	FAIR OR BETTER
449	ENGLISH WALNUT	9.1	13	POOR TO DEAD
450	WESTERN SYCAMORE	18.1	25	FAIR OR BETTER
453	MEXICAN FAN PALM	15.0	8	FAIR OR BETTER
454	CHINABERRY	53.0	12	FAIR OR BETTER
455	MEXICAN FAN PALM	15.0	6	FAIR OR BETTER
456	ENGLISH WALNUT	11.9	18	FAIR OR BETTER
457	CALIFORNIA BLACK WALNUT	55.3	35	FAIR OR BETTER
460	VALLEY OAK	8.4	15	FAIR OR BETTER
461	VALLEY OAK	21.6	22	FAIR OR BETTER
462	VALLEY OAK	8.0	10	FAIR OR BETTER
463	VALLEY OAK	8.3	16	FAIR OR BETTER
464	VALLEY OAK	17.5	22	POOR TO DEAD
475	WESTERN SYCAMORE	8.4	18	FAIR OR BETTER
479	VALLEY OAK	5.3	7	FAIR OR BETTER
481	VALLEY OAK	24.2	15	FAIR OR BETTER
482	VALLEY OAK	9.0	12	FAIR OR BETTER
483	VALLEY OAK	9.4	15	FAIR OR BETTER
484	MYOPORUM	9.4	14	FAIR OR BETTER
559	APRICOT	10.6	18	FAIR OR BETTER
560	ENGLISH WALNUT	44.0	30	POOR TO DEAD
581	CHINESE PISTACHE	9.2	15	FAIR OR BETTER
582	VALLEY OAK	6.0	8	FAIR OR BETTER
697	INTERIOR LIVE OAK	9.8	20	FAIR OR BETTER
698	VALLEY OAK	28.1	30	FAIR OR BETTER
N1	CHINABERRY	16.5	12	FAIR OR BETTER
N2	CALIFORNIA BLACK WALNUT	13.0	20	FAIR OR BETTER
N3	CHINESE PISTACHE	11.0	16	FAIR OR BETTER
N4	MEXICAN FAN PALM	15.0	6	FAIR OR BETTER
N5	MEXICAN FAN PALM	15.0	6	FAIR OR BETTER
N6	MEXICAN FAN PALM	18.0	7	FAIR OR BETTER
N7	ITALIAN CYPRESS	14.6	5	FAIR OR BETTER
N8	ITALIAN CYPRESS	11.0	5	FAIR OR BETTER
N9	ITALIAN CYPRESS	11.0	5	FAIR OR BETTER
N10	ITALIAN CYPRESS	11.0	5	FAIR OR BETTER
N11	ITALIAN CYPRESS	11.0	5	FAIR OR BETTER

Trees to Be Preserved				
Number	**Common Name**	**DBH (in)**	**Dripline Radius (ft)**	**Condition**
432	COMMON HACKBERRY	13.6	22	FAIR OR BETTER
451	PRIVET	9.4	12	FAIR OR BETTER
452	PRIVET	5.1	8	FAIR OR BETTER
458	VALLEY OAK	18.2	28	FAIR OR BETTER
459	CALIFORNIA BUCKEYE	30.4	18	FAIR OR BETTER
465	WESTERN SYCAMORE	6.5	12	FAIR OR BETTER
466	WESTERN SYCAMORE	11.3	16	FAIR OR BETTER
467	TOYON	15.4	14	FAIR OR BETTER
468	WESTERN SYCAMORE	14.9	15	FAIR OR BETTER
469	WESTERN SYCAMORE	6.0	10	FAIR OR BETTER
470	BLACK WILLOW	44.2	45	FAIR OR BETTER
471	BLACK WILLOW	19.2	18	FAIR OR BETTER
472	WESTERN SYCAMORE	9.3	15	FAIR OR BETTER
473	BLACK WILLOW	53.9	30	FAIR OR BETTER
474	BLACK WILLOW	19.2	18	FAIR OR BETTER
476	WESTERN SYCAMORE	9.6	15	FAIR OR BETTER
477	VALLEY OAK	10.8	20	POOR TO DEAD
478	VALLEY OAK	21.5	16	FAIR OR BETTER
480	VALLEY OAK	8.0	14	FAIR OR BETTER
561	ENGLISH WALNUT	39.4	28	POOR TO DEAD
562	CALIFORNIA BLACK WALNUT	41.1	35	POOR TO DEAD
563	CHINESE PISTACHE	12.2	20	FAIR OR BETTER
564	CHINESE PISTACHE	8.8	18	POOR TO DEAD
565	CHINESE PISTACHE	11.1	18	FAIR OR BETTER
566	CHINESE PISTACHE	11.2	16	FAIR OR BETTER
567	CHINESE PISTACHE	11.6	18	FAIR OR BETTER
568	CHINESE PISTACHE	10.2	18	FAIR OR BETTER
569	GOLDEN RAIN TREE	9.4	16	FAIR OR BETTER
570	GOLDEN RAIN TREE	12.8	22	FAIR OR BETTER
571	GOLDEN RAIN TREE	12.6	18	FAIR OR BETTER
572	CHINESE PISTACHE	9.6	20	FAIR OR BETTER
573	CHINESE PISTACHE	8.9	20	FAIR OR BETTER
574	CHINESE PISTACHE	11.6	18	FAIR OR BETTER
575	CANARY ISLAND PINE	15.9	12	FAIR OR BETTER
576	VALLEY OAK	18.2	20	FAIR OR BETTER
577	VALLEY OAK	12.0	14	FAIR OR BETTER
578	CALIFORNIA BLACK WALNUT	36.0	25	POOR TO DEAD
579	CHINESE PISTACHE	11.1	18	FAIR OR BETTER
580	CHINESE PISTACHE	8.3	15	POOR TO DEAD
583	ENGLISH WALNUT	26.8	25	POOR TO DEAD
584	ENGLISH WALNUT	31.8	30	POOR TO DEAD
585	ENGLISH WALNUT	16.3	30	POOR TO DEAD
586	ENGLISH WALNUT	42.2	28	FAIR OR BETTER
587	ENGLISH WALNUT	15.0	25	FAIR OR BETTER
588	ENGLISH WALNUT	18.8	20	POOR TO DEAD

As summarized in Table 4.3-4, the trees within the study area are comprised of the following: 30 street trees along either side of East Covell Boulevard and in the median, 29 City trees along the walkable trail within the Wildhorse Agricultural Buffer, 66 private trees within private parcels, and three trees within the area proposed for the obstacle course east of the project site. It should be noted that the 2009 EIR identified 51 trees with a DBH of five inches or greater within the 25.8-acre project site under Impact 4.6-7. Thirty-one of the trees received a fair to good health rating, and 20 were found to be in fair or poor health.

4.3.3 REGULATORY CONTEXT

A number of federal, State, and local policies provide the regulatory framework that guides the protection of biological resources. The following discussion summarizes those laws that are most relevant to biological resources in the vicinity of the project site.

Federal Regulations

The following are the federal environmental laws and policies relevant to biological resources.

Federal Endangered Species Act

The U.S. Congress passed the FESA in 1973 to protect species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [3], [19]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 Code of Federal Regulations [CFR] Section 17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR Section 17.3). Actions that result in take can result in civil or criminal penalties.

Section 10 requires the issuance of an "incidental take" permit before any public or private action may be taken that could take an endangered or threatened species. The permit requires preparation and implementation of an HCP that would offset the take of individuals that may occur, incidental to implementation of a proposed project, by providing for the protection of the affected species.

Pursuant to the requirements of FESA, a federal agency reviewing a project within the jurisdiction of the agency must determine whether any federally listed threatened or endangered species may be present on-site and whether the proposed project will have a potentially significant impact on such species.

In addition, the agency is required to determine whether the proposed action is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 U.S. Code [USC], Section 1536[3], [4]).

Table 4.3-4
Trees Within the Study Area

Tree Species	Number of City Trees (DBH)		Number of Private Trees (DBH)		Number of Street Trees (DBH)		Total (DBH)
	Fair or Better	Poor to Dead	Fair or Better	Poor to Dead	Fair or Better	Poor to Dead	
Apricot			1 (10.6)				1 (10.6)
Black Willow	4 (207.2)		1 (20.7)				5 (227.9)
California Black Walnut	1 (13)		8 (231.9)			2 (77.1)	11 (322)
California Buckeye	1 (30.4)						1 (30.4)
Canary Island Pine				1 (24.7)	1 (15.9)		2 (40.6)
Chinaberry	1 (16.5)		1 (53)				2 (69.5)
Chinese Pistache	1 (11)				10 (106.7)	2 (17.1)	13 (134.8)
Common Hackberry			2 (60.4)				2 (60.4)
English Walnut			6 (83.5)	10 (156.7)	3 (75.7)	6 (177.1)	25 (493)
European Olive			3 (52.1)	1 (28.5)			4 (80.6)
Fig			1 (20.9)	1 (22.3)			2 (43.2)
Golden Rain Tree					3 (34.8)		3 (34.8)
Holm Oak			1 (6.2)	1 (10)			2 (16.2)
Interior Live Oak	1 (9.8)						1 (9.8)
Italian Cypress			5 (58.6)				5 (58.6)
Mexican Fan Palm			16 (383.3)				16 (383.3)
Myoporum			2 (32.6)	2 (81.7)			4 (114.3)
Privet			2 (14.5)				2 (14.5)
Toyon	1 (15.4)	1 (29.1)					2 (44.5)
Valley Oak	12 (170.0)	2 (28.3)			3 (36.2)		17 (234.5)
Western Sycamore	7 (66)		1 (18.1)				8 (84.1)
Total	**29 (539.3)**	**3 (57.4)**	**50 (1,046.4)**	**16 (323.9)**	**20 (269.3)**	**10 (271.3)**	**128 (2,507.6)**

Source: Madrone Ecological Consulting, 2022.

For federally listed species covered under the Yolo HCP/NCCP, the Biological Opinion issued by the USFWS for the Yolo HCP/NCCP provides take coverage for covered projects under the Yolo HCP/NCCP that may impact federally listed species that are Covered Species under the Yolo HCP/NCCP. Further consultation is not required as long as the covered project complies with Yolo HCP/NCCP requirements. For federally listed species that are not Yolo HCP/NCCP Covered Species, take coverage is required as outlined below.

In the context of the proposed project, FESA consultation with USFWS or the NMFS would be initiated if development would result in take of a threatened or endangered species not covered under the Yolo HCP/NCCP or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species not covered under the Yolo HCP/NCCP or adversely modify critical habitat of such a species.

Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of State and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior.

Clean Water Act

The U.S. Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into waters of the U.S. under Section 404 of the Clean Water Act (CWA). “Discharge of fill material” is defined as the addition of fill material into waters of the U.S., including but not limited to, the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for the construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines (33 CFR Section 328.2[f]). In addition, Section 401 of the CWA (Title 33 of USC, Section 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments, such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR Section 328.3[b]).

Furthermore, jurisdictional waters of the U.S. can be defined by exhibiting a defined bed and bank and ordinary high-water mark (OHWM). The OHWM is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 CFR Section 328.3[e]).

State Regulations

The following are the State environmental laws and policies relevant to biological resources.

California Department of Fish and Wildlife

CDFW administers a number of laws and programs designed to protect fish and wildlife resources under the California Fish and Game Code (CFGC), such as CESA (CFGC Section 2050, et seq.), Fully Protected Species (CFGC Section 3511) and the Lake or Streambed Alteration Agreement (LSAA) Program (CFGC Sections 1600 to 1616). Such regulations are summarized in the following sections.

California Endangered Species Act

The State of California enacted CESA in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with CDFW when preparing CEQA documents to ensure that the State lead agency actions do not jeopardize the existence of listed species. CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that "overriding considerations" exist; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

As with FESA, for covered projects that may impact State-listed species under CESA that are also Covered Species under the Yolo HCP/NCCP, direct consultation with CDFW for State-listed take authorization is not required as long as the covered project complies with Yolo HCP/NCCP requirements. For projects that may result in take of State-listed species that are not Yolo HCP/NCCP Covered Species, CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (CFGC Section 2081).

California Fish and Game Codes

A number of species have been designated "Fully Protected" species under Sections 5515, 5050, 3511, and 4700 of the CFGC, but are not listed as endangered (Section 2062) or threatened (Section 2067) species under CESA. Except for take related to scientific research, all take of fully protected species is prohibited. The CFGC defines take as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

Birds of prey are protected in California under provisions of the CFGC Section 3503.5 (1992), which states, "it is unlawful to take, possess, or destroy any birds in the order 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." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by CDFW.

Lake or Streambed Alteration Program

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, CFGC Section 1602 requires notification to CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification

is required by any person, business, State or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;
- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

For the purposes of Section 1602, rivers, streams and lakes must flow at least intermittently through a bed or channel. If notification is required and CDFW believes the proposed activity is likely to result in adverse harm to the natural environment, the CDFW will require that the parties enter into an LSAA.

CDFW Species of Special Concern

In addition to formal listings under FESA and CESA, plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern" developed by CDFW. Species whose numbers, reproductive success, or habitat may be threatened are tracked by CDFW in California.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. Currently, 64 species, subspecies, and varieties of plants are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations, emergencies, and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

Regional Water Quality Control Board

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under the requirements stipulated by Section 401 of the federal CWA. Although the CWA is a federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Quality Control Boards (RWQCBs) are the authorities that certify that issuance of a federal license or permit does not violate California's water quality standards (i.e., that they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the WQC for discharges requiring USACE's permits for fill and dredge discharges within waters of the U.S., and also implements the State's wetland protection and hydromodification regulation program under the Porter-Cologne Water Quality Control Act.

On April 2, 2019, the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan. The Procedures consist of four major elements: (1) a wetland definition; (2) a framework for determining if a feature that meets the wetland definition is a water of the State; (3) wetland delineation procedures; and (4) procedures for the submittal, review, and approval of applications for WQCs and Waste Discharge Requirements (WDR) for dredge or fill activities. The State Office

of Administrative Law (OAL) approved the Procedures on August 28, 2019, and the Procedures became effective May 28, 2020.

Under the Procedures and the State Water Code (Water Code Section 13050[e]), "waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." Unless excluded by the Procedures, any activity that could result in discharge of dredged or fill material to waters of the State, which includes waters of the U.S. and non-federal waters of the State, requires filing of an application under the Procedures.

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 et seq.) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the SWRCB and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

Local Regulations

The following are the local environmental laws and policies relevant to biological resources.

Yolo County Habitat Conservation Plan and Natural Community Conservation Plan

The Yolo HCP/NCCP, which was adopted in January 2019, is a 50-year regional plan that provides for the conservation of 12 Covered Species and the natural communities and agricultural land on which they depend, while allowing for orderly development in Yolo County consistent with local general plans. The following six local agencies prepared the Yolo HCP/NCCP: the Yolo Habitat Conservancy, County of Yolo, City of Davis, City of West Sacramento, City of Winters, and City of Woodland. The Yolo HCP/NCCP only applies to eligible projects, also known as Covered Activities, undertaken within the Yolo HCP/NCCP plan area, which includes all areas within Yolo County, including the incorporated cities of Davis, West Sacramento, Winters, and Woodland.

The Yolo HCP/NCCP provides the basis for issuance of long-term permits under FESA and the California Natural Community Conservation Planning Act (NCCPA) that cover an array of public and private activities, including activities that are essential to the ongoing viability of Yolo County's agricultural and urban economies. Specifically, the Yolo HCP/NCCP provides permittees (i.e., Yolo County, the four incorporated cities, and the Yolo Habitat Conservancy) with incidental take permits from both USFWS and CDFW for the 12 Covered Species, pursuant to Section 10(a)(1)(B) of the FESA and Section 2835 of the NCCPA chapter of the CFGC. The Yolo HCP/NCCP ensures compliance with the FESA, NCCPA, and CESA for Covered Activities that may affect Covered Species.

In addition to the permittees, the Yolo HCP/NCCP permits may cover the activities of other entities through certificates of inclusion obtained by completing the Yolo HCP/NCCP application process. The Yolo Habitat Conservancy charges various types of fees to cover implementation costs, including administration, land acquisition, restoration, and land management costs. Yolo

HCP/NCCP applicants can either pay mitigation fees for land cover conversion, or conduct wetland restoration, and/or dedicate land in-lieu of the fees. Wetland restoration and land-in-lieu proposals must be reviewed and approved by the Yolo Habitat Conservancy. If an applicant opts to pay the mitigation fees, the Yolo Habitat Conservancy applies an adopted land cover fee schedule, with additional fees for wetlands. Fees are automatically increased annually, adjusted for inflation. Additionally, every five years, the Yolo Habitat Conservancy completes a fee assessment to review costs, underlying assumptions, and actual costs. After the review, fee schedule adjustments are made, and automatic annual increases resume based off the five-year fee assessment.

It should be noted that the 2009 EIR was certified prior to the adoption of the Yolo HCP/NCCP. As such, potential impacts to special-status plant and wildlife species that would have resulted from the Wildhorse Ranch Project required direct consultation with USFWS and/or CDFW.

City of Davis General Plan

The City of Davis General Plan biological resource policies that are applicable to the proposed project are presented below.

Habitat and Natural Areas Chapter

Goal HAB 1 Identify, protect, restore, enhance, and create natural habitats. Protect and improve biodiversity consistent with the natural biodiversity of the region.

Policy HAB 1.1 Protect existing natural habitat areas, including designated Natural Habitat Areas.

Policy HAB 1.2 Enhance and restore natural areas and create new wildlife habitat areas.

City of Davis Tree Ordinance

The City of Davis regulates tree planting and removal within the community in Davis Municipal Code Chapter 37, Tree Planting, Preservation, and Protection. Article 37.01 of the Municipal Code contains the administrative provisions, the pertinent sections of which are as follows:

Section 37.01.020 Definitions

City tree means any tree, other than a street tree, planted or maintained by the city within a city easement, right-of-way, park, greenbelt, public place or property owned or leased by the city.

Landmark tree means a tree that has determined by resolution of the city council to be of high value because of its species, size, age, form, historical significance, or some other professional criterion. The landmark tree list, available from the community services department, lists these identified trees.

Private tree means any tree privately owned and growing on private property, which may include landmark trees and/or trees of significance.

Street tree means any tree planted and/or maintained by the city, or recorded as a street tree, adjacent to a street or within a city easement or right-of-way on private property, within the street tree easement.

Tree means any woody perennial plant having one or several main stems commonly achieving ten or more feet in height and capable of being pruned and shaped to develop a branch-free trunk at least nine feet in height. Reference to any tree indicates the entire plant, including both visible (canopy, trunk) and below grade (roots).

Tree of significance means any tree included but not limited to those listed as per Section 37.03.050 as small and large trees which measure five inches or more in diameter (DBH).

In addition, Davis Municipal Code Article 37.03 contains the criteria for landmark trees and trees of significance, the pertinent sections of which are as follows:

37.03.020 Landmark tree designation criteria

(a) Any person may and is encouraged to submit a proposal to designate a tree as a landmark tree. Property owners of trees under consideration shall be notified that a proposal has been submitted and shall have the opportunity to be fully involved in the designation process. Proposals shall be reviewed by the director and sent to the tree commission for its review. Upon recommendation of the tree commission and approval of the City Council, a tree may be designated as a landmark tree if it meets any of the following criteria:

(1) The tree is an outstanding specimen of a desirable species;
(2) The tree is one of the largest or oldest trees in Davis;
(3) The tree is of historical interest;
(4) The tree is of distinctive form; or,
(5) The tree is an unusual species, significant grove or is otherwise unique.

The director shall notify, in writing, the person who submitted the proposal and the tree owner (if different from the applicant) of the City Council's decision.

(b) When considering designating, removing designation (per Section 37.03.040) or removing (per Sections 37.03.060 and 37.03.070) landmark trees of historic value, the historical resources management commission shall be given the opportunity to comment on the proposal prior to tree commission review. (Ord. 2099 § 1, 2002)

37.03.050 Trees of significance – Identification and classification

All trees of significance are considered significant at five inches or greater in diameter (DBH). The following list of potential trees of significance divides tree species into two separate categories based upon their potential size at maturity; however, this list is not exhaustive. Should a property owner not know how a specific tree(s) five inches or greater may be affected by this section, (such as identification of species or species not on the list), the property owner may contact the city arborist. Not all trees on the following lists are appropriate for street trees or parking lot trees. For recommended street trees and parking lot trees, the City of Davis master tree list should be consulted.

37.03.070 Landmark trees and trees of significance – Removal or modification associated with building permits or discretionary projects

(d) Standards and provisions to be observed considering a permit under this section are as follows:

(1) The design and placement of development should attempt to incorporate existing healthy trees into the site design.
(2) All trees to be removed shall be mitigated as required in the permit, with options as follows:

(A) Replanting a Tree(s) On-Site. Trees shall be planted in number and size so that there is no net loss in tree diameter at breast height (DBH). For example, if one tree is removed with a twelve-inch DBH size, mitigation may consist of a replacement of equal size, two trees each six-inch DBH, or four trees each three-inch DBH. The replanted tree(s) shall be minimum five-gallon size and of a species that will eventually equal or exceed the removed tree in size.
(B) Replanting a Tree(s) Off-Site. If there is insufficient space on the property for the replacement tree(s), required planting shall occur on the other property in the applicant's ownership or in city-owned open space or park, subject to the approval of the city arborist and authorized property owners.
(C) Payment to the Tree Preservation Fund in Lieu of Replacement. If in the city arborist's determination no feasible alternative exists to plant the required mitigation, or there are other considerations for alternative mitigation, the applicant shall pay into the tree preservation fund an amount determined by the director based upon the ISA appraisal guidelines or other approved method. If the director approves another method of appraisal guidelines the director shall publish notice of that approval and notify the permit applicant at the time the permit application is issued.

(3) Removal or modification shall not be approved unless one of the following shall apply:

(A) The tree(s), due to its location in respect to topography and required setbacks and easements, prevents reasonable development of permitted uses. Existing development on similar sites in the same zone and having similar characteristics shall be considered when determining reasonable development of permitted uses.
(B) The condition of the tree(s), with respect to general health; disease; maturity; structural integrity; proximity to existing structures; parking; high pedestrian traffic areas; activity areas or interference with utility services, cannot be controlled or remedied through reasonable preservation procedures and practices.
(C) Good forestry practice suggests a reduction in the number of trees due to incapacity of the property to sustain the present number in healthy condition.

(4) The visual prominence and function of each tree on the site shall be considered prior to a decision on the application.
(5) If the application is approved, such conditions shall be imposed as are deemed necessary to fulfill the standards of this chapter.

Davis Municipal Code Section 37.03.050 protects 25 small tree species and 43 large tree species. However, as noted above, the listed tree species is not exhaustive. In addition, Davis Municipal Code Section 37.03.060 requires approval of a valid tree removal request and/or tree modification permit prior to cutting down, pruning substantially, encroaching into the protection zone of, or topping or relocating any landmark tree or tree of significance. Furthermore, Article 37.05 contains protection procedures to be implemented during grading, construction, or other site-related work. Such procedures, include, but are not limited to, inclusion of tree protection measures on approved development plans and specifications, and inclusion of tree care practices, such as the cutting of roots, pruning, etc., in approved tree modification permits, tree preservation plans, or project conditions.

4.3.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to biological resources. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, the City's General Plan, and professional judgment, a significant impact would occur if the proposed project would result in the following:

- 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 USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan.

Method of Analysis

The analysis of this SEIR is focused generally on the changes in circumstances following the City's certification of the 2009 EIR, pursuant to CEQA Guidelines Section 15162. The analysis of this chapter is based on the 2009 EIR and the BRA prepared for the currently proposed project by Madrone.

As discussed throughout this SEIR, the environmental baseline for this SEIR is appropriately considered to be the approved Wildhorse Ranch Project, which included a 191-unit residential development comprised of 73 detached single-family residences and 78 two- and three-story single-family townhomes on 11.95 acres, as well as 40 attached affordable housing units on 1.92 acres. In addition, the Wildhorse Ranch Project included the dedication of 2.26 acres of additional agricultural buffer, 1.61 acres of interior greenbelt, and 4.4 acres of interior open space. As such, construction activities associated with the Wildhorse Ranch Project would have potentially impacted biological resources located on-site.

Below are descriptions of the methodologies used in the BRA (see Appendix D of this SEIR) to evaluate potential impacts to biological resources associated with the currently proposed project. Further details are provided in Appendix D of this SEIR. The results of the impact analyses were compared to the standards of significance discussed above in order to determine the associated level of impact.

Biological Resources Assessment

The analyses within the BRA are based on a literature review, field surveys of the study area, an ARD, and an arborist survey, which are detailed further below.

Literature Review

A list of special-status plant and wildlife species with potential to occur within the study area was developed as part of the BRA through queries of the following databases:

- CNDDB query of the study area and all areas within five miles of the study area (see Figure 4.3-4 and Figure 4.3-5);
- USFWS Information for Planning and Conservation (IPaC) query of federally listed species within the vicinity of the study area (included as Attachment B of the BRA);
- CNPS Rare and Endangered Plant Inventory query of the "Davis, California" U.S. Geological Survey (USGS) topographic quadrangle and the eight surrounding quadrangles (included as Attachment C of the BRA);
- The Cornell Laboratory's eBird Database;
- The Western Monarch Milkweed Mapper Database;
- WBWG Species Matrix; and
- iNaturalist.

In addition, any special-status species that are known to occur in the project region, but that were not identified in any of the above database searches were also analyzed for their potential to occur within the study area.

Field Surveys

Madrone conducted field surveys of the study area on August 24, September 12, and September 21, 2022, as well as in April 2024. The August 2022 field survey mapped Yolo HCP/NCCP land cover types, assessed the suitability of on-site habitats to support special-status species, and included an ARD. The April 2024 survey was conducted within the portion of the study area that would contain the proposed obstacle course to map Yolo HCP/NCCP land cover types, assess the suitability of habitats to support special-status species, and conduct a follow-up ARD.

The September 2022 field surveys were conducted to inventory the trees throughout the study area, as required by the City's Tree Ordinance. The September 2022 field survey also included a protocol-level special-status plant survey, which was conducted in accordance with the USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants; the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities; and the CNPS Botanical Survey Guidelines. Meandering pedestrian surveys were performed throughout the study area, and a list of all wildlife species observed during the surveys is included as Attachment D to the BRA. Vegetation communities were classified in accordance with The Manual of California Vegetation, Second Edition, and plant taxonomy was based on the nomenclature in the Jepson eFlora.

Aquatic Resources Delineation Report

Madrone conducted an ARD within the study area on August 24, 2022, and a follow-up ARD of the proposed obstacle course area in April 2024. Water features and data points were mapped in the field with a global positioning system (GPS) unit capable of sub-meter accuracy (Arrow 100). Three-parameter data (vegetation, soils, and hydrology) was collected at each data point, documenting wetland/waters or upland status as appropriate. The delineation map was prepared

in accordance with the USACE Updated Map and Drawing Standards for the South Pacific Division Regulatory Program. The GPS data was overlaid on an ortho-rectified aerial photograph.

The delineation was performed in accordance with the USACE Wetlands Delineation Manual, the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States, and the USACE Sacramento District's Minimum Standards for Acceptance of Preliminary Wetlands Delineations. In addition, USACE regulations (33 CFR 328) were used to determine the presence of waters of the U.S. other than wetlands. The most recent USACE National Wetland Plant List from 2018 was used to determine the wetland indicator status of plants observed in the study area. The Jepson eFlora was used for plant nomenclature, except where nomenclature conflicted with the National Wetland Plant List, which was given priority on the data sheets.

Arborist Survey Report

Madrone conducted an arborist survey on September 12 and 21, 2022 and a follow-up survey in April 2024. The survey was conducted in accordance with the City of Davis Tree Ordinance. All trees with a DBH of five inches or more were inventoried.

In accordance with the City's Tree Ordinance, the arborist survey report defined a "tree" as any woody perennial plant having one or several main stems commonly achieving 10 or more feet in height and capable of being pruned to develop a branch free trunk at least nine feet in height. A number of woody plant species that are typically considered shrubs, but have been pruned into a tree shape, were observed within the study area; however, in many cases, the branches and/or trunks were numerous and slender. As such, only plants with at least one trunk five inches DBH or greater were inventoried.

For each tree inventoried, aluminum tags with a unique identification number were nailed into the trunk, and Madrone recorded the tree identification number, tree species, DBH, approximate dripline radius, and general health and structure of the tree. The location of each tree was recorded with a GPS unit capable of sub-meter accuracy (Arrow 100). It should be noted that the health and structure ratings recorded during the course of the survey should not be considered to be a hazard assessment for public safety purposes.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts related to biological resources is based on implementation of the proposed project in comparison with the baseline and the standards of significance presented above.

4.3-1 Have a substantial adverse effect, either directly or through habitat modifications, on special-status plant species. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR evaluated the potential for special-status plant species to occur on-site on pages 4.6-8 and 4.6-9 of the EIR and concluded that although field surveys were not performed as part of preparation of the EIR, special-status plant species with potential to occur within 10 miles of the project site (see Table 4.6-1 of the 2009 EIR) were not expected to occur on-site. As detailed therein, the majority of special-status plant species with potential to occur within the greater project region required alkaline soils, vernal pools, seasonal wetlands, and other habitats, none of which were detected within the project site. As such, the 2009 EIR determined that a potential impact would not occur to special-status plant species.

With respect to the currently proposed project, as detailed in Table 4.3-3, the special-status plant species with potential to occur within the study area include bristly sedge and San Joaquin spearscale. Channel A within the off-site portion of the study area represents potential habitat for bristly sedge, and ruderal areas containing Tyndall soils in the southeastern portion of the project site represent potential habitat for San Joaquin spearscale. However, the protocol-level special-status plant surveys conducted as part of the BRA were negative for both plant species. Additionally, the study area does not include the necessary habitat to support the 21 other special-status plant species identified by the BRA as having potential to occur within five miles of the study area.

Nonetheless, the protocol-level plant surveys were conducted in 2022. Given enough time, plants may become established in areas where suitable habitat exists, such as the off-site Channel A and on-site ruderal areas featuring Tyndall soils. Therefore, special-status plants could become established within the foregoing portions of the study area in the interim between surveys/analysis and construction activities, which could result in potential impacts during project construction.

Based on the above, should construction commence during or following the spring of 2025, without additional field surveys, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on a special-status plant species, beyond what were previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

SEIR 4.3-1 *If construction has not commenced prior to the first day of spring 2025 (March 20, 2025), a new round of special-status plant surveys shall be conducted by a qualified biologist in areas proposed for disturbance, prior to the commencement of construction.*

The surveys shall be conducted in accordance with the U.S. Fish and Wildlife Service (USFWS) Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants, the California Native Plant Society (CNPS) Botanical Survey Guidelines of the California Native Plant Society, and the California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. The surveys shall be conducted at the appropriate time of year when plants are in bloom. A report summarizing the results of the protocol-level special-status plant surveys shall be submitted for review and approval to the City of Davis Community Development and Sustainability Department.

If special-status plant species are not found, further mitigation shall not be required. If special-status plants are found within the proposed impact area and they are perennials, such as bristly sedge, then mitigation shall consist of digging up the plants and transplanting them into a suitable mitigation area prior to construction. If special-status plants will be impacted, a mitigation plan shall be developed and approved by the City of Davis Community Development and Sustainability Department. Mitigation for the transplantation/establishment of rare plants shall result in no net loss of individual plants after a five-year monitoring period.

4.3-2 Have a substantial adverse effect, either directly or through substantial habitat modifications, on monarch butterfly. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR did not evaluate potential impacts to monarch butterfly, as the species was not identified as a special-status species with potential to occur on-site.

With respect to the currently proposed project, several scattered narrowleaf milkweed plants occur within the ruderal areas and annual grasslands throughout the study area, which represent potential habitat for monarch butterfly, a special-status species that is not covered under the Yolo HCP/NCCP. If milkweed plants are removed during project construction and monarch butterfly larva or chrysalises are present, incidental mortality could occur. In addition, the City's wildlife biologist has observed monarch butterfly multiple times on and adjacent to the project site.

Based on the above, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on monarch butterfly, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

SEIR 4.3-2 *If project-related vegetation removal occurs during the time when milkweed plants may host monarch eggs or caterpillars (March 15 through September 30, or otherwise identified in any future USFWS survey protocol), a preconstruction survey shall be conducted by a qualified biologist to survey for monarch eggs, larvae, and chrysalises, at most, 14 days prior to the commencement of construction. All milkweed plants within the study area shall be surveyed, as well as surrounding vegetation which may support chrysalises. A report summarizing the results of the preconstruction survey shall be submitted for review and approval to the City of Davis Community Development and Sustainability Department.*

If any monarch eggs, larvae, or chrysalises are found within the study area, they shall be avoided and work shall not occur within 50 feet of the monarchs until adults emerge and voluntarily leave the project site. If the eggs, larvae, or chrysalises are located in the work area and cannot be avoided, as determined by a qualified biologist in coordination with the project engineer and the City, eggs shall be allowed to hatch, and all larvae and chrysalises shall be translocated to an alternative location (e.g., containing a suitable population of larval host plants) outside of the work area. Should the species be listed under the federal Endangered Species Act (FESA) in the future, additional coordination with USFWS shall be completed, as necessary, prior to translocation.

4.3-3 Have a substantial adverse effect, either directly or through habitat modifications, on VELB. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR noted the presence of one small blue elderberry shrub, which was located approximately 100 feet east of the project site within the Wildhorse Agricultural Buffer, on page 4.6-18 of the EIR. As discussed therein, the blue elderberry shrub had several stems with a diameter over one inch, but exit holes were not observed. In addition, other occurrences of elderberry shrub included shrubs within 100 feet of the study area. Because elderberry shrubs were not present within the project site and

because VELB depend on the presence of the elderberry shrubs for all stages of their life cycle, the 2009 EIR concluded that a potential impact to VELB would not occur.

One elderberry shrub with stems greater than one inch occurs within the current study area, and an additional two shrubs are present within 100 feet of the study area (see Figure 4.3-6). The foregoing shrubs represent potential habitat for VELB. If VELB larva are present within the on-site elderberry shrub and the shrub is removed during project construction, the larva could be killed. Additionally, construction activities that occur within 100 feet of the elderberry shrubs outside the study area could indirectly affect VELB if they are present. Potential indirect effects could include application of pesticides that could kill individual beetles, or disturbance associated with dust, herbicides, or adjacent compaction that could reduce the health of the shrubs hosting the beetles and cause larva inside the shrubs to die.

VELB is a Yolo HCP/NCCP Covered Species. Davis Municipal Code Section 42.01.040 requires project applicants for Covered Activities within the Yolo HCP/NCCP plan area to comply with the applicable Yolo HCP/NCCP Avoidance and Minimization Measures (AMMs) to avoid, minimize, and mitigate the take of Covered Species resulting from Covered Activities. Thus, as the proposed project is a Covered Activity under the Yolo HCP/NCCP, the proposed project would be required to comply with the applicable Yolo HCP/NCCP AMMs, including the species-specific Yolo HCP/NCCP AMM12, which necessitates the mapping of all elderberry shrubs in and within 100 feet of the project footprint, as well as requiring the establishment of buffers and transplanting of elderberry shrubs to minimize take and adverse effects on habitat of VELB. However, as the final application to the Yolo Habitat Conservancy has not yet been prepared, proper compliance with the aforementioned Yolo HCP/NCCP AMMs cannot be ensured at this time, and the proposed project could have a substantial adverse effect on VELB, either directly or through habitat modifications.

Based on the above, without compliance with the Yolo HCP/NCCP, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on VELB, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

VELB is a Yolo HCP/NCCP Covered Species. Thus, the proposed project would be subject to the following species-specific Yolo HCP/NCCP AMM to address potential impacts to the species. Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

SEIR 4.3-3 *Yolo HCP/NCCP AMM12: The project proponent will retain a qualified biologist who is familiar with valley elderberry longhorn*

beetle and evidence of its presence (i.e., exit holes in elderberry shrubs) to map all elderberry shrubs in and within 100 feet of the project footprint with stems that are greater than one inch in diameter at ground level. To avoid take of valley elderberry longhorn beetle fully, the project proponent will maintain a buffer of at least 100 feet from any elderberry shrubs with stems greater than one inch in diameter at ground level. AMM1, Establish Buffers, above [in the Yolo HCP/NCCP], describes circumstances in which a lesser buffer may be applied. For elderberry shrubs that cannot be avoided with a designated buffer distance as described above, the qualified biologist will quantify the number of stems one inch or greater in diameter to be affected, and the presence or absence of exit holes. The Yolo Habitat Conservancy will use this information to determine the number of plants or cuttings to plant on a riparian restoration site to help offset the loss, consistent with Section 6.4.2.4.1, Valley Elderberry Longhorn Beetle. Additionally, prior to construction, the project proponent will transplant elderberry shrubs identified within the project footprint that cannot be avoided.

Transplantation will only occur if a shrub cannot be avoided and, if indirectly affected, the indirect effects would otherwise result in the death of stems or the entire shrub. If the project proponent chooses, in coordination with a qualified biologist, not to transplant the shrub because the activity would not likely result in death of stems of the shrub, then the qualified biologist will monitor the shrub annually for a five-year monitoring period. The monitoring period may be reduced with concurrence from the wildlife agencies if the latest research and best available information at the time indicates that a shorter monitoring period is warranted. If death of stems at least one inch in diameter occurs within the monitoring period, and the qualified biologist determines that the shrub is sufficiently healthy to transplant, the project proponent will transplant the shrub as described in the following paragraph, in coordination with the qualified biologist. If the shrub dies during the monitoring period, or the qualified biologist determines that the shrub is no longer healthy enough to survive transplanting, then the Yolo Habitat Conservancy will offset the shrub loss consistent with the preceding paragraph.

The project proponent will transplant the shrubs into a location in the HCP/NCCP reserve system that has been approved by the Conservancy. Elderberry shrubs outside the project footprint but within the 100-foot buffer will not be transplanted.

Transplanting will follow the following measures:

1. *Monitor: A qualified biologist will be on-site for the duration of the transplanting of the elderberry shrubs to ensure the effects on elderberry shrubs are minimized.*
2. *Timing: The project proponent will transplant elderberry plants when the plants are dormant, approximately*

November through the first two weeks of February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success.

3. *Transplantation procedure:*

    a. *Cut the plant back three to six feet from the ground or to 50 percent of its height (whichever is taller) by removing branches and stems above this height. Replant the trunk and stems measuring one inch or greater in diameter. Remove leaves that remain on the plants.*
    b. *Relocate plant to approved location in the reserve system, and replant as described in Section 6.4.2.4.1, Valley Elderberry Longhorn Beetle.*

4.3-4 Have a substantial adverse effect, either directly or through habitat modifications, on Crotch's bumble bee. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR did not evaluate potential impacts to Crotch's bumble bee, as the species was not identified as a special-status species with potential to occur on-site. The approximately three acres of California Annual Grassland Alliance land cover that occurs off-site within the Wildhorse Agricultural Buffer of the current study area represents suitable habitat for Crotch's bumble bee. In addition, the on-site ruderal areas represent marginally suitable habitat for the species. Thus, if Crotch's bumble bees are nesting within the foregoing areas during project construction, the species could be injured or killed.

Based on the above, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on Crotch's bumble bee, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level. It should be noted that the following mitigation measures only apply if Crotch's bumble bee is a candidate species or is listed under the CESA at the time of project construction. If the California Fish and Game

Commission finds that the petitioned action is not warranted, mitigation for the species shall not be required.

SEIR 4.3-4 *If feasible, initial ground-disturbing activities associated with the proposed project (e.g., grading, vegetation removal, staging) shall take place between September 1 and March 31 (i.e., outside the colony active period) to avoid potential impacts on special-status bumble bees. If completing all initial ground-disturbing activities between September 1 and March 31 is not feasible, then at a maximum of 14 days prior to the commencement of construction activities, a qualified biologist with 10 or more years of experience conducting biological resource surveys within California shall conduct a preconstruction survey for Crotch's bumble bees in the area(s) proposed for impact.*

The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65 degrees Fahrenheit and 90 degrees Fahrenheit, with low wind and zero rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying biologist shall select the most appropriate days based on the National Weather Service seven-day forecast and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which represent foraging habitat) present within the area proposed for impact, and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch's bumble bee include species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae.

At a minimum, preconstruction survey methods shall include the following:

- *Search areas with floral resources for foraging Crotch's bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present;*
- *If Crotch's bumble bees are observed, watch any Crotch's bumble bees present and observe their flight patterns. Attempt to track their movements between foraging areas and the nest;*
- *Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat;*

- *If floral resources or other vegetation preclude observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of a minimum of four inches to assist with locating the nest;*
- *Look for concentrated Crotch's bumble bee activity;*
- *Listen for the humming of a nest colony; and*
- *If bumble bees are observed, attempt to photograph the individual and identify it to species.*

The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a Crotch's bumble bee nest(s) may be present or if construction activities could result in take of Crotch's bumble bees. The report shall be submitted to the City of Davis Community Development and Sustainability Department prior to the commencement of construction activities.

If bumble bees are not located during the preconstruction survey or the bumble bees located are definitively identified as a common species (i.e., not special-status species), then further mitigation or coordination with the CDFW is not required.

If any sign(s) of a bumble bee nest is observed, and if the species present cannot be established as a common bumble bee, then construction shall not commence until either (1) the bumble bees present are positively identified as common (i.e., not a special-status species), or (2) the completion of coordination with CDFW to identify appropriate mitigation measures, which may include, but not be limited to, waiting until the colony active season ends, establishment of nest buffers, or obtaining an Incidental Take Permit (ITP) from CDFW.

If Crotch's bumble bees are located, and after coordination with CDFW take of Crotch's bumble bees cannot be avoided, the project proponent shall obtain an ITP from CDFW, and the project proponent shall implement all conditions identified in the ITP. Mitigation required by the ITP may include, but not be limited to, the project proponent translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources on areas of the project site that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.

4.3-5 Have a substantial adverse effect, either directly or through habitat modifications, on northwestern pond turtle. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR concluded on pages 4.6-22 to 4.6-23 of the EIR that, based on a lack of suitable aquatic habitat and isolation from known populations, western pond turtles were not expected to occur within the study area. Although soils within the project site could have been suitable for western pond turtle nest building, the 2009 EIR found that known breeding populations in the region would not have nested on-site due to the lack of aquatic features and the disconnection from local waterways. Channel A, located approximately 0.3-mile north of the project site, contained suitable aquatic habitat for western pond turtles; however, the Wildhorse Ranch Project did not require installation of an off-site sewer line. Thus, Channel A would not have been impacted by the Wildhorse Ranch Project. In addition, western pond turtles had not been documented within the waterway in the project vicinity and the project site was separated from the waterway by dense urban development and actively farmed agricultural fields. Thus, the 2009 EIR concluded a potential impact to western pond turtle would not occur.

The western pond turtle is now known as the northwestern pond turtle, and this SEIR reflects the species' current taxonomy. The off-site Channel A within the current study area could represent potential habitat for the northwestern pond turtle if the drainage is inundated during the species' active season. As discussed further in the Project Description chapter of this SEIR, as part of establishing sewer service to the project site, 2,270 lineal feet of new 12-inch sewer line would be extended from an existing 42-inch sewer trunk main along the northern boundary of the Wildhorse Golf Course to the project site's northeastern corner, through the edge of the existing Wildhorse Agricultural Buffer, requiring a crossing of Channel A. While potential aquatic habitat would not be impacted, as the project would use a jack-and-bore process to install the crossing, northwestern pond turtles present and/or nesting during project construction in the upland areas within 100 feet of Channel A, as well as their eggs, could be injured or killed.

The northwestern pond turtle is a Yolo HCP/NCCP Covered Species. In accordance with Davis Municipal Code Section 42.01.040, the proposed project would be required to comply with species-specific Yolo HCP/NCCP AMM14, which necessitates permanent buffer zones to protect habitat of northwestern pond turtle and preconstruction assessment of the potential for northwestern pond turtle to occur within on- and off-site habitat. If the potential is determined to be moderate to high, AMM14 requires a qualified biologist to monitor ground-disturbing activity. However, as the final application to the Yolo Habitat Conservancy has not yet been prepared, proper compliance with the aforementioned Yolo HCP/NCCP AMMs cannot be ensured at this time, and the proposed project could have a substantial adverse effect on northwestern pond turtle, either directly or through habitat modifications.

Based on the above, without compliance with the Yolo HCP/NCCP, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on northwestern pond turtle, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

Northwestern pond turtle is a Yolo HCP/NCCP Covered Species. Thus, the proposed project would be subject to the following general and species-specific Yolo HCP/NCCP AMMs to address potential impacts to the species. It should be noted that AMM9, which is referenced below within the text of AMM14, is related to establishing buffers around valley foothill riparian communities, and thus, is not applicable to the currently proposed project due to the lack of such habitat within areas that would be disturbed by the currently proposed project. AMM10 is related to the avoidance and minimization of effects on wetlands and waters but is not required due to the currently proposed project's design avoiding impacts to Channel A waters. As such, AMMs 9 and 10 are not included as mitigation measures.

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

SEIR 4.3-5 *Yolo HCP/NCCP AMM14: There are no specific design requirements for western pond turtle habitat, however, project proponents must follow design requirements for the valley foothill riparian and lacustrine and riverine natural communities described in AMMs 9 and 10, which require a 100-foot (minimum) permanent buffer zone from the canopy drip-line (the farthest edge on the ground where water will drip from the tree canopy, based on the outer boundary of the tree canopy). If modeled upland habitat will be impacted, a qualified biologist must be present and will assess the likelihood of western pond turtle nests occurring in the disturbance area (based on sun exposure, soil conditions, and other species habitat requirements). If a qualified biologist determines that there is a moderate to high likelihood of western pond turtle nests within the disturbance area, the qualified biologist will monitor all initial ground disturbing activity for nests that may be unearthed during the disturbance, and will move out of harm's way any turtles or hatchlings found.*

4.3-6 Have a substantial adverse effect, either directly or through habitat modifications, on giant garter snake. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR concluded on pages 4.6-23 to 4.6-24 of the EIR that giant garter snakes are not expected to occur within the project site during project construction. As discussed therein, aquatic features capable of supporting giant garter snakes were not located on-site. The closest potential habitat was Channel A, located 0.3-mile north of the project site. Giant garter snakes had been recorded within Willow Slough Bypass, two miles northeast of the project site, and in the Fork of Putah Creek, as well as approximately 4.5 miles east of the project site in the Willow Slough Bypass. However, the Wildhorse Ranch Project did not include installation of an off-site sewer line and, thus, would not have impacted Channel A. Furthermore, the 2009 EIR concluded that the area between the slough and the project site was developed with a dense residential neighborhood, which would limit the potential for giant garter snakes to travel to the project site. The 2009 EIR also concluded that the likelihood for giant garter snakes to use the rodent burrows within the project site as upland refugia was similarly low, due to the distance from suitable aquatic habitat. Thus, the 2009 EIR concluded a potential impact to giant garter snake would not occur.

The current BRA found that when inundated, the off-site Channel A represents potential habitat for giant garter snake. As previously discussed, as part of establishing sewer service to the project site, 2,270 lineal feet of new 12-inch sewer line would be extended from an existing 42-inch sewer trunk main along the northern boundary of the Wildhorse Golf Course to the project site's northeastern corner, through the edge of the existing Wildhorse Agricultural Buffer, requiring a crossing of Channel A. While potential aquatic habitat would not be impacted, due to the project using a jack-and-bore process to install the crossing, giant garter snakes present and/or nesting during project construction in the upland areas within 200 feet of Channel A could be injured or killed.

The giant garter snake is a Yolo HCP/NCCP Covered Species, and thus, the proposed project would be required to comply with the applicable Yolo HCP/NCCP AMMs. Applicable Yolo HCP/NCCP AMMs would include species-specific Yolo HCP/NCCP AMM15, which necessitates avoidance of potential habitat and minimization procedures if avoidance is infeasible, including, but not limited to, dewatering irrigation ditches, canals, or other aquatic habitat, providing environmental awareness training, and stopping construction if the species is encountered. However, as the final application to the Yolo Habitat Conservancy has not yet been prepared, proper compliance with the aforementioned Yolo HCP/NCCP AMMs cannot be ensured at this time, and the proposed project could have a substantial adverse effect on giant garter snake, either directly or through habitat modifications.

Based on the above, without compliance with the Yolo HCP/NCCP, the currently proposed project could result in a new significant impact or substantially more severe

significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on giant garter snake, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

Giant garter snake is a Yolo HCP/NCCP Covered Species. Thus, the proposed project would be subject to the following general and species-specific Yolo HCP/NCCP AMMs to address potential impacts to the species. Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

SEIR 4.3-6 *Yolo HCP/NCCP AMM15: The project proponent will avoid effects on areas where planning-level surveys indicate the presence of suitable habitat for giant garter snake. To avoid effects on giant garter snake aquatic habitat, the project proponent will conduct no in-water/in-channel activity and maintain a permanent 200-foot non-disturbance buffer from the outer edge of potentially occupied aquatic habitat. If the project proponent cannot avoid effects of construction activities, the project proponent will implement the measures below to minimize effects of construction projects (measures for maintenance activities are described after the following bulleted list).*

- *Conduct preconstruction clearance surveys using USFWS-approved methods within 24 hours prior to construction activities within identified giant garter snake aquatic and adjacent upland habitat. If construction activities stop for a period of two weeks or more, conduct another preconstruction clearance survey within 24 hours prior to resuming construction activity.*
- *Restrict all construction activity involving disturbance of giant garter snake habitat to the snake's active season, May 1 through October 1. During this period, the potential for direct mortality is reduced because snakes are expected to move and avoid danger.*
- *In areas where construction is to take place, encourage giant garter snakes to leave the site on their own by dewatering all irrigation ditches, canals, or other aquatic habitat (i.e., removing giant garter snake aquatic habitat) between April 15 and September 30. Dewatered habitat must remain dry, with no water puddles remaining, for at least 15 consecutive days prior to excavating or filling of the habitat. If a site cannot be completely dewatered, netting*

and salvage of giant garter snake prey items may be necessary to discourage use by snakes.

- *Provide environmental awareness training for construction personnel, as approved by the Conservancy. Training may consist of showing a video prepared by a qualified biologist, or an in-person presentation by a qualified biologist. In addition to the video or in-person presentation, training may be supplemented with the distribution of approved brochures and other materials that describe resources protected under the Yolo HCP/NCCP and methods for avoiding effects.*
- *A qualified biologist will prepare a giant garter snake relocation plan which must be approved by the Conservancy prior to work in giant garter snake habitat. The qualified biologist will base the relocation plan on criteria provided by CDFW or USFWS, through the Conservancy.*
- *If a live giant garter snake is encountered during construction activities, immediately notify the project's biological monitor and USFWS and CDFW. The monitor will stop construction in the vicinity of the snake, monitor the snake, and allow the snake to leave on its own. The monitor will remain in the area for the remainder of the work day to ensure the snake is not harmed or, if it leaves the site, does not return. If the giant garter snake does not leave on its own, the qualified biologist will relocate the snake consistent with the relocation plan described above.*
- *Employ the following management practices to minimize disturbances to habitat:*

    - *Install temporary fencing to identify and protect adjacent marshes, wetlands, and ditches from encroachment from construction equipment and personnel.*
    - *Maintain water quality and limit construction runoff into wetland areas through the use of hay bales, filter fences, vegetative buffer strips, or other accepted practices. No plastic, monofilament, jute, or similar erosion-control matting that could entangle snakes or other wildlife will be permitted.*

Ongoing maintenance covered activities by local water and flood control agencies typically involve removal of vegetation, debris, and sediment from water conveyance canals as well as resloping, rocking, and stabilizing the canals that serve agricultural water users. Maintenance of these conveyance facilities can typically occur only from mid-January through April when conveyance canals and ditches are not in service by the agency, although some drainages are used for storm conveyance during the winter and are wet all year. This timing is during the giant garter snake's inactive

period. This is when snakes may be using underground burrows and are most vulnerable to take because they are unable to move out of harm's way. Maintenance activities, therefore, will be limited to the giant garter snake's active season (May 1 to October 1) when possible. All personnel involved in maintenance activities within giant garter snake habitat will first participate in environmental awareness training for giant garter snake, as described above for construction-related activities. To minimize the take of giant garter snake, the local water or flood control agency will limit maintenance of conveyance structures located within modeled giant garter snake habitat (Appendix A, Covered Species Accounts) to clearing one side along at least 80 percent of the linear distance of canals and ditches during each maintenance year (e.g., the left bank of a canal is maintained in the first year and the right bank in the second year). To avoid collapses when resloping canal and ditch banks composed of heavy clay soils, clearing will be limited to one side of the channel during each maintenance year.

For channel maintenance activities conducted within modeled habitat for giant garter snake, the project proponent will place removed material in existing dredged sites along channels where prior maintenance dredge disposal has occurred. For portions of channels that do not have previously used spoil disposal sites and where surveys have been conducted to confirm that giant garter snakes are not present, removed materials may be placed along channels in areas that are not occupied by giant garter snake and where materials will not re-enter the canal because of stormwater runoff.

Modifications to this AMM may be made with the approval of the Conservancy, USFWS, and CDFW.

4.3-7 Have a substantial adverse effect, either directly or through habitat modifications, on tricolored blackbird. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR concluded on page 4.6-28 that tricolored blackbird was among the special-status bird species with a low potential to occur on-site, due to suitable nesting and foraging habitat being located on-site, such as ruderal grasslands and agricultural fields. Thus, the 2009 EIR determined under Impact 4.6-3 that tricolored blackbird and other special-status passerine species could be disturbed by construction activities occurring in the vicinity of active nests, and a significant impact could occur. To address the potential impact, the 2009 EIR set forth Mitigation Measures 4.6-3(a) through 4.6-3(c). Mitigation Measure 4.6-3(a) required removal of buildings, trees, or shrubs outside of the annual nesting season. If such activities were to begin during the

nesting season, Mitigation Measure 4.6-3(a) required a preconstruction nesting bird survey. If active nests were identified as part of the preconstruction survey, Mitigation Measure 4.6-3(b) required establishment of non-disturbance buffer zones, and Mitigation Measure 4.6-3(c) required continued monitoring of active nests by a qualified biologist. Such mitigation measures would apply to any on-site nests associated with tricolored blackbird. With implementation of Mitigation Measures 4.6-3(a) through 4.6-3(c), the 2009 EIR concluded a less-than-significant impact would occur.

The current BRA identified small stands of bulrush within the off-site Channel A that represent potential nesting habitat for tricolored blackbird. As previously discussed, the portion of Channel A that runs through the northern portion of the study area could be impacted by the proposed project during installation of the off-site sewer line necessary to establish sewer service for the proposed project. If Channel A is impacted and tricolored blackbirds are nesting during project construction, the species could be injured or killed.

The tricolored blackbird is a Yolo HCP/NCCP Covered Species. Therefore, the proposed project would be required to comply with species-specific Yolo HCP/NCCP AMM21, which necessitates identifying potential tricolored blackbird nests, maintaining non-disturbance buffers, and checking records for tricolored blackbird nesting colonies. However, as the final application to the Yolo Habitat Conservancy has not yet been prepared, proper compliance with the Yolo HCP/NCCP cannot be ensured at this time, and the proposed project could have a substantial adverse effect on tricolored blackbird, either directly or through habitat modifications.

Based on the above, without compliance with the Yolo HCP/NCCP, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on tricolored blackbird, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

As previously discussed, the 2009 EIR was certified prior to the adoption of the Yolo HCP/NCCP. Because tricolored blackbird is a Yolo HCP/NCCP Covered Species, potential impacts to the species that would occur as a result of the currently proposed project are addressed through compliance with the applicable Yolo HCP/NCCP AMMs, including the species-specific AMM21. Thus, Mitigation Measures 4.6-3(a) through 4.6-3(c) from the 2009 EIR are not applicable to address potential impacts specific to tricolored blackbird. However, it should be noted that the foregoing mitigation measures are included under Impact 4.3-10 to address potential impact to other migratory birds and nesting raptors.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

SEIR 4.3-7 *Yolo HCP/NCCP AMM21: The project proponent will retain a qualified biologist to identify and quantify (in acres) tricolored blackbird nesting and foraging habitat (as defined in Appendix A, Covered Species Accounts) within 1,300 feet of the footprint of the covered activity. If a 1,300-foot buffer from nesting habitat cannot be maintained, the qualified biologist will check records maintained by the Conservancy (which will include CNDDB data, and data from the tricolored blackbird portal) to determine if tricolored blackbird nesting colonies have been active in or within 1,300 feet of the project footprint during the previous five years. If there are no records of nesting tricolored blackbirds on the site, the qualified biologist will conduct visual surveys to determine if an active colony is present, during the period from March 1 to July 30, consistent with protocol described by Kelsey (2008).*

Operations and maintenance activities or other temporary activities that do not remove nesting habitat and occur outside the nesting season (March 1 to July 30) do not need to conduct planning or construction surveys or implement any additional avoidance measures.

If an active tricolored blackbird colony is present or has been present within the last five years within the planning-level survey area, the project proponent will design the project to avoid adverse effects within 1,300 feet of the colony site(s), unless a shorter distance is approved by the Conservancy, USFWS, and CDFW. If a shorter distance is approved, the project proponent will still maintain a 1,300-foot buffer around active nesting colonies during the nesting season but may apply the approved lesser distance outside the nesting season. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.

4.3-8 Have a substantial adverse effect, either directly or through habitat modifications, on burrowing owl. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR evaluated potential impacts to burrowing owl under Impact 4.6-2 and concluded that with implementation of mitigation, a less-than-significant impact would occur. As discussed therein, the habitat assessment and focused winter and breeding surveys conducted as part of the Wildhorse Ranch Project either identified burrowing owls on-site, detected burrows with burrowing owl sign, or both. Therefore, the 2009 EIR determined that a potential impact could occur. As a result, Mitigation Measures 4.6-2(a) through 4.6-2(f) were required, which necessitated preconstruction surveys of all potential burrowing owl habitat. If active nests were identified during the

preconstruction survey, Mitigation Measure 4.6-2(b) necessitated a non-disturbance buffer around burrows during the nesting season. If burrowing owls were identified outside of the nesting season, Mitigation Measure 4.6-2(c) included passive relocation and monitoring procedures. Regardless of the time of detection, if burrowing owls were actively detected on-site, Mitigation Measures 4.6-2(d) and 4.6-2(e) required habitat preservation and educational material on recognizing burrowing owl, respectively. Mitigation Measure 4.6-2(f) necessitated submittal of a monitoring report of all activities related to burrowing owl to the City and CDFW. With incorporation of the foregoing requirements, the 2009 EIR concluded that a substantial adverse effect to the species would not occur.

With respect to the currently proposed project, extensive complexes of ground squirrel burrows and several piles of debris located throughout the study area represent suitable habitat for the burrowing owl. The proposed project would potentially impact the majority of the foregoing areas (approximately 25.5 total acres of ruderal areas and California Annual Grassland Alliance land cover). If ground disturbance occurs while burrowing owls are occupying the on-site burrows, the species could be injured or killed.

The burrowing owl is a Yolo HCP/NCCP Covered Species. Therefore, the proposed project would be required to comply with species-specific Yolo HCP/NCCP AMM18, which necessitates a planning-level survey for suitable burrowing owl habitat and the species, non-disturbance buffers on occupied habitat, and potentially, a preconstruction survey prior to ground-disturbing activities and nest monitoring to ensure buffers are enforced and any on-site burrowing owls remain undisturbed. However, as the final application to the Yolo Habitat Conservancy has not yet been prepared, proper compliance with the aforementioned Yolo HCP/NCCP AMMs cannot be ensured at this time, and the proposed project could have a substantial adverse effect on burrowing owl, either directly or through habitat modifications.

Based on the above, without compliance with the Yolo HCP/NCCP, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on burrowing owl, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

As previously discussed, the 2009 EIR was certified prior to the adoption of the Yolo HCP/NCCP. Because burrowing owl is a Yolo HCP/NCCP Covered Species, pursuant to Davis Municipal Code Section 42.01.040, potential impacts to the species that would occur as a result of the currently proposed project are addressed through compliance with the applicable Yolo HCP/NCCP AMMs set forth below under the Modified Mitigation Measure(s) subheading.

Modified Mitigation Measure(s)

Modifications to Mitigation Measures 4.6-2(a) through 4.6-2(f) from the 2009 EIR are shown in ~~strikethrough~~ and double-underline below. Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.6-2~~(a)~~ ~~Prior to commencement of construction-related activities for the project including, but not limited to, grading, staging of materials, or earthmoving activities and within 15 days of initiation of any grading or other construction activities, pre-construction surveys of all potential burrowing owl habitat shall be conducted by a qualified biologist within the project area and within 250 feet of the project boundary. Presence or sign of burrowing owl and all potentially occupied burrows shall be recorded and monitored according to the CDFG and California Burrowing Owl Consortium guidelines. If burrowing owls are not detected by sign or direct observation, construction may proceed.~~

Yolo HCP/NCCP AMM18: The project proponent will retain a qualified biologist to conduct planning-level surveys and identify western burrowing owl habitat (as defined in Appendix A, Covered Species Accounts) within or adjacent to (i.e., within 500 feet of) a covered activity. If habitat for this species is present, additional surveys for the species by a qualified biologist are required, consistent with CDFW guidelines (Appendix L).

If burrowing owls are identified during the planning-level survey, the project proponent will minimize activities that will affect occupied habitat as follows. Occupied habitat is considered fully avoided if the project footprint does not impinge on a nondisturbance buffer around the suitable burrow. For occupied burrowing owl nest burrows, this nondisturbance buffer could range from 150 to 1,500 feet (Table 4-2, Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls [incorporated as Table 4.3-5 of this chapter]), depending on the time of year and the level of disturbance, based on current guidelines (California Department of Fish and Game 2012). The Yolo HCP/NCCP generally defines low, medium, and high levels of disturbances of burrowing owls as follows.

- Low: Typically 71-80 dB, generally characterized by the presence of passenger vehicles, small gas-powered engines (e.g., lawn mowers, small chain saws, portable generators), and high-tension power lines. Includes electric hand tools (except circular saws, impact wrenches and similar). Management and enhancement activities would typically fall under this category. Human activity in the immediate vicinity of burrowing owls would also constitute a low level of disturbance, regardless of the noise levels.
- Moderate: Typically 81-90 dB, and would include medium- and large-sized construction equipment, such as backhoes, front end loaders, large pumps and generators, road graders, dozers, dump trucks, drill rigs, and other moderate to large diesel engines. Also includes power saws, large chainsaws, pneumatic drills and impact wrenches, and large

gasoline-powered tools. Construction activities would normally fall under this category.

- High: Typically 91-100 dB, and is generally characterized by impacting devices, jackhammers, compression ("jake") brakes on large trucks, and trains. This category includes both vibratory and impact pile drivers (smaller steel or wood piles) such as used to install piles and guard rails, and large pneumatic tools such as chipping machines. It may also include large diesel and gasoline engines, especially if in concert with other impacting devices. Felling of large trees (defined as dominant or subdominant trees in mature forests), truck horns, yarding tower whistles, and muffled or underground explosives are also included. Very few covered activities are expected to fall under this category, but some construction activities may result in this level of disturbance.

Table 4.3-5
Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls

	Level of Disturbance (feet) from Occupied Burrows		
Time of Year	**Low**	**Medium**	**High**
April 1-August 15	600	1,500	1,500
August 16-October 15	600	600	1,500
October 16-March 31	150	300	1,500

Source: Yolo Habitat Conservancy. Yolo County Habitat Conservation Plan/Natural Community Conservation Plan [Table 4-2]. April 2018.

The project proponent may qualify for a reduced buffer size, based on existing vegetation, human development, and land use, if agreed upon by CDFW and USFWS (California Department of Fish and Game 2012).

If the project does not fully avoid direct and indirect effects on nesting sites (i.e., if the project cannot adhere to the buffers described above), the project proponent will retain a qualified biologist to conduct preconstruction surveys and document the presence or absence of western burrowing owls that could be affected by the covered activity. Prior to any ground disturbance related to covered activities, the qualified biologist will conduct the preconstruction surveys within three days prior to ground disturbance in areas identified in the planning-level surveys as having suitable burrowing owl burrows, consistent with CDFW preconstruction survey guidelines (Appendix L, Take Avoidance Surveys). The qualified biologist will conduct the preconstruction surveys three days prior to ground disturbance. Time lapses

between ground disturbing activities will trigger subsequent surveys prior to ground disturbance.

If the biologist finds the site to be occupied by western burrowing owls during the breeding season (February 1 to August 31), the project proponent will avoid all nest sites, based on the buffer distances described above, during the remainder of the breeding season or while the nest is occupied by adults or young (occupation includes individuals or family groups that forage on or near the site following fledging). Construction may occur inside of the disturbance buffer during the breeding season if the nest is not disturbed and the project proponent develops an AMM plan that is approved by the Conservancy, CDFW, and USFWS prior to project construction, based on the following criteria:

- *The Conservancy, CDFW, and USFWS approves the AMM plan provided by the project proponent.*
- *A qualified biologist monitors the owls for at least three days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).*
- *The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.*
- *If the qualified biologist identifies a change in owl nesting and foraging behavior as a result of construction activities, the qualified biologist will have the authority to stop all construction related activities within the non-disturbance buffers described above. The qualified biologist will report this information to the Conservancy, CDFW, and USFWS within 24 hours, and the Conservancy will require that these activities immediately cease within the non-disturbance buffer. Construction cannot resume within the buffer until the adults and juveniles from the occupied burrows have moved out of the project site, and the Conservancy, CDFW, and USFWS agree.*
- *If monitoring indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use by owls, the project proponent may remove the nondisturbance buffer, only with concurrence from CDFW and USFWS. If the burrow cannot be avoided by construction activity, the biologist will excavate and collapse the burrow in accordance with CDFW's 2012 guidelines to prevent reoccupation after receiving approval from the wildlife agencies.*

If evidence of western burrowing owl is detected outside the breeding season (December 1 to January 31), the project proponent will establish a non-disturbance buffer around occupied burrows, consistent with Table 4-2 (incorporated as Table 4.3-5 of

this chapter), as determined by a qualified biologist. Construction activities within the disturbance buffer are allowed if the following criteria are met to prevent owls from abandoning important overwintering sites:

- *A qualified biologist monitors the owls for at least three days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).*
- *The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.*
- *If there is any change in owl roosting and foraging behavior as a result of construction activities, these activities will cease within the buffer.*
- *If the owls are gone for at least one week, the project proponent may request approval from the Conservancy, CDFW, and USFWS for a qualified biologist to excavate and collapse usable burrows to prevent owls from reoccupying the site if the burrow cannot be avoided by construction activities. The qualified biologist will install one-way doors for a 48-hour period prior to collapsing any potentially occupied burrows. After all usable burrows are excavated, the buffer will be removed and construction may continue.*

Monitoring must continue as described above for the nonbreeding season as long as the burrow remains active.

A qualified biologist will monitor the site, consistent with the requirements described above, to ensure that buffers are enforced and owls are not disturbed. Passive relocation (i.e., exclusion) of owls has been used in the past in the Plan Area to remove and exclude owls from active burrows during the nonbreeding season (Trulio 1995). Exclusion and burrow closure will not be conducted during the breeding season for any occupied burrow. If the Conservancy determines that passive relocation is necessary, the project proponent will develop a burrowing owl exclusion plan in consultation with CDFW biologists. The methods will be designed as described in the species monitoring guidelines (California Department of Fish and Game 2012) and consistent with the most up-to-date checklist of passive relocation techniques. This may include the installation of one-way doors in burrow entrances by a qualified biologist during the nonbreeding season. These doors will be in place for 48 hours and monitored twice daily to ensure that the owls have left the burrow, after which time the biologist will collapse the burrow to prevent reoccupation. Burrows will be excavated using hand tools. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure, such as piping, into the burrow to prevent collapsing until the entire burrow can be excavated and it can be determined that

no owls are trapped inside the burrow. The Conservancy may allow other methods of passive or active relocation, based on best available science, if approved by the wildlife agencies. Artificial burrows will be constructed prior to exclusion and will be created less than 300 feet from the existing burrows on lands that are protected as part of the reserve system.

~~4.6-2(b) If potentially nesting burrowing owl are present during pre-construction surveys conducted between February 1 and August 31, grading or other construction related disturbance shall not be allowed within 250 feet of any active nest burrows during the nesting season (February 1 – August 31) unless approved by CDFG.~~

~~4.6-2(c) If burrowing owl are detected during pre-construction surveys outside the nesting season (September 1 – January 31), passive relocation and monitoring may be undertaken by a qualified biologist following the CDFG and California Burrowing Owl Consortium guidelines, which involve the placement of one-way exclusion doors on occupied and potentially occupied burrowing owl burrows. Owls shall be excluded from all suitable burrows within the project area and within a 250-foot buffer zone of the impact area. A minimum of one week shall be allowed to accomplish this task and allow for owls to acclimate to alternate burrows. These mitigation actions shall be carried out prior to the burrowing owl breeding season (February 1 - August 31) and the site shall be monitored weekly by a qualified biologist until construction begins to ensure that burrowing owls do not re-inhabit the site.~~

~~4.6-2(d) If burrowing owl or sign of burrowing owl are detected at any time on the project site, a minimum of 6.5 acres of foraging habitat per pair or individual resident bird, shall be acquired and permanently protected to compensate for the loss of burrowing owl habitat. The acreage shall be based on the maximum number of owls observed inhabiting the property for any given observation period, pre-construction survey, or other field visit. The protected lands shall be occupied burrowing owl habitat and at a location acceptable to CDFG. A report shall be submitted to the City describing the agreed upon location. First priority for habitat preservation shall be accomplished on-site. If the required acreage cannot be preserved on-site, second priority shall be given to habitat preservation at an off-site location within the Davis city limits that shall be acquired and preserved in perpetuity. Third priority shall be given to another offsite location outside of the Davis city limits. Habitat in the amount specified above shall be acquired, permanently protected, and enhanced through management for the benefit of the species, to compensate for the loss of burrowing owl habitat on the project site. Alternatively, the applicant can provide the required mitigation either through an in-lieu fee program, purchase of the required~~

~~*acreage in an approved mitigation bank, or an approved Habitat Conservation Plan (HCP).*~~

~~*4.6-2(e) If burrowing owl are determined to be actively using the site, a qualified biologist shall conduct an education session for project contractors and construction crews responsible for site demolition and/or grading operations before any ground disturbance work within the project area. The education session, shall include includes photos of burrowing owl for identification purposes, habitat description, limits of construction activities in the project area, and guidance regarding general measures being implemented to conserve burrowing owl as they relate to the project. A qualified biologist shall provide materials and instructions to train new workers whose jobs involve initial ground disturbance, grading, or paving. Training for personnel finalizing exteriors and interiors would not be required.*~~

~~*4.6-2(f) A monitoring report of all activities associated with pre-construction surveys, avoidance measures, and passive relocation of burrowing owls shall be submitted to the City and CDFG no later than three days before initiation of grading.*~~

New Mitigation Measure(s)
None required.

4.3-9 Have a substantial adverse effect, either directly or through habitat modifications, on Swainson's hawk and white-tailed kite. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR evaluated potential impacts to nesting Swainson's hawk under Impact 4.6-5 and concluded that, if Swainson's hawks were found nesting on or near the site, development of the Wildhorse Ranch Project could have a significant impact. In addition, the 2009 EIR evaluated potential impacts to Swainson's hawk foraging habitat under Impact 4.6-6 and concluded that development of the project site would result in the loss of approximately 15.5 acres of Swainson's hawk foraging habitat, which would be a significant impact. To address the potential impacts, the 2009 EIR included Mitigation Measures 4.6-5(a) through 4.6-5(c), as well as Mitigation Measures 4.6-6(a) and 4.6-6(b). Mitigation Measure 4.6-5(a) necessitated preconstruction surveys for nesting Swainson's hawk, and Mitigation Measure 4.6-5(b) required non-disturbance buffers around any active nests. In addition, Mitigation Measure 4.6-5(c) required the planting of replacement trees for any Swainson's hawk nest trees removed as part of project construction and/or payment of an in-lieu fee to the City. Mitigation Measure 4.6-6(a) and 4.6-6(b) necessitated compensation and mitigation for the loss of Swainson's hawk foraging habitat, as determined by the City and CDFW

through habitat management lands, in-lieu fees for the 15.5 acres of impacted foraging habitat, and/or conservation easements. The 2009 EIR concluded that with implementation of the foregoing requirements, the potential impacts would be reduced to a less-than-significant level.

With respect to potential impacts to white-tailed kite, the 2009 EIR concluded on page 4.6-25 of the EIR that the on-site trees lining the driveway and within the Wildhorse Agricultural Buffer would provide suitable nesting and foraging habitat for the species, and the on-site ruderal grasslands in the pastures and corrals would provide suitable foraging habitat. To address the potential impact, the 2009 EIR set forth Mitigation Measures 4.6-3(a) through 4.6-3(c), which are discussed further under Impact 4.3-6 in the analysis of potential impacts to tricolored blackbird. The 2009 EIR determined that a less-than-significant impact would occur with implementation of the foregoing requirements.

The ruderal areas and annual grassland within the study area of the currently proposed project would represent suitable foraging habitat for Swainson's hawk and white-tailed kite. In addition, the proposed project could result in the removal of potential nesting trees and impacts to 25.5 total acres of ruderal areas and California Annual Grassland Alliance land cover that represent foraging habitat for Swainson's hawk and white-tailed kite. It should be noted that the 2009 EIR identified potential impacts to 15.5 acres of Swainson's hawk foraging habitat; however, as previously discussed, the 2009 EIR did not include the acreage associated with the Wildhorse Agricultural Buffer within the analysis, as the Wildhorse Ranch Project did not include installation of an off-site sewer line in the foregoing location.

Swainson's hawk and white-tailed kite are Yolo HCP/NCCP Covered Species. Thus, the proposed project would be required to comply with species-specific Yolo HCP/NCCP AMM16, which necessitates planning-level surveys and avoidance of potential Swainson's hawk and white-tailed kite nest trees. If avoidance is infeasible, AMM16 requires preconstruction surveys, non-disturbance buffers around any identified nests, and on-site monitoring to watch for agitated behavior. However, as the final application to the Yolo Habitat Conservancy has not yet been prepared, proper compliance with the aforementioned Yolo HCP/NCCP AMMs cannot be ensured at this time, and the proposed project could have a substantial adverse effect on Swainson's hawk or white-tailed kite, either directly or through habitat modifications.

Based on the above, without compliance with the Yolo HCP/NCCP, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having an adverse effect, either directly or through habitat modifications, on Swainson's hawk and white-tailed kite, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

As previously discussed, the 2009 EIR was certified prior to the adoption of the Yolo HCP/NCCP. Because Swainson's hawk and white-tailed kite are Yolo HCP/NCCP Covered Species, potential impacts to the species that would occur as a result of the currently proposed project are addressed through compliance with the applicable Yolo

HCP/NCCP AMMs set forth below under the Modified Mitigation Measure(s) subheading.

Modified Mitigation Measure(s)

Modifications to Mitigation Measures 4.6-5(a) through 4.6-5(c) and Mitigation Measures 4.6-6(a) and 4.6-6(b) from the 2009 EIR are shown in ~~strikethrough~~ and double-underline below. It should be noted that the acreage mitigation and compensation required by Mitigation Measures 4.6-6(a) and 4.6-6(b) of the Wildhorse Ranch EIR would be accomplished by the currently proposed project through payment of applicable Yolo HCP/NCCP fees. Thus, Mitigation Measures 4.6-6(a) and (b) have been deleted as they are superseded by Yolo HCP/NCCP compliance. Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

~~4.6-5(a)~~ *~~In order to ensure that nesting Swainson's hawks will not be affected by construction on the project site, a qualified biologist shall conduct preconstruction surveys according to the CDFG and Swainson's hawk Technical Advisory Committee guidelines (2000). Survey Period I occurs from January 1 – March 20, Period II from March 20 – April 5, Period III from April 5 – April 20, Period IV from April 21 – June 10, and Period V from June 10 – July 30. Three surveys shall be completed in at least each of the two survey periods immediately prior to a project's initiation and shall encompass the area within one half mile of the project site.~~*

Yolo HCP/NCCP AMM16: The project proponent will retain a qualified biologist to conduct planning-level surveys and identify any nesting habitat present within 1,320 feet of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.

If a construction project cannot avoid potential nest trees (as determined by the qualified biologist) by 1,320 feet, the project proponent will retain a qualified biologist to conduct preconstruction surveys for active nests consistent, with guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000), between March 15 and August 30, within 15 days prior to the beginning of the construction activity. The results of the survey shall be submitted to the Conservancy and CDFW. If active nests are found during preconstruction surveys, a 1,320-foot initial temporary nest disturbance buffer shall be established. If project related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then the qualified biologist will monitor the nest and will, along with the project proponent, consult with CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may be allowed only to proceed within the temporary nest disturbance buffer if Swainson's hawk or white-tailed kite are not

exhibiting agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, and only with the agreement of CDFW and USFWS. The designated on-site biologist/monitor shall be on-site daily while construction-related activities are taking place within the 1,320-foot buffer and shall have the authority to stop work if raptors are exhibiting agitated behavior. Up to 20 Swainson's hawk nest trees (documented nesting within the last 5 years) may be removed during the permit term, but they must be removed when not occupied by Swainson's hawks.

For covered activities that involve pruning or removal of a potential Swainson's hawk or white-tailed kite nest tree, the project proponent will conduct preconstruction surveys that are consistent with the guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000). If active nests are found during preconstruction surveys, no tree pruning or removal of the nest tree will occur during the period between March 1 and August 30 within 1,320 feet of an active nest, unless a qualified biologist determines that the young have fledged and the nest is no longer active.

~~*4.6-5(b) Because of the potential for Swainson's hawk to nest on-site, potential adverse affects to this species shall be avoided by establishment of CDFG approved buffers around any active nests. No construction activities shall take place within 0.25 mile of the nest until the young have fledged, or authorization has been obtained from CDFG. Weekly monitoring reports summarizing nest activities shall be submitted to the City and CDFG until the young have fledged and the nest is determined to be inactive. Trees containing nests that must be removed as a result of project implementation shall be removed during the non-breeding season (late September to March) and in accordance with the CDFG "Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California," November 8, 1994.*~~

~~*4.6-5(c) Replacement trees for any potential Swainson's hawk nest trees removed as part of project construction must be planted either on-site or at a nearby site, and/or an in-lieu fee must be paid to the City of Davis Tree Preservation Fund as detailed in Mitigation Measure 4.6-7.*~~

~~*4.6-6(a) The applicant shall be responsible for mitigating the loss of any Swainson's hawk foraging habitat. The extent of any necessary mitigation shall be determined by the City in consultation with CDFG; past recommended mitigation for loss of foraging habitat has been at a ratio of one acre of suitable foraging habitat for every one acre utilized by the proposed project. An "Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County" was executed in August, 2002, between the Cities of Davis, West Sacramento, Winters, Woodland, the County of Yolo, and CDFG. The agreement currently requires 1.0 acre of*~~

~~*habitat management lands as mitigation for each 1.0 acre of Swainson's hawk foraging habitat lost.*~~

~~*4.6-6(b)*~~ ~~*The project proponent will compensate for the loss of Swainson's hawk foraging habitat by providing Habitat Management lands (HM lands) to CDFG as defined in the Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California (published by California Department of Fish and Game in 1994). If the proposed project is located within 1 mile of an active nest (to be determined with preconstruction surveys) the loss of habitat will be compensated at a ratio of 1:1 (HM lands:urban development). The project proponent will provide HM lands through an in-lieu fee process prior to groundbreaking per the Agreement to Yolo County HCP/NCCP Joint Powers Agency. Credits will be purchased through the in-lieu fee program due to the lack of mitigation credits currently available at a bank. As of January 2007, the cost per acre for the in-lieu fee is $8,660 payable to the Joint Powers Agency. Should the in-lieu fee be increased prior to clearance to grade the project site, the project proponent shall pay the in-lieu fee in effect at that time. The project proponent will issue a check to the Joint Powers Agency if mitigation is required. It is estimated that a total of 15.5 acres of Swainson's hawk foraging habitat would be removed as a result of the project. The applicant shall pay the in-lieu fee for the 15.5 acres based on the removal of this Swainson's hawk foraging habitat.*~~

~~*-Or-*~~

~~*Prior to commencement of construction-related activities for the project including, but not limited to, grading, staging of materials, or earthmoving activities, the project proponent shall place and record one or more Conservation Easements that meet the acreage requirements of CDFG's Swainson's Hawk foraging habitat mitigation guidelines. The conservation easement(s) shall be executed by the project proponent and a Conservation operator. The City may, at its discretion, also be a party to the conservation easement(s). The conservation easement(s) shall be reviewed and approved in writing by CDFG prior to recordation for the purpose of confirming consistency. The purpose of the conservation easement(s) shall be to preserve the value of the land as foraging habitat for the Swainson's hawk.*~~

New Mitigation Measure(s)

None required.

4.3-10 Have a substantial adverse effect, either directly or through habitat modifications, on other nesting birds and raptors protected under the MBTA and CFGC. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR evaluated potential impacts to nesting birds under Impact 4.6-3 and concluded that a significant impact could occur. As discussed therein, special-status bird species had the potential to nest in on-site vegetation, trees, shrubs, ruderal habitats, and/or grassland, as well as within existing structures. Therefore, the 2009 EIR found that any removal of buildings, trees, or shrubs, as well as any grading, discing, or other construction activities in the vicinity of active nests could have resulted in nest abandonment, nest failure, or premature fledging. In order to address the potential impact, the 2009 EIR required Mitigation Measures 4.6-3(a) through 4.6-3(c), which are discussed further under Impact 4.3-6 in the analysis of potential impacts to tricolored blackbird. The 2009 EIR determined that a less-than-significant impact would occur with implementation of the foregoing requirements.

Other nesting bird and raptor species protected under the MBTA and CFGC have the potential to be present and nest within the current study area. Removal of trees, shrubs, or ground cover being used by actively nesting bird and raptor species could result in the incidental mortality of individuals. In addition, construction activities adjacent to birds nesting in nearby areas could result in nest abandonment.

With respect to northern harrier, which is protected under the MBTA and a CDFW Species of Special Concern, Table 4.6-2 of the 2009 EIR notes that the species was observed on-site, and the 2009 EIR concludes on page 4.6-25 that northern harriers could nest either on-site or in the project vicinity. The current study area includes approximately 25.5 total acres of ruderal areas and California Annual Grassland Alliance land cover that represents potential nesting and foraging habitat for northern harrier could be impacted by the proposed project. Therefore, construction of the proposed project could have a substantial adverse effect on nesting northern harrier individuals.

With respect to loggerhead shrike, which is protected under the MBTA and a CDFW Species of Special Concern, the 2009 EIR notes under Impact 4.6-3 that the species is considered to have a moderate potential to occur on-site. In addition, the City's wildlife biologist has identified the species nesting in shrubs located within the Wildhorse Agricultural Buffer. As such, construction of the proposed sewer line and/or obstacle course could have a substantial adverse effect on nesting loggerhead shrike individuals.

Based on the above, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on nesting songbirds and raptor species protected under the MBTA and CFGC, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

The 2009 EIR required Mitigation Measures 4.6-3(a) through 4.6-3(c) to reduce potential impacts to nesting birds. The proposed project would be subject to the most up-to-date provisions to protect nesting bird and raptor species, as established in the BRA prepared for the currently proposed project. Thus, Mitigation Measures 4.6-3(a) through 4.6-3(c) from the 2009 EIR are modified, as applicable, and included under the Modified Mitigation Measure(s) subheading below.

Modified Mitigation Measure(s)

Modifications to Mitigation Measures 4.6-3(a) through 4.6-3(c) from the 2009 EIR are shown in ~~strikethrough~~ and double-underline below. Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.6-3~~(a)~~ *The removal of any buildings, trees, or shrubs shall occur from September 1 through December 15, outside of the avian nesting season. If removal of buildings, trees, or shrubs occurs, or construction begins between February 1 and August 31 (nesting season for passerine or non-passerine land birds) or between December 15 and August 31 (nesting season for raptors), a nesting bird survey shall be performed by a qualified ornithologist throughout the project site and all accessible areas within a 500-foot radius of proposed construction areas, at most, 14 ~~within 15~~ days prior to the removal or disturbance of a potential nesting structure, tree, or shrub, or the initiation of other construction activities. During this survey, a qualified ~~biologist~~ ornithologist shall inspect all potential nesting habitat (trees, shrubs, structures, grasslands, etc.) for nests in and immediately adjacent to the impact areas. If a break in construction activity of more than 14 days occurs, then subsequent surveys shall be conducted. A report of the survey findings shall be provided to the City of Davis Community Development and Sustainability Department and CDFG within 30 days of the completed survey and is valid for one construction season. If nests are not found, further mitigation is not required.*

If active raptor nests are found, construction activities shall not take place within 500 feet of the nest until the young have fledged. If active songbird nests are found, a 100-foot non-disturbance buffer shall be established. The non-disturbance buffers may be reduced if a smaller, sufficiently protective buffer is approved by the City after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, the nest occupants' habituation to existing or ongoing activity, and nest concealment (i.e., whether visual or acoustic barriers occur between the proposed activity and the nest). A qualified ornithologist may visit the nest, as needed, to determine when the young have fledged the nest and are independent of the site or the nest can be left undisturbed until the end of the nesting season.

If the nest buffer is reduced but construction activities cause a nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest in a way that would be considered a result of construction activities, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop the agitated behavior. The revised non-disturbance buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified ornithologist in consultation with the City.

Construction activities may only resume within the non-disturbance buffer after a follow-up survey by the ornithologist has been conducted and a report has been prepared indicating that the nest (or nests) are not active any longer, and that new nests have not been identified.

~~*4.6-3(b) All vegetation and structures with active nests shall be flagged and an appropriate non-disturbance buffer zone shall be established around the nest site. The size of the buffer zone shall be determined by the project biologist in consultation with CDFG and shall depend on the species involved, site conditions, and type of work to be conducted in the area.*~~

~~*4.6-3(c) A qualified biologist shall monitor active nests to determine when the young have fledged and are feeding on their own. The project biologist and CDFG shall be consulted for clearance before construction activities resume in the vicinity.*~~

New Mitigation Measure(s)

None required.

4.3-11 Have a substantial adverse effect, either directly or through habitat modifications, on roosting bats. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR evaluated potential impacts to special-status bat species, including pallid bat, Townsend's western big-eared bat, western red bat, hoary bat, and Yuma myotis bat, under Impact 4.6-4 and concluded that a significant impact could occur. The 2009 EIR noted that special-status bat species had the potential to roost in existing on-site structures and trees and found that any removal of buildings or trees hosting special-status bat species could result in injury or mortality. In order to address the potential impact, the 2009 EIR required Mitigation Measures 4.6-4(a) through 4.6-4(d), which necessitated a preconstruction survey within 30 days of tree or structure removal, as well as project redesign, roost avoidance, non-disturbance buffers, species eviction, and replacement roost procedures. With implementation of the

foregoing requirements, the 2009 EIR found that a less-than-significant impact would occur.

The currently proposed project includes the removal of buildings, structures, and trees within the project site and similarly has the potential to impact several roosting bat species, including western red bat, hoary bat, and pallid bat. Should such species be roosting in trees or structures proposed for removal as part of the proposed project, the foregoing species could be injured or killed. In addition, protected bat species roosting in trees adjacent to the proposed off-site sewer line extension, which was not included as part of the Wildhorse Ranch Project, could be subject to indirect disturbance associated with the proposed off-site improvements.

Based on the above, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on roosting bats, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

The 2009 EIR required Mitigation Measures 4.6-4(a) through 4.6-4(d) to reduce potential impacts to special-status bat species. The proposed project would be subject to the most up-to-date provisions to protect roosting bat species, as established in the BRA prepared for the currently proposed project. Thus, Mitigation Measures 4.6-4(a) through 4.6-4(d) from the 2009 EIR are modified, as applicable, and included under the Modified Mitigation Measure(s) subheading below.

Modified Mitigation Measure(s)

Modifications to Mitigation Measures 4.6-4(a) through 4.6-4(d) from the 2009 EIR are shown in ~~strikethrough~~ and double-underline below. Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.6-4~~(a)~~ *A pre-construction survey for roosting bats shall be performed by a qualified biologist within ~~30~~ 14 days prior to any removal of trees or structures on the site that would occur during the breeding season (April through August). A report summarizing the results of the preconstruction roosting bat survey shall be submitted for review and approval to the City of Davis Community Development and Sustainability Department. Surveys shall be repeated if project-related disturbance is delayed more than 14 days past previous survey date. If no active roosts are found, then no further action would be warranted. ~~If either a maternity roost or hibernacula (structures used by bats for hibernation) is present, the following mitigation measures shall be implemented.~~*

If roosting bats are found, exclusion shall be conducted by the qualified biologist in coordination with CDFW. Exclusion and bat habitat removal shall not occur during the breeding season in order to minimize disturbance to, or abandonment of, young bats. Methods may include acoustic monitoring, evening emergence

surveys, and the utilization of two-step tree removal supervised by the qualified biologist. Two-step tree removal involves removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree. Building exclusion methods may include such techniques as installation of passive one-way doors, or the installation of netting when the bats are not present to prevent their reoccupation. Once the bats have been excluded, tree or building removal may occur.

~~*4.6-4(b) If active maternity roosts or hibernacula are found in trees or structures which will be removed as part of project construction, the project shall be redesigned to avoid the loss of the tree or structure occupied by the roost to the extent feasible as determined by the City. If an active maternity roost is located and the project cannot be redesigned to avoid removal of the occupied tree or structure, demolition shall commence before maternity colonies form (i.e., prior to March 1) or after young are volant (flying) (i.e., after July 31). Disturbance-free buffer zones, as determined by a qualified biologist in coordination with CDFG, shall be observed during the maternity roost season (March 1 - July 31).*~~

~~*4.6-4(c) If a non-breeding bat hibernacula is found in a tree or structure scheduled for removal, the individuals shall be safely evicted, under the direction of a qualified biologist (as determined by a Memorandum of Understanding with CDFG), by opening the roosting area to allow airflow through the cavity. Demolition shall then follow at least one night after initial disturbance for airflow. This action should allow bats to leave during darkness, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. Trees or structures with roosts that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.*~~

~~*4.6-4(d) If special-status bats are found roosting within trees or structures on-site that require removal, appropriate replacement roosts shall be created at a suitable location on site or off site in coordination with a qualified biologist, CDFG, and the City.*~~

New Mitigation Measure(s)

None required.

4.3-12 Have a substantial adverse effect, either directly or through habitat modifications, on American badger. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR evaluated potential impacts to American badger under Impact 4.6-1 and concluded that a significant impact could occur. As discussed therein, suitable foraging habitat was located on-site, and the ground squirrel colonies located on-site and adjacent to the project site formed a large prey base. The 2009 EIR found that if individual American badgers were located on-site during construction activities, the species could be injured or killed. In order to address the potential impact, the 2009 EIR required Mitigation Measures 4.6-1(a) through 4.6-1(d), which necessitated preconstruction surveys and also included den excavation, blocking, and animal-relocation procedures, as well as requiring a worker-awareness program if the species was actively using the project site. The 2009 EIR determined that a less-than-significant impact would occur with implementation of the foregoing requirements.

The currently proposed project could result in the loss of 25.5 total acres of on-site ruderal areas and off-site California Annual Grassland Alliance land cover, both of which represent potential habitat for American badger. It should be noted that because the Wildhorse Ranch Project did not include installation of an off-site sewer line through the Wildhorse Agricultural Buffer, the currently proposed project includes a greater amount of potential habitat. Similar to the 2009 EIR, if the species is present during project construction, individuals could be directly impacted.

Based on the above, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on American badger, beyond what were previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

The 2009 EIR required Mitigation Measures 4.6-1(a) through 4.6-1(d) to reduce potential impacts to American badger. The proposed project would be subject to the most up-to-date provisions to protect American badgers, as established in the BRA prepared for the currently proposed project. Thus, Mitigation Measures 4.6-1(a) through 4.6-1(d) from the 2009 EIR are modified, as applicable, and included under the Modified Mitigation Measure(s) subheading below.

Modified Mitigation Measure(s)

Modifications to Mitigation Measures 4.6-1(a) through 4.6-1(d) from the 2009 EIR are shown in ~~strikethrough~~ and double-underline below. Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.6-1(a) ~~*A*~~ *Within 48 hours prior to the commencement of construction activities, a qualified biologist shall conduct pre-construction surveys for American badger in all construction areas identified as potential habitat located within the project area two weeks prior to initiation of construction activities. If American badger is not found, further mitigation shall not be required. If an American badger or active burrow, indicated by the presence of badger sign (i.e. suitable shape and burrow-size, scat) is found within the construction area during pre-construction surveys, the CDFG shall be consulted to obtain permission for animal relocation. A report summarizing the results of the preconstruction survey shall be submitted for review and approval to the City of Davis Community Development and Sustainability Department.*

~~*4.6-1(b) If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers from re-using them during construction.*~~

4.6-1(~~c~~b) If the qualified biologist determines that potential dens may be active, the entrances of the dens shall be blocked with soil, sticks, and debris for three to five days to discourage use of these dens prior to project disturbance. The den entrances shall be blocked to an incrementally greater degree over the three to five day period. After the qualified biologist determines that badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use during construction.

4.6-1(~~d~~c) If badger are determined to be actively using the site, a qualified biologist shall provide project contractors and construction crews responsible for site demolition and/or grading operations with a worker-awareness program before any ground disturbance work within the project area. This program shall be used to describe the species, its habits and habitats, its legal status and required protection, and all applicable mitigation measures.

New Mitigation Measure(s)
None required.

4.3-13 Have a substantial adverse effect on any riparian habitat or other Sensitive Natural Community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. Based on the analysis below, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR determined on pages 4.6-7 and 4.6-8 that Sensitive Natural Communities are not present within or adjacent to the project site. The project site was subject to mass disturbance that precluded any native vegetation communities, and site conditions did not include water ponding or seasonal flooding that could result in wetlands or watercourses to support a Sensitive Natural Community. Therefore, the 2009 EIR concluded that adverse effects on riparian habitat or other Sensitive Natural Communities would not occur.

Riparian habitat does not occur within the current project site boundaries, similar to the conclusions of the 2009 EIR. The current study area contains a portion of the Wildhorse Agricultural Buffer, where the off-site sewer line extension would be located (which was not included as part of the Wildhorse Ranch Project). This portion of the agricultural buffer includes a wooden plank bridge that crosses the off-site Channel A as part of the walking trail within the Wildhorse Agricultural Buffer. Riparian vegetation occurs at the bridge crossing within the 0.04-acre of Mixed Willow Alliance land cover and is dominated by Goodding's black willow, along with Fremont cottonwood and California wild grape (see Figure 4.3-2). In addition, the Mixed Willow Alliance land cover is included by the Yolo HCP/NCCP as part of the Valley Foothill Riparian Natural Community. However, according to the BRA, the proposed project would not result in disturbances to the riparian vegetation within the study area, as the proposed project would use jack-and-bore construction methods as part of installation of the off-site sewer line crossing underneath Channel A and the adjacent riparian zone. It should be noted that the jack and bore process is sometimes associated with an accidental release of drilling mud through a process known as a frac-out. Frac-out occurs during drilling operations and involves the inadvertent release of drilling fluids or slurry into materials other than the intended entry and exit points. According to the BRA, the injection of drilling mud would not be necessary during the jack-and-bore activities due to the alluvial soil types present. Therefore, the proposed project would not include risk of frac-out associated with boring activities.

Based on the above, the currently proposed project would not result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect on riparian habitat identified in local or regional plans, policies, regulations or by the CDFW or USFWS, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

None required.

4.3-14 Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Based on the analysis below, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or groundwater, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions.

The 2009 EIR concluded on pages 4.6-7 and 4.6-8 that the project site did not include aquatic habitats, and thus, potential impacts to State- or federally protected wetlands were not identified. As discussed therein, the project site included three soil units: Sycamore silt loam, drained; Sycamore silty clay loam, drained; and Tyndall very fine sandy loam, drained. The foregoing soils consist of somewhat poorly drained silty clay loams and fine sandy loams formed on alluvial fans. Where relatively undisturbed, but even where cultivated, such soils can support seasonal wetlands where poor drainage allows water to pond on the surface. However, such conditions did not appear present on-site.

The currently proposed project includes a total of 0.052-acre of aquatic resources mapped within the study area associated with the off-site Channel A, which is an increase in aquatic resources within the study area, as the proposed off-site sewer line extension was not included as part of the Wildhorse Ranch Project. Channel A ultimately flows into the Yolo Bypass and Sacramento River. As previously discussed, the portion of Channel A that runs through the northern portion study area outside of the project site boundaries would not be impacted by the proposed project during installation of the off-site sewer line necessary to establish sewer service for the proposed project, as the sewer line crossing of Channel A would be completed through a jack-and-bore process.

Based on the above, the currently proposed project would not result in a new significant impact or substantially more severe significant impact related to the project having a substantial adverse effect on State- or federally protected wetlands through direct removal, filling, hydrological interruption, or other means, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)
None required.

4.3-15 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. Based on the analysis below, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. Fragmentation also occurs when a portion of one or more habitats is converted into another habitat, such as when woodland or scrub habitat is altered or converted into grasslands after a disturbance, such as fire, mudslide, or grading activities. Wildlife corridors mitigate the effects of fragmentation by (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thereby reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The 2009 EIR did not identify potential impacts related to wildlife migratory corridors or use of the project site as a wildlife nursery site. As detailed on page 4.6-31 of the EIR, although the project site is adjacent to a section of the Wildhorse Agricultural Buffer, which provides relatively high-quality wildlife habitat that could use the open nature of the project site for foraging opportunities, the 2009 EIR ultimately determined that because the site is located adjacent to dense urban development, the site was unlikely to offer a corridor of movement between areas of suitable habitat for terrestrial species. In addition, because aquatic features were not present on-site, the 2009 EIR found that a potential impact to movement corridors for aquatic species would not occur.

The project site continues to be located adjacent to existing residential development to the north and west, and East Covell Boulevard to the south, which precludes use of the site as a migratory corridor for terrestrial species. In addition, due to the regularly disturbed nature of the project site's ruderal areas, which encompass the majority of the site, the site does not serve as a wildlife nursery site.

The Wildhorse Agricultural Buffer is used as a movement corridor by wildlife species for north-south movement through the area. The currently proposed project would include installation of an obstacle course within a narrow portion of the 135-foot-wide Wildhorse Agricultural Buffer adjacent to the project site's eastern boundary in the southernmost portion of the buffer, near the proposed USA Pentathlon Training Facility

and pool complex, as well as near East Covell Boulevard. The obstacle course would encroach into the movement corridor within the Wildhorse Agricultural Buffer; however, the obstacle course would be located between the western fence line associated with the proposed project and the existing gravel path. Although the obstacle course would be constructed within the Wildhorse Agricultural Buffer, adequate space would still exist for wildlife species to move through the corridor. Furthermore, the Wildhorse Agricultural Buffer is wider near the location of the proposed obstacle course due to existing configuration of the East Covell Boulevard undercrossing.

In addition, the proposed project would require a crossing of Channel A as part of installation of the off-site sewer line; however, the channel does not include flowing water year-round. Thus, use of Channel A as a migratory corridor for aquatic species is limited. In addition, the off-site sewer line would be installed below the existing gravel path, thereby ensuring any interference would not be substantial and removal of existing vegetation within the buffer would not be necessary for sewer line construction. As such, while the proposed sewer line and obstacle course improvements could interfere with wildlife movement through the Wildhorse Agricultural Buffer, it is reasonable to conclude that the interference would not be considered substantial, which is the significance threshold for this impact, pursuant to Appendix G of the CEQA Guidelines.

Based on the above, the currently proposed project would not result in a new significant impact or substantially more severe significant impact related to interfering substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impeding the use of native wildlife nursery sites, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

None required.

4.3-16 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR evaluated potential impacts related to tree removal under Impact 4.6-7 and concluded that a significant could occur. As discussed therein, the tree appraisal

of the site identified 51 trees of significance, 31 of which received a fair to good health rating; all others were rated in fair or poor health. In addition, 17 trees were considered unsuitable for preservation. Depending on the final site plan and extent of grading activities associated with the Wildhorse Ranch Project, tree removal could result in a significant impact. Therefore, the 2009 EIR required Mitigation Measures 4.6-7(a) through 4.6-7(c). Mitigation Measure 4.6-7(a) required preparation of a tree preservation plan to ensure compliance with various measures required by the City of Davis Tree Ordinance. Mitigation Measure 4.6-7(b) required preparation of a tree report, including descriptions of trees, protection procedures for preserved trees, and an explanation of tree care practices. Mitigation Measure 4.6-7(c) required tree replacement and replanting procedures, including payment to the City's Tree Preservation Fund. With implementation of the foregoing requirements, the 2009 EIR determined a less-than-significant impact would occur.

The currently proposed project, as detailed in the Arborist Survey Report conducted as part of the BRA (see Attachment G to the BRA), includes a total of 128 protected trees of significance in the study area. It should be noted that the current study area includes the off-site portion of the Wildhorse Agricultural Buffer to accommodate the sewer line extension included as part of the currently proposed project, which contains a large number of trees. The protected trees are comprised of three trees within the obstacle course area, 29 City trees along the public trail in the Wildhorse Agricultural Buffer, 30 street trees along either side of East Covell Boulevard, and 66 additional trees, which are shown in Figure 4.3-7 and summarized in Table 4.3-4. It should be noted that the walnut trees along East Covell Boulevard are in poor health.

Of the total number of trees within the study area, 18 are in "poor to dead" condition and recommended for removal. The remaining 110 trees are in "fair or better" condition and could be protected under the City's Tree Ordinance, thus, requiring a tree removal permit. Project construction is anticipated to require removal of 62 of the 110 potentially protected trees. Additionally, indirect effects from construction could occur to any trees that are avoided. The indirect effects could include compaction from adjacent construction, altered hydrology, or exposure to fungi or other pathogens. Therefore, the currently proposed project would be subject to Mitigation Measures 4.6-7(a) through 4.6-7(c) of the 2009 EIR to ensure the project complies with the provisions of Davis Municipal Code Chapter 37.

Based on the above, because the mitigation measures from the 2009 EIR would still apply to address tree removal within the current study area, the currently proposed project would not result in a new significant impact or substantially more severe significant impact related to conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

The following mitigation measures from the 2009 EIR have been modified to reflect the current City departments and/or officials that would be responsible for ensuring

satisfactory completion of the various requirements established therein. Modifications are shown in ~~strikethrough~~ and double-underline. Implementation of the following modified mitigation measures from the 2009 EIR would reduce the above potential impact to a *less-than-significant* level.

4.6-7(a) *Prior to commencement of construction-related activities for the project including, but not limited to, grading, staging of materials, or earthmoving activities, a tree preservation plan, in compliance with Ordinance 37.03.010 in the City of Davis Municipal Code, shall be submitted to the Community Development Department and ~~City Arborist~~ Public Works Department for review and approval, which shall ensure the following measures:*

- *Trees shall be cordoned off with chain link fence prior to construction as specified;*
- *Soil compaction under trees is to be avoided;*
- *The fence shall prevent equipment traffic and storage under the trees and should extend beyond the drip-line;*
- *Excavation within this zone shall be accomplished by hand, and roots ½" and larger shall be preserved;*
- *Proper fertilization and irrigation prior to and during the construction period shall be provided as specified;*
- *New landscaping under existing trees shall be carefully planned to avoid any grade changes and any excess moisture in trunk area. Existing plants which have compatible irrigation requirements and which complement the trees' color, texture and form are to be saved;*
- *Trenching within the drip-line shall be performed only with prior approval of the Park and General Services Department. Boring is preferred when feasible;*
- *All paving plans and specifications shall clearly prohibit the use of soil sterilants adjacent to preserved trees; and*
- *Grade changes greater than one foot within the drip-line shall be avoided, and nothing other than a saw shall be used for root cutting.*

4.6-7(b) *Prior to commencement of construction-related activities for the project including, but not limited to, grading, staging of materials, or earthmoving activities, a ~~sheet~~ page shall be included with the project plans, which indicates all of the trees identified. The tree report with corresponding descriptions of each tree by species, health, etc. should also be included. In addition, notes shall be included on the plans which clearly state protection procedures for trees that are to be preserved. Any tree care practices, such as cutting of roots, pruning the top, etc., shall be adequately described and shall have the approval of a representative of the ~~Parks and General Services~~ Public Works Utilities and Operations Department prior to execution. In the event of damage to existing trees, a penalty clause shall be replacement tree(s) of equal size in D.B.H.*

unless specified otherwise by the Parks and General Services Department.

4.6-7(c) *Trees identified on the site as Trees of Significance, that are proposed for removal, shall be replaced either on site or at a nearby site deemed acceptable by the Public Works Director ~~of the City of Davis Parks and General Services Department~~. The Director may require an in-lieu fee to be paid to the City of Davis Tree Preservation Fund instead of or in addition to tree replacement. The recommendations for avoidance of trees contained in Chapter 37 of the City of Davis Municipal Code (Tree Planting, Preservation, and Protection) should be adopted if feasible. If infeasible, the applicant should identify trees slated for removal on the site plan, including those with encroachments within 30-feet of the drip line of trees and develop a tree replacement plan that shall be reviewed and approved by the City prior to issuance of the grading permit. Tree replacement shall be implemented according to options outlined in Section 37.03.070 of the City's Municipal Code as follows:*

- *(i) Replanting a tree(s) on site: Trees shall be planted in number and size so that there is no net loss in tree diameter at breast height (DBH). For example, if one tree is removed with a 12-inch DBH size, mitigation may consist of a replacement of equal size, two trees each 6-inch DBH, or four trees each 3-inch DBH. The replanted tree(s) shall be minimum 5 gallon size and of a species that will eventually equal or exceed the removed tree in size.*
- *(ii) Replanting a tree(s) off site: If there is insufficient space on the property for the replacement tree(s), required planting shall occur on other property in the applicant's ownership or in City-owned open space or park, subject to the approval of the City Arborist and authorized property owners.*
- *(iii) Payment to the Tree Preservation Fund in lieu of replacement: If in the City Arborist's determination no feasible alternative exists to plant the required mitigation, or there are other considerations for alternative mitigation, the applicant shall pay into the Tree Preservation Fund an amount determined by the Director based upon the ISA appraisal guidelines or other approved method. If the Director approves another method of appraisal guideline, the Director shall publish notice of that approval and notify the permit applicant at the time the permit application is issued.*

New Mitigation Measure(s)

None required.

4.3-17 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Based on the analysis below and with implementation of mitigation, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The Yolo HCP/NCCP was adopted after the 2009 EIR was certified, and thus, was not included as part of the 2009 evaluation.

Applicants of development projects within the Yolo HCP/NCCP permit area are required to complete a Yolo HCP/NCCP application package, which includes an application form, a project description, land cover mapping and planning-level surveys, verification of land cover impacts, an AMM plan, and fees or equivalent mitigation. Land cover conversion fees, in effect at time of payment, would be applied for the proposed project's land cover impacts, in accordance with Yolo HCP/NCCP guidelines.

In addition, pursuant to Yolo HCP/NCCP Chapter 4, the Yolo HCP/NCCP AMMs are intended to ensure that adverse effects on Covered Species and natural communities are avoided and minimized. As previously discussed in this chapter in the species-specific analyses of potential impacts that could occur to Yolo HCP/NCCP Covered Species, the proposed project would be subject to the applicable Yolo HCP/NCCP AMMs. However, without compliance with the aforementioned provisions of the Yolo HCP/NCCP, the project would result in a significant impact.

Based on the above, without compliance with all applicable AMMs set forth by the Yolo HPC/NCCP, the currently proposed project could result in a new significant impact or substantially more severe significant impact related to conflicts with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan, beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

SEIR 4.3-17(a) *Yolo HCP/NCCP AMM3: Where natural communities and covered species habitat are present, workers will confine land clearing to the minimum area necessary to facilitate construction activities. Workers will restrict movement of heavy equipment to and from the*

project site to established roadways and driveways to minimize natural community and covered species habitat disturbance. The project proponent will clearly identify boundaries of work areas using temporary fencing or equivalent and will identify areas designated as environmentally sensitive. All construction vehicles, other equipment, and personnel will avoid these designated areas.

SEIR 4.3-17(b) *Yolo HCP/NCCP AMM4: To prevent injury and mortality of giant garter snake, western pond turtle, and California tiger salamander, workers will cover open trenches and holes associated with implementation of covered activities that affect habitat for these species or design the trenches and holes with escape ramps that can be used during non-working hours. The construction contractor will inspect open trenches and holes prior to filling and contact a qualified biologist to remove or release any trapped wildlife found in the trenches or holes.*

SEIR 4.3-17(c) *Yolo HCP/NCCP AMM5: Workers will minimize the spread of dust from work sites to natural communities or covered species habitats on adjacent lands.*

SEIR 4.3-17(d) *Yolo HCP/NCCP AMM6: All construction personnel will participate in a worker environmental training program approved/authorized by the Conservancy and administered by a qualified biologist. The training will provide education regarding sensitive natural communities and covered species and their habitats, the need to avoid adverse effects, state and federal protection, and the legal implications of violating the FESA and NCCPA Permits. A pre-recorded video presentation by a qualified biologist shown to construction personnel may fulfill the training requirement.*

SEIR 4.3-17(e) *Yolo HCP/NCCP AMM7: Workers will direct all lights for nighttime lighting of project construction sites into the project construction area and minimize the lighting of natural habitat areas adjacent to the project construction area.*

SEIR 4.3-17(f) *Yolo HCP/NCCP AMM8: Project proponents should locate construction staging and other temporary work areas for covered activities in areas that will ultimately be a part of the permanent project development footprint. If construction staging and other temporary work areas must be located outside of permanent project footprints, they will be located either in areas that do not support habitat for covered species or are easily restored to prior or improved ecological functions (e.g., grassland and agricultural land). Construction staging and other temporary work areas located outside of project footprints will be sited in areas that avoid adverse effects on the following:*

- *Serpentine, valley oak woodland, alkali prairie, vernal pool complex, valley foothill riparian, and fresh emergent wetland land cover types.*
- *Occupied western burrowing owl burrows.*
- *Nest sites for covered bird species and all raptors, including noncovered raptors, during the breeding season.*

Project proponents will follow specific AMMs for sensitive natural communities (Section 4.3.3, Sensitive Natural Communities) and covered species (Section 4.3.4, Covered Species) in temporary staging and work areas. For establishment of temporary work areas outside of the project footprint, project proponents will conduct surveys to determine if any of the biological resources listed above are present. Within one year following removal of land cover, project proponents will restore temporary work and staging areas to a condition equal to or greater than the covered species habitat function of the affected habitat. Restoration of vegetation in temporary work and staging areas will use clean, native seed mixes approved by the Conservancy that are free of noxious plant species seeds.

SEIR 4.3-17(g) *To ensure avoidance and minimization of impacts to the species covered by the Yolo HCP/NCCP, which could be impacted by the project, the project applicant shall obtain coverage under the Yolo HCP/NCCP for on-site, and as may be determined necessary by Yolo Habitat Conservancy, for off-site infrastructure work, for each phase of development. In addition to payment of any applicable HCP/NCCP fees, the applicant shall implement Yolo HCP/NCCP Avoidance and Minimization Measures identified in Mitigation Measures SEIR 4.3-3, SEIR 4.3-5, SEIR 4.3-6, SEIR 4.3-7, 4.6-2, 4.6-5, and SEIR 4.3-17(a) through SEIR 4.3-17(f).*

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The geographic scope for the cumulative biological resources analysis generally includes buildout of the proposed project in conjunction with the development of the Davis General Plan planning area, as well as a list of present and probable future projects. For more details regarding the cumulative setting, refer to Chapter 5, Statutorily Required Sections, of this SEIR.

4.3-18 Cumulative loss of habitat for special-status species. Based on the analysis below, the currently proposed project would not result in a new significant impact or substantially more severe significant impact beyond what was previously identified in the 2009 EIR.

The 2009 EIR concluded that, while additional impacts may result from the development of individual projects within the City and surrounding areas, impacts to biological resources related to future growth and the ongoing urbanization of the area would be mitigated to a less-than-significant level by mitigation measures required of the future developments, such as the mitigation measures included in the 2009 EIR. In addition, the 2009 EIR concluded that the policies and guidelines established by the City of Davis and the, at the time, impending Yolo HCP/NCCP (once adopted) would further reduce cumulative impacts.

The cumulative analysis in this EIR is based upon development of the proposed project in conjunction with buildout of the Davis General Plan planning area, as well as a list of present and probable future projects. In addition to the proposed project, Shriner's Property, a 234-acre residential subdivision project located east of the proposed project, across the Wildhorse Agricultural Buffer and outside of the City limits, is currently under review by the City. The Village Farms Davis Project, a mixed-use neighborhood development including single- and multi-family residential villages on 497.6-acre project site north of East Covell Boulevard and west of Pole Line Road, is also under review by the City.

Other development projects undergoing planning review are located in the southern portion of the City, including two new multi-family residential apartment buildings, a new commercial hotel building, and a 700-unit residential neighborhood located on the 46.9-acre site formerly known as the Nishi Housing Site. The Bretton Woods University Retirement Community project, located northwest of the West Covell Boulevard/Risling Place intersection, is currently under construction. Finally, though rejected by the voters, the City of Davis previously approved the Davis Innovation and Sustainability Campus (DiSC) 2022 Project, which was proposed for a 102-acre site (plus the 16.5-acre Mace Triangle property) located immediately to the east of Mace Boulevard and to the north of CR 32A, northeast of the City limits. Buildout of the proposed project, in combination with the foregoing development projects and other development within the City of Davis, would result in a significant cumulative impact related to the loss of special-status species habitat.

The study area is comprised of a variety of Yolo HCP/NCCP land covers, including Bulrush-Cattail Freshwater Marsh Alliance, Mixed Willow Alliance, Urban, Urban Ruderal with Covered Species Habitat, Vegetated Corridor, and California Annual Grassland Alliance land covers. In addition, the study area includes an intermittent drainage known as Channel A. As discussed throughout this chapter, the foregoing areas represent potential habitat for various special-status species listed in Table 4.3-3.

This chapter provides a wide range of mitigation to minimize potential adverse effects associated with the proposed project to habitat for special-status species. For

example, mitigation measures have been set forth in this chapter to ensure that the proposed project complies with all applicable Yolo HCP/NCCP AMMs, including, but not limited to, AMMs to address potential impacts to Yolo HCP/NCCP Covered Species, such as VELB, northwestern pond turtle, giant garter snake, tricolored blackbird, burrowing owl, Swainson's hawk, and white-tailed kite, as well as general construction, operations, and maintenance AMMs. In addition, the proposed project would be required to pay land cover conversion fees to with the Yolo Habitat Conservancy, which are anticipated to total an estimated $414,771.20 and would further reduce any potential impacts to biological resources.

With respect to special-status species that are not covered under the Yolo HCP/NCCP, such as bristly sedge, San Joaquin spearscale, monarch butterfly, northern harrier, western red bat, hoary bat, pallid bat, and American badger, this chapter sets forth mitigation to ensure that potential impacts are reduced to a less-than-significant level. For example, preconstruction plant and wildlife surveys would be conducted, non-disturbance buffers maintained, and all applicable permits, such as a tree removal permit, would be acquired. In addition, it should be noted that while the proposed project would result in the loss of a portion of the existing on-site habitat, the project would include a total of 2.76 acres of open space preserved on-site and 0.46-acre of trails.

Overall, with incorporation of the mitigation measures set forth herein, the proposed project would be required to comply with all applicable Yolo HCP/NCCP AMMs and pay all applicable land cover conversion fees to address Covered Activities within the study area. The mitigation measures set forth herein additionally address potential impacts to biological resources that are not covered under the Yolo HCP/NCCP. As such, the proposed project would not result in a substantial adverse effect to biological resources protected by CEQA.

Additionally, the Yolo HCP/NCCP requires the Yolo Habitat Conservancy to protect approximately 33,300 acres over 50 years, primarily through the acquisition of habitat conservation easements on agricultural land funded with development fees paid by project proponents. The Yolo HCP/NCCP coordinates conservation efforts to ensure that the lands are selected consistent with a conservation strategy based on biological criteria, including the selection of lands that provide habitat to multiple species and are located near existing protected lands and riparian areas. The Yolo Habitat Conservancy regularly consults with the CDFW and the USFWS to ensure that the Yolo HCP/NCCP is successfully and sustainably implemented. As such, the Yolo HCP/NCCP functions as the regional strategy for preserving natural habitat, and compliance with the Yolo HCP/NCCP would prevent cumulative impacts. It should be noted that projects within the City limits, including project associated with buildout of the Davis General Plan planning area, as well as the list of present and probable future projects, would all be required to comply with the Yolo HCP/NCCP.

Based on the above, although cumulative buildout of the City of Davis would result in a significant cumulative impact related to the loss of special-status species habitat, the currently proposed project's contribution to the significant impact, through incorporation of the mitigation measures set forth herein, would not result in a new significant impact or substantially more severe significant impact related to the

cumulative loss of special-status species habitat beyond what was previously identified in the 2009 EIR.

Applicable Mitigation Measure(s) from the 2009 EIR

None applicable.

Modified Mitigation Measure(s)

None required.

New Mitigation Measure(s)

None required.