

This section describes the regulatory setting, regional biological resources, and impacts that are likely to result from Project implementation. This section is based in part on the following technical studies and field survey:

- *Draft Davis Innovation Center Biological Technical Report* (AECOM, 2014);
- *Arborist Report: WDAAC Project, Davis, CA* (Tree Associates, 2017);
- *Arborist Report Addendum: WDAAC Project, Davis, CA* (Tree Associates, 2017);
- Field survey by De Novo Planning Group staff biologist, Steve McMurtry (October 2017).

The analysis contained in this section is intended to be at a project-level, and covers impacts associated with development of the entire site to an urban use.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: Russ Kanz and Toni Terhaar (May 4, 2017), Yolo Local Agency Formation Commission (LAFCo) (May 11, 2017), Craighton Chin (April 27, 2017), Susan Garbini (April 24, 2017), and County of Yolo (April 18, 2017). Each of the comments related to this topic are addressed within this section.

3.4.1 ENVIRONMENTAL SETTING

REGIONAL SETTING

The project site is located within the southern portion of the Sacramento Valley bioregion, and just north of the Bay/Delta bioregion. The Sacramento Valley bioregion is a watershed of the Sierra Nevada that encompasses the northern end of the great Central Valley, stretching from Redding to Yolo and Sacramento County. The bioregion is generally flat, and is rich in agriculture. The bioregion has a climate that is characterized by hot dry summers and cool wet winters. Historically, oak woodlands, riparian forests, vernal pools, freshwater marshes, and grasslands have been the major natural vegetation of the bioregion; however, much of the region has been converted to agricultural uses. This bioregion is the most prominent wintering area for waterfowl, attracting significant numbers of ducks and geese to its seasonal marshes along the Pacific Flyway. Species include northern pintails, snow geese, tundra swans, sandhill cranes, mallards, grebes, peregrine falcons, heron, egrets, and hawks. Black-tailed deer, coyotes, river otters, muskrats, beavers, ospreys, bald eagles, salmon, steelhead, and swallowtail butterflies are some of the wildlife that are common in this bioregion.

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM

The California Wildlife Habitat Relationships (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. When first published in 1988, the classification scheme had 53 habitats. At present, there are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated.

3.4 BIOLOGICAL RESOURCES

The Sacramento Valley region is considered to have low biological diversity due to the conversion of native habitat to agricultural and urban uses. As shown in Figure 3.4-1, the CWHR shows the project site as having the following habitats on the project site: Cropland (11.08 acres), Dryland Grain Crop (62.37 acres), and Irrigated Hayfield (1.49 acres). Below is a brief description of these CWHR habitats.

Cropland habitats are located on flat to gently rolling terrain. When flat terrain is put into crop production, it usually is leveled to facilitate irrigation. Rolling terrain is either dry farmed or irrigated by sprinklers. Vegetation in this habitat includes a variety of sizes, shapes, and growing patterns. Field corn can reach ten feet while strawberries are only a few inches high. Although most crops are planted in rows, alfalfa hay and small grains (rice, barley, and wheat) form dense stands with up to 100 percent canopy closure. Most croplands support annuals, planted in spring and harvested during summer or fall. In many areas, second crops are commonly planted after harvesting the first. Wheat is planted in fall and harvested in late spring or early summer. Overwintering of sugar beets occurs in the Sacramento Valley, with harvesting in spring after the soil dries.

Dryland Grain Crop habitats are often located on flat to gently rolling terrain. When flat terrain is put into crop production, it usually is leveled to facilitate irrigation. Rolling terrain is either dry farmed or irrigated by sprinklers. Vegetation in the dryland (nonirrigated) grain and seed crops habitat includes seed producing grasses, primarily barley, cereal rye, oats, and wheat. These seed and grain crops are annuals. They are usually planted by drilling in rows which produce solid stands, forming 100 percent canopy at maturity in good stands. They are normally planted in fall and harvested in spring. However, they may be planted in rotation with other irrigated crops and winter wheat or barley may be planted after harvest of a previous crop in the fall, dry farmed (during the wet winter and early spring months), and then harvested in late spring.

Irrigated Hayfield habitats occur in variable climates, from hot and dry to cool and wet to cold and snowy. This habitat type requires relatively flat topography that allows irrigation or water spreading. Except for 2 to 6 months initial growing period, depending on climate, and soil, this habitat is dense, with nearly 100 percent cover. Average height is about 0.46 meters (1.5 feet) tall. Planted fields generally are monocultures (the same species or mixtures or a few species with similar structural properties). Structure changes to a lower stature following each harvest, grows up again and reverts to bare ground following plowing or discing. Plowing may occur annually, but is usually less often. Layering generally does not occur in this habitat. Unplanted "native" hay fields may contain short and tall patches. If not harvested for a year, they may develop a dense thatch of dead leaves between the canopy and the ground.

LOCAL SETTING

The project site consists of approximately 74 acres located northwest and adjacent to the City of Davis within the City of Davis Sphere of Influence (SOI) of unincorporated Yolo County. The project site is bounded by existing agricultural land within unincorporated Yolo County (within the City's SOI) to the west, nine mapped but undeveloped 13- to 23-acre residential lots to the north, the

Sutter Davis Hospital and Risling Court to the east, and West Covell Boulevard to the south. The project site can be identified by Yolo County Assessor's Parcel Number (APN) 036-060-05.

The project site is currently undeveloped and has been previously used for agricultural uses. The site is nearly level at an elevation of approximately 47 to 50 feet above mean sea level (MSL). Figure 2.0-4 shows the U.S. Geological Survey (USGS) topographic map. Existing trees are located along the western and eastern project site boundaries, as well as within the southeastern corner of the site. Risling Court, an existing public access roadway to the Sutter Davis Hospital, is located along the southernmost portion of the eastern project site boundary. An existing drainage channel (known as the Covell Drain) conveys runoff from west to east north of Covell Boulevard. Frontage improvements along Covell Boulevard are limited but include a bus shelter, a section of curb, and traffic signs and signals.

The project site has developed or partially developed land uses on three sides. The land directly to the north of the project site is Binning Ranch, an improved, final mapped, but unbuilt residential area planned for nine 13- to 23-acre residential lots. Further north is a single-family rural residential development known as the Binning Farms community. Public/Semi-Public land uses such as Sutter Davis Hospital, Sutter Medical Foundation, North Davis Water Tank, and the Sutter Drainage Pond are located directly adjacent to the project site to the east. Further to the east are existing developed General Commercial land uses located west of SR 113 and east of John Jones Road. The parcels south of West Covell Boulevard are designated Residential – High Density by the City's General Plan (including the University Retirement Community and the Saratoga West Apartments). Residential – Low Density land uses also exist south of the project site (including the Evergreen and Aspen Neighborhoods). Additionally, land west of the project site consists of agricultural uses and fallow land with a few ranchette-style single family homes and associated structures located along County Road (CR) 99.

SPECIAL-STATUS SPECIES

Special-status species are generally defined as: 1) species listed as a candidate, threatened, or endangered under the federal or state Endangered Species Act; 2) species considered rare or endangered under the California Environmental Quality Act; 3) plants considered "rare, threatened, or endangered in California" by the California Native Plant Society (Lists 1B); 4) animal listed as "species of special concern" by the state; and 5) animals fully protected in California by the Fish and Game Code.

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDDB), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants, the U.S. Fish and Wildlife Service's (USFWS) endangered and threatened species lists, and observations from local experts. The background search was regional in scope and focused on the documented occurrences within the 9-quadrangle radius of the project site, which includes the following USGS quadrangles: Madison, Woodland, Grays Bend, Winters, Merritt, Davis, Allendale, Dixon, and Saxon.

3.4 BIOLOGICAL RESOURCES

The search revealed 51 special-status species within the region: 20 plants, and 32 animals. Table 3.4-1 provides a list of special-status plant species that are documented in the region, their habitat, potential for project site occurrence, and current protective status. Table 3.4-2 provides a list of special-status wildlife species that are documented in the region, their habitat, potential for project site occurrence, and current protective status. Figure 3.4-2 illustrates the general location of these records maintained by the CNDDDB.

TABLE 3.4-1: SPECIAL-STATUS PLANTS WITHIN 9-QUADRANGLE REGION FOR PROJECT SITE

PLANT	STATUS (FED;CA; CNPS)	HABITAT ASSOCIATION	BLOOMING PERIOD	POTENTIAL FOR OCCURRENCE
<i>Astragalus tener</i> var. <i>ferrisiae</i> Ferris' milk-vetch	--;--;1B.1	Meadows, seeps, foothill and valley grasslands. Usually found in subalkaline flats.	April to May	Not expected to occur; no suitable habitat.
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	--;--;1B.2	Favors alkaline playas, valley and foothill grasslands, and vernal pools. Also occurs in open, alkaline and seasonally moist meadows from 0 to 200 feet.	March to June	Not expected to occur; no suitable vernal pool habitat.
<i>Atriplex cordulata</i> var. <i>cordulata</i> heartscale	--;--;1B.2	Grows in grasslands with sandy alkaline or saline soils. Favors chenopod scrub, meadows, seeps, valley and foothill grasslands.	April to October	Low potential to occur; marginal habitat and soils present on-site; CNDDDB records within 3 miles of the site.
<i>Atriplex depressa</i> brittlescale	--;--;1B.2	Prefers meadows or grasslands with alkaline or saline clay soils. Also favors vernal pools, meadows and seeps, and grasslands.	April to October	Low potential to occur; marginal habitat and soils present on-site; CNDDDB records within 3 miles of the site.
<i>Extriplex joaquiniana</i> San Joaquin spearscale	--;--;1B.2	Found in seasonal alkali wetlands or alkali sink scrub. Favors chenopod scrub, playas, valley and foothill grasslands and meadows and seeps.	April to October	Low potential to occur; marginal habitat and soils present on-site; CNDDDB records within 3 miles of the site.
<i>California macrophylla</i> round-leaved filaree	--;--;1B.2	Species found in cismontane woodlands, valley and foothill grassland with clay soils.	March to May	Not expected to occur; outside elevational range.
<i>Chloropyron palmatum</i> palmate-bracted salty bird's-beak	FE;CE;1B.1	Species is restricted to seasonally-flooded, saline-alkali soils in lowland plains/basins at elevations below 500 ft. Favors chenopod scrub and valley and foothill grasslands.	May to October	Low potential to occur; marginal habitat present on-site; No CNDDDB records within 3 miles of the site.
<i>Fritillaria pluriflora</i> adobe-lily	--;--;1B.2	Grows in chaparral, cismontane woodland, or foothill grasslands with clay or serpentine soils. Found at elevations of 60-705 meters.	February to April	Not expected to occur; outside elevational range.
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i> woolly rose-	--;--;1B.2	Marshes and swamps (freshwater). Moist, freshwater-soaked river banks and low peat islands in sloughs; can also occur on riprap and levees. In California.	June to September	Not expected to occur; no suitable habitat.

PLANT	STATUS (FED;CA; CNPS)	HABITAT ASSOCIATION	BLOOMING PERIOD	POTENTIAL FOR OCCURRENCE
mallow		Found at elevations of 0-120 meters.		
<i>Lepidium latipes</i> var. <i>heckardii</i> Heckard's pepper-grass	--;;1B.2	This annual prefers valley and foothill grasslands with alkaline soils. Found at elevations of 2-200 meters.	March to May	Not expected to occur; no suitable habitat.
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	--;CR;1B.1	Prefers brackish or freshwater swamps, intertidal marshes, and riparian scrub at or below 35 feet.	April to November	Not expected to occur; no suitable habitat.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	--;;1B.1	This annual herb grows in vernal pools, cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grasslands. Can be found at elevations of 5-1740 meters.	April to July	Not expected to occur; no suitable habitat.
<i>Neostapfia colusana</i> Colusa grass	FT;CE;1B.1	Vernal pools or other seasonal wetlands. Found at elevations of 5-200 meters.	May to August	Not expected to occur; no suitable habitat.
<i>Plagiobothrys hystriculus</i> bearded popcorn-flower	--;;1B.1	Vernal pools or other seasonal wetlands. Found at elevations of 0-274 meters.	April to May	Not expected to occur; no suitable habitat.
<i>Puccinellia simplex</i> California alkali grass	--;;1B.2	Meadows and seeps, chenopold scrub, valley and foothill grasslands, vernal pools. Alkaline, vernal mesic. Sinks, flats, and lake margins. 2-930 meters.	March to May	Not expected to occur; no suitable habitat.
<i>Trifolium hydrophilum</i> saline clover	--;;1B.2	Grows in marshes, swamps, and vernal pools with alkaline soils. This annual herb can be found at elevations of 0-300 meters.	April to June	Low potential to occur; marginal habitat present on-site; No CNDDB records within 3 miles of the site.
<i>Tuctoria mucronata</i> Crampton's tuctoria	FE;CE;1B.1	Vernal pools or other seasonal wetlands. This annual herb can be found at elevations of 5-10 meters.	April to August	Not expected to occur; no suitable habitat.
<i>Eryngium jepsonii</i> Jepson's coyote-thistle	--;;1B.2	Vernal pools or other seasonal wetlands such as valley and foothill grasslands. Mostly found in clay habitats at elevations of 3-300 meters.	April to August	Not expected to occur; no suitable habitat.
<i>Delphinium recurvatum</i> Recurved larkspur	--;;1B.2	This perennial herb is found in alkaline soils typically in chenopod scrub, cismontane woodland, and valley and foothill grasslands. Found at elevations of 3-790 meters.	March to June	Low potential to occur; marginal habitat present on-site; No CNDDB records within 3 miles of the site.
<i>Downingia pusilla</i> Dwarf downingia	--;;2B.2	Annual herb found in vernal pools and valley and foothill grasslands (mesic). At elevations of 1-445 meters.	March to May	Not expected to occur; no suitable habitat.

SOURCE: CDFW CNDDB 2017.

Federal Lists

- FE Federal Endangered
- FT Federal Threatened
- FC Federal Candidate
- FPD Federal proposed for delisting
- FPT Federal proposed threatened
- FD Federal delisted

California Rare Plant Ranks (formerly CNPS Lists)

- 1B CNPS - Rare, Threatened, or Endangered

- 2B CNPS - Rare, Threatened, or Endangered in California, But More Common Elsewhere

State Lists

- CE California Endangered Species
- CT California Threatened
- CD California Delisted
- CR California Rare
- CSC CDFW Species of Special Concern
- CC State candidate for listing

3.4 BIOLOGICAL RESOURCES

TABLE 3.4-2: SPECIAL-STATUS ANIMALS WITHIN 9-QUADRANGLE REGION FOR PROJECT SITE

<i>ANIMAL</i>	<i>STATUS (FED;CA)</i>	<i>HABITAT ASSOCIATION</i>	<i>POTENTIAL FOR OCCURRENCE</i>
MAMMALS			
<i>Antrozous pallidus</i> pallid bat	--;SSC	Roosts in rock outcrops, hollow trees, abandoned mines, barns, and attics.	Moderate potential to occur. Suitable foraging and roosting habitats present on-site. There is one CNDDDB record within 3 miles of the site.
<i>Lasionycteris noctivagans</i> silver-haired bat	--;--	Roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. It forages in open wooded areas near water features.	Moderate potential to occur. Suitable foraging and roosting habitats present on-site, but no water sources are located on-site. There is one CNDDDB record within 2 miles of the site from 1957.
<i>Lasiurus cinereus</i> hoary bat	--;--	Prefer older large leaf trees such as cottonwoods, willows, and fruit/nut trees for daytime roosts. Often found in association with riparian corridors. Need open spaces to forage.	Moderate potential to occur. Suitable foraging and roosting habitats present on-site. There is one CNDDDB record within 2 miles of the site from 1991.
<i>Lasiurus blossevillii</i> Western red bat	--;SSC	Prefers edges that have trees for roosting as well as open areas. Requires water. Feeds on a multitude of insects. Roosts primarily in trees and sometimes in shrubs but less often. Roost 2-40 ft above the ground.	Moderate potential to occur. Suitable foraging and roosting habitats present on-site, but no water sources are located on-site. Agricultural land use likely precludes this species from majority of the site. There are no CNDDDB record within 5 miles of the site.
<i>Taxidea taxus</i> American badger	--;SSC	This species prefers dry open fields, grasslands, and pastures. From high alpine meadows to sea level.	Low potential to occur. Suitable foraging habitat present on-site, but no suitable burrows were found during site assessment. Agricultural land use likely precludes this species from majority of the site. There is one CNDDDB record within 3 miles of the site.
<i>Myotis yumanensis</i> Yuma myotis	--;--	Range from juniper and riparian woodlands to the desert near open water sources. Found near rivers, streams, ponds, etc. Temperate and terrestrial habitats.	Moderate potential to occur. Suitable foraging and roosting habitats present on-site. There are no CNDDDB record within 5 miles of the site.
BIRDS			
<i>Agelaius tricolor</i> tricolored blackbird	--;CE	Colonial nester in cattails, bulrush, or blackberries associated with wetland or drainage habitats. Also need foraging areas such as grasslands or agricultural pastures.	Moderate potential to occur. Suitable nesting and foraging habitat present. One CNDDDB record within 3 miles of the site.
<i>Ammodramus savannarum</i> Grasshopper sparrow	--;SSC	Prefer open grasslands with barren ground for foraging. Tend to be found in areas with vegetation and scrub cover especially in grasslands and prairies.	Moderate potential to occur. Suitable foraging habitat present. There are no CNDDDB record within 5 miles of the site.
<i>Athene cunicularia</i> burrowing owl	--;SSC	Nests in abandoned ground squirrel burrows associated with open grassland habitats. Found in areas with sparse	High potential to occur. Suitable nesting and foraging habitat present on-site.

ANIMAL	STATUS (FED;CA)	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
		vegetation and few trees.	Ground squirrel burrows observed during site survey. Several CNDDDB records within 3 miles of the site.
<i>Buteo Swainsoni</i> Swainson's hawk	--;CT	Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pasture, and grassland often near riparian corridors.	High potential to occur. Suitable nesting and foraging habitat present on-site. Old raptor nest in walnut tree observed during site assessment. Numerous CNDDDB records within 3 miles of the site.
<i>Charadrius alexandrinus nivosus</i> western snowy plover	FT;SSC	Sandy beaches, salt pond levees and shores of large alkali lakes with friable sandy or gravelly soils. Large sandy rivers and lakes with sparse vegetation.	No potential to occur. Habitat not present.
<i>Charadrius montanus</i> mountain plover	--;SSC	Species nests/breeds in the Great Basin and migrates to California in the winter. It prefers grasslands and farmlands where it forages for insects.	Low potential to occur. Suitable foraging habitat present. There are no CNDDDB record within 5 miles of the site.
<i>Circus cyaneus</i> Northern harrier	--;SSC	Found mostly in open habitats. Reside in fields, savannas, meadows, marshes, prairies and deserts. The largest populations tend to be in dense and low vegetative areas.	Moderate potential to occur. Suitable nesting and foraging habitat present on-site. One CNDDDB record within 3 miles of the site.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FT;CE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape.	No potential to occur. Habitat not present.
<i>Elanus leucurus</i> white-tailed kite	--;FP	Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	High potential to occur. Suitable nesting and foraging habitat present. There is a CNDDDB record for this species on the Project site.
<i>Falco columbarius</i> merlin	--;WL	It is not known to nest in California, but it is a winter transient throughout most of California with wintering populations in the Central Valley. Avoid dense forests and inhabit fairly open land.	Moderate potential to occur. Suitable foraging habitat present.
<i>Melospiza melodia</i> song sparrow ("Modesto" population)	--;SSC	Emergent freshwater marshes dominated by tules and cattails as well as riparian willow thickets. Nest in riparian forests of valley oak with a sufficient understory of blackberry, along vegetated irrigation canals and levees, and in recently planted valley oak restoration sites.	Low to Moderate potential to occur. Suitable foraging habitat present.
<i>Nycticorax nycticorax</i> Black-crowned night heron	--;--	Found mostly within large wetland habitats such as swamps, streams, rivers, marshes, and mud flats. Typically found at the edges of bodies of water with over grown vegetation.	Low to Moderate potential to occur. Suitable foraging habitat present. Irrigation ditches provide some potential habitat.
<i>Plegadis chihi</i> white-faced ibis	--;WL	Forages and nests in fresh-water marshes with heavy growths of tules.	Low to Moderate potential to occur. Suitable foraging habitat present. Irrigation ditches provide some potential habitat.

3.4 BIOLOGICAL RESOURCES

<i>ANIMAL</i>	<i>STATUS (FED;CA)</i>	<i>HABITAT ASSOCIATION</i>	<i>POTENTIAL FOR OCCURRENCE</i>
<i>Riparia riparia</i> Bank swallow	--;CT	Prefer to nest along banks or bluffs along rivers or coastal areas. Prefer low gradient and meandering rivers or bodies of water.	No potential to occur. Habitat not present.
AMPHIBIANS & REPTILES			
<i>Ambystoma californiense</i> California tiger salamander	FT;CT	Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	No potential to occur; no suitable breeding habitat present on-site. Active disking on-site for agriculture likely precludes use of site as upland refugia habitat. There is one CNDDB occurrence within 3 miles of the site.
<i>Emys marmorata</i> western pond turtle	--;SSC	Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests.	Low potential to occur. Marginal habitat present within Covell Drainage Canal. There are several CNDDB records for this species within 3 miles of the site.
<i>Thamnophis gigas</i> giant garter snake	FT;CT	Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	Low potential to occur. Marginal habitat present within Covell Drainage Canal, but no habitat connectivity to known populations. There are CNDDB records for this species within 3 miles of the site.
FISH			
<i>Spirinchus thaleichthys</i> longfin smelt	FC;CT	Euryhaline, nektonic, and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater. They spend their adult life in bays, estuaries, and nearshore coastal areas, and migrate into freshwater rivers to spawn.	No potential to occur. Habitat not present.
<i>Oncorhynchus mykiss irideus</i> steelhead - Central Valley DPS	FT;--	Populations in the Sacramento and San Joaquin Rivers and their tributaries. Free of heavy sedimentation with adequate flow and cool, clear water. Gravel that is between 0.5 to 6.0 inches in diameter, dominated by 2 to 3-inch gravel. Escape cover such as logs, undercut banks, and deep pools for spawning adults.	No potential to occur. Habitat not present.
<i>Pogonichthys macrolepidotus</i> Sacramento splittail	--;SSC	Adults migrate upstream from brackish areas to spawn in freshwater on submerged vegetation in temporarily flooded upland and riparian habitat in the lower reaches of rivers, bypasses, sloughs. The young remain in shallow, weedy areas inshore near spawning sites and move to deeper offshore habitat as they mature.	No potential to occur. Habitat not present.
INVERTEBRATES			
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE;--	Vernal pools or other seasonal wetlands.	No potential to occur. Habitat not present.

ANIMAL	STATUS (FED;CA)	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	FT;--	Vernal pools or other seasonal wetlands. Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County.	No potential to occur. Habitat not present.
<i>Branchinecta mesovallensis</i> midvalley fairy shrimp	--;--	Vernal pools or grass-bottomed swales ranging from 4 to 660 square feet.	No potential to occur. Habitat not present.
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	FT;--	Dependent upon elderberry plant (<i>Sambucus mexicana</i>) as primary host species. Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant. Stream side habitats below 3,000 feet throughout the Central Valley.	Low potential to occur. Elderberry shrub clump located on western boundary of the Project site. No beetles or exit holes observed. Lack of adjacent riparian habitat. No CNDDDB records within 3 miles of the site.
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	FE;--	Vernal pools and ephemeral stock ponds. Shasta County south to Merced County.	No potential to occur. Habitat not present.
<i>Linderiella occidentalis</i> California linderiella	--;--	Occur on most land forms and soil types supporting vernal pools. Tend to be in deeper pools and tolerate a wider range of water temperatures.	No potential to occur. Habitat not present.

SOURCE: CDFW CNDDDB 2017.

Abbreviations:

Federal Lists

- FE Federal Endangered
- FT Federal Threatened
- FC Federal Candidate
- FSC USFWS Birds of Conservation Concern
- FPD Federal proposed for delisting
- FPT Federal proposed threatened
- FD Federal delisted
- MBTA Protected by Migratory Bird Treaty Act

State Lists

- CE California Endangered Species
- CT California Threatened
- CD California Delisted
- SSC CDFW Species of Special Concern/CDFW Special Animals
- CC State candidate for listing
- FP Fully Protected

3.4.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the state and nation including the CDFW, USFWS, USACE, and the National Marine Fisheries Service. These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the federal, state and local regulations that are applicable to the proposed project.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an

endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed it is fully protected from a “take” unless a take permit is issued by the USFWS. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 USC 1532, 50 CFR 17.3). Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Migratory Bird Treaty Act

To kill, possess, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., §703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

STATE

Fish and Game Code §2050-2097 - California Endangered Species Act

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

CESA was expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Wildlife Commission.

Fish and Game Code §1900-1913 California Native Plant Protection Act

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the state. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Wildlife Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Fish and Game Code §3503, 3503.5, 3800 - Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called “raptors,” are protected. The law indicates that it is unlawful to take, possess, or destroy the nest or eggs of any such bird unless it is in accordance with

the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Public Resources Code § 21000 - California Environmental Quality Act

The California Environmental Quality Act (CEQA) identifies that a species that is not listed on the federal or state endangered species list may be considered rare or endangered if the species meets certain criteria. Under CEQA public agencies must determine if a project would adversely affect a species that is not protected by FESA or CESA. Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e. candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFW. Additionally, the California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere. List 3 contains plants where additional information is needed. List 4 contains plants with a limited distribution.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act provides long-term protection of species and habitats through regional, multi-species planning before the special measures of the CESA become necessary.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the SWRCB to regulate state water quality and protect beneficial uses.

LOCAL

Yolo County Joint Powers Agency/ Yolo Habitat Conservancy

The Yolo County Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) Joint Powers Agency (now known as the Yolo Habitat Conservancy [YHC]) was formed in August 2002 for the purposes of acquiring Swainson's hawk habitat conservation easements and to serve as the lead agency for the preparation of a county-wide NCCP/HCP, produced as part of the Yolo Natural Heritage Program. The YHC governing Board is composed of representatives from member Agencies, which include two members of the Yolo County Board of Supervisors, one member each from the City Councils of Davis, Woodland, West Sacramento and Winters, and one ex-officio member from UC Davis. The YHC is currently responsible for managing two programs: the Yolo Natural Heritage Program and the Swainson's Hawk Interim Mitigation Fee Program.

The YHC established a Steering Advisory Committee and a Technical Advisory Committee, prepared a draft Ecological Baseline Report, developed a GIS data base, completed the Independent Science Advisors process, prepared a Draft HCP/NCCP, and has begun the CEQA/NEPA process.

The Second Administrative Draft Yolo HCP/NCCP was released on March 31, 2015, and the public comment period for the Second Administrative Draft closed on May 29, 2015. The environmental review documents have not been completed. The Public Review Draft Plan and Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was released for public comment beginning on June 1, 2017. The 90-day public review period ended on August 30, 2017.¹ Now that the Draft EIR/EIS public review period is complete, a Final EIR/EIS will be drafted and completed.

Swainson's Hawk Interim Mitigation Fee Program

This program, established in 1993, utilizes mitigation fees to acquire conservation easements to protect Swainson's hawk habitat. Changes to the program in 2006 require project applicants with projects over 40 acres in size to mitigate directly by providing land for conservation. The program is administered by the Yolo Habitat Conservancy.

City of Davis General Plan

The City of Davis General Plan contains the following goals and policies that are relevant to biological resources:

HABITAT, WILDLIFE, AND NATURAL AREAS

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.

Policy HAB 1.3 Commit adequate City resources and staff time so as to protect habitat and other natural resources.

GOAL HAB 2. Increase public awareness of habitat, wildlife and sensitive species.

Policy HAB 2.1 Develop environmental educational programs and public access areas and programs to allow viewing of wildlife and habitat through controlled interactions of people with natural areas.

¹ Source: <https://www.yolohabitatconservancy.org/documents>.

City of Davis Tree Ordinance

The City of Davis acknowledges the importance of trees to the community's health, safety, welfare, and tranquility. Trees increase property values, provide visual continuity, provide shade and cooling, decrease wind velocities, control erosion, conserve energy, reduce stormwater runoff, filter airborne pollutants, reduce noise, provide privacy, provide habitat and food value, and release oxygen. On December 4, 2002, the City Council adopted the Tree Ordinance, Chapter 37 of the Municipal Code, to ensure that the community forest would be prudently protected and managed so as to ensure these multiple civic benefits. The Tree Ordinance protects the following trees:

- **Landmark Trees:** Any tree which has been 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 Public Works Department, lists and identifies these trees.
- **Trees of Significance:** Any tree which measures 5 inches or more in Diameter at Breast Height (4'-6" above ground height).
- **Street Trees:** 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 Public Works Department maintains a master list of street trees.
- **City Trees:** 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.
- **Private Tree:** Any tree privately owned and growing on private property, which may include a tree designated as a landmark tree and/or tree of significance, as defined within the definitions section of the Tree Ordinance, Chapter 37.

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on biological resources if it will:

- 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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- 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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

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- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (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;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As part of a previously proposed project located on the project site, two AECOM biologists visited the project site on September 15, 2014. The biologists conducted the reconnaissance field survey on foot with binoculars, a field map, and a Trimble GPS to assess the existing biological conditions of the site and to map the locations of trees, water features, and habitat types. The biologists surveyed the area for habitat of that could potentially support special-status species, identified potential jurisdictional water features, mapped habitat types, and recorded tree species at the site. Any wildlife species observed at the site were also recorded. Binoculars were used to survey for old nests in trees, as the survey was conducted outside the nesting season. Floristic surveys and protocol-level wildlife surveys were not conducted during the 2014 field visit.

A reconnaissance-level site survey was conducted on October 23, 2017 by Steve McMurtry, De Novo Planning Group Principal Biologist. Prior to the site survey, several aerial photos and maps of the project site were reviewed to identify features within the project site and vicinity. Tools that were brought to the field investigation included a Trimble GeoExplorer XH Handheld (sub-foot unit), 30-meter tape measure, diameter tape, spade, Dutch auger, Munsell color chart, alpha-alpha dipridil solution, muriatic acid, wetland flagging, digital camera, Vortex 20-60x80 spotting scope, and Bushnell 10x42 binoculars. Features were documented. The investigation was conducted on foot to systematically inspect and record existing conditions. The investigation was performed between 9:30 am and 1:30pm under clear skies. The temperatures ranged from around 72 degrees Fahrenheit in the morning, rising to around 78 degrees at the conclusion of the investigation. Winds were between 0 and 5 miles per hour throughout the investigation. After the on-site field investigation, a windshield survey was performed by driving the public right of way to investigation conditions within approximately one-half mile of the Project site.

Additionally, a literature review and database search was conducted to gather information regarding sensitive plants, animals, and habitats. The purpose of the literature and database review is to identify species known to occur within the region based on historic range, observations, and habitat requirements.

IMPACTS AND MITIGATION

Impact 3.4-1: Project implementation may result in direct or indirect effects on special-status invertebrate species (Less than Significant with Mitigation)

Special-status invertebrates that occur within the 9-quad region (which includes the following USGS quadrangles: Madison, Woodland, Grays Bend, Winters, Merritt, Davis, Allendale, Dixon, and Saxon) for the project site include: vernal pool tadpole shrimp, vernal pool fairy shrimp, California linderiella, and valley elderberry longhorn beetle. Each of these is discussed below:

Vernal Pool Branchiopods: The record search lists several occurrences of the federally endangered vernal pool tadpole shrimp (*Lepidurus packardi*) and Conservancy fairy shrimp (*Branchinecta conservatio*), the threatened vernal pool fairy shrimp (*Branchinecta lynchi*), and the non-listed California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*) as occurring within the 9-quad region for the project site. These species exclusively inhabit vernal pools or other seasonally ponded wetlands that sustain inundation during the winter before drying in the late spring. The project site does not provide suitable habitat for this species.

Valley Elderberry Longhorn Beetle: The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is a federally threatened insect that is dependent upon the elderberry plant (*Sambucus* sp.) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region. As noted previously in Table 3.4-2, an elderberry shrub clump consisting of approximately 10 shrubs was observed on the western boundary of the project site. However, no valley elderberry longhorn beetle or exit holes on the elderberry shrubs were observed during the site surveys (2014 and 2017). Additionally, the elderberry shrub clump would likely be located within the proposed 150-foot agricultural buffer. Preservation of the shrubs through design is highly likely. If trimming or removal of any of these shrubs is necessary, there is potential for direct impacts on valley elderberry longhorn beetle.

Other Insects: There are three other insects that are not formally listed, special-status species, but are included in the CNDDDB search results. These include Antioch multilid wasp (*Myrmosula pacifica*), Crotch bumble bee (*Bombus crotchii*), and western bumble bee (*Bombus occidentalis*). While these species are documented within the 9-quad region for the project site, they are not documented on the project site. The habitat present on the project site is not ideal natural habitat for these species and none are believed to be present.

Conclusion: The project site is currently undeveloped and has been previously used for agricultural uses. There are five documented special-status invertebrates located within the 9-quad region for the project site. There are no documented or observed special-status invertebrate species on the project, and the reconnaissance-level site surveys performed in 2014 and 2017 by qualified biologists did not provide any evidence of presence. The project site does not provide the necessary habitat to support the majority of the special-status invertebrates. However, as noted above, valley elderberry longhorn beetle has a low potential to occur near the on-site elderberry

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shrubs, thus potentially impacted by project activities. This would be considered a **potentially significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-1: *The project proponent shall implement the following measures to avoid or minimize impacts on valley elderberry longhorn beetle:*

- *All on-site elderberry shrubs shall be avoided and preserved on-site through site design, as feasible.*
- *All elderberry shrubs that are located adjacent to construction areas, but can be avoided, shall be fenced and designated as environmentally sensitive areas. These areas shall be avoided by all construction personnel. Fencing shall be placed at least 20 feet from the dripline of each shrub, unless otherwise approved by USFWS.*
- *No insecticides, herbicides, or other chemicals that might harm the beetle or its host plant shall be used within 100 feet of the elderberry shrubs.*
- *If the shrub(s) cannot be avoided through redesign, as determined by the City of Davis Public Works Department in conjunction with the project applicant, the project applicant shall mitigate for potential impacts to the shrub(s) by either (1) purchasing VELB conservation credits from a USFWS-approved conservation bank, or (2) transplanting the individual shrub(s) that is not avoided to a suitable mitigation site in a manner consistent with the USFWS' 1999 Conservation Guidelines for the VELB. The mitigation shall be overseen by a qualified biologist, approved by the City of Davis Department of Community Development and Sustainability and USFWS.*

SIGNIFICANCE AFTER MITIGATION

The mitigation measure identified above would reduce the above identified impact related to direct or indirect effects on special-status valley elderberry longhorn beetle. With implementation of the above mitigation measure, this impact would be considered **less than significant**.

Impact 3.4-2: Project implementation may result in direct or indirect effects on special-status reptile and amphibian species (Less than Significant with Mitigation)

Special-status reptiles and amphibians that occur within the 9-quadrant region for the project site include: California tiger salamander, western pond turtle, and Giant garter snake. Each of these is discussed below:

California Tiger Salamander: The California tiger salamander (*Ambystoma californiense*) is a federal and California threatened species. It typically breeds in fish-free seasonal or permanent ponds associated with grassland communities. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or

channels. CTS spends the majority of its life cycle below ground in ground squirrel or pocket gopher burrows in grasslands situated adjacent to potential breeding sites.

Forty-seven units of critical habitat, or habitat that has been deemed as essential to the survival and recovery of the CTS, were proposed by the USFWS on August 10, 2004. The 5,699-acre Unit 2 (Jepson Prairie Unit) is located approximately 17 miles southwest of the project site.

Active disking on-site for agriculture likely precludes use of site as upland refugia habitat. The necessary habitat (aestivation and aquatic) for this species is not present within the project site.

Western Pond Turtle: The western pond turtle (*Emys marmorata*) is a California species of special concern. Its 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. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals and some plants. Western pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks.

The necessary habitat for this species is not present within the project site, and this species has a low potential to occur on-site. However, marginal habitat (i.e., habitat which supports only a few species or individuals because of the limiting environmental conditions) is present along the Covell Drainage Canal along the southern boundary of the project site.

Giant Garter Snake: Giant garter snake (*Thamnophis gigas*) is designated as a federally threatened and state threatened species afforded special protection by FWS and CDFW. The giant garter snake is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation.

The necessary habitat for this species is not present within the project site, and this species has a low potential to occur on-site. However, marginal habitat (i.e., habitat which supports only a few species or individuals because of the limiting environmental conditions) is present along the Covell Drainage Canal along the southern boundary of the project site. It is noted that there is no habitat connectivity to known source populations of giant garter snake in the project vicinity. Additionally, although there are CNDDDB records for this species within 3 miles of the site, the snake has never been observed in the Covell Drainage Canal. Further, both the Covell Drainage Canal and the adjacent area are typically annually disturbed for maintenance/agricultural activities.

Conclusion: The project site is currently undeveloped and has been previously used for agricultural uses. There are three documented special-status reptiles/amphibians located within the 9-quad region for the project site. However, there are no documented or observed special-status reptile/amphibian species on the project, and the reconnaissance-level site survey conducted in October 2017 by Steve McMurtry, De Novo Planning Group Principal Biologist did not provide any evidence of presence. Nevertheless, project site does provide marginal habitat to support western

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pond turtle and giant garter snake. Without mitigation, this would be considered a **potentially significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-2: *The project proponent shall implement the following measures to avoid or minimize impacts on western pond turtle:*

- *Ground-disturbing activities in areas of potential pond turtle nesting habitat shall be avoided during the nesting season (April–August), to the extent feasible.*
- *A preconstruction survey for western pond turtles within aquatic habitats and adjacent suitable uplands to be disturbed by project activities shall be conducted by a qualified biologist. In aquatic habitats which may be dewatered during project construction, surveys shall be conducted immediately after dewatering and before any subsequent disturbance. Elsewhere, surveys shall be conducted within 24 hours before project disturbance.*
- *If pond turtles are found during preconstruction surveys, a qualified biologist, with approval from CDFW, shall move the turtles to the nearest suitable habitat outside the area subject to project disturbance. The construction area shall be reinspected whenever a lapse in construction activity of 2 weeks or more has occurred.*
- *Construction personnel performing activities within aquatic habitats and adjacent suitable uplands to be disturbed by project activities shall receive worker environmental awareness training from a qualified biologist to instruct workers to recognize western pond turtle, their habitats, and measures being implemented for its protection.*
- *Construction personnel shall observe a 15-miles-per-hour speed limit on unpaved roads.*

Mitigation Measure 3.4-3: *The project proponent shall implement the following measures to avoid or minimize impacts on giant garter snake:*

The project proponent shall consult with USFWS regarding the potential for the project to affect giant garter snake habitat. If USFWS determines that giant garter snake may be potentially affected by project construction, the project proponent shall obtain an incidental take permit from USFWS and implement the minimization guidelines for giant garter snake, as follows:

- *Unless authorized by USFWS, construction and other ground-disturbing activities within 200 feet of suitable aquatic habitat for the giant garter snake shall not commence before May 1, with initial ground disturbance expected to correspond with the snake's active season. Initial ground disturbance shall be completed by October 1.*
- *To the extent possible, construction activities shall be avoided within upland habitat within 200 feet from the banks of giant garter snake aquatic habitat. Movement of heavy equipment in these areas shall be confined to existing roadways, where feasible, to minimize habitat disturbance.*

- *Construction personnel shall receive USFWS-approved worker environmental awareness training to instruct workers to recognize giant garter snake and their habitats.*
- *Within 24 hours before construction activities, the project area shall be surveyed for giant garter snake. The survey shall be repeated if a lapse in construction activity of 2 weeks or greater has occurred. If a giant garter snake is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it is determined by the qualified biologist and City staff, in coordination with USFWS and CDFW, that the giant garter snake shall not be harmed. Any sightings or incidental take shall be reported to USFWS and CDFW immediately.*
- *Any aquatic habitat for the snake that is dewatered shall remain dry for at least 15 consecutive days after April 15 and before excavating or filling of the dewatered habitat. If complete dewatering is not possible, potential snake prey (e.g., fish and tadpoles) will be removed so that snakes and other wildlife are not attracted to the construction area.*
- *Giant garter snake habitat to be avoided within or adjacent to construction areas will be fenced and designated as environmentally sensitive areas. These areas shall be avoided by all construction personnel.*

SIGNIFICANCE AFTER MITIGATION

The mitigation measures identified above would reduce the above identified impact related to direct or indirect effects on special-status reptile/amphibian species. With implementation of the above mitigation measures, this impact would be considered *less than significant*.

Impact 3.4-3: Project implementation may result in direct or indirect effects on special-status fish species (No Impact)

Special-status fish that occur within the 9-quad region for the project site include: steelhead - Central Valley DPS, Sacramento splittail, and longfin smelt. These species require aquatic habitat, which is not present within the project site. Implementation of the proposed project would have *no impact* on special-status fish species.

Impact 3.4-4: Project implementation may result in direct or indirect effects on special-status bird species (Less than Significant with Mitigation)

Special-status birds that occur within the 9-quad region for the project site include: tricolored blackbird, grasshopper sparrow, burrowing owl, Swainson's hawk, western snowy plover, mountain plover, Northern harrier, western yellow-billed cuckoo, white-tailed kite, merlin, song sparrow ("Modesto" population), white-faced ibis, and bank swallow. These species are discussed below:

Tricolored Blackbird: Tricolored blackbirds (*Agelaius tricolor*) are listed by CDFW as a species of special concern due to declining populations in the region. They are colonial nesters that favor

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dense stands of cattails and/or bulrush, but they also commonly utilize blackberry thickets associated with drainages, ditches, and canals. The closest recorded occurrence is approximately 2.4 miles to the northwest.

This species was not encountered during the field survey. Nevertheless, the necessary foraging and nesting habitat is present within the project site.

Grasshopper Sparrow: Grasshopper sparrows (*Ammodramus savannarum*) are listed by CDFW as a species of special concern due to declining populations in the Great Central Valley of California. They prefer open grasslands with barren ground for foraging, and tend to be found in areas with vegetation and scrub cover especially in grasslands and prairies. There are no CNDDDB records within five miles of the project site.

This species was not encountered during the field survey. Nevertheless, the necessary foraging habitat is present within the project site.

Burrowing Owl: Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species that is afforded protection by CDFW as a species of special concern due to declining populations in the Great Central Valley of California. They typically inhabit open grasslands and nest in abandoned ground squirrel burrows, cavities associated with raised mounds, levees, or soft berm features. The nearest CNDDDB occurrences are located approximately 0.2 miles east of the project site, and 0.6 miles east of the project site.

Active ground squirrel burrows were observed in the disturbed areas within the project site. No burrowing owls or their signs were observed during the site visit. Nevertheless, any ground disturbance has potential to result in direct impacts on this species if present.

Swainson's Hawk: Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFW. Breeding pairs typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors, 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.

The riparian habitat along Willow Slough, approximately 2.5 miles north of the project site, supports a relatively high density of nesting Swainson's hawks. Suitable nesting trees are located within the project site, and Swainson's hawks have been recorded in and near the project site. An old raptor nest was observed in a black walnut within the project site during the 2014 site surveys. The majority of the site provides suitable foraging habitat for Swainson's hawk. If tree removal were necessary, or if construction were to occur during the nesting season and an active Swainson's hawk nest were present, the potential would exist for direct effects on the species. The project would also have a direct impact on Swainson's hawk through the loss of foraging habitat.

Western Snowy Plover: The western snowy plover (*Charadrius alexandrinus nivosus*) is a federally threatened bird listed by CDFW as a species of special concern. This ground nester is associated with beaches, salt pond levees and shores of large alkali lakes with friable sandy or gravelly soils. There are no CNDDDB record within five miles of the site.

The necessary habitat is not present within the project site, nor was it encountered during the field survey.

Mountain Plover: The mountain plover (*Charadrius montanus*) is a federally proposed threatened bird listed by CDFW as a species of special concern. This ground nester is considered a shorebird, but it prefers to live in drier areas away from water. It breeds in the Great Basin and migrates to California in the winter where its life cycle is poorly understood. It forages in California grasslands, pastures, and farmlands for insects which make up the majority of its diet. There are no CNDDB record within five miles of the site.

Suitable foraging habitat is present within the project site. This species was not encountered during the field survey.

Northern Harrier: Northern harrier (*Circus cyaneus*) are listed by CDFW as a species of special concern. They typically inhabit fields, savannas, meadows, marshes, prairies and deserts. The largest populations tend to be in dense and low vegetative areas. Northern harrier typically nest on the ground, mostly within patches of dense, often tall, vegetation in undisturbed areas. The nearest CNDDB occurrence is located approximately 1.9 miles northeast.

Suitable nesting and foraging habitat is present within the project site. This species was not encountered during the field survey.

Western yellow-billed cuckoo: The western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a federally threatened and California endangered species. This riparian forest nester is found along the broad, lower flood-bottoms of larger river systems. They nest in riparian jungles of willow, often mixed with cottonwoods, with lower stories of blackberry, nettles, or wild grape. The closest CNDDB record is approximately 3.2 miles southwest of the project site.

The necessary habitat is not present within the project site. This species was not encountered during the field survey.

White-Tailed Kite: White-tailed kite (*Elanus leucurus*) is a CDFW fully protected species. This non-migrating bird typically attains a wingspan of approximately 40 inches and feeds primarily on insects, small mammals, reptiles, and amphibians, which it forages from open grasslands. It builds a platform-like nest of sticks in trees or shrubs and lays 3 to 5 eggs, but may brood a second clutch if prey is abundant. The kite's distinct style of hunting includes hovering before diving onto its target. Numerous occurrences of this species are located within ten miles of the project site including one located on the project site in 1993.

The project site contains appropriate foraging and nesting habitat. This species was not encountered during the field survey.

Merlin: The Merlin (*Falco columbarius*) is a CDFW species of special concern that has never been observed nesting in California. Though it is a transient throughout most of the state, wintering populations are known to occur in the Central Valley and along the coast.

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Suitable foraging habitat is present within the project site. This species was not encountered during the field survey.

Song sparrow ("Modesto" population): The song sparrow ("Modesto" population) (*Melospiza melodia*) is a CDFW species of special concern. This species is found in emergent freshwater marshes dominated by tules and cattails as well as riparian willow thickets. They nest in riparian forests of valley oak with a sufficient understory of blackberry, along vegetated irrigation canals and levees, and in recently planted valley oak restoration sites.

Suitable foraging habitat is present within the project site. This species was not encountered during the field survey.

White-Faced Ibis: White-faced ibis (*Plegadis chihi*) is listed by CDFW as a Watch List animal. It favors marsh habitats where it forages for a variety of invertebrates. It is a colonial nester and prefers thick marshes or low-growing trees for its nest site.

Suitable foraging habitat is present on-site. Nearby irrigation ditches also provide some potential habitat. This species was not encountered during the field survey.

Bank Swallow: Bank swallow (*Riparia riparia*) is listed by CDFW as a Threatened species. They typically prefer to nest along banks or bluffs along rivers or coastal areas. This species also prefers low gradient and meandering rivers or bodies of water. There are no CNDDDB record within five miles of the site.

The necessary habitat is not present within the project site. This species was not encountered during the field survey.

Conclusion: The project site is currently undeveloped and has been previously used for agricultural uses. Field surveys did not reveal the presence of any special-status species. However, the trees found on the project site can provide nesting opportunities for a variety of birds, including: Swainson's hawk and white-tailed kite, among other protected bird species. During field surveys there was no evidence of nesting; however, new nests can be constructed in future breeding cycles. Suitable foraging habitat is also located on and around the project site. The proposed project would require permanent disturbance to trees. This is a **potentially significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-4: *The project proponent shall implement the following measure to avoid or minimize impacts on western burrowing owl:*

- *No less than 14 days before initiating ground disturbance activities, the project proponent shall complete an initial take avoidance survey using the recommended methods described in the Detection Surveys section of the March 7, 2012, CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). Implementation of avoidance and minimization measures (as presented in the March 7, 2012, CDFW Staff Report on Burrowing Owl Mitigation) would be triggered if the initial take avoidance survey results in positive owl presence on the project site where project activities shall occur. If needed, the development of avoidance*

and minimization approaches shall be developed in coordination with CDFW and fully implemented prior to the start of construction activity.

Mitigation Measure 3.4-5: *The project proponent shall implement the following measures to avoid or minimize impacts on Swainson's hawk:*

- *No more than 30 days before the commencement of construction, a qualified biologist shall perform preconstruction surveys for nesting Swainson's hawk and other raptors during the nesting season (February 1 through August 31), on and within a ½ mile radius of the project site.*
- *Appropriate buffers shall be established and maintained around active nest sites during construction activities to avoid nest failure as a result of project activities. The appropriate size and shape of the buffers shall be determined by a qualified biologist, in coordination with CDFW, and may vary depending on the nest location, nest stage, and construction activity. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. Monitoring shall be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist has determined that the young have fledged or the nest site is otherwise no longer in use.*
- *Before the commencement of construction, the project proponent shall provide 1:1 compensatory mitigation for the permanent loss of Swainson's hawk foraging habitat to the Yolo County HCP/NCCP JPA in accordance with its Swainson's Hawk Interim Mitigation Program. If this measure is implemented after adoption of the Yolo Natural Heritage Program, the project proponent shall comply with all requirements of the Yolo Natural Heritage Program.*

Mitigation Measure 3.4-6: *The project proponent shall implement the following measure to avoid or minimize impacts on other protected bird species that may occur on the site:*

- *Preconstruction surveys for active nests of special-status birds shall be conducted by a qualified biologist in all areas of suitable habitat within 500 feet of project disturbance. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 15 to August 31) in a given area.*
- *If any active nests, or behaviors indicating that active nests are present, are observed, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. The size of the buffer shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. If buffers are adjusted, monitoring will be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas*

until a qualified biologist has determined that the young have fledged or the nest site is otherwise no longer in use.

SIGNIFICANCE AFTER MITIGATION

Implementation of Mitigation Measures 3.4-4 through 3.4-6 would ensure that measures to avoid or minimize impacts on other protected bird species are implemented, which would reduce the potential for impacts to special-status bird species to a ***less than significant*** level.

Impact 3.4-5: Project implementation may result in direct or indirect effects on special-status mammal species (Less than Significant with Mitigation)

Special-status mammals that occur within the 9-quad region for the project site include: pallid bat, silver-haired bat, hoary bat, western red bat, American badger, and Yuma myotis. These species are discussed below:

Pallid Bat: Pallid bat (*Antrozous pallidus*) is a listed CDFW species of special concern. It favors roosting sites in crevices in rock outcrops, caves, hollow trees, abandoned mines, and human-made structures such as barns, attics, and sheds. Though pallid bats are gregarious, they tend to group in small colonies of 10 to 100 individuals. It is a nocturnal hunter and captures prey in flight, but unlike most American bats, the species has been observed foraging for flightless insects, which it seizes after landing. Trees located within the project site provide suitable roosting habitat. If tree removal is necessary for construction, direct impacts on special-status bat species could occur if the species are present.

Silver-Haired Bat: Silver-haired bat (*Lasionycteris noctivagans*) is a listed CDFW special animal. Primarily considered a coastal and montane forest species, the silver-haired bat roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. This insectivore's favored foraging sites include open wooded areas near water features. This species has a moderate potential to occur on-site. There is one CNDDDB record within two miles of the site from 1957. Field surveys did not reveal the presence of this species.

Hoary Bat: The hoary bat (*Lasiurus cinereus*) is a listed CDFW special animal. It is considered to be one of the most widespread of all American bats with a range extending from Canada to central Chile, Argentina, and Hawaii. Hoary bats prefer older large leaf species such as cottonwoods, willows, and fruit or nut trees for daytime roosts. The species is primarily crepuscular or nocturnal and requires open areas to hunt its main prey item, moths. The hoary bat is considered a forest/woodland species, and in California they are often associated with undisturbed riparian or stream corridors. Field surveys did not reveal the presence of this species.

Western Red Bat: The western red bat (*Lasiurus cinereus*) is a listed CDFW species of special concern. This species typically prefers edges that have trees for roosting as well as open areas. This species on a multitude of insects and roosts primarily in trees and sometimes in shrubs, but less often. Suitable foraging habitat is present on-site, but no water sources are located on-site. The

past agricultural land use likely precludes this species from majority of the site. Field surveys did not reveal the presence of this species.

American Badger: American badger (*Taxidea taxus*) is a listed CDFW species of special concern. This burrowing carnivorous mammal is solitary and very territorial preferring to feed on small mammals, lizards, snakes, insects, and carrion. It has no known natural enemies and inhabits dry, open fields, grasslands, and pastures. Field surveys did not reveal the presence of this species.

Yuma myotis: The Yuma myotis (*Myotis yumanensis*) is a listed CDFW special animal. This bat species ranges from juniper and riparian woodlands to the desert near open water sources. Field surveys did not reveal the presence of this species.

Conclusion: The project site is currently undeveloped and has been previously used for agricultural uses. There are six documented special-status mammal species located within the 9-quad region for the project site. The project site provides the necessary habitat to support these special-status mammals. This is a **potentially significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-7: *Prior to any ground disturbance or removal of on-site trees, the project proponent shall implement the following measures to avoid or minimize impacts on special-status bats:*

- *If removal of any on-site trees with suitable roost cavities (as determined by a qualified biologist) and/or dense foliage must occur during the bat pupping season (April 1 through July 31), surveys for active maternity roosts shall be conducted by a qualified biologist in trees designated for removal. The surveys shall be conducted from dusk until dark.*
- *If a special-status bat maternity roost is located, appropriate buffers around the roost sites shall be determined by a qualified biologist and implemented to avoid destruction or abandonment of the roost resulting from tree removal or other project activities. The size of the buffer shall depend on the species, roost location, and specific construction activities to be performed in the vicinity. No project activity shall commence within the buffer areas until the end of the pupping season (August 1) or until a qualified biologist conforms the maternity roost is no longer active.*

SIGNIFICANCE AFTER MITIGATION

The mitigation measure identified above would reduce the above identified impact related to direct or indirect effects on special-status mammals. With implementation of the above mitigation measure, this impact would be considered **less than significant**.

Impact 3.4-6: Project implementation may result in direct or indirect effects on candidate, sensitive, or special-status plant species (Less Than Significant with Mitigation)

The project site is currently undeveloped and has been previously used for agricultural uses for at least the last 30 years. During that period of time, the project site has been annually disced, planted, and harvested as part of the agricultural operation on the vast majority of the property. This area is classified as tilled farmland. There are microhabitats on the project site that have been less frequently disturbed as part of the operation. These microhabitats include farmland fringe, irrigation ditch, and paved road. Farmland fringe is the area located along the margins of the property just outside the tilled farmland. This area does have some disturbance during tilling, but is not actively planted each year and has some limited potential for native plants. Irrigation ditches occur in a variety of locations on the project site and are associated with the agricultural operation. The irrigation ditches support growth of hydrophytic vegetation as evidenced by the presence of cattails (*Typha* sp.), tules (*Schoenoplectus acutus*), and sedge (*Cyperus eragrostis*) in some locations. The slopes are vegetated with annual grassland and weedy species. These areas are not regularly disturbed, but do require some disturbance for weed abatement. There is paved road located along the southern boundary of the project site. This area is not considered habitat.

The CNDDDB search identified 20 documented special-status plant species within the 9-quadrant region for the project site. These special-status plants include: Ferris' milk-vetch (*Astragalus tener* var. *ferrisiae*), alkali milk-vetch (*Astragalus tener* var. *tener*), heartscale (*Atriplex cordulata* var. *cordulata*), brittlescale (*Atriplex depressa*), San Joaquin spearscale (*Atriplex joaquiniana*), round-leaved filaree (*California macrophyllum*), palmate-bracted bird's-beak (*Chloropyron palmatus*), adobe-lily (*Fritillaria pluriflora*), woolly rose-mallow (*Hibiscus lasiocarpus* var. *occidentalis*), Heckard's pepper-grass (*Lepidium latipes* var. *heckardii*), Mason's lilaeopsis (*Lilaeopsis masonii*), Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*), Colusa grass (*Neostapfia colusana*), bearded popcorn-flower (*Plagiobothrys hystriculus*), California alkali grass (*Puccinellia simplex*), saline clover (*Trifolium hydrophilum*), Crampton's tuctoria (*Tuctoria mucronata*), Jepson's coyote-thistle (*Eryngium jepsonii*), recurved larkspur (*Delphinium recurvatum*), and dwarf downingia (*Downingia pusilla*).

Of the 20 special-status plants that occur in the region, none of these species occur within the tilled farmland. The tilled farmland is regularly disturbed and is planted for agricultural production and does not have any potential for these plants. The farmland fringe and the irrigation ditches are the only areas within the project site that have some potential for presence of native plants. Of the 20 special-status plants that occur in the region, six special-status plant species have low potential to occur within these areas: heartscale (*Atriplex cordulata* var. *cordulata*), brittlescale (*A. depressa*), San Joaquin spearscale (*A. joaquiniana*), palmate-bracted bird's-beak (*Chloropyron palmatum*), recurved larkspur (*Delphinium recurvatum*), and saline clover (*Trifolium hydrophilum*). All six of these plants have similar habitat requirements and typically can be found in valley grassland in seasonally flooded, saline-alkali soils. The CNDDDB records indicate the presence of two of these species (brittlescale, San Joaquin spearscale) within three miles of the project site. Suitable saline soils that could support these species have been mapped on the site including

Willows clay, alkali and Pescadero silty clay, saline alkali. However, agriculture and other activities even in the farmland fringe and irrigation ditches have significantly modified the hydrology and vegetation of the project site, and given the disturbed nature of these areas it is unlikely that these species occur there. However, a final floristic survey would be needed prior to disturbance to confirm the absence of these special-status plant species at the project site. Given that these species are known to occur within the region combined with the expectation that construction may not occur for multiple years, there is the potential for these plant species to establish and populate the farmland fringe and/or irrigation ditches in the future. This is a **potentially significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-8: *Prior to construction, the project proponent shall retain a biologist to perform a focused survey for the following CNPS listed plants: heartscale (April to October), brittlescale (April to October), San Joaquin spearscale (April to October), recurved larkspur (March to June), and saline clover (April to June). The survey shall be performed during the floristic season (shown in parenthesis). While there is a low potential for these species to be found on the project site, there is some limited habitat present within and along the fringe of the irrigation ditches. If any of these plants are found during the focused survey, the project proponent shall contact the CNPS to obtain the appropriate avoidance and minimization measures.*

Mitigation Measure 3.4-9: *Prior to construction, the project proponent shall retain a biologist to perform a focused survey for the federally and state listed palmate-bracted salty bird's-beak (*Chloropyron palmatum*). The survey shall be performed during the floristic season (generally May through October). This species is generally restricted to seasonally-flooded, saline-alkali soils in lowland plains/basins, which is generally present within and along the fringe of the irrigation ditches. If this plant is found during the focused survey, the project proponent shall contact the USFS and CDFW to obtain the appropriate avoidance and minimization measures.*

SIGNIFICANCE AFTER MITIGATION

The mitigation measures identified above would reduce the above identified impact related to direct or indirect effects on special-status mammals. With implementation of the above mitigation measures, this impact would be considered **less than significant**.

Impact 3.4-7: The proposed project has the potential to affect protected wetlands and jurisdictional waters (Less than Significant with Mitigation)

Various water features were observed on the project site. A 0.42-acre detention basin occurs in the northern portion of the project site. The basin contains ruderal vegetation dominated by wild oats.

Agricultural ditches were observed within the project site along the northern project boundary. There is a roughly 150-foot ditch on the eastern edge of the project site that dissipates into the agricultural field at its southern end and ends in a depression on the northern end that does not connect to the east-west excavated agricultural ditch. Another agricultural ditch extends along the

western boundary of the project site. The ditch begins at a well on the southwestern corner and extends north approximately 200 feet, where it dissipates into the adjacent agricultural fields. Further, another agricultural ditch begins at the north end of Riesling Court on the eastern boundary of the project site and extends approximately 200 feet south, parallel to Riesling Court. This ditch was covered in upland vegetation at the time of the site visit.

The Covell Drainage Channel extends along the southern boundary of the project site for approximately 1,271 linear feet. At the time of the site visits, the channel was dry but supports growth of hydrophytic vegetation as evidenced by the presence of cattails (*Typha* sp.), tules (*Schoenoplectus acutus*), and sedge (*Cyperus eragrostis*). The slopes are vegetated with annual grassland and weedy species. A wetland delineation has not been performed at the project site and the jurisdictional status of these water features has not been determined. Therefore, this is a **potentially significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-10: *The project proponent shall implement the following measure to avoid or minimize impacts on potentially jurisdictional waters:*

- *Before any activities that would result in discharge, fill, removal, or hydrologic interruption of any of the water features within the project site, a wetland delineation and jurisdictional determination shall be conducted by a qualified delineator and the delineation that determines the extent of jurisdictional waters should be approved by USACE.*
- *Any impacts on jurisdictional features shall obtain the appropriate CWA Section 404 and or 401 permits. All permit conditions including required avoidance, minimization, and mitigation measures included as conditions of the permit shall be followed.*

SIGNIFICANCE AFTER MITIGATION

The mitigation measure identified above would reduce the above identified impact related to protected wetlands and jurisdictional waters. With implementation of the above mitigation measure, this impact would be considered **less than significant**.

Impact 3.4-8: Project implementation may result in direct or indirect adverse effects on riparian habitat or a sensitive natural community (No Impact)

The CNDDDB record search revealed documented occurrences of one sensitive habitat, Valley Oak Woodland, within the 9-quad region for the project site. This sensitive habitat does not occur within the project site. Implementation of the proposed project would have a **less than significant** impact on riparian habitats or natural communities.

Impact 3.4-9: Project implementation may result in interference with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites (No Impact)

The CNDDDB record search did not reveal any documented wildlife corridors or wildlife nursery sites on or adjacent to the project site. Furthermore, the field surveys did not reveal any wildlife corridors or wildlife nursery sites on or adjacent to the project site. Implementation of the proposed project will have *no impact* relative to this issue.

Impact 3.4-10: Project implementation may result in conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant with Mitigation)

Swainson's Hawk Interim Mitigation Fee Program: The Swainson's Hawk Interim Mitigation Fee Program is applicable to the proposed project because the undeveloped project site is over 40 acres in size. As noted above, the majority of the site provides suitable foraging habitat for Swainson's hawk. If tree removal were necessary, or if construction were to occur during the nesting season and an active Swainson's hawk nest were present, the potential would exist for direct effects on the species. Implementation of Mitigation Measure 3.4-5 would ensure that the project applicant complies with the requirements of the Swainson's Hawk Interim Mitigation Fee Program. Compliance with this mitigation would ensure that implementation of the proposed project will have a *less than significant* impact relative to this issue.

City of Davis Tree Preservation Ordinance (Davis Municipal Code, Chapter 37): The City of Davis regulates tree planting and removal within the community in Chapter 37, Tree Planting, Preservation, and Protection, of the Municipal Code. The City's Tree Ordinance defines five categories of protected trees:

- **Landmark Trees:** Any tree which has been 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 Public Works Department, lists and identifies these trees.
- **Trees of Significance:** Any tree which measures 5 inches or more in Diameter at Breast Height (4'-6" above ground height).
- **Street Trees:** 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 Public Works Department maintains a master list of street trees.
- **City Trees:** 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.
- **Private Tree:** Any tree privately owned and growing on private property, which may include a tree designated as a landmark tree and/or tree of significance, as defined within the definitions section of the Tree Ordinance, Chapter 37.

3.4 BIOLOGICAL RESOURCES

The *Arborist Report* (Tree Associate, 2017) provides a review of the trees located on the project site, including: species, size, and current structure and vigor. This portion of the Report only reviewed trees within the 74.49-acre on-site area and along the proposed off-site Risling Court right-of-way addition. An *Arborist Report Addendum* (Tree Associate, 2017) provides a review of trees along Covell Boulevard and the Sutter Hospital frontage areas, located off-site.

According to the *Arborist Report*, the site contains 103 trees of significance on the 74.49-acre on-site area. Ten species were represented on site, including planted and naturalized California native trees (willow, California black walnut, valley oak, coast live oak and California sycamore) as well as exotic species (Italian cypress, cypress, black locust, Chinese elm, and Chinese pistache). The most common species were the walnut and cypress, which together comprised 75% of the trees on site. Only 21% of the trees had no significant structural concerns, while 43% were in poor or poor-fair structural condition.

Additionally, according to the *Arborist Report Addendum*, an additional 31 trees of significance are located along Covell Boulevard and the Sutter Hospital frontage areas, located off-site. Nine species were represented on site, including planted and naturalized California native trees (willow, coast live oak and California sycamore) as well as exotic species (Chinese pistache, golden rain tree, Chinese tallow, olive, fig, cork oak). The most common species were golden rain tree, willow and Chinese pistache, which together comprised 74% of the trees in this area.

According to the *Arborist Report*, a total of 34 trees (33% of the total) within the 74.49-acre development area are recommended for removal due to their poor health or structural condition or their close proximity to existing roadways. Tree health varied from poor to good. Five of the trees (16% of the total) were in poor or poor-fair health. Fifteen trees (48% of the total) had poor or poor-fair structure.

Additionally, according to the *Arborist Report Addendum*, an additional 11 trees within the Covell Boulevard and the Sutter Hospital frontage areas are recommended for removal due to their poor health, structure, or both.

Overall, the project site (including the 74.49-acre on-site area and the Covell Boulevard and the Sutter Hospital frontage areas) includes 134 trees of significance. The *Arborist Report* and *Arborist Report Addendum* recommend removal of 45 of the trees of significance. Removal of these trees on the project site is subject to the City's Tree Ordinance and would be addressed by a standard City condition of approval which requires preparation of a Tree Protection Plan for trees being preserved and approval of Tree Modification Permit for trees being removed with standard measures for tree replacement or payment for the appraised value of the trees. The Tree Protection Plan would include measures to ensure that all trees to be preserved would be protected during construction of the project. Additionally, street trees and landscaping would be provided along the Covell Boulevard and Sutter Hospital frontages and would be maintained by the project applicant in perpetuity.

It is noted that the *Arborist Report* and *Arborist Report Addendum* did not include surveys of the off-site trees located near the proposed off-site detention basin. Construction of the basin is not

anticipated to require tree modification or removal in this area. Nevertheless, without mitigation to ensure that tree removal within all on- and off-site areas complies with the City's Tree Ordinance this would be a **potentially significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-11: *The project proponent shall implement the following measure to avoid or minimize impacts on trees protected by the City of Davis:*

- *Before the commencement of construction, the project proponent shall retain a qualified arborist to perform a survey of any trees within the footprint of the proposed off-site detention basin (located north of Sutter Hospital, and east of the City water tank). The tree survey and arborist report shall detail the number, species, size, and relative health and structure of all trees in the aforementioned area. The report will also describe which trees on-site are subject to regulation under the City of Davis Tree Ordinance.*
- *A tree protection plan shall be prepared that includes measures to avoid or minimize impacts on trees that are to be preserved on-site and well as proposed mitigation for regulated trees subject to impact or removal. Compliance with the tree protection plan shall be required before and during any site disturbance and construction activity and before issuance of building permits. A tree modification permit shall be submitted to the City for any proposed removal of a tree. Fees shall be assessed by the City, and paid by the project proponent, in accordance with Davis Municipal Code Chapter 37, "Tree Planting, Preservation, and Protection."*

SIGNIFICANCE AFTER MITIGATION

The mitigation measure identified above would reduce the above identified impact related to conflicts with the local tree preservation policy or ordinance. With implementation of the above mitigation measure, this impact would be considered **less than significant**.

Impact 3.4-11: Project implementation may result in conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (Less than Significant with Mitigation)

As noted previously, the Yolo YNHP is not yet an adopted plan. The Second Administrative Draft Yolo YNHP was released on March 31, 2015, and the public comment period for the Second Administrative Draft closed on May 29, 2015. The environmental review documents have not been completed. The Public Review Draft Plan and Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was released for public comment beginning on June 1, 2017. The 90-

3.4 BIOLOGICAL RESOURCES

day public review period ended on August 30, 2017.² Now that the Draft EIR/EIS public review period is complete, a Final EIR/EIS will be drafted and completed.

The possibility exists that the YNHP will be adopted prior to development of the first phase of the project. Should the YNHP be in place prior to development of any phase of the project, a **potentially significant** impact would result.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-12: *Should the Yolo Natural Heritage Program (YNHP) be adopted prior to initiation of any ground disturbing activities for any phase of development associated with the project, the project applicant shall comply with the mitigation/conservation requirements of the YNHP, as applicable. The project applicant, the City of Davis Department of Community Development and Sustainability, and a representative from the YNHP JPA shall ensure that all mitigation/conservation requirements of the YNHP are adhered to prior to and during construction. To the extent there is duplication in mitigation for a given species, the requirements of the YNHP shall supersede. If this measure is implemented after adoption of the YNHP, the project proponent shall comply with all requirements of the YNHP.*

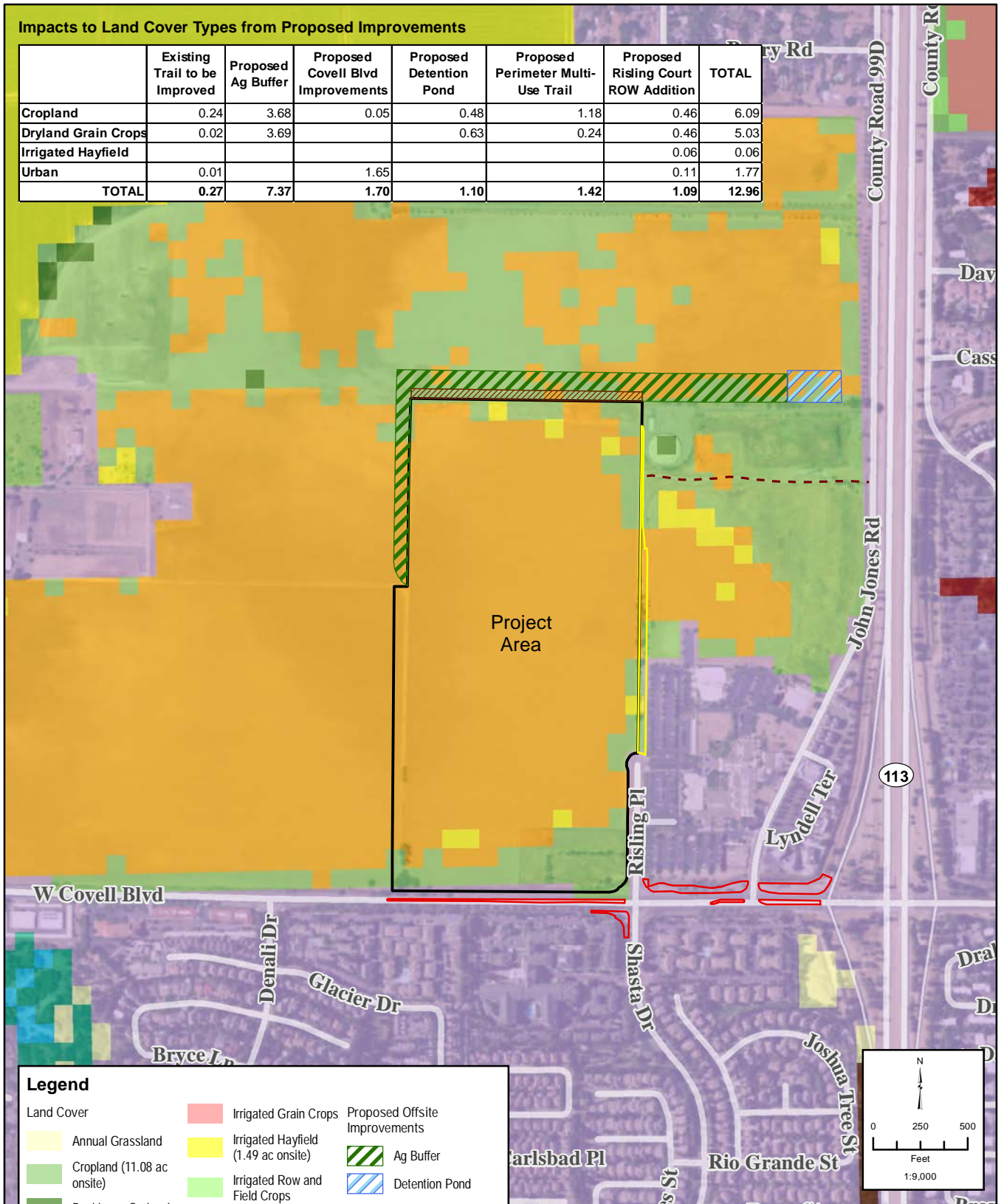
SIGNIFICANCE AFTER MITIGATION

The mitigation measure identified above would reduce the above identified impact related to conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. With implementation of the above mitigation measure, this impact would be considered **less than significant**.

² Source: <https://www.yolohabitatconservancy.org/documents>.

Impacts to Land Cover Types from Proposed Improvements

	Existing Trail to be Improved	Proposed Ag Buffer	Proposed Covell Blvd Improvements	Proposed Detention Pond	Proposed Perimeter Multi-Use Trail	Proposed Rising Court ROW Addition	TOTAL
Cropland	0.24	3.68	0.05	0.48	1.18	0.46	6.09
Dryland Grain Crops	0.02	3.69		0.63	0.24	0.46	5.03
Irrigated Hayfield						0.06	0.06
Urban	0.01		1.65			0.11	1.77
TOTAL	0.27	7.37	1.70	1.10	1.42	1.09	12.96



Legend

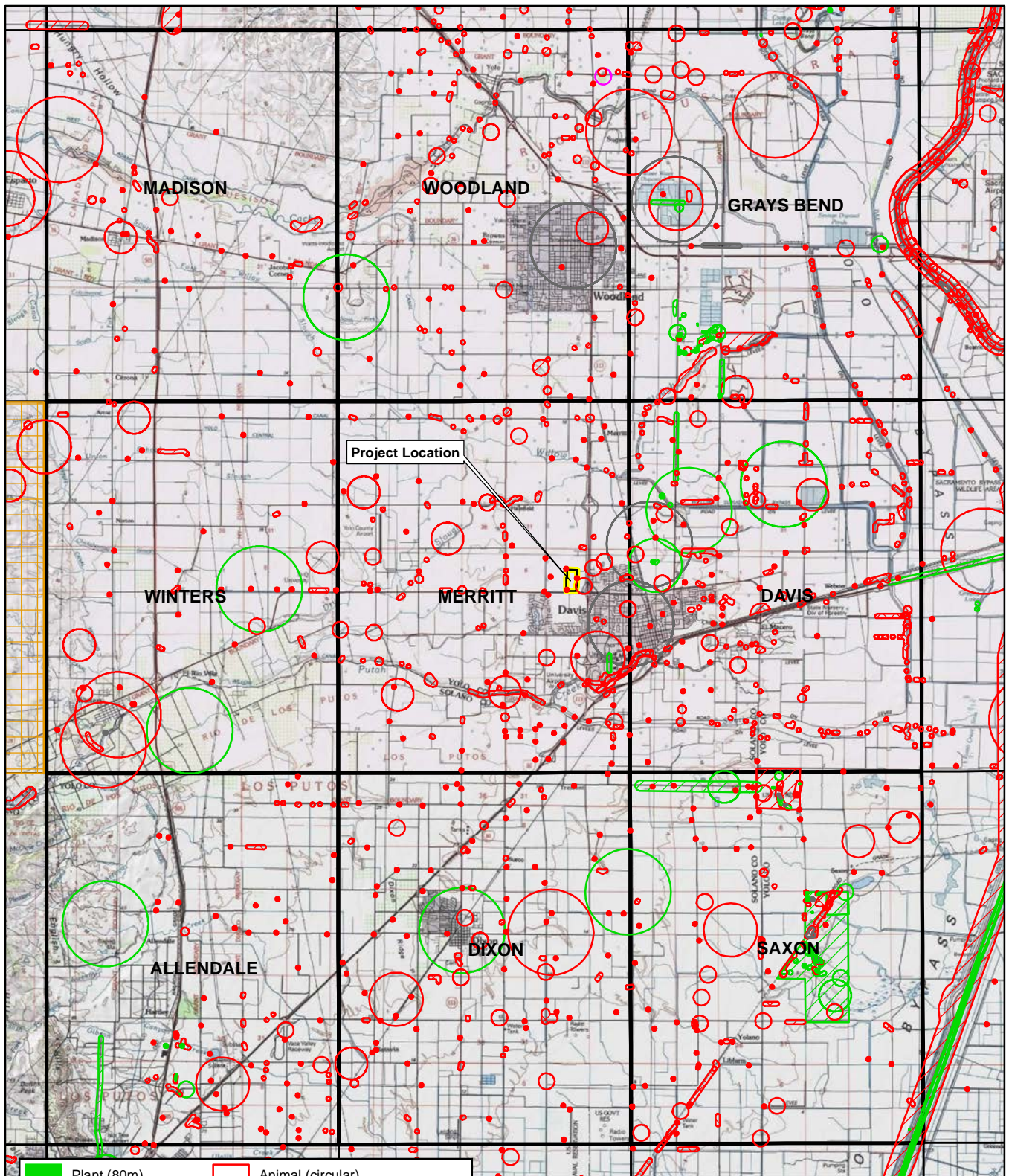
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|---------------------------------------|-------------------------------------|--------------------------------------|
| Land Cover | Irrigated Grain Crops | Proposed Offsite Improvements |
| Annual Grassland | Irrigated Hayfield (1.49 ac onsite) | Ag Buffer |
| Cropland (11.08 ac onsite) | Irrigated Row and Field Crops | Detention Pond |
| Deciduous Orchard | Montane Hardwood | Covell Blvd Improvements |
| Dryland Grain Crops (62.37 ac onsite) | Riverine | Rising Ct ROW Addition |
| Eucalyptus | Urban | Perimeter Multi Use Trail |
| Fresh Emergent Wetland | Valley Foothill Riparian | Existing Trail to be Improved |

**CITY OF DAVIS
WEST DAVIS ACTIVE ADULT COMMUNITY**

Figure 3.4-1. Project Site Cover Types

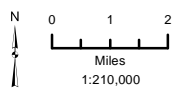
Source: Cunningham Engineering, 10/13/2017. CalFire FRAP data fveg15_1; Yolo County GIS; ArcGIS Online World Imagery Map Service. Map date: October 16, 2017.

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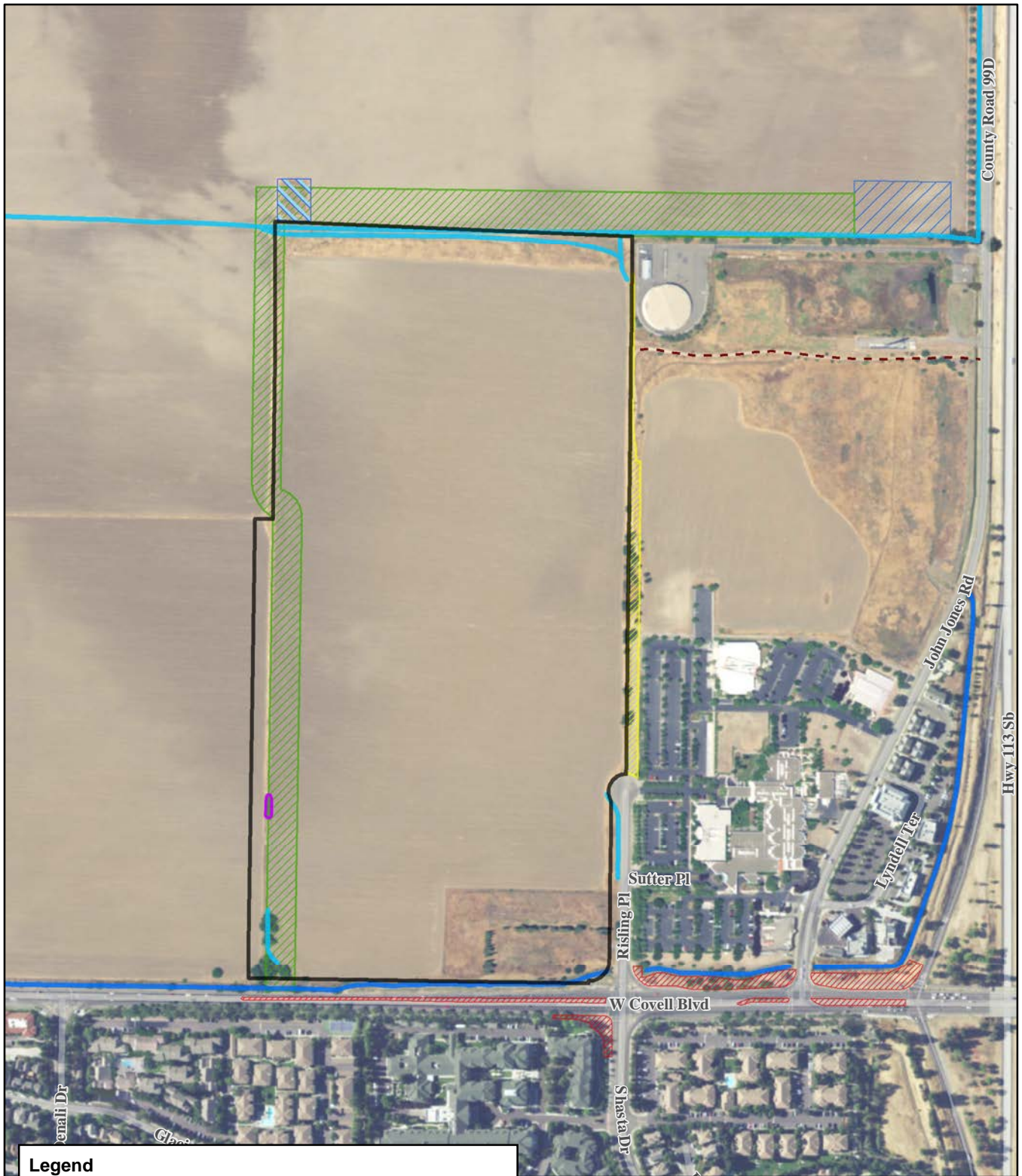
	Plant (80m)		Animal (circular)
	Plant (specific)		Terrestrial Comm. (circular)
	Plant (non-specific)		Multiple (80m)
	Plant (circular)		Multiple (specific)
	Animal (80m)		Multiple (non-specific)
	Animal (specific)		Multiple (circular)
	Animal (non-specific)		Sensitive EO's (Commercial only)

WEST DAVIS ACTIVE ADULT COMMUNITY
 Figure 3.4-2: California Natural Diversity Database
 9-Quad Search



CNDDDB version 03/2017. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area. Basemap: ArcGIS Online Topographic Map Service. Map date: March 28, 2017.

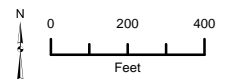
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Legend

Project Parcel	Existing Features
Proposed Features	Agricultural Ditch
Multi-Use Trail	Covell Drainage Channel
Ag Buffer	Detention Basin
Detention Pond	Elderberry Clump
Covell Blvd Improvements	
Risling Ct ROW Addition	

CITY OF DAVIS
WEST DAVIS ACTIVE ADULT COMMUNITY
 Figure 3.4-3. Location of Water Features and Elderberry Shrub Clump



Source: Cunningham Engineering 9/12/2017; Yolo County GIS; ArcGIS Online World Imagery Map Service. Map date: October 13, 2017.

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