4.4 BIOLOGICAL RESOURCES

This section addresses biological resources known or with potential to occur in and/or nearby the project site but could be affected by the project, and describes potential effects of project implementation on those resources. Biological resources include common vegetation and habitat types, special-status plant and animal species, and otherwise sensitive plant communities.

4.4.1 Environmental Setting

METHODS FOR DOCUMENTING EXISTING BIOLOGICAL CONDITIONS

To evaluate and describe the presence or absence and quality of common and sensitive biological resources in the project site, map land cover and habitat types, and identify potential effects of project implementation on those resources, project biologists reviewed several existing biological data sources for the project area and vicinity and subsequently conducted reconnaissance-level surveys on March 6, 2015. No protocol level or intensive species specific surveys were conducted on the project site. The data reviewed included:

- California Department of Fish and Game's Natural Diversity Database (CNDDB) record search (Appendix E) within a 5-mile radius of the project site (CNDDB 2015),
- Species Lists for the "Davis" 7.5-minute quadrangle (Appendix E) created by the U.S. Fish and Wildlife Service (USFWS 2015),
- California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants record search for the "Winters" 7.5-minute quadrangle (Appendix E) (CNPS 2015),
- Tree Evaluation and General Preservation Guidelines Nishi Property, Davis, California (Appendix F) (Tree Associates 2014), and
- City of Davis General Plan (2007).

The following sections describe the biological resources within the boundaries of the project site and the immediate surrounding area that are most relevant to the significance criteria and impact analysis for the project.

OVERVIEW OF PHYSICAL CONDITIONS AND LAND USE

The project site is located adjacent to the southwest corner of the City of Davis in Yolo County, California and is bounded by the Union Pacific Railroad (UPRR) to the west, Richards Boulevard to the north and Interstate 80 (I-80) to the east (refer to Figure 3-1, in Chapter 3, "Project Description"). As noted in Chapter 3, "Project Description," the project site is divided into two distinctly separate but adjoining areas, the Nishi site and West Olive Drive. The Nishi site is located on approximately 46.9 acres within the southwest portion of the project site, beginning at the centerline of the old north fork of Putah Creek and west towards the intersection of I-80 and the UPRR line. West Olive Drive includes 11 parcels totaling 10.8 acres and is located in the northwest portion of the site. A small parcel just south of Solano Park Housing within the University of California at Davis (UC Davis) Campus is also considered a component of the project - a direct connection to Old Davis Road from the project site, pending approval by the UC Regents.

The topography within the project site is mostly flat. A portion of the Nishi site slopes slightly to the northeast towards the low laying areas along the old north fork of Putah Creek, although the majority of the site slopes gently in a southwesterly direction towards I-80. Elevations range from approximately 38 to 60 feet above mean sea level. The West Olive Drive area is flat.

Current land use in the Nishi site is agriculture. Winter wheat (*Triticum* spp.) was the crop observed growing during the March 6, 2015 site visit. The West Olive area is developed with commercial and light industrial uses. Within the area for the proposed connection to Old Davis Road, a community garden is present.

VEGETATION COMMUNITIES AND HABITATS

Regional Environment

The area in Yolo and Solano counties surrounding the project site are primarily agricultural landscapes with a diverse matrix of crop types and agricultural uses. The majority of the agricultural land south and east of the project area consists of row crops and rice fields, while most of the agricultural land north and east consists of row and field crops and walnut orchards. Within the City of Davis, land is predominantly urban/developed with some areas of managed open space.

The project site is immediately surrounded by predominantly urban land uses, although agricultural land is located south of the project site, across I-80.

In addition to the uses described above, the former main channel of Putah Creek, located within and to the north and east of the project site, supports a remnant and sparse riparian woodland composed of valley oak (*Quercus lobata*), California sycamore (*Platanus racemosa*), Fremont's cottonwoods (*Populus fremontii*) and black walnuts (*Juglans hindsii*). The western portion of Putah Creek (also connected to the project site) within the UC Davis campus consists of a man made dammed section of the creek surrounded by an arboretum supporting native and non-native plant species. Native habitats are not common within the City and are primarily located within the Putah Creek riparian area that is outside of the City boundaries and in some county parks. Native habitats in these areas include oak woodlands, riparian woodlands, wetlands, and annual grasslands. These areas provide homes for a variety of wildlife including migratory birds such as ducks and raptors as well as larger native fauna such as deer (*Odocoileus hemionus*) and coyote (*Canis latrans*).

The climate is typical of California's Central Valley Mediterranean climate regime which includes dry, hot summers and cool, rainy winters, with an average annual temperature of 74.6 degrees Fahrenheit and average annual minimum temperature of 47.6 degrees Fahrenheit, and an average annual rainfall of approximately 20 inches.

Local Environment

The project site can be generally divided into three different settings, the urban environment associated with West Olive Drive, the Putah Creek channel, and the Nishi site. In general, Putah Creek channel, also referred to as the remnant old north fork Putah Creek, within the project site supports scarce remnant riparian vegetation. The project site does not support important wildlife movement corridors or habitats that would attract larger concentrations of wildlife. Urban wildlife such as raccoon, Virginia opossum, skunks and feral cats likely use the I-80 bike undercrossing to reach South Davis. In general, the project site supports a combination of urban- and agricultural-associated wildlife.

Vegetation

Vegetation within the project site is characterized predominantly by agricultural crops, ornamental trees, remnant riparian vegetation, and ruderal grassland. West Olive Drive is dominated by ornamental vegetation, although several native trees, such as valley oak, California sycamore, and Fremont's cottonwoods (*Populus fremontii*), were also observed within this area.

The remnant riparian vegetation occurs within the old north fork Putah Creek channel and includes valley oak, coast like oak (*Quercus agrifolia*), black walnut, Freemont's cottonwood, elderberry (*Sambucus* spp.), boxelder (*Acer negundo*), common hackberry (*Celtis occidentalis*), red-willow (*Salix laevigata*) redbud (*Cercis occidentalis*), tree-of-heaven (*Ailanthis altissima*), and poison oak (*Toxicodendron diversilobum*). Ruderal vegetation is found intermixed with the riparian vegetation, the agricultural land and the railroad right-of-way and includes fiddleneck (*Amsinkia* spp.), storksbill (*Erodium cicutarium*), shepherd's purse (*Capsella bursa-*

pastoris), bedstraw (*Gallium* spp.), birdsrape mustard (*Brassica rapa*), wild radish (*Raphanus raphanistrum*), wildoats (*Avena* spp.), and Italian ryegrass (*Lolium multiflorum*). For a complete list of observed plant species, refer to Appendix E.

The habitats within the project site include agricultural, remnant riparian, ruderal and urban/developed (see Figure 4.4-1). Table 4.4-1 presents the approximate acreages of each habitat type within the project site.

Table 4.4-1 Habitats Types within the Project Site

Habitat Type	Size (acres)
Agricultural Land	43.5
Community Garden	0.9
Remnant Riparian	3.2
Ruderal (Weedy)	1.6
Urban/Developed	11.6
Total	60.8

Note: Total includes project site and disturbance area for roadway connection to Old Davis Road.

Source: Data compiled by Ascent Environmental in 2015

Hydrology

Because of the fact that the project site is mostly flat, there are drainage ditches outside of the site boundary that convey drainage from the site and adjacent areas, such as the railroad right-of-way and I-80, into existing storm drains or allow water to percolate into the soil. No water was observed in any of the drainage ditches during the March 2015 field surveys. A portion of the old north fork of Putah Creek divides the project site and general runs in a northwest to southeast direction, however, this section of Putah Creek has not seen river flow since the late 1800s when it was diverted to drain the fields for the purposes of planting wheat and preventing flooding in Davisville (now Davis) (Vaught 2009).

Soils

There are only two soils types within the project site; Reiff fine sandy loam and Sycamore silty clay loam, drain (refer to Section 4.6, "Geology, Soils, and Mineral Resources" for further information). West Olive Drive is located entirely on Sycamore silty clay loam, drained; whereas the Nishi site contains both of the aforementioned soil types. Neither of these soils meets hydric criteria (i.e., they typically do not support wetlands) (NRCS 2015).

RARE OR UNIQUE ENVIRONMENTAL RESOURCES

For the purposes of this evaluation, rare or unique environmental resources include special-status species and sensitive natural communities. Queries of the CNDDB, species lists maintained by USFWS, and the CNPS Online Inventory of Rare and Endangered Plants were conducted. The CNDDB is a statewide database, managed by the California Department of Fish and Wildlife (CDFW) that is continually updated with the location and condition of the state's rare and declining special status species and habitats. Although the CNDDB is the most current and reliable tool available for tracking occurrences of special-status species, it contains only those records that have been observed by and/or reported to CDFW. The CNPS inventory is similarly a statewide resource intended to develop current, accurate information on the distribution, ecology, and conservation status of California's rare and endangered plants, and to use this information to promote science-based plant conservation in California.

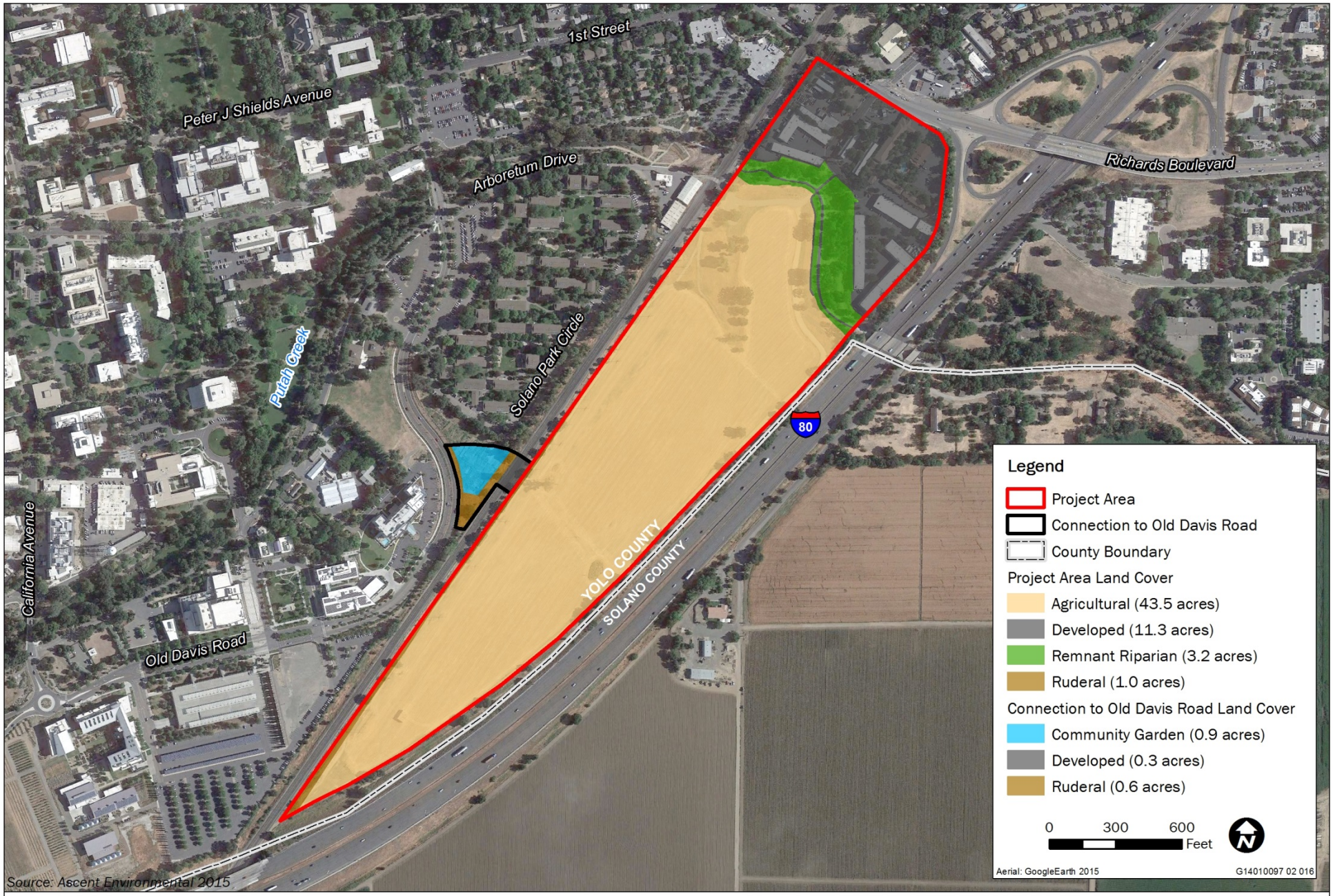

Figure 4.4-1 **Habitat Types within Project Site**

Special-Status Species

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

- listed or proposed for listing as threatened or endangered under federal Endangered Species Act (ESA) or candidates for possible future listing (USFWS 2015);
- listed or candidates for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA);
- listed as Fully Protected under the California Fish and Game Code;
- animals identified by CDFW as species of special concern;
- plants considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR). The CDFW system includes five rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:
  - CRPR 1A Plants presumed to be extinct in California;
  - CRPR 1B Plants that are rare, threatened, or endangered in California and elsewhere;
  - CRPR 2 Plants that are rare, threatened, or endangered in California but more common elsewhere;
  - CRPR 3 Plants about which more information is needed (a review list); and
  - CRPR 4 Plants of limited distribution (a watch list);
- considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA Section15125 (c)) or is so designated in local or regional plans, policies, or ordinances (State CEQA Guidelines, Appendix G); or
- otherwise meets the definition of rare or endangered under CEQA Sections 15380(b) and (d).

Special-Status Plants

Queries of the CNDDB and CNPS returned records of 20 special-status plant species that occur within 5-miles of the project site (Table 4.4-2). With the exception of the Northern California black walnut, none of these species have been reported from the project site and there is no suitable habitat for any of these species within the project site boundary. Although no protocol-level botanical surveys for any special-status plant species were conducted on the project site, the lack of required habitat (i.e., vernal pools, wetlands, riverine, etc.), soils (i.e., alkaline, serpentinite, etc.), the urban habitat and the ongoing agricultural practices preclude the likely presence of any of these species. Nineteen of these species were eliminated from further evaluation because none of their habitats occur at the project site.

Special-Status Wildlife

Queries of the CNDDB and USFWS species lists identified 24 special-status wildlife species that have been documented or have the potential to occur within a 5-mile radius of the project site. Of the 24, 14 wildlife species are considered unlikely to occur at the project site because they are restricted to particular habitat types (e.g., vernal pools, seasonal wetlands, streams and rivers) that are not present on or immediately adjacent to the project site.

Table 4.4-2 lists the special-status species that are known or have the potential to occur in the vicinity of the project site based on their local and regional distribution and indicates whether or not they occur or have potential to occur on the project site or immediately adjacent lands based on reported observations and/or the availability of suitable habitat.

Table 4.4-2 Special-Status Species Known to Occur or Have Potential to Occur in the Vicinity of the Project Site

Species	Status State/Federal/CRPR	Habitat Association	Habitat Availability on the Project Site	Potential to Occur on the Project Site
Invertebrates				
Conservancy fairy shrimp *Branchinecta conservatio*	-/E	Vernal pools and other seasonal wetlands	None	*Unlikely to occur.* No suitable wetland habitat within the project site.
Vernal pool fairy shrimp *Branchinecta lynchi*	-/T	Vernal pools and other seasonal wetlands	None	*Unlikely to occur.* No suitable wetland habitat within the project site.
Vernal pool tadpole shrimp *Lepidurus packardi*	-/E	Vernal pools and other seasonal wetlands	None	*Unlikely to occur.* No suitable wetland habitat within the project site.
California linderiella *LInderiella occidentalis*	-/-	Vernal pools and other seasonal wetlands	None	*Unlikely to occur.* No suitable wetland habitat within the project site.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	-/T	Elderberry shrubs	Two elderberry shrubs are present along old north fork Putah Creek.	*Moderate*. Six elderberry shrubs are present within the survey area. No boreholes were observed.
Fish				
Delta smelt *Hypomesus transpacificus*	E/T/-	Delta smelt are found only in the Sacramento-San Joaquin Estuary	None	*Unlikely to occur.* No suitable habitat within the project site.
Central Valley steelhead DPS *Oncorhynchus mykiss irideus*	-/NMFS T/-	Sacramento and San Joaquin Rivers and their tributaries	None	*Unlikely to occur.* No suitable habitat within the project site.
Central Valley spring-run Chinook salmon *Oncorhynchus tshawytscha*	T/NMFS T/-	Sacramento and San Joaquin Rivers and their tributaries	None	*Unlikely to occur.* No suitable habitat within the project site.
Winter run Chinook salmon *Oncorhynchus tshawytscha*	E/NMFS E/-	Sacramento and San Joaquin Rivers and their tributaries	None	*Unlikely to occur.* No suitable habitat within the project site.
Reptiles and Amphibians				
California tiger salamander *Ambystoma californiense*	T, SSC/T/-	Vernal pools, seasonal wetlands in grasslands and oak woodland/grassland interface	None	*Unlikely to occur.* No suitable habitat within the project site.
California red-legged frog *Rana draytonii*	SSC/T/-	Seasonal wetlands and stock ponds	None	*Unlikely to occur.* No suitable habitat within the project site.
Giant garter snake Thamnophis gigas	T/T/-	Slow moving irrigation ditches, sloughs, rice fields with overhanging vegetation	None	*Unlikely to occur.* No suitable habitat within the project site.
Western pond turtle *Actinemys marmorata*	CSC/-	Streams, ponds, water conveyance channels	None, present on the UC Davis arboretum portion of old north fork of Putah Creek with no direct connection between the project site and the arboretum pond area.	*Unlikely to occur.* No suitable habitat within the project site.

Table 4.4-2 Special-Status Species Known to Occur or Have Potential to Occur in the Vicinity of the Project Site

Species	Status State/Federal/CRPR	Habitat Association	Habitat Availability on the Project Site	Potential to Occur on the Project Site
Birds				
Western snowy plover *Charadrius alexandrinus nivosus*	CSC/T	Occurs in coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries	None	*Unlikely to occur.* No suitable habitat within the project site.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	E/T	Riparian Forest nester along broad lower flood bottoms of larger river systems. Cottonwood/willow riparian with understory of blackberry, nettle or wild grape.	Old north fork Putah Creek does not provide suitable dense riparian habitat for this species	*Unlikely to occur.* No suitable habitat within the project site.
White-tailed kite *Elanus leucurus*	FP/-	Riparian trees, woodlands, roadside trees, grasslands, agricultural lands	Suitable nesting in edge habitats and suitable agricultural foraging habitat	*Moderate.* No active nests were observed but adjacent vegetation provides potential roost sites.
Northern harrier *Circus cyaneus*	CSC/-	Grasslands, seasonal marshes, some agricultural habitats	Ag practices preclude nesting, suitable agricultural foraging habitat	*Moderate.* No active nests were observed but adjacent vegetation provides potential roost sites.
Swainson's hawk *Buteo swainsoni*	T/-	Riparian trees, woodlands, roadside trees, grasslands, agricultural lands	Suitable nesting and edge habitats, suitable agricultural foraging habitat.	*Moderate.* No active nests were observed but adjacent vegetation provides potential roost sites.
Burrowing owl *Athene cunicularia*	CSC/-	Ruderal habitats, field edges with ground squirrel activity	Low value habitat along field edges and idle field, but minimal ground squirrel activity noted	*Low.* Habitat type is suitable, however lack of ground squirrel or other small mammal burrows reduce likelihood to occur.
Loggerhead shrike *Lanius ludovicianus*	CSC/-	Grasslands, agricultural lands	Suitable nesting in trees and shrubs, suitable foraging in active and idle fields	*Moderate.* No active nests were observed but adjacent vegetation provides potential roost sites.
Tricolored blackbird *Agelaius tricolor*	E, CSC/-	Emergent marshes, blackberry thickets, silage, pastures, some agricultural habitats	Wheat field may provide nesting habitat.	*Moderate.* No active nests were observed but on-site vegetation provides potential nesting habitat.
Pallid Bat *Antrozous pallidus*	CSC/-	Shrublands, grasslands, agricultural lands, woodlands; caves, mines, hollow trees, buildings.	Potential foraging in agricultural fields. Possible roosting along arboretum portion of Putah Creek outside of project area.	*Moderate.* Potential foraging habitat; no suitable nest sites are present within study area.
Silver-haired bat *Lasionycteris noctivagans*	-/-	Primarily a coastal and montane forest dweller feeding over streams, ponds and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes and rarely under rocks.	Possible roosting habitat within Putah Creek Channel	*Moderate.* Vegetation within Putah Creek Channel provides potential roost sites.

Table 4.4-2 Special-Status Species Known to Occur or Have Potential to Occur in the Vicinity of the Project Site

Species	Status State/Federal/CRPR	Habitat Association	Habitat Availability on the Project Site	Potential to Occur on the Project Site
Hoary bat *Lasiurus cinereus*	-/-	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Requires water	Potential roosting in project site trees, foraging habitat marginable	*Moderate.* On-site vegetation provides potential roost sites.
Plants				
Ferris' milk-vetch *Astragalus tener* var. *ferrisiae*	-/-/1B.1	Annual herb typically found in meadows and seeps (vernally mesic), valley and foothill grasslands (subalkaline flats).	None	*Unlikely to occur.* No suitable habitat within the project site.
Alkali milk-vetch *Astragalus tener* var. *tener*	-/-/1B.2	Alkaline soils within playas, valley and foothill grasslands (adobe clay) and vernal pools	None	*Unlikely to occur.* No suitable habitat within the project site.
Heartscale *Atriplex cordulata var. cordulata*	-/-/1B.2	Typically found in saline or alkaline soils within chenopod scrub, meadows and seeps, and valley and foothill grassland (sandy)	None	*Unlikely to occur.* No suitable habitat within the project site.
Bitterscale *Atriplex depressa*	-/-/1B.2	Typically found in alkaline, clay within chenopod scrub, meadows and seeps, playas, valley and foothill grassland and vernal pools.	None	*Unlikely to occur.* No suitable habitat within the project site.
San Joaquin spearscale *Atriplex joaquiana*	-/-/1B.2	Typically found in alkaline soils within chenopod scrub, meadows and seeps, playas, valley and foothill grassland	None	*Unlikely to occur.* No suitable habitat within the project site.
Bristly sedge *Carex comosa*	-/-/2B.1	Typically found in coastal prairie, marshes and swamps (lake margins), valley and foothill grassland.	None	*Unlikely to occur.* No suitable habitat within the project site.
Palmate-bracted bird's beak *Chlorophyron palmatum*	E/E/1B.1	Annual herb (hemiparasitic), typically found in alkaline soils within chenopod scrub, valley and foothill grassland.	None	*Unlikely to occur.* No suitable habitat within the project site.
Adobe lily *Fritillaria pluriflora*	-/-/1B.2	Often in adobe soils within chaparral, cismontane woodland, valley and foothill grasslands	None	*Unlikely to occur.* No suitable habitat within the project site.
Woolly rose mallow *Hibiscus lasiocarpos* var. *occidentalis*	-/-/1B.2	Often in riprap on sides of levees, marshes and swamps (freshwater)	None	*Unlikely to occur.* No suitable habitat within the project site.
Northern California black walnut *Juglans hindsii*	-/-/1B.1	Typically found in riparian forest and riparian woodland	Tree survey identified black walnuts, however, CNPS lists as only one confirmed population in Jericho Valley (Lake County)	*High.* Tree survey of project site identified as being potentially on-site.
Heckard's pepper-grass *Lepidium latipes* var. *heckardii*	-/-/1B.2	Typically found in alkaline flats within valley and foothill grasslands.	None	*Unlikely to occur.* No suitable habitat within the project site.
Wooly-headed lessingia *Lessingia hololeuca*	-/-/3	Clay, serpentinite soils within broadleaf upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland	None	*Unlikely to occur.* No suitable habitat within the project site.

Table 4.4-2 Special-Status Species Known to Occur or Have Potential to Occur in the Vicinity of the Project Site

Species	Status State/Federal/CRPR	Habitat Association	Habitat Availability on the Project Site	Potential to Occur on the Project Site
Mason's lilaeopsis *Lilaeopsis masonii*	R/-/1B.1	Marshes and swamps (brackish or freshwater)	None	*Unlikely to occur.* No suitable habitat within the project site.
Little mousetail *Myosurus minimus* ssp. *apus*	-/-/3.1	Valley and foothill grasslands, vernal pools (alkaline)	None	*Unlikely to occur.* No suitable habitat within the project site.
Baker's navarretia *Navarretia leucocephala* ssp. *bakeri*	-/-/1B.1	Mesic. Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland and vernal pools	None	*Unlikely to occur.* No suitable habitat within the project site.
Colusa grass *Neostapfia colusana*	E/T/1B.1	Vernal pools (adobe, large)	None	*Unlikely to occur.* No suitable habitat within the project site.
Bearded popcorn-flower *Plagiobothrys hystriculus*	-/-/1B.1	Often in vernal swales, valley and foothill grassland (mesic) and vernal pool margins	None	*Unlikely to occur.* No suitable mesic habitat within the project site.
Suisun Marsh aster *Symphyotrichum lentum*	-/-/1B.2	Marshes and swamps (brackish and freshwater)	None	*Unlikely to occur.* No suitable (brackish/ freshwater) habitat within the project site.
Saline clover *Trifolium hydrophilum*	-/-/1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools	None	*Unlikely to occur.* No suitable mesic/ alkaline habitat within the project site.
Crampton's tuctoria/Solano grass *Tuctoria mucronata*	E/E/1B.1	Valley and foothill grassland (mesic) and vernal pools.	None	*Unlikely to occur.* No suitable mesic habitat within the project site.

Note: CNDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service, NMFS = National Marine Fisheries Service

[1] Legal Status Definitions

Federal:
PD = Proposed for Delisting
E = Endangered
T = Threatened

State:
FP = Fully protected (legally protected)
SC = Species of special concern (no formal protection other than CEQA consideration)
T = Threatened
E = Endangered

CRPR=California Rare Plant Rank
1A = Plants presumed to be extinct in California
2A = Plants presumed extirpated in California but more common elsewhere
1B = Plants that are rare, threatened, or endangered in California and elsewhere;
2B = Plants that are rare, threatened, or endangered in California but common elsewhere
3 = Plants about which more information is needed (a review list);

Source: CNDDB 2015; CDFW 2015; CNPS 2015; USFWS 2015; Data compiled by Ascent Environmental, Inc. in 2015

The following discussion provides further detail regarding those special-status species considered to potentially occur on-site.

Special-Status Wildlife Potentially Occurring On-Site

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. The CNDDB records the closest beetle occurrences approximately 7 miles to the southwest.

There are six multi-trunk elderberry shrubs within the old north fork Putah Creek area, just east of the pedestrian/bike trail. No sign (i.e., bore holes) of valley elderberry longhorn beetle was observed on the shrubs.

Tricolored blackbird: Tricolored blackbirds (*Agelaius tricolor*) were emergency listed as endangered by the California Fish and Game Commission on December 3, 2014 and it is also listed by CDFW as a species of special concern because of declining populations in the region. They are colonial nesters that favor dense stands of cattails and/or bulrush, but they also commonly utilize blackberry thickets associated with drainages, ditches, and canals. The closest recorded nesting colony is approximately 4.5 miles to the northeast. The Nishi site portion of the project site contains suitable nesting and foraging habitat. This species was not encountered during the field survey.

Burrowing owl: Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species that is afforded protection by CDFW as a species of special concern because of declining populations in California. They are typically found in open grasslands and nest in abandoned ground squirrel burrows, cavities associated with raise mounds, levees, or soft berm features. They have also been observed on railroad berms. The nearest CNDDB occurrence is located approximately 0.7 miles east, across I-80.

The Nishi site provides suitable foraging and nesting habitat. This species was not encountered during the field survey.

Swainson's hawk: Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California. Breeding pairs typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors, grasslands, 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. CDFW considers any nest active within the last five years as active. The CNDDB contains seven nests that fall under this category within five miles, three of these nests were observed in 2013, three in 2012 and only one in 2011. The Yolo County HCP/NCCP Joint Powers Agency (JPA) also provided a map with a documented Swainson's hawk nest approximately 0.34 miles northeast of the Nishi site. This occurrence appears to correlate with a CNDDB record of a nest that was last active in 2007. Swainson's hawks are also known to nest within the urban portion of the City of Davis and thus the large trees within the project site provide suitable nesting habitat for the Swainson's hawk. The Nishi site also provides suitable foraging habitat. This species was observed foraging over the project site during field surveys.

White-tailed kite: White-tailed kite (*Elanus leucurus*) is a CDFW fully protected species. This non-migrating bird is typically found on the rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. They require open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching. The nearest CNDDB recorded occurrence is 2.25 miles to the east, across I-80. This species was not observed during the field survey, although the project site provides suitable foraging and nesting habitat.

Northern harrier: The northern harrier (*Circus cyaneus*) is considered a California species of special concern. This species occurs year round within its breeding range in California. Northern harriers breed and forage in a variety of open (treeless) habitats that provide adequate vegetative cover, and abundance of suitable prey, and scattered hunting, plucking, and lookout perches such as shrubs or fence posts. In the region, these habitats include, freshwater marshes, rivers and streams, annual and perennial grasslands, weed fields, ungrazed and lightly grazed pastures, some croplands especially alfalfa, grain sugar beets, tomatoes, and melons. Harriers are ground nesters mostly within patches of dense, tall, vegetation in undisturbed areas.

The project site provides suitable foraging habitat and low quality nesting habitat because of ongoing farm practices. This species was not observed during the field surveys, but are known residents of the Davis area.

Loggerhead shrike: Loggerhead shrike (*Lanius ludovicianus*) is considered a California species of special concern. This species occurs year round within California. This species breeds mainly in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground. It requires tall shrubs or trees (it also uses fences or power lines) for hunting perches. This species also requires impaling sites for prey manipulation or storage, which can include sharp, thorny, or multi-stemmed plants and barbed-wire fences.

The Nishi site provides suitable nesting and foraging habitat. This species was not observed during the field surveys, but are known residents of the Davis area.

Pallid bat: Pallid bat (*Antrozous pallidus*) is a California 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. Although pallid bats are gregarious, they tend to group in small colonies of 10 to 100 individuals. This species 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. The CNDDB has a recorded occurrence within the project site that dates back to a collected specimen from 1964.

This species was not observed during the field survey, however, the mature trees within the project site may provide suitable roosting sites for this species. The Nishi site may provide suitable foraging habitat.

Silver-haired bat: Silver-haired bat (*Lasionycteris noctivagans*) is a listed CDFW special animal. This species is 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. The CNDDB recorded occurrence near the project site dates back to a specimen collected in 1957.

This species was not observed during the field survey, however, the woodpecker holes on the mature trees within the project site may provide suitable habitat for 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. The CNDDB contains one recorded occurrence attributed to three collections dating back to 1925, 1956 and 1991.

This species was not observed during the field survey. Although the project site does not support undisturbed riparian corridors, the trees within the site may provide suitable roosting habitat.

Special-Status Plants Potentially Occurring On-Site

Northern California black walnut: Northern California black walnut (*Juglans hindsii*) is in the California Rare Plant Rank 1B.1 list. The northern California black walnut is a perennial deciduous tree typically found in riparian forest and riparian woodland habitat. It is widely naturalized in cismontane California and it blooms between April and May. This species is threatened by hybridization with orchard trees, urbanization, and conversion of riparian habitat to agriculture. This species was formerly cultivated as rootstock for English walnut (*Juglans regia*) with which it hybridizes readily.

The arborist survey conducted for the project identified twelve northern California black walnuts in the periphery of the Nishi site, as well as within the north fork Putah Creek area.

SENSITIVE HABITATS

Sensitive habitat types include those that are of special concern to CDFW, or that are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, the Porter-Cologne Act, and/or Section 404 of the Clean Water Act, as discussed in Section 4.4.2, "Regulatory Setting," above. Sensitive habitats may be of special concern to regulatory agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species.

Riparian Woodland, Oak Woodland, and Other Special-Status Plant Communities

CDFW maintains a list of plant communities that are native to California. Within that list, CDFW identifies special-status plant communities (a.k.a. sensitive natural communities), which are defined as communities that are of limited distribution statewide or within a county or region and often vulnerable to environmental effects of projects (CDFW 2009:2). These communities may or may not contain special-status species or their habitat. Special-status plant communities are tracked in the CNDDB, a statewide inventory of the locations and conditions of the state's rarest plant and animal taxa and vegetation types. Many wetland and riparian plant communities are included on CDFW's list of special-status plant communities, and the importance of protecting and preserving riparian and oak woodland habitats is recognized in the City's general plan policies.

The trees within the old north fork of Putah Creek are remnant trees that were part of the old riparian forest along Putah Creek. Since the diversion of Putah Creek in the early 1870s the habitat degraded to what it is today. Vegetation restoration efforts are ongoing as part of State grant program for native plant restoration and other improvements along the old north fork Putah Creek. The existing composition and state of the vegetation within the old north fork Putah Creek within the project site are not functioning as a proper riparian area because of lack of water and thus is not identified as a special-status plant community on CDFW's latest list of natural communities.

Waters of the United States and Waters of the State

Under Section 404 of the Clean Water Act (CWA), the U.S. Army Corps of Engineers (USACE) has the authority to regulate activity that discharges fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. Waters of the United States are defined as follows:

1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

2) All interstate waters including interstate wetlands;

3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:

    I. Which are or could be used by interstate or foreign travelers for recreational or other purposed; or
    II. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    III. Which are used or could be used for industrial purpose by industries in interstate commerce;

4) All impoundments of water otherwise defined as waters of the United States under the definition;

5) Tributaries of waters identified in paragraphs (1)-(4) of this section;

6) The territorial seas; and

7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1)-(6) of this section. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the U.S. The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."

Wetlands are further defined as those areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Non-jurisdictional wetlands are those wetlands that do not fit the description of federal jurisdictional wetlands. However, federally non-jurisdictional wetlands that are not covered by the CWA, including most vernal pools, are still considered sensitive habitats and are protected as "waters of the State" by the State Water Resources Control Board and regional water quality control boards (RWQCBs), under the authority of the California Porter-Cologne Act.

The old north fork of Putah Creek (also referred to as the Putah Creek channel) receives runoff from adjacent uplands and businesses. This section of the channel has no hydrological connection to the lower watershed due to channel fill in the vicinity of Drummond Ave to the east. As such, waters from this portion of the channel no longer flow to the Yolo Bypass or eventually into the Sacramento River. There are two low spots within the Putah Creek channel that may allow water to pond, the vegetation observed within these low areas include bedstraw (*Galium aparine*), Italian rye grass (*Lolium multiflorum*) and tall flatsedge (*Cyperus eragrostis*), this area is located just downstream of the bike crossing over Putah Creek channel and receives runoff from businesses on West Olive Drive. The other low area is located closer to the railroad-bicycle underpass, vegetation here was a mix between Dutchman's pipe vine (*Aristolochia californica*), Himalayan blackberry (*Rubus armeniacus*) and Italian ryegrass. There are no additional areas within the project site that support a predominance of hydrophytic vegetation, or areas that exhibit potential wetland hydrology.

4.4.2 Regulatory Setting

FEDERAL

Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA) (16 U.S.C. Section 1531 et seq.), the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) regulate the "taking" of species listed in the ESA as threatened or endangered. In general, persons subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant habitat modification that could result in take.

Two sections of the ESA address take. Section 10 regulates take if a non-federal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. However, if a project would result in take of a federally-listed species and federal discretionary action (even if a non-federal agency is the overall lead agency) is involved (i.e., a federal agency must issue a permit), the lead federal agency consults with USFWS under Section 7 of the ESA. Because this project may involve federal permits, interagency cooperation under Section 7 of the ESA is required. Section 7 of the ESA outlines procedures for federal interagency cooperation to protect and conserve federally listed species and designated critical habitat. Section 7(a)(2) requires federal agencies to consult with USFWS and NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat.

Clean Water Act

Section 404 of the CWA requires project applicants to obtain a permit from USACE before performing any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, tidally

influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Many surface waters and wetlands in California meet the criteria for waters of the United States.

In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate RWQCB indicating that the action would uphold state water quality standards.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. Under the MBTA, "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

STATE

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA), a permit from CDFW is required for projects that could result in the "take" of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but the CESA definition of take does not include "harm" or "harass," like the ESA definition does. As a result, the threshold for take is higher under CESA than under ESA. Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 incidental take permit.

California Fish and Game Code Sections 3503 and 3503.5

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs and/or young.

California Fish and Game Code Section 1602—Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW:

- substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake; or

- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation (CCR Title 14, Section 1.72). The CDFW jurisdiction within altered or artificial waterways is based on the value of those

waterways to fish and wildlife. A CDFW streambed alteration agreement must be obtained for any action that would result in an impact on a river, stream, or lake.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Act, waters of the state fall under the jurisdiction of the appropriate RWQCB. The RWQCB must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control point and nonpoint sources of pollution to achieve and maintain these standards. The RWQCB's jurisdiction includes federally protected waters as well as areas that meet the definition of "waters of the state." Waters of the state is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally protected under Section 401 provided they meet the definition of waters of the state. Actions that affect waters of the state, including wetlands, must meet the RWQCB waste discharge requirements. This issue is addressed comprehensively in Section 4.9, "Hydrology and Water Quality," as well as herein with respect to biological resources.

LOCAL

Yolo County Natural Heritage Program

The Yolo Natural Heritage Program (YNHP) is a Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) currently in preparation. A Second Draft was released in March 31, 2015. In February 2005, a JPA comprised of Yolo County, its four cities (Davis, West Sacramento, Woodland, and Winters), and CDFW entered into an NCCP/HCP Planning Agreement, now known as the Yolo Natural Heritage Program. The NCCP/HCP planning area includes the entirety of Yolo County which is approximately 653,800 acres. The plan is currently proposed to provide coverage for 12 species, including seven state- and/or federally listed species and five species that are not listed but could become listed during the 50-year term of the Plan. Of the 12 species, four have the potential to occur on the project site and include Swainson's hawk, white-tailed kite, western burrowing owl and tricolored blackbird.

Swainson's Hawk Interim Mitigation Free 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 (formerly County HCP/NCCP Joint Powers Agency).

City of Davis General Plan

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

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.

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 website (http://trees.cityofdavis.org/landmark-tree-list), lists and identifies these trees.

- Trees of Significance: Any tree which measures 5 inches or more in Diameter at Breast Height (4'-6 feet above ground height). The Davis Municipal Code Chapter 37 Article 37.03 Landmark Trees and Trees of Significance on Certain Private Property includes a not exhaustive list of Trees of Significance, and thus all trees five inches or greater in diameter that may be affected would need to be evaluated.

- 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.

- 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.

4.4.3 Impacts and Mitigation Measures

SIGNIFICANCE CRITERIA

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact on biological resources if it would:

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

- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;

- have a substantial adverse effect on federally protected waters of the United States, including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;

- interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;

- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan;
- substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species; or
- conflict, or create an inconsistency, with an applicable plan, policy, or regulation adopted for the purposes of avoiding or mitigating environmental effects related to biological resources.

METHODS AND ASSUMPTIONS

Components of the Nishi Sustainability Implementation Plan That Could Affect Project Impacts

The following goals and objectives from the Nishi Sustainability Implementation Plan are applicable to the evaluation of biological resources:

Goal 5: Create synergy with other project design goals and existing community sustainability initiatives.

- **Objective 5.1:** Preserve and promote the health of future project residents and employees and the local ecosystem.
- **Objective 5.2:** Ensure appropriately sited and programmed open spaces and parks, in order to meet the recreational needs of new residents and workers while maximizing habitat connectivity, public health, active transportation connectivity, and stormwater management.

Impact Analysis Methodology

As noted in Chapter 3, "Project Description," this EIR evaluates development of the Nishi site at a project level and potential redevelopment that may occur within West Olive Drive as a result of rezoning/redesignation at a programmatic level.

Potential impacts on biological resources resulting from project implementation were determined by evaluating the project plans in relation to the habitat characteristics of the project site and immediate surrounding area, quantifying potential loss of common and sensitive habitats, and evaluating potential effects to common and special-status species that could result indirectly from this habitat loss or directly from construction activities. As noted above, reconnaissance level surveys were conducted in March 2015 to determine habitat conditions and potential presence of sensitive biological resources. The survey conducted also included an assessment of potential wetlands and riparian areas in and around the project site that could be affected by project implementation. In determining the level of significance, the analysis assumes that the project would comply with relevant, federal, state, and local laws, regulations, and ordinances.

ISSUES NOT EVALUATED FURTHER

Section 4.4.1, "Existing Environmental Setting," discusses the special-status plant and animal species evaluated in this analysis, and Table 4.4-2 summarizes the potential for each of these species to occur in the project area. Those plant and animal species considered unlikely to occur (because of a lack of suitable habitat, and lack of other occurrence records) are not addressed further in this analysis.

Nurseries and Wildlife Corridors

The project site is surrounded by urban development (i.e., industrial, transportation, and housing), and despite the bisection of the project site by the old north fork Putah Creek, the project would not create a barrier to movement of migratory species because the only potential movement area is through the old north fork Putah Creek and the existing bike tunnels under the UPRR line and I-80. However, there are existing barriers to wildlife movement because the bike tunnels connect urban to urban environs and not pristine

habitat areas and there are fences and walls that prevent movement south of I-80. Furthermore, the old north fork Putah Creek travels through a fenced box culvert underneath I-80 that prevents passage of wildlife species. The south fork Putah Creek west of the project site provides a migratory corridor for wildlife species and no construction activities are proposed in that area as part of the project. Additionally, areas that would be affected by construction in the project site are not known to contain native wildlife nursery sites, such as colonial bird rookeries or bat roosts. Therefore, this issue is not discussed further in this EIR.

Consistency with Habitat Conservation Plans

There are currently no approved habitat conservation plans applicable to the project site. The project site is within the proposed Yolo HCP/NCCP and the City of Davis is participating in the development of the Yolo HCP/NCCP. The Yolo HCP/NCCP is currently being drafted by the Yolo Habitat Conservancy and is in the initial stages of environmental review; however, the plan has not been adopted. Because the Yolo HCP/NCCP has not been adopted and is subject to change, it would be premature to analyze the project's consistency with it. Also, because it is not an adopted plan, the project's consistency is not required to be analyzed under CEQA. Further, the current mapping contained within the draft of the Solano Multispecies Habitat Conservation Plan (Solano HCP) includes the project site within the service area of the Solano HCP, however, this is considered to be a mapping error as the site is within Yolo County and would not be covered by different HCPs. It is assumed that will be corrected through future map revisions, and discussion of consistency with the Solano HCP is not required or provided herein. The Solano HCP is also an unadopted draft.

PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

Impact 4.4-1: Disturbance or loss of special-status plants.

Nishi Site

Development of the Nishi site would result in removal of California black walnut trees and conversion of habitat that provides suitable habitat for California black walnut. Loss of California black walnut trees would be a **significant** impact.

The California black walnut is in the 1B.1 California Rare Plant Rank list, which denotes plants that are rare, threatened, or endangered in California and elsewhere by CNPS. The California black walnut was formerly cultivated as rootstock for English walnut (*Juglans regia*). The California black walnut is widely naturalized and it is threatened by urbanization and conversion to agriculture, and hybridization with orchard trees. CNPS, in the description of the California black walnut, states that there is only one confirmed native occurrence that appears viable as of 2003. This occurrence is located in Jericho Valley, Lake County, California.

An arborist survey was conducted at the Nishi site between October 23 and November 5, 2014. The survey identified twelve California black walnut (*Juglans hindsii*) trees within the Nishi site, as shown in Figure 4.4-2. All of the identified California black walnuts are located within the periphery of the Nishi site as well as within the old north fork of Putah Creek. The arborist survey report also included the health and structural rating of the trees. The majority of the California black walnuts are rated Fair and Poor, and some were noted as dead. Seven of identified California black walnut trees were recommended for removal because of structural concerns or poor health of the tree (refer to Appendix F for further clarification). These seven trees are considered in poor health and are not anticipated to recover with or without the project. As a result, the removal of these trees would not be considered a significant effect of the project. Only five of the California black walnuts received other recommendations besides removal, such as trimming and training (Tree Associates 2014). The Consortium of California Herbaria also identifies a California black walnut in the bank of the old north fork Putah Creek based on an observation dating back to 1974. The observation states that the tree is within the remaining riparian woodland with cottonwood, valley oak, box elder and tamarix (Consortium of California Herbaria 2015). Although a specific location was not given, two of the California black walnut trees included as part of the arborist survey match the general location.

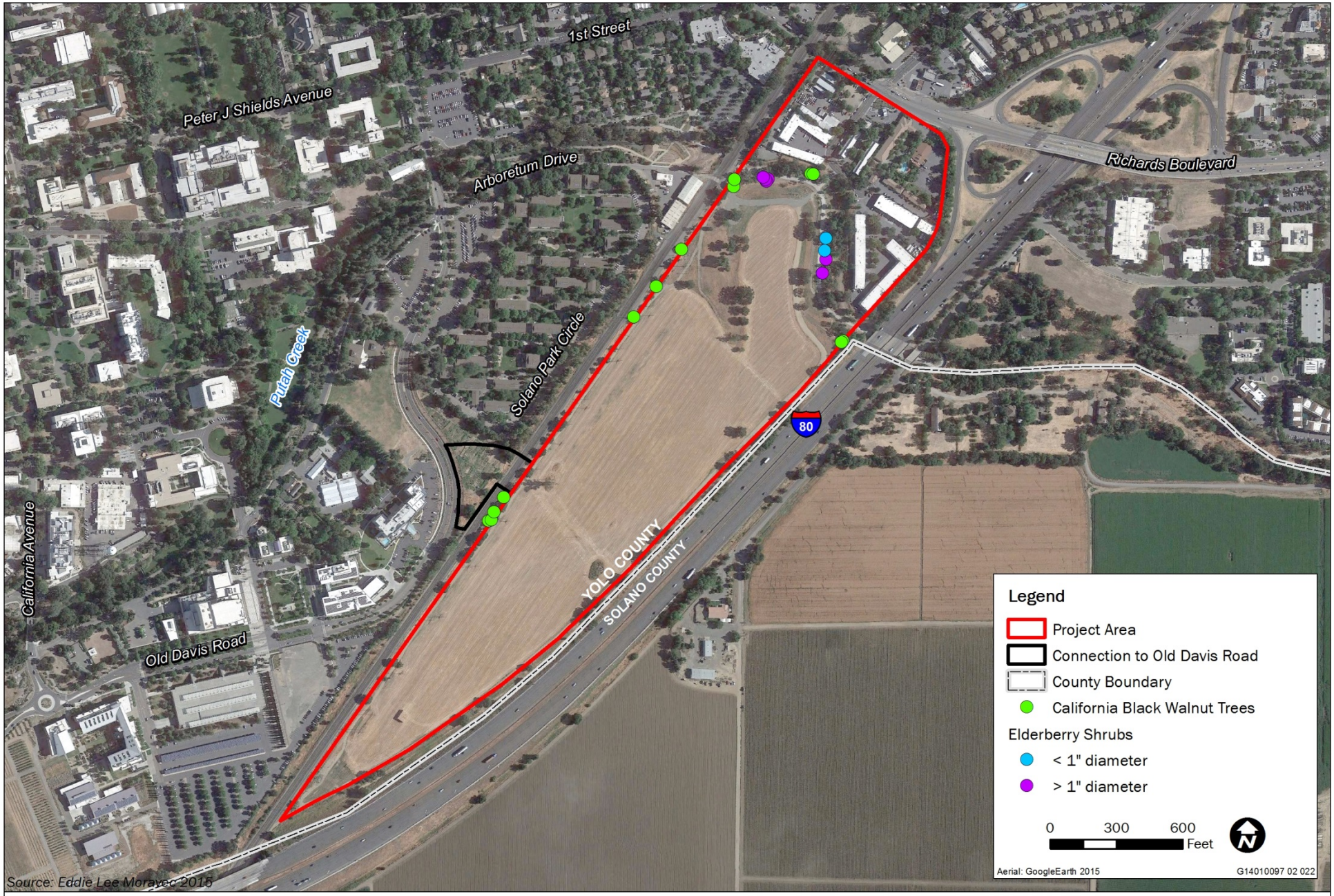

Figure 4.4-2

Trees

ASCENT ENVIRONMENTAL

The proposed development may result in the removal of up to three of the California black walnut trees, one of which is recommended for removal and two of which are recommended for trimming, within the Nishi site. Based on the site plan, the remainder of California black walnuts are located within proposed open space areas, the old north fork Putah Creek and the UPRR right-of-way. Of the trees that may be removed because of planned construction, one is located adjacent to the planned footprint of the roadway extension to Old Davis Road, and the other two are located adjacent to the planned footprint of the extension of West Olive Drive.

Because of the sensitive status of California black walnut, the loss of California black walnut as a result of project implementation would be a ***significant*** *impact.*

Mitigation Measures

Mitigation Measure 4.4-1: The applicant shall implement the following measures to avoid or minimize loss of California black walnut:

- Construction activities shall avoid removal of and damage to California black walnut trees that were identified as healthy or requiring training/trimming. Dead trees may be removed and do not require mitigation. The protection of the remaining black walnut trees shall include the prohibition of heavy equipment operation within the drip line of the trees to be preserved. Only hand tools may be used within the drip line.

- In the event that a California black walnut tree cannot be avoided, the applicant shall replace the trees such that there is no net loss of California black walnuts. At a minimum, each California black walnut tree will be replaced with 15-gallon California black walnut trees at a 2:1 ratio (two California black walnut trees planted for every California black walnut tree removed). The replacement trees may be incorporated into proposed plantings within designated open space areas on-site or in proximity to the old north fork Putah Creek area.

- Success criteria for compensatory California black walnuts shall include:

  - The extent of occupied area and tree density (number of trees per unit area) in compensatory populations will be equal to or greater than the affected occupied habitat.

  - 5 years annual monitoring with remedial planting if mortality exceeds 20%. The applicant shall submit annual reports, prepared by a qualified arborist, to the City indicating success metrics for replacement planting. If mortality exceeds 20%, annular reporting shall continue for 5 years after remedial planting until it is demonstrated that replacement criteria stated within this measure is attained.

- California black walnut trees recommended for trimming/training by the 2014 arborist report for the Nishi site shall be trimmed/trained prior to initiation of construction.

Significance after Mitigation

Based on the location of California black walnut trees, avoidance (as stipulated by Mitigation Measure 4.4-1) would prevent the loss of existing sensitive plants on-site. However in the event that removal is required, further implementation of Mitigation Measure 4.4-1 would ensure replacement of any removed California black walnut trees at a minimum of a 2:1 ratio such that there would be no net loss of California black walnuts within the Nishi site. As no net loss of special status plants would occur, this impact would be reduced to a **less-than-significant** level.

West Olive Drive

The redesignation/rezoning of parcels located along West Olive Drive from Commercial Service to Neighborhood Mixed Use would allow for redevelopment of this area that could result in the removal of special-status plants. Because of existing urban/industrial uses and lack of habitat, it is unlikely that special-

status herbaceous plants would be present; however special-status trees could occur within West Olive Drive. Loss of special-status trees would be considered a **potentially significant** impact.

Potential redevelopment of uses within West Olive Drive may include removal of plant and tree species. No protocol surveys for special-status plants or intensive tree surveys have been conducted within the West Olive Drive because it is highly urbanized and lacks suitable habitat. Because of existing urban/industrial uses and lack of habitat, it is unlikely that special-status herbaceous plants would be present; however two California black walnut trees are located on the northern bank of the Putah Creek channel, within the West Olive Drive portion of the project site and could be impacted during potential redevelopment within West Olive Drive.

*Loss of special-status trees, such as California black walnut, would be a **potentially significant** impact.*

Mitigation Measures

Implement Mitigation Measure 4.4-1 (Replacement of California black walnut trees).

Significance after Mitigation

Implementation of Mitigation Measure 4.4-1 would ensure that any California black walnut trees located within West Olive Drive would be protected during and after construction and any removal of special-status trees would necessitate replacement at a 2:1 ratio, thereby ensuring no net loss. As a result, impacts would be reduced to **less than significant**.

Impact 4.4-2: Impacts to valley elderberry longhorn beetle.

Nishi Site

Development of the Nishi site would occur in the vicinity of observed elderberry shrubs, which are known to provide habitat for valley elderberry longhorn beetle. Depending on the proximity of construction activities to the existing shrubs, indirect impacts to the shrubs and potential beetles or beetle larvae could occur. As a result, impacts are considered **potentially significant**.

There are six multi-trunk elderberry shrubs within the old north fork Putah Creek area, as shown in Figure 4.4-2. These elderberry shrubs are located within the existing Putah Creek corridor and bike trail area. No exit holes were observed during the March 2015 field survey. The only construction activity proposed within the Putah Creek corridor is the extension of West Olive Drive into the Nishi site, which is located 325 feet north from the nearest elderberry shrub. The other nearest construction would be the northern most building and it would be 135 feet west of the nearest elderberry shrub. Although grading may occur as part of the leveling of the site, it would occur outside of the designated Putah Creek corridor which provides a 90-foot buffer from the edge of construction to the nearest elderberry shrub.

The USFWS Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999) assumes complete avoidance (i.e., no adverse effects) when a 100-foot (or wider) buffer is established and maintained around elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level. The buffer may be reduced to 20 feet but the USFWS must be contacted before any disturbance within the 100-foot buffer area. Fencing the shrubs for protection during construction as part of the protective measures in the USFWS Conservation Guidelines would be infeasible because the walk path and bike trail would fall within the fenced portion but flagging and signage will be posted to delineate the limits of construction. Although construction activities (i.e., grading) would occur within 90 feet from the nearest elderberry shrub, the existing Putah Creek corridor and bikeway provide sufficient buffer distance between the edge of construction and the elderberry shrubs that no direct impacts are anticipated. Nevertheless, work would occur within 100 feet of the elderberry shrubs, which could result in indirect impacts to the shrubs.

Because construction work associated with development of the Nishi site could occur within 100 feet of known elderberry shrubs that may serve as habitat for valley elderberry longhorn beetle, this impact is considered ***potentially significant****.*

Mitigation Measures

Mitigation Measure 4.4-2: The applicant shall implement the following measures to avoid or minimize loss of valley elderberry longhorn beetle:

- If elderberry shrubs are 100 feet or more from project activities, no direct or indirect impacts are expected. Shrubs will be protected during construction by establishing and maintaining a high visibility netting at least 100 feet from the drip line of each elderberry shrub with stems 1 inch or greater. If fencing would cut off access to the pedestrian/bicycle trail within the old north fork Putah Creek trail area, high visibility flagging will be used, but all contractors will be briefed as to the limits of construction and the need to avoid the flagged area.

- Should construction activities be necessary within 100 feet of existing elderberry shrubs, project activities may occur up to 20 feet from the dripline of elderberry shrubs, pending consultation with the USFWS. At a minimum, the following shall be implemented:

  - A minimum setback of at least 20 feet from the dripline of each elderberry plant with stems greater than one-inch diameter at ground level will be maintained to avoid direct impacts. The buffer area will be fenced with high visibility construction fencing or flagging before commencement of ground-disturbing activities and will be maintained for the duration of construction activities. The applicant will ensure that ground-disturbing activities on the project site do not alter the hydrology of the site or otherwise affect the likelihood of vigor or survival of elderberry shrubs.

  - The applicant will ensure that project activities, such as truck traffic or other use of machinery, do not create excessive dust on the project site, such that the growth or vigor of elderberry shrubs is adversely affected. Enforcement of a speed-limit and watering dirt roadways are potential methods to ensure that excessive dust is not created.

  - Areas that are disturbed temporarily will be restored to pre-disturbance conditions. Erosion control measures will be implemented to restore areas disturbed within 100 feet of elderberry shrubs.

  - No insecticides, herbicides, fertilizers, or other chemicals will be used within 100 feet of elderberry shrubs. Herbaceous vegetation may be mowed or removed using hand tools within 100 feet, but not within 20 feet of the elderberry shrubs.

  - The applicant or its contractor will ensure that all contractors are briefed on the need to avoid damaging the elderberry plants, the status of the beetle, the need to protect its elderberry plant, and the possible penalties for not complying with these requirements.

  - The applicant shall erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.

Significance after Mitigation

Through implementation of Mitigation Measure 4.4-2, the applicant would avoid or minimize direct or indirect impacts to shrubs through the establishment of buffers and fencing. As a result, direct (i.e., removal)

or indirect impacts (i.e., hydrology changes, dust deposition, etc.) are not anticipated to occur. Because potential effects on valley elderberry longhorn beetle would be avoided in accordance with the Conservation Guidelines, impacts would be reduced to a **less-than-significant** level.

West Olive Drive

Potential redevelopment of West Olive Drive could result in construction activities occurring proximate to elderberry shrubs located within the Putah Creek Channel. Depending on the proximity of construction activities to the existing shrubs, indirect impacts to the shrubs and potential beetles or beetle larvae could occur. As a result, impacts are considered **potentially significant**.

West Olive Drive's southwestern edge is located along the Putah Creek channel, within which two elderberry shrubs were observed. Depending on the type and location of redevelopment within West Olive Drive, construction activities could be located proximate (within 100 feet) of elderberry shrubs. As noted above for the Nishi site, this could result in adverse effects on valley elderberry longhorn beetles and/or larvae.

*Because redevelopment of West Olive Drive may result in construction activities within 100 feet of existing elderberry shrubs that may support valley elderberry longhorn beetle, impacts would be **potentially significant**.*

Mitigation Measures

Implement Mitigation Measure 4.4-2 (Avoid or minimize loss of valley elderberry longhorn beetle).

Significance after Mitigation

As noted above for the Nishi site, implementation of Mitigation Measure 4.4-2 would avoid or minimize direct and indirect impacts to shrubs through the establishment of buffers and fencing. As a result, direct (i.e., removal) or indirect impacts (i.e., hydrology changes, dust deposition, etc.) are not anticipated to occur. Because potential effects on valley elderberry longhorn beetle would be avoided in accordance with the Conservation Guidelines, impacts would be reduced to a **less-than-significant** level.

Impact 4.4-3: Impacts to special status bat species.

Nishi Site

Development of the Nishi site could disturb roosts for special-status bats in the area. This is considered a **potentially significant** impact.

Although no bats or roosts were observed during the reconnaissance surveys, the mature trees within the Nishi site may provide suitable roosting habitat for special-status bats such as pallid bat, silver-haired bat and hoary bat. These bat species are mobile and thus could have moved into the area after the initial reconnaissance surveys. Some species may roost on the bark or foliage of these trees or within the hollows of the trunks. Most of the suitable trees in the Nishi site are located within the old north fork Putah Creek area or will be incorporated into the landscape of the proposed development of the Nishi site and thus will not be removed. Some trees however, would be removed during ground-clearing/grading activities. Should a tree be removed that contains a special-status bat roost, this would be considered an adverse effect.

*It is unknown whether bats roost in trees that would be removed from the site. Therefore, removal of on-site trees would result in a **potentially significant** impact to several species of bats.*

Mitigation Measures

Mitigation Measure 4.4-3: The applicant shall implement the following measures to avoid or minimize impacts to special status bat species:

- Before ground disturbance, surveys will be conducted to determine if suitable habitat (that would be removed during construction) are occupied by bats. These areas shall be surveyed within 14 days before start of construction. Surveys may consist of daytime pedestrian surveys looking for evidence of bat use (e.g., guano) and/or an evening emergence survey to note the presence or absence of bats. Bat detectors may be used to supplement survey efforts, but are not required. If no evidence of bat roosts are found, then no further study is required. If evidence of bat use is observed, the number and species of bats using the roost will be determined.

    - If surveys confirm bats daytime-roost will be affected by the project, a Bat Exclusion Plan will be developed by the applicant and submitted to the City for review and approval before its implementation. No bat exclusion will occur between March 1 and August 15 (depending on type of roost and location) which coincides with the maternity season in California.

    - If a winter roost or a maternity roost is found, a 100 foot buffer will be created around a roost and no project related activities will occur within the buffer until a biologist has determined that the roost is no longer in use.

Significance after Mitigation
Implementation of Mitigation Measure 4.4-3 would avoid or minimize impacts to special-status bats through avoidance or exclusion, thereby insuring that project implementation would not result in the direct mortality of such species. As a result, impacts would be reduced to a **less-than-significant** level.

West Olive Drive

Redevelopment within West Olive Drive as a result of the proposed redesignation/rezoning could result in impacts to special status bats during construction activities. Disturbance or loss of special-status bats during construction activities would be a **potentially significant** impact.

The West Olive Drive portion of the project is completely developed, however, this area supports some vegetation (including large trees), as well as buildings that could serve as potential roosting sites for special status bats known to occur in the area. As redevelopment occurs within West Olive Drive, construction activities could result in the disturbance of or direct mortality of roosting special status bats.

*The loss or disturbance of roosting bats within West Olive Drive would be a **potentially significant** impact.*

Mitigation Measures

Implement Mitigation Measure 4.4-3 (Avoid or minimize impacts to special status bat species).

Significance after Mitigation
As noted above for the Nishi site, implementation of Mitigation Measure 4.4-3 would avoid or minimize impacts to special-status bats through avoidance or exclusion, thereby ensuring that project implementation would not result in the direct mortality of such species. As a result, impacts would be reduced to a **less-than-significant** level.

Impact 4.4-4: Impacts to Swainson's hawk.

Nishi Site

Development of the Nishi site would result in a reduction in available foraging habitat for Swainson's hawk as a result of conversion of agricultural land. Additionally, Swainson's hawk could nest on or near the project, and construction activities associated with the project could result in the direct loss of special-status wildlife or temporary disruption of wildlife feeding and/or breeding behavior. Loss of foraging habitat and disturbance or loss of special-status wildlife species would be a **significant** impact.

The CNDDB contains 133 historical records of nesting Swainson's hawks within 5 miles of the Nishi site. CDFW considers any nest that was active within the last 5 years as active. The CNDDB contains seven nests that fall under this category within 5 miles; three of these nests were observed in 2013, three in 2012 and only one in 2011, but none are within the project site. The Yolo County HCP/NCCP JPA also provided a map with a documented Swainson's hawk nest northeast of the Nishi site, approximately 0.34 mile. This occurrence appears to be a CNDDB occurrence that was last active in 2007.

The Nishi site supports agricultural land with cultivated crops. Cultivated crops, such as wheat and alfalfa, provide habitat for Swainson's hawk prey species. At the time of the March 2015 survey, winter wheat was in cultivation. Although the wheat was tall, one Swainson's hawk and one red-tailed hawk were observed foraging over the field. No raptor nests were observed on or near the project site during the field visit.

Implementation of the proposed development of Nishi site would convert approximately 46 acres of agricultural land to urban development, and thus reduce the foraging habitat of Swainson's hawk in the vicinity of the project site. Although the site would retain approximately 23 acres of open space, including parks, the stormwater detention basin, and the Putah Creek channel area, the majority of these areas would be temporarily impacted by construction activities and human use, and they would not provide the open habitat that Swainson's hawk require for foraging. Furthermore, removal of existing trees could potentially remove active nest and nest trees that may establish between the March 2015 survey and the initiation of construction. Although no raptor nests were observed during the initial reconnaissance surveys, the project site trees provide suitable nesting habitat and the agricultural area provides suitable foraging habitat and there is the potential for these species to have moved into the site after the initial reconnaissance surveys.

Loss of Swainson's hawk foraging habitat or nests as a result of project construction would result in a ***significant*** *impact.*

Mitigation Measures

Mitigation Measure 4.4-4a: The applicant shall implement the following measures to avoid or minimize impacts to Swainson's hawk within the Nishi site:

- For construction activities occurring between February 1 and August 31, the applicant shall retain a qualified biologist to conduct surveys for Swainson's hawk in accordance with the Swainson's Hawk Technical Advisory Committee 2000 guidelines (SHTAC 2000) and/or currently accepted guidance/industry standards, subject to City of Davis review and approval. Surveys shall encompass a minimum of a 0.5-mile radius around the construction area. If nesting Swainson's hawks are detected, a 0.5-mile, no-disturbance buffer shall be established, depending on location. Buffers shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival. Buffer distance may be reduced in consultation with CDFW.

- Although no Swainson's hawk nests were observed during the initial survey, it is possible that before initiation of construction, a Swainson's hawk may establish a nest within the boundaries of the project site. If a Swainson's hawk nest tree is found within the project site and said nesting tree is to be removed during construction activities, removal will take place outside of Swainson's hawk nesting season. Upon discovery, the applicant shall develop a tree replacement plan, in consultation with CDFW, to replace known active nest trees at a ratio of 3:1. If replacement planting is implemented, monitoring shall be conducted annually for 5 years to ensure the survivability of replacement trees.

- Before commencement of construction, the applicant shall provide compensatory mitigation for the loss of approximately 46 acres of Swainson's hawk foraging habitat to the Yolo Habitat Conservancy (formerly HCP/NCCPJPA) in accordance with their Swainson's Hawk Interim Mitigation Program. This program currently requires compensation at a 1:1 ratio and projects over 40 acres

are required to provide the conservation land directly. If the project is implemented after adoption of the YNHP, in lieu of this measure, the applicant will comply with the requirements of the YNHP.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-4a would ensure no direct impacts to nesting Swainson's hawk and would provide compensatory mitigation in accordance with an established program for the mitigation of loss of Swainson's hawk foraging habitat, thereby reducing impacts associated with development of the Nishi site on Swainson's hawk to a **less-than-significant** level.

West Olive Drive

West Olive Drive does not represent potential foraging habitat for Swainson's hawk, however, it is possible that Swainson's hawk may establish a nest(s) in an existing tree within this portion of the project site. Construction activities associated with redevelopment of West Olive Drive could result in the direct loss of disturbance of such a nest. Disturbance or loss of special-status wildlife species would be a **potentially significant** impact.

The West Olive Drive portion of the project is completely developed, however, this area supports some vegetation and large trees that represent potential nesting locations for Swainson's hawk. Should a nest establish within an on-site tree, project-related grading, excavation, and other earth-moving activities result in direct and indirect impacts to Swainson's hawk, such as direct loss of a nest or nest abandonment because of noise.

*Loss or disturbance of an active Swainson's hawk nest as a result of redevelopment of West Olive Drive would be a **potentially significant** impact.*

Mitigation Measures

Mitigation Measure 4.4-4b: The applicant shall implement the following measures to avoid or minimize impacts to Swainson's hawk within West Olive Drive:

- For construction activities occurring between February 1 and August 31, the applicant shall retain a qualified biologist to conduct surveys for Swainson's hawk in accordance with the Swainson's Hawk Technical Advisory Committee 2000 guidelines (SHTAC 2000) and/or currently accepted guidance/industry standards. Surveys shall encompass a minimum of a 0.5-mile radius around the construction area. If nesting Swainson's hawks are detected, a 0.5-mile, no-disturbance buffer shall be established, depending on location. Buffers shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival. Buffer distance may be reduced in consultation with CDFW.

- Although no Swainson's hawk nests were observed during the initial survey, it is possible that before initiation of construction, a Swainson's hawk may establish a nest within the boundaries of the project site. If a Swainson's hawk nest tree is found within the project site and said nesting tree is to be removed during construction activities, removal will take place outside of Swainson's hawk nesting season. Upon discovery, the applicant shall develop a tree replacement plan, in consultation with CDFW, to replace known active nest trees at a ratio of 3:1. If replacement planting is implemented, monitoring shall be conducted annually for 5 years to assess the mitigation's effectiveness. The plan shall include a performance standard for the mitigation that results in no net loss of nesting habitat.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-4b would ensure no direct impacts to nesting Swainson's hawk, thereby reducing impacts associated with redevelopment of West Olive Drive on Swainson's hawk to a **less-than-significant** level.

Impact 4.4-5: Impacts to burrowing owl.

Nishi Site

On-site vegetation within the Nishi site could provide potential nesting habitat for burrowing owl. As a result, construction activities associated with development of the Nishi site could result in the direct loss of burrowing owl and/or temporary disruption of wildlife feeding and/or breeding behavior. The potential impacts from construction activities would vary depending on the location and timing of construction. Disturbance or loss of active burrowing owl nests would be a **potentially significant** impact.

The tall ruderal grasses and vegetation growing within the UPRR right-of-way or the winter wheat field at the Nishi site do not provide suitable habitat for the burrowing owl. However, based on the results of the March 2015 survey of the project site, potential suitable habitat does exist along the periphery of the Nishi site where vegetation is less dense. California ground squirrels, which can dig burrow suitable for burrowing owls, were observed, but most of their burrows were observed along the ballast rock area within the UPRR right-of-way and along the embankment associated with I-80 (less than 100 feet from the Nishi site). No white wash, owl pellets or other burrowing owl sign (i.e., feathers, egg shells, etc.) were observed at any of the ground squirrel burrows during the March 2015 field surveys. The nearest extant observation of burrowing owl is located in the Wildhorse Golf Course, 2.45 miles to the northeast. Nonetheless, burrowing owl could establish on-site before initiation of construction activities because of the presence of potentially suitable habitat, and as a result, development of the Nishi site could result in removal/disturbance of nesting burrowing owls.

*Loss/disturbance of nesting burrowing owls as a result of project construction would be considered a **potentially significant** impact.*

Mitigation Measures

Mitigation Measure 4.4-5a: The applicant shall implement the following measures to avoid or minimize impacts to burrowing owl:

- The applicant shall retain a qualified biologist to conduct pre-construction surveys for burrowing owls in areas supporting potentially suitable habitat (sparsely vegetated areas and those containing suitable burrows) no more than 30 days before the start of construction activities that could affect the subject areas. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site shall be resurveyed. The project biologist shall conduct surveys for burrowing owls in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (CDFG 2012 or current version).

- If burrowing owls are detected, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers shall be established around occupied burrows in accordance with guidance provided in the Staff Report on Burrowing Owl Mitigation. This guidance includes buffers around occupied burrows shall be a minimum of 656 feet (200 meters) during the nesting season, and 160 feet (100 meters) during the non-breeding season unless otherwise approved by CDFW.

- Outside of the nesting season (February 1 through August 31), passive owl relocation techniques shall be implemented if approved by CDFW. Owls would be excluded from burrows in the immediate impact zone within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors shall be in place at least 48 hours before excavation to insure the owls have departed.

- The work area shall be monitored daily for 1 week to confirm owl departure from burrows before any ground-disturbing activities.

- Where possible, burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow.

Mitigation Measure 4.4-5b: If active burrowing owl dens are present and the project would impact active dens, the project applicant shall implement the following:

- If active burrows are present and the project would impact active burrows, the project applicant shall provide compensatory mitigation for the permanent loss of burrowing owl habitat consistent with the Staff Report on Burrowing Owl Mitigation (CDFG 2012 or current version). Such mitigation may include the permanent protection of land, which is deemed to be suitable burrowing owl habitat through a conservation easement deeded to a non-profit conservation organization or public agency with a conservation mission, or the purchase of burrowing owl conservation bank credits from a CDFW-approved burrowing owl conservation bank.

  If the same mitigation acreage would be utilized for multiple species (i.e. burrowing owl habitat and Swainson's hawk foraging habitat), the appropriate wildlife agency, in this case CDFW, must approve the mitigation lands and long-term management practices for the mitigation lands as suitable and compatible for all species for which the lands are to provide compensatory mitigation. Proof of CDFW's approval habitat "stacking" shall be provided to the City of Davis.

Significance after Mitigation

Implementation of Mitigation Measures 4.4-5a and 4.4-5b would require pre-construction surveys of the Nishi site to identify potential nesting burrowing owls. If active nest sites are found, no-disturbance buffers would be established to ensure that breeding/nesting would not be disrupted or adversely impacted by construction, and as a result, this impact would be reduced to a **less-than-significant** level.

West Olive Drive

The redesignation/rezoning of parcels located along West Olive Drive from Commercial Service to Neighborhood Mixed Use would not result in the removal of potential active burrowing owl nest sites. However, construction associated with redevelopment of West Olive Drive could result in indirect impacts to nearby nesting habitat and potential nests. While impacts would be considered temporary, construction within West Olive Drive that results in the disturbance or loss of an active burrowing owl nest would be a **potentially significant** impact.

The West Olive Drive portion of the project is completely developed and does not represent potential burrowing owl nesting habitat. However, areas immediately adjacent to West Olive Drive are less developed and burrowing owl may establish nests within these areas. During construction activities within West Olive Drive, construction-related noise may disturb such nest sites and could result in nest abandonment.

*As construction activities with West Olive Drive could result in the disturbance of burrowing owl nest sites adjacent to West Olive Drive, the loss/disturbance of nesting burrowing owls as a result of project construction would be considered a **potentially significant** impact.*

Mitigation Measures

Mitigation Measure 4.4-5c: The applicant shall implement the following measures to avoid or minimize impacts to burrowing owl:

- The applicant shall retain a qualified biologist to conduct pre-construction surveys for burrowing owls in areas supporting potentially suitable habitat (sparsely vegetated areas and those containing suitable burrows) no more than 30 days before the start of construction activities that could affect the subject areas. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site shall be resurveyed. The project biologist

shall conduct surveys for burrowing owls in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (CDFG 2012 or current version).

- If burrowing owls are detected, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers shall be established around occupied burrows in accordance with guidance provided in the Staff Report on Burrowing Owl Mitigation. This guidance includes buffers around occupied burrows shall be a minimum of 656 feet (200 meters) during the nesting season, and 160 feet (100 meters) during the non-breeding season unless otherwise approved by CDFW.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-5c would require pre-construction surveys to identify potential nesting burrowing owls. If active nest sites are found, no-disturbance buffers would be established to ensure that breeding/nesting would not be disrupted or adversely impacted by construction, and as a result, this impact would be reduced to a **less-than-significant** level.

Impact 4.4-6: Impacts to raptors, nesting birds, and other special status birds.

Nishi Site

Development of the Nishi site would result in impacts to land cover types such as agricultural land, and remnant riparian area that provide nesting opportunities for birds and potential habitat for special status bird and raptor species. Construction activities within the Nishi site, especially vegetation removal, could result in the direct impacts these bird and/or raptor species. The potential impacts from construction activities would vary depending on the location and timing of construction. The disturbance or loss of an active nest or special-status bird or raptor species would be a **potentially significant** impact.

The shrubs and trees associated with the agricultural and the old north fork Putah Creek areas could provide suitable habitat for birds protected under the MBTA and special-status nesting birds and raptors, such as northern harrier, white-tailed kite, loggerhead shrike, and tricolored blackbird. With respect to tricolored blackbird, it should be noted that the protection for this species, emergency listed in late 2014 as a fully-protected species, expired on June 11, 2015. The species remains a "species of special concern" and petitions have been filed to renew protection. As noted above, white-tailed kite is also a fully-protected species as designated by Fish and Game Code Section 3511. Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take. The ruderal grassland and wheat field associated with the agricultural field could provide suitable ground nesting habitat for the northern harrier. If special status or MBTA-protected nests are present, removal of grasslands and wheat fields, as well as shrubs and trees, could result in the direct loss of nests of these species. Vibration, dust, and noise from construction activities at the Nishi site could also result in indirect effects to some nesting species, if present, potentially leading to nest abandonment.

*The loss of nests associated with special-status nesting birds, raptors, and/or other birds protected under the MBTA would be considered a **potentially significant** impact.*

Mitigation Measures

Mitigation Measure 4.4-6: The applicant shall implement the following measures to avoid or minimize impacts to special-status birds, raptors, or other birds protected under the MBTA:

- For construction activities occurring between February 1 and August 31, the applicant shall retain a qualified biologist to conduct surveys for special status nesting birds and raptors no less than 14 days before the start of ground disturbing activities. These surveys can be conducted concurrently with the Swainson's hawk and burrowing owl surveys identified in Mitigation Measures 4.4-4a and 4.4-5a. If no nesting birds are found, no further study is required.

- If nests are detected, the project biologist shall establish a minimum 500-foot no-disturbance buffer for raptors and a 100-foot no-disturbance buffer around all other nests until the nest is no longer active or the young have fledged. The size of the buffer may be adjusted by the project biologist if, in consultation with CDFW, it is determined that such as adjustment would not be likely to adversely affect the nest.

- Factors to be considered for determining buffer size shall include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers shall be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.

- Should tricolored blackbird be relisted as a fully-protected species before construction activities associated with the project and tricolored blackbird are found during the preconstruction surveys, a 500-foot no disturbance buffer shall be established around the nesting colony unless otherwise approved by CDFW. The buffer will be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-6 would require pre-construction surveys of the Nishi site to identify active bird and raptor nests. If active nest sites are found, the above-listed mitigation would require the establishment of no-disturbance buffers to ensure that breeding/nesting is not likely to be disrupted or adversely impacted by construction, and as a result, this impact would be reduced to a **less-than-significant** level.

West Olive Drive

The redesignation/rezoning of parcels located along West Olive Drive from Commercial Service to Neighborhood Mixed Use could result in impacts to existing trees and remnant riparian area that provide habitat for special status bird and raptor species. Construction associated with redevelopment of West Olive Drive could result in direct and indirect impacts to nests that may establish within on-site trees and other areas. The disturbance or loss of special-status bird or raptor species would be a **potentially significant** impact.

The West Olive Drive portion of the project is completely developed, however, this area includes some vegetation and large trees that could serve as potential nesting sites for special status birds and/or raptors. As a result, project-related grading, excavation, and other earth-moving activities during construction could result in the disturbance of and or direct loss of active nests associated with these species.

*The loss or disturbance of active nests associated with special-status birds and/or raptors would be a **potentially significant** impact.*

Mitigation Measures

Implement Mitigation Measure 4.4-6 (Pre-construction surveys for special-status birds, raptors, or other birds protected under MBTA).

Significance after Mitigation

Implementation of Mitigation Measure 4.4-6 would require pre-construction surveys to identify potential nests within West Olive Drive. If active nest sites are found, no-disturbance buffers would be established to ensure that breeding/nesting would not be disrupted or adversely impacted by construction, and as a result, this impact would be reduced to a **less-than-significant** level.

Impact 4.4-7: Loss of riparian habitat and fill of waters of the U.S. during construction.

Nishi Site

Implementation of the proposed development of Nishi site would result in the extension of West Olive Drive over the old north fork of Putah Creek which will require removal of the existing crossing and removal of remnant riparian vegetation. In turn, this could result in the placement of fill material into waters of the U.S. or waters of the State. This would be considered a **potentially significant** impact.

The proposed development of the Nishi site would require the improvement of an existing crossing of the Putah Creek channel to allow for vehicular traffic from West Olive Drive to the Nishi site. To accomplish this, the existing earthen crossing (including a 12-inch culvert) that provides for pedestrian and bicycle traffic across the Putah Creek channel would be removed and replaced with a free-standing crossing (approximately 50 feet in width) with up to two piers extending downward into the channel. The proposed crossing would be elevated so as to maintain pedestrian and bicycle access along the existing Putah Creek trail located on the channel's western edge. The Putah Creek channel, as it crosses the Nishi site, does not support fish and supports only a narrow riparian corridor, but still provides habitat to a number of common wildlife species, such as nesting birds.

Removal of the existing earthen crossing (including a 12-in culvert) and the placement of the bridge piers may require a permit from the USACE pursuant to Section 404 of the CWA and may also require issuance of a Section 401 water quality certification by the RWQCB. In addition, the streams supporting riparian vegetation may be regulated by CDFW under Section 1600-1616 of the California Fish and Game Code, which provides for the protection of fish, wildlife, and native plant resources. Although there has not been flow within the old north fork Putah Creek since the early 1870s, the USACE and CDFW may potentially retain jurisdiction over the old bed and bank and remnant riparian area.

*The loss of remnant riparian and potential wetland habitat as a result of development of the Nishi site is a **potentially significant** impact.*

Mitigation Measures

Mitigation Measure 4.4-7: The applicant shall implement the following measures to avoid, minimize, and mitigate Impacts on sensitive natural communities and compensate for loss of remnant riparian and wetland habitat:

- As a first priority, the applicant will minimize wetland and/or riparian impacts through minimizing project footprint during project design and construction
- Before any ground breaking activity along the remnant riparian area of the old north fork Putah Creek, the applicant shall retain a qualified wetland specialist who shall prepare a jurisdictional wetland delineation for both waters of the U.S. and waters of the State in sensitive areas that cannot be avoided. The preliminary delineation shall be submitted to USACE for verification.
- The creek and associated riparian areas may be subject to CDFW regulation under Section 1602 of the Fish and Game Code and shall be evaluated for CDFW jurisdiction and riparian extent. If determined to be subject to CDFW jurisdiction, CDFW shall be consulted and a Lake and Streambed Alteration Agreement notification shall be prepared.
- No grading, fill, or other ground disturbing activities shall occur in proximity to the Putah Creek channel until all required permits, regulatory approvals, and permit conditions for effects on wetland and riparian habitats are obtained. Any additional avoidance, minimization, and conservation measures shall be fulfilled before construction as stipulated by the permits.

- For those wetlands and riparian areas that cannot be avoided, the applicant shall commit to replace, restore, or enhance on a "no net loss" basis (in accordance with the USACE permit) the acreage of all wetlands and other waters of the U.S. that would be removed, lost, and/or degraded with project implementation. Wetland habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE, and the RWQCB (if applicable) as appropriate, depending on agency jurisdiction, and as determined during the permitting processes. Similarly all riparian vegetation shall be compensated for, as applicable, in accordance with an obtained CDFW 1602 Streambed Alteration Agreement.

- The applicant or its contractor will provide environmental awareness training to all construction workers on-site, conducted by a qualified biologist that includes the following provisions:

  - The location of the Putah Creek revegetation area and its designation as "environmentally sensitive area." This area will be protected, and no entry by the Contractor or crews will occur unless specifically authorize as per the project plans.

  - The area will be protected by installing orange construction barrier fence at the limits of the area needed to construction improvements along this area. If needed, the contractor will work with the project biologist to identify the location for the barrier fence. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period.

Significance after Mitigation
Significant impacts associated with loss of riparian habitat and fill material into waters of the U.S. and waters of the State would be reduced to a **less-than-significant** level by providing replacement, restoration or enhancement habitat of equal or greater value.

West Olive Drive

The redesignation/rezoning of parcels located along the north bank of the old north fork of Putah Creek in the West Olive Drive area would allow for redevelopment of this area which could result in construction within the remnant riparian area and Putah Creek channel. As a result, redevelopment of West Olive Drive could result in the placement of fill material into waters of the U.S. or waters of the State. This would be considered a **potentially significant** impact.

Upon redesignation/rezoning of parcels within West Olive Drive, redevelopment could occur. Reasonably foreseeable redevelopment activities would include demolition of existing structures, grading, and vegetation removal, which could impact the remnant riparian area and could result in the accidental placement of fill material during demolition or construction into the neighboring Putah Creek channel, similar to the potential impacts of the Nishi site identified above.

*The loss of remnant riparian and/or the placement of fill within potential wetland habitat as a result of redevelopment within West Olive Drive is a **potentially significant** impact.*

Mitigation Measures

Implement Mitigation Measure 4.4-7 (Replacement, restoration or enhancement of wetland/riparian habitat).

Significance after Mitigation
Significant impacts associated with loss of riparian habitat and fill material into waters of the U.S. and waters of the State would be reduced to a **less-than-significant** level by providing replacement, restoration or enhancement habitat of equal or greater value.

Impact 4.4-8: Conflict with local policies or ordinances related to the protection of biological resources.

Nishi Site

Implementation of the proposed development of Nishi site would result in the removal of City-protected trees. However, consistent with the City's Tree Preservation Ordinance, the project applicant would be required to prepare a tree protection plan, pay applicable fees, and provide replacement trees as required by the City ordinance. Impacts would be **less than significant**.

The City of Davis Tree Preservation Ordinance (Davis Municipal Code, Chapter 37) protects the following trees: Landmark Trees as determined by resolution of the City Council; Trees of Significance - any tree which measures 5 inches or more in DBH; 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; 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 and Private Trees - 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.

The Tree Associates (2014) arborist report prepared for the Nishi site identified 150 trees with a diameter of 5 inches or more within the Nishi site and within the West Olive Drive portion that would be affected by the extension of West Olive Drive to the Nishi site. All of the 150 trees would fall under the City of Davis Tree Preservation Ordinance definition as Trees of Significance. 52 of these trees were recommended for removal because of the severity of noted defects, comprised health and or structural instability. Refer to Appendix F for further clarification. Although the arborist report includes recommendations for tree removal, the full extent of tree removals or the impacts to tree roots system, canopy would not be known until the grading and improvement plans have been finalized and can be compared against the arborist report. Nonetheless, as required by the City's ordinance, any trees to be removed at the Nishi site would be evaluated and either relocated or replaced (whether on-site or through the payment of fees).

As the project would comply with the requirements of the City of Davis Tree Protection Ordinance, development of the Nishi site would not result in a conflict with local policies or regulations related to the protection of biological resources. Impacts would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

West Olive Drive

The redesignation/rezoning of parcels located in the West Olive Drive area from Commercial Service to Neighborhood Mixed Use could result in impacts to City protected trees as redevelopment occurs. Construction activities potentially occurring during redevelopment could result in the direct loss of trees. Redevelopment activities would vary depending on the location and could result in the trimming, damage or removal of City protected trees. As redevelopment occurs within West Olive Drive, the City would review each application and ensure consistency with the requirements of the City of Davis Tree Protection Ordinance. As a result, impacts would be **less than significant**.

There is no proposed construction from the redesignation/rezoning of parcels within West Olive Drive. However, it is reasonably foreseeable that some tree removal would be required as redevelopment occurs. Each application for redevelopment would be evaluated by the City and, if tree removal/modification is required, a tree protection plan would be required, consistent with the ordinance.

Because any plans for redevelopment of West Olive Drive would require preparation of a tree protection plan, no potential conflicts with the City's Tree Protection Ordinance are anticipated. Impacts would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 4.4-9: Conflict, or create an inconsistency, with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating environmental effects related to biological resources.

Nishi Site

Implementation of the project within the Nishi site would be consistent with the policies of the City of Davis General Plan related to biological resources. This would be a **less-than-significant** impact.

The City of Davis General Plan includes policies to protect environmental resources. The project's features (i.e., detention basins, proposed native vegetation, etc.) and mitigation measures discussed in this document are consistent with the policies of the City of Davis General Plan as shown in Table 4.4-3. Additionally, while the City of Davis General Plan does contain policies requiring protection of wetlands, the project would satisfy these requirements through compliance with the protection and if necessary with the compensation of loss as part of compliance with Section 404 of the CWA. Impacts on wetlands are addressed under Impact 4.4-7, and Mitigation Measure 4.4-7 requires mitigation for loss of wetlands resulting in no net loss of acreage, function, or value of wetland habitat, consistent with City Policy HAB 1.1. In addition, the project would comply with the County's Swainson's Hawk Ordinance as discussed in Impact 4.4-2, including mitigating for loss of Swainson's hawk foraging habitat through consultation with CDFW. Based on the information presented in this table foregoing information, the development of the Nishi site as part of the project would be consistent with the City General Plan.

Development of the Nishi site as part of the project would not conflict with any local policies or ordinances protecting biological resources. Impacts would be ***less than significant.***

Mitigation Measures

No mitigation measures are required.

West Olive Drive

Redevelopment that could occur as a result of the redesignation/rezoning of parcels located in West Olive Drive would be consistent with the policies of the City of Davis General Plan related to biological resources. This would be a **less-than-significant** impact.

As noted above, biological resources within West Olive Drive are limited primarily to existing landscaping and resources that may utilize the landscaping. Similar to what was discussed above for the Nishi site, the redevelopment of West Olive Drive would not reduce the level of biological resources in the area and would provide protection/replacement of resources consistent with mitigation identified above and City requirements. As a result, potential redevelopment of this portion of the project site would not result in any conflicts or potential inconsistencies with regulations, plans, or policies related to biological resources.

The proposed General Plan Amendment and zoning change associated with redevelopment of West Olive Drive would not conflict with any regulations established for the protection of biological resources. Impacts would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Table 4.4-3 City of Davis General Plan Policy Consistency

Policy	Project Consistency
Policy HAB 1.1: Protect existing natural habitat areas, including designated Natural Habitat Areas.	The project site does not contain any designated Natural Habitat Areas. The conceptual site plan for the project has taken into consideration existing natural resources on-site, including existing trees and the Putah Creek channel. The project design would enhance the existing environment surrounding those trees with native vegetation and passive recreational uses. Further, the anticipated design of the Putah Creek channel crossing would reconnect the northern and southern areas of the Putah Creek channel within the project site compared to existing conditions, consistent with this policy.
Policy HAB 1.2: Enhance and restore natural areas and create new wildlife habitat areas.	As noted above under the consistency discussion for Policy HAB 1.1, the design of the project would protect existing resources, including on-site trees and the Putah Creek channel and would provide additional native landscaping and improve the natural condition along the Putah Creek channel, consistent with this policy.
Policy HAB 1.3: Commit adequate City resources and staff time so as to protect habitat and other natural resources.	The applicant would, as required by the City's Tree Protection Ordinance, work with City staff to protect, preserve, and replace on-site trees where necessary, as well as to enhance the quality of vegetation/habitat within the Putah Creek channel. Additionally, the City would monitor the applicant's implementation of mitigation measures identified herein to protect biological resources consistent with this policy.
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.	As shown on the conceptual site plan for the project (Figure 3-3), the project would increase publicly accessible open space within the site and maintain/enhance biological conditions, primarily around the Putah Creek channel and within the southern portion of the Nishi site. These areas would then serve as potential areas for wildlife movement and nesting, which could be accessible to Davis residents, consistent with this policy.

Source: City of Davis General Plan 2007; data provided by Ascent Environmental 2015

This page intentionally left blank.