

3.4 Biological Resources

3.4.1 Introduction

This section evaluates the potential effects on biological resources associated with development and operation of the Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project (proposed project). This section describes the biological resources present within the project site; identifies special-status plant and wildlife species known to occur or potentially occur within the project site; outlines applicable federal, state, and regional regulations pertaining to protection of plant and wildlife species; and identifies potential project-specific and cumulative impacts on biological resources and measures to minimize these impacts. This section also addresses potential impacts to biological resources associated with proposed off-site improvements. Based on the analysis provided in the Biological Resources Assessment prepared for the project (which is provided in Appendix E), the Initial Study, included in Appendix B, concluded that because the project site is a non-linear feature and bound by existing roads, development, and agricultural production, it has little value as a potential wildlife corridor, habitat linkage or, native wildlife nursery site. Therefore, implementation of the proposed project would result in a less-than-significant impact on wildlife movement and this issue is not further evaluated in this Environmental Impact Report (EIR). In addition, the Initial Study noted that the project site is not located within or adjacent to any preserve or conservation area, nor would it conflict with any adopted Habitat Conservation Plan or Natural Community Conservation Plan because there are no adopted conservation plans that include the project site. Therefore, this issue is also not further evaluated in this EIR.

As discussed in Chapter 1, Introduction, a Notice of Preparation (NOP) for this EIR was initially published in December 2016 based on the original project applications. In 2019, the project applicant submitted revised applications and site plans, increasing the number of residential units from 330 to 540 and increasing the amount of onsite parking. The City issued a revised NOP in May 2020. A comment letter from the California Department of Fish and Wildlife (CDFW) received in response to the 2020 NOP addressed potential impacts to special status wildlife, particularly Swainson's hawk, California tiger salamander, burrowing owl, and nesting birds (CDFW 2020). Both NOPs and the comments received in response to them are included in Appendix A.

Primary resources referenced to prepare this section include the Biological Resources Assessment (Appendix E), the City of Merced Vision 2030 General Plan (City of Merced 2012a) and the Merced County 2030 General Plan (Merced County 2013). The Biological Resources Assessment was prepared based on a literature review and site survey conducted in 2016. A review of multiple aerial images taken between 2016 and 2019 suggests that the environmental setting has not changed since the initial field survey. The literature review was updated in 2019 to account for any changes in species protection status and data regarding known occurrences of special-status species (CDFW 2019b).

3.4.2 Environmental Setting

This section describes the existing conditions on the approximately 68.6-acre project site and identifies biological resources that could be affected by development of the proposed project. The proposed project includes the approximately 28.4-acre The Crossings component, and the 40.2-acre Remainder Area where no development is proposed at this time. As shown in Figure 2-2, The Crossings is proposed to be developed within an L-shaped portion of the site that includes the majority of the western half of the site, excluding an approximately 9.4-acre area in the northwest corner. This 9.4-acre area is included in the Remainder Area, along with the approximately 30.8 acres in the eastern portion of the project site.

Existing Site Conditions and Habitat Types

Merced County is located within the Central Valley bioregion of California. This bioregion extends from the Sacramento Valley to the San Joaquin Valley and the predominant landscape feature of the Central Valley bioregion is agricultural croplands. The project site is defined by extensive farmland and long, hot, dry summers and cool, wet winters. About half of the Central Valley is farmed and 75% of that farmland is irrigated. The Crossings portion of the project site and the area immediately adjacent to the northern boundary have been farmed extensively and thus contain very few native/natural plant communities (Appendix E).

Currently, a majority of The Crossings component of the project site is used for cultivating irrigated row crops, as described below. The remaining 40.2 acres is comprised of rural residences and agricultural land, along with Yosemite Church and Stoneridge Christian School, which are located in the southwestern corner of the Remainder Area. The project site is located in an unincorporated area of Merced County adjacent to developed areas of the City of Merced (City) to the south and west. Land under active agricultural use is located to the north and a mix of rural residential uses are located to the east, across Hatch Road. The project site is relatively flat and located at an elevation of approximately 185 feet above mean sea level (AMSL).

Agricultural Lands

The Crossings portion of the project site is characterized by previously graded agricultural lands currently used for growing row crops. Other than row crops, the site is largely devoid of vegetation except for disturbed areas along the periphery of the site and an approximately 3-acre piece of land in the south-central portion of the Crossings component that is developed with a residence, barn, and other smaller sheds. These areas support non-native, ruderal plant species such as telegraphweed (*Heterotheca grandiflora*), horseweed (*Erigeron* spp.), wild oat (*Avena* spp.), mustard (*Brassica* spp.) and yellow star thistle (*Centaurea solstitialis*). Several mature trees exist within the

developed portion near the residence located in the south-central area of The Crossings portion of the project site (Appendix E).

The Remainder Area includes several developed parcels that support single-family residences, Yosemite Church, and Stoneridge Christian School, and includes approximately 10 acres of agricultural land. A row of mature olive (*Olea europaea*) trees exists along the boundary between the Crossings component and the eastern portion of the Remainder Area and a second row of mature olive trees appears to be present between the approximately 10-acre agricultural parcel and Stoneridge Christian School.

Hydrology

The project site is located within the Middle San Joaquin-Lower Chowchilla Sub-Basin (HUC 18040001) of the San Joaquin Watershed (HUC 1804) (USDA 2019).

A drainage ditch that is potentially within the jurisdiction of CDFW and the Regional Water Quality Control Board (RWQCB) occurs along East Yosemite Avenue on the southern boundary of the project site that terminates underground at Gardner Avenue to the west and at Yosemite Church to the east, as shown on Figure 3.4-1, Soil Types and Potential Jurisdictional Resources. This drainage appears to have been constructed in upland habitat to collect runoff from East Yosemite Avenue and the adjacent agricultural land. No hydrophitic vegetation was observed within the drainage. An extension of the Yosemite Lateral irrigation canal is present along the northern boundary of the project site. Agricultural ditches are not considered jurisdictional waters of the U.S. [33 CFR 328.3(b)(3)] because these features are human-made structures excavated in uplands and are primarily used for irrigation purposes (Appendix E), however this ditch may be within the jurisdiction of CDFW and the RWQCB. The section of the canal adjacent to The Crossings development would be required to be piped during project construction. These drainages are discussed further in the Jurisdictional Aquatic Resources section below.

Topography and Soils

The project site is generally flat due to past levelling and grading and is situated at approximately 185 feet AMSL (Appendix E).

According to the Natural Resources Conservation Service (USDA 2019) and as shown on Figure 3.4-1, the following three soil types are mapped within the approximately 68.6-acre project site: Ryer clay loam, 0-2% slopes; Wyman clay loam (deep over hardpan), 0-1% slopes; and Yokohl clay loam, 0-3% slopes. Ryer clay loam and Wyman clay loam are well-drained alluvium soils derived from igneous rock. Yokohl clay loam is well-drained, non-saline to very slightly saline alluvium derived from igneous rock.

Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large areas or patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small areas or patches of land that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that essentially function as 'stepping stones' for wildlife dispersal.

The approximately 68.6-acre project site is a non-linear feature and bounded by existing roads and development. The site has little value as a potential wildlife corridor or habitat linkage, although common urban wildlife species such as raccoon (*Procyon lotor*), coyote (*Canis latrans*) and Virginia opossum (*Didelphis virginiana*) would likely move through the project area on a regular basis in search of food and cover habitat (Appendix E).

Jurisdictional Aquatic Resources

A jurisdictional delineation was not performed for wetlands that may be present within the project site, however The Crossings component of the site was assessed for potential jurisdictional features during the December 2016 field survey. During this survey, no features that are within the jurisdiction of the U.S. Army Corps of Engineers (ACOE), such as vernal pools and wetlands, were identified within The Crossings portion of the project site because there are no features that were found to support or contain all three characteristics of waters of the U.S. – these characteristics are hydric soils, surface hydrology/downstream water connectivity, and hydrophytic vegetation.

Under the state Porter-Cologne Act, the RWQCB jurisdiction includes features that are regulated by the ACOE and also extends to isolated features that have evidence of surface water inundation. These areas generally support at least one of the three ACOE wetlands indicators listed above but are considered isolated through the lack of connectivity to downstream waterways. The extent of CDFW-regulated areas typically include areas supporting a predominance of hydrophytic vegetation (i.e., 50% cover or greater) where associated with a stream channel that has a defined bed and bank. As noted previously, there are two drainages adjacent to the project site that could potentially be under the regulation of the RWQCB and CDFW. Pursuant to Section 1600 of the state Fish and Game Code and the state Porter-Cologne Act, future development affecting these drainages would need to be addressed through a Streambed Alteration Agreement from CDFW and a Waste Discharge Requirement or Certification of Waste Discharge Requirement from the RWQCB. The areas that could be potential jurisdictional resources are shown on Figure 3.4-1.

As described further below, both drainages are human-made structures excavated in uplands; one is an agricultural ditch, the other functions as both a roadside (stormwater) and agricultural ditch. These are not considered jurisdictional waters of the U.S. [33 CFR 328.3(b)(3)] because they are human-made structures and their hydrology is solely reliant on artificial inputs and therefore, would revert to dry land if artificial inputs ceased. In accordance with *Regulatory Guidance Letter No. 07-02 - Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches under Section 404 of Clean Water Act (CWA)*, even if the ditches were determined to be waters of the U.S., they would be exempt from regulation under Section 404 of the CWA.

Drainage 1. There is one drainage located along East Yosemite Avenue on the southern boundary of the project site that terminates underground at Gardner Avenue to the west and at Yosemite Church to the east. This drainage functions as a roadside and agricultural ditch, constructed in an upland to collect runoff from East Yosemite Avenue and the adjacent agricultural land.

Drainage 2. There is one drainage located along the northern boundary of the project site. This drainage is an extension of the Yosemite Lateral irrigation canal. It is an open air, earthen ditch approximately 16 feet wide and 5.8 feet deep. It enters the project site from the east, continues along most of the northern boundary of the site, then heads north before turning west again and passing under Gardner Avenue. This drainage functions as an agricultural ditch, constructed in an upland to collect runoff from the adjacent agricultural land.

Based on a review of aerial imagery, there may be potential wetlands or other waters present in the Remainder Area however, this area could not be accessed during the field survey. Specifically, there are aerial signatures indicating seasonally wet areas visible on the four residential parcels in the northwest corner of the project site, as well as in the undeveloped parcel at the western side of the eastern portion of the Remainder Area, west of the Yosemite Church property.

In addition, there are three agricultural ditches northwest of the site. However, these features are outside of the project site boundaries and no off-site improvements are included in the proposed project.

Critical Habitat

No federally designated critical habitat for threatened or endangered species occurs within or adjacent to the project area.

Special-Status Plant and Wildlife Species

For the purpose of this EIR, special-status plant and wildlife species are defined as those that fall into one or more of the following categories:

- Officially listed or proposed for listing under the state and/or federal Endangered Species Acts.
- State or federal candidate species proposed for listing under the state and/or federal Endangered Species Acts.
- Species meeting the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act (CEQA) Guidelines.
- Species protected under the Federal Migratory Bird Treaty Act and/or Bald and Golden Eagle Protection Act.
- Species considered by the CDFW to be a “Species of Special Concern.”

Special-status biological resources present or potentially present within the approximately 68.6-acre project site were identified through an online literature search using the following sources: USFWS Information, Planning and Conservation (IPaC) Trust Resource Report; CDFW California Natural Diversity Database (CNDDDB); and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants. The database searches for the CNDDDB and CNPS included Merced and the surrounding eight USGS 7.5 minute quadrangles. The IPaC search included the project site and all lands within a five-mile radius of the site. California Rare Plant Rank (CRPR) 1 and 2 plant species were included in the CNPS search. The initial literature search was conducted for the project in December 2016. As noted previously, an updated literature search of the above resources was conducted in September 2019 to account for any changes in species protection status or occurrence data (CDFW 2019b). Results of the updated literature searches are incorporated into the Biological Resources Assessment (Appendix E).

Following review of these resources, Dudek determined the potential for each species to occur within or adjacent to The Crossings component of the project site based on a review of vegetation communities and available land cover types, habitat types, soils, and elevation preferences, as well as the known geographic range of each species. Table 3.4-1 describes special-status plant and wildlife species that have a potential to occur within or adjacent to The Crossings portion of the project site and those that have a potential to occur within the Remainder Area. The determination of potential to occur was based on the habitat requirements of each species relative to the existing conditions observed during the December 1, 2016 field survey as well as review of aerial photographs and soil data.

The Remainder Area was not surveyed because no development is currently proposed for that portion of the project site. Data regarding the biological resources that are or may be present within the Remainder Area were obtained primarily through literature review, although some field reconnaissance of the annexation area was possible using binoculars from the survey area and perimeter roadways.

Additionally, an aerial photograph (Google Earth 2016) with an overlay of the full project site, and surrounding area was utilized to map vegetation communities and land cover types present, as well as record any special-status or sensitive biological resources while in the field. As noted previously, an additional review of multiple aerial images taken between 2016 and 2019 was completed which indicated that there have not been any changes in the environmental setting of the project site.

Four wildlife species, specifically birds, were observed within The Crossings component of the project site: American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), Say's phoebe (*Sayornis saya*), and California scrub-jay (*Aphelocoma californica*). Due to limited observations of the Remainder Area, only one wildlife species was detected there during the field survey: white-crowned sparrow (*Zonotrichia leucophrys*).

Plants

Based on the literature and database review, 25 special-status plant species are known to occur within the USGS quadrangles included in the database search.

All of these species were determined unlikely to occur within The Crossings component of the project site due to lack of suitable habitat (Appendix E). Specifically, of the 25 species, 14 require mesic habitat types that are not present within The Crossings component of the project site, such as vernal pools, marshes, and seeps; 4 occur only in habitat types that are not present on the project site, such as cismontane woodland, valley and foothill grassland, and/or chenopod scrub; and 7 require particular soil types that are not present on the project site, such as alkaline, rocky, and serpentine soils. Further, no special-status plants were observed within The Crossings portion of the project site during the field survey, although focused rare plant surveys were not performed and the field survey occurred outside of the blooming period for several special-status plant species. However, because the majority of The Crossings portion of the site is disked on an annual basis and used for growing row crops, and because the project site supports a dominance of non-native and/or ruderal species common to disturbed sites, the likelihood of special-status plant species occurring within this area is low.

Within the Remainder Area, 13 of the special-status plant species were determined not to have potential to occur due to lack of suitable habitat or the site being outside the species known range.

Specifically, one requires a marsh/swamp habitat type not present on the project site, six require particular soil types not present on the project site, such as alkaline, rocky, and serpentine soils, four species only occur in natural habitat types, such as cismontane woodland, valley and foothill grassland, and/or chenopod scrub, and the two remaining species would be outside of their known elevation ranges at the project site.

Aerial imagery of the site indicates there is the potential for wetlands and vernal pools in the Remainder Area, which may provide habitat for 12 of the 25 special-status plant species known to occur within the USGS quadrangles included in the database search. As identified in Table 3.4-1, Special Status Plant Species with Potential to Occur within the Remainder Area, these include vernal pool smallscale (*Atriplex persistens*), succulent owl's clover (*Castilleja campestris* var. *succulenta*), dwarf downingia (*Downingia pusilla*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), pincushion navarretia (*Navarretia myersii* ssp. *Myersii*), shining navarretia (*Navarretia nigelliformis* ssp. *radians*), Colusa grass (*Neostapfia colusana*), San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), hairy Orcutt grass (*Orcuttia Pilosa*), California alkali grass (*Puccinellia simplex*), Sanford's arrowhead (*Sagittaria sanfordii*), and Greene's tuctoria (*Tuctoria greenei*).

Table 3.4-1

Special Status Plant Species with Potential to Occur within the Remainder Area

Common Name	Scientific Name	Federal/State/CRPR Status	Primary Habitat Associations; Life Form; Blooming Period; Elevation Range (feet)
Vernal pool smallscale	<i>Atriplex persistens</i>	None/None/1B.2	Vernal pools (alkaline); annual herb; June, Aug, Sep, Oct; 30–375
Succulent owl's-clover	<i>Castilleja campestris</i> var. <i>succulenta</i>	FT/SE/1B.2	Vernal pools (often acidic); annual herb (hemiparasitic); (Mar)Apr–May; 160–2460
Dwarf downingia	<i>Downingia pusilla</i>	None/None/2B.2	Valley and foothill grassland (mesic), Vernal pools; annual herb; Mar–May; 0–1460
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	None/SE/1B.2	Marshes and swamps (lake margins), Vernal pools; clay; annual herb; Apr–Aug; 30–7790
Pincushion navarretia	<i>Navarretia myersii</i> ssp. <i>Myersii</i>	None/None/1B.1	Vernal pools; often acidic; annual herb; Apr–May; 65–1085

Table 3.4-1

Special Status Plant Species with Potential to Occur within the Remainder Area

Common Name	Scientific Name	Federal/State/CRPR Status	Primary Habitat Associations; Life Form; Blooming Period; Elevation Range (feet)
Shining navarretia	<i>Navarretia nigelliformis</i> ssp. <i>Radians</i>	None/None/1B.2	Cismontane woodland, Valley and foothill grassland, Vernal pools; sometimes clay; annual herb; (Mar)Apr–July; 210–3280
Colusa grass	<i>Neostapfia colusana</i>	FT/SE/1B.1	Vernal pools (adobe, large); annual herb; May–Aug; 15–655
Orcutt grass	<i>Orcuttia inaequalis</i>	FT/SE/1B.1	Vernal pools; annual herb; Apr–Sep; 30–2475
Hairy Orcutt grass	<i>Orcuttia pilosa</i>	FE/SE/1B.1	Vernal pools; annual herb; May–Sep; 150–655
California alkali grass	<i>Puccinellia simplex</i>	None/None/1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools; alkaline, vernal mesic; sinks, flats, and lake margins; annual herb; Mar–May; 5–3050
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	None/None/1B.2	Marshes and swamps (assorted shallow freshwater; perennial rhizomatous herb (emergent); May–Oct(Nov); 0–2135
Greene's tuctoria	<i>Tuctoria greenei</i>	FE/SR/1B.1	Vernal pools; annual herb; May–July(Sep); 95–3510

Status Abbreviations:

FE: Federally Endangered

FT: Federally Threatened

SE: State Endangered

ST: State Threatened

SR: State Rare

CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Source: Appendix E

Wildlife

Results of the CNDDDB and USFWS searches revealed 27 special-status wildlife species listed or proposed for listing as rare, threatened, or endangered by either the CDFW or the USFWS within a five-mile radius of the project site, although no occurrences have been recorded on the 68.6-acre project site. Of these, 13 were removed from consideration to occur within the entire project site based on lack of suitable habitat or because the site is outside of the known geographic or elevation range for the species and an additional 5 species were removed from consideration to occur within The Crossings component of the project (Appendix E). Conservancy fairy shrimp (*Branchinecta conservatio*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), California tiger salamander (*Ambystoma californiense*), and western spadefoot toad (*Spea hammondi*), are considered to have potential to occur within the Remainder Area. Burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), loggerhead shrike (*Lanius ludovicianus*), pallid bat (*Antrozous pallidus*), Townsend's big eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*), western mastiff bat (*Eumops perotis californicus*), American badger (*Taxidea taxus*), and San Joaquin kit fox (*Vulpes macrotis mutica*) have a low to moderate potential to occur in the vicinity of the project site. These species are discussed in further detail below.

Only those species with the potential to occur within or adjacent to the project site are discussed further in this document (Table 3.4-2). For a full list of species identified during the literature and database review, please see Appendix E.

Table 3.4-2

Special Status Wildlife Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Federal and State Status	Habitat Associations	Potential to Occur in each component of the Project Area
<i>Invertebrates</i>				
Conservancy fairy shrimp	Branchinecta conservatio	Federal: Endangered State: None	The conservancy fairy shrimp is adapted to seasonally inundated features and occur primarily in vernal pools, seasonal wetlands that fill with water	The Crossings: Not expected due to lack of vernal pools and seasonal wetlands. Remainder Area: Potential to occur due to likelihood of vernal pools or

Table 3.4-2

Special Status Wildlife Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Federal and State Status	Habitat Associations	Potential to Occur in each component of the Project Area
			during fall and winter rains and dry up in spring and summer. Different pools within or between complexes may provide habitat for the fairy shrimp in alternative years, as climatic conditions vary.	seasonal wetlands in the northwestern and central portions of the project site.
Vernal pool fairy shrimp	Branchinecta lynchi	Federal: Threatened State: None	Vernal pool fairy shrimp is adapted to seasonally inundated features and occur primarily in vernal pools, seasonal wetlands that fill with water during fall and winter rains and dry up in spring and summer. Different pools within or between complexes may provide habitat for the fairy shrimp in alternative years, as climatic conditions vary.	The Crossings: Not expected due to lack of vernal pools and seasonal wetlands. Remainder Area: Potential to occur due to likelihood of vernal pools or seasonal wetlands in the northwestern and central portions of the project site.
Vernal pool tadpole shrimp	Lepidurus packardi	Federal: Endangered State: None	Vernal pool tadpole shrimp is associated with low-alkalinity seasonal pools in unplowed grasslands. The vernal pool tadpole shrimp is found only in ephemeral	The Crossings: Not expected due to lack of vernal pools and seasonal wetlands. Remainder Area: Potential to occur due to likelihood of vernal pools or

Table 3.4-2

Special Status Wildlife Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Federal and State Status	Habitat Associations	Potential to Occur in each component of the Project Area
			freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands in California. Suitable vernal pools and seasonal swales are generally underlain by hardpan or sandstone.	seasonal wetlands in the northwestern and central portions of the project site.
Amphibians				
California tiger salamander	Ambystoma californiense	Federal: Threatened State: Threatened, California Watch List Species	Found in riparian and wet meadow habitats, but is more common in grasslands. Most of their life cycle is spent underground in adjacent valley oak woodland or grassland habitat, primarily in rodent burrows. Breeding takes place following the first heavy winter rains. Temporary or permanent freshwater pools or slowly flowing streams are required for egg-laying and larval development. They	The Crossings: Not expected due to lack of vernal pools and seasonal wetlands. Remainder Area: Potential to occur due to likelihood of vernal pools or seasonal wetlands in the northwestern and central portions of the project site.

Table 3.4-2

Special Status Wildlife Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Federal and State Status	Habitat Associations	Potential to Occur in each component of the Project Area
			appear to be absent in waters containing predatory game fish.	
Western spadefoot toad	<i>Spea hammondi</i>	Federal: None State: SSC	Inhabits areas with slightly moist, friable soils in mostly treeless habitats. Usually absent from narrow canyons and highly mesic habitats. Requires rain pools for spawning with little to no vegetation.	The Crossings: Not expected due to lack of vernal pools and seasonal wetlands. Remainder Area: Potential to occur due to likelihood of vernal pools or seasonal wetlands in the northwestern and central portions of the project site.
Birds				
burrowing owl	<i>Athene cunicularia</i>	Federal: None State: SSC	The burrowing owl utilizes abandoned ground squirrel burrows in open habitats and grasslands, also disturbed areas. Diet consists of insects, small mammals, reptiles and amphibians. Commonly uses burrows on levees or mounds where there are unobstructed views of possible predators such as raptors or foxes.	The Crossings: Low potential to occur. Suitable nesting and foraging habitat exists within the project area; however, no California ground squirrels (<i>Otospermophilus beechyi</i>) or associated burrows were observed during the field survey that could be used for nesting or overwintering by burrowing owl.

Table 3.4-2

Special Status Wildlife Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Federal and State Status	Habitat Associations	Potential to Occur in each component of the Project Area
				Remainder Area: Moderate potential to occur. Suitable nesting and foraging habitat exists within the project area; no field survey was conducted to identify presence or absence of California ground squirrels or associated burrows.
loggerhead shrike	Lanius ludovicianus	Federal: None State: SSC	Loggerhead shrike is a year-round resident in most areas of California that contain grasslands, open areas, orchards and areas with scattered trees, shrubs, fences, and other perching options. Highest densities are found in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. Feeds on small vertebrates	The Crossings and Remainder Area: Low potential to occur. The site provides poor quality nesting habitat due to frequent disturbance by disking activities and residential dwellings, and lacks scattered perching options.

Table 3.4-2

Special Status Wildlife Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Federal and State Status	Habitat Associations	Potential to Occur in each component of the Project Area
			and invertebrates, impales prey on thorns or barbed wire.	
Swainson's hawk	Buteo swainsoni	Federal: None State: Threatened	Swainson's hawk spends the breeding season in the Central Valley of California and is commonly found in agricultural areas or open grasslands containing solitary trees for nesting. Diet consists of small mammals and reptiles.	The Crossings and Remainder Area: Moderate potential to occur. Potential nesting and foraging is present and there are five documented occurrences of this species within 5 miles of the project site.
Mammals				
American badger	Taxidea taxus	Federal: None State: SSC	This species utilizes dry, open, treeless areas, such as grasslands, coastal scrub, agriculture, and pastures, especially with friable soils. Preferred prey items include rodents and small mammals.	The Crossings and Remainder Area: Low potential to occur. The project site provides marginal habitat due to the level of existing disturbance, including regular disking. No potential dens were observed within The Crossings component during the field survey.
San Joaquin kit fox	Vulpes macrotis mutica	Federal: Endangered State: Threatened	San Joaquin kit fox occurs in grasslands and agricultural areas	The Crossings and Remainder Area: Low potential to occur

Table 3.4-2

Special Status Wildlife Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Federal and State Status	Habitat Associations	Potential to Occur in each component of the Project Area
			along the edges of the San Joaquin Valley. It uses dens created by other mammals, as well as larger pipes and culverts for cover. It is primarily a nocturnal species and feeds on small mammals, birds and reptiles.	within the project area. The project site provides marginal habitat due to the lack of open, native habitat and movement corridors onsite. No potential dens were observed onsite during the field survey.
pallid bat	<i>Antrozous pallidus</i>	Federal: None State: SSC	Pallid bat occupies a variety of habitats including grassland, shrubland, woodland and forests from sea level up through mixed conifer forest. Roosts in caves, mines, crevices and occasionally hollow trees or buildings. Prefers open habitats for foraging. Highly sensitive to disturbance.	The Crossings and Remainder Area: Low potential to occur. Potential foraging and roosting habitat is present, however frequent human disturbance onsite likely precludes this species from utilizing the site.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	Federal: None State: Candidate Threatened, SSC	Occupies mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava	The Crossings and Remainder Area: Low potential to occur. Potential foraging and roosting habitat is present; however, frequent human disturbance

Table 3.4-2

Special Status Wildlife Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Federal and State Status	Habitat Associations	Potential to Occur in each component of the Project Area
			tubes, man-made structures, and tunnels. Highly sensitive to disturbance.	onsite likely precludes this species from utilizing the site.
western mastiff bat	<i>Eumops perotis californicus</i>	Federal: None State: SSC	Western mastiff bat occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, chaparral, desert scrub, and urban. Suitable habitat consists of extensive open areas with abundant roost locations. Primarily roosts in rock crevices and shallow caves on cliff sides, but occasionally roosts in buildings. When roosting in rock crevices, needs vertical faces to drop off to take flight.	The Crossings and Remainder Area: Low potential to occur. Potential foraging and roosting habitat is present; however, roosting opportunities within the project site are few and limited to non-riparian areas .
Western red bat	<i>Lasiurus blossevillii</i>	Federal: None State: SSC	In California, habitat includes forests and woodlands from sea level up through mixed conifer	The Crossings and Remainder Area: Low potential to occur. Potential roosting

Table 3.4-2

Special Status Wildlife Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Federal and State Status	Habitat Associations	Potential to Occur in each component of the Project Area
			forests. Strongly associated with riparian habitats in the Central Valley and lower reaches of Sierra Nevada streams. Roosts primarily in trees. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Not found in desert areas.	and foraging habitat is present, but roosting opportunities are few and limited to occupied residential and institutional buildings. There are no riparian areas onsite.

Status Code:

SSC - CDFW Species of Concern

American badger

American badger is a CDFW Species of Special Concern (CDFW 2019a) with a low potential to occur on the project site. This species utilizes dry, open, treeless areas, such as grasslands, coastal scrub, agriculture, and pastures, especially with friable soils (CDFW 2019c). The project site provides marginal habitat due to the level of existing disturbance, including regular disking. No potential dens were observed onsite during the field survey (Appendix E). The nearest documented occurrence is 6 to 11 badgers detected at or near an active den site in 2016, 2017, and 2018, approximately 10.5 miles south-southeast of the site (CDFW 2019b).

Burrowing owl

Burrowing owl is a raptor that is designated by CDFW as a species of special concern (CDFW 2019a). These owls typically inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. Burrowing owls utilize small mammal burrows, most notably

the California ground squirrel (*Otospermophilus beechyi*), year-round for nesting and cover. The breeding season in California generally extends from February 1 through September 30 (CDFW 2019c).

Although no California ground squirrels or associated burrows were observed during the field survey, the project site contains potential nesting and foraging habitat for this species (Appendix E). The nearest documented occurrence is for burrowing owls and occupied burrows observed in grazed grassland, vernal pool habitat, approximately 2 miles north-northeast of the project site (CDFW 2019b).

California tiger salamander

The California tiger salamander is listed as threatened at both the federal and state level, and is a CDFW Watch List Species with a potential to occur in the northwestern and central portions of the site (CDFW 2019a.) California tiger salamanders are found in riparian and wet meadow habitats, as well as in grasslands. Most of their life cycle is spent underground in adjacent valley oak woodland or grassland habitat, primarily in rodent burrows. Temporary or permanent freshwater pools or slowly flowing streams are required for egg-laying and larval development (CDFW 201c).

This species is not expected to occur within The Crossings component of the project site due to lack of vernal pools and seasonal wetlands but has potential to occur within the Remainder Area because aerial photography shows a likelihood that vernal pools and/or seasonal wetlands to be present in the northwestern and central portions of the site (Appendix E).

Conservancy fairy shrimp

Conservancy fairy shrimp is federally listed as endangered with the potential to occur in the northwestern and central portions of the site (CDFW 2019a). This species is adapted to seasonally inundated features and primarily occurs in vernal pools and seasonal wetlands (CDFW 2019c).

This species is not expected to occur within The Crossings component of the project site due to lack of vernal pools and seasonal wetlands but has potential to occur within the Remainder Area because aerial photography shows a likelihood that vernal pools and/or seasonal wetlands to be present in the northwestern and central portions of the site (Appendix E).

Loggerhead shrike

Loggerhead shrike is a CDFW Species of Special Concern (CDFW 2019a) with a low potential to occur on the project site. This species occurs in grasslands, open areas, orchards and areas

with scattered trees, shrubs, fences, and other perching options. The highest densities are found in more complex habitat types, such as open-canopied valley foothill hardwood, valley foothill hardwood-conifer, and valley foothill riparian (CDFW 2019c).

The project site provides poor quality nesting habitat because the Crossings component of the project site is frequently disturbed by disking activities; the existing church, school, and residential dwellings in the Remainder Area limit available nesting and foraging habitat; and the site lacks scattered perching options (Appendix E). There are no documented occurrences of this species within 25 miles of the project site (CDFW 2019b).

Pallid bat

Pallid bat is designated by CDFW as a Species of Special Concern (CDFW 2019a). Pallid bat occupies a variety of habitats including grassland, shrub land, woodland and forests. This species primarily roosts in caves, mines, and crevices, but may also utilize hollow trees or buildings for roosting. Foraging generally occurs in open habitats. Pallid bat are extremely sensitive to their roosting sites and highly sensitive to disturbance (CDFW 2019c). Although the project site provides potential foraging and roosting habitat, the level of existing human disturbance onsite likely precludes this species from utilizing the site (Appendix E). The nearest documented occurrence is for bats detected near the Merced River in 1999, approximately 9.6 miles north-northwest of the site (CDFW 2019b).

San Joaquin kit fox

San Joaquin kit fox is a federal and state listed species (CDFW 2019a) with a low potential to occur on the project site. This species historically inhabited grasslands and scrublands, much of which has been extensively modified in recent years. This species now typically occurs in grassland and agricultural areas. Dens are scarce in areas with shallow soils, because of either proximity to bedrock, high water tables, or impenetrable hardpan layers (CDFW 2019c). The project site provides marginal habitat due to the lack of open, native habitat and movement corridors onsite. No potential dens were observed onsite during the field survey (Appendix E). The nearest documented occurrence is for one adult kit fox observed approximately 3.7 miles east-northeast of the site (CDFW 2019b).

Swainson's hawk

Swainson's hawk is a state-listed threatened species (CDFW 2019a) with a moderate potential to occur on the project site. This species typically nests in isolated large trees located in open woodland, savanna, or riparian habitats, and foraging occurs in nearby grasslands and agricultural areas (CDFW 2019c). Within the project site, large trees provide potential nesting habitat and open agricultural areas provide potential foraging habitat for Swainson's hawk

(Appendix E). There are at least five documented occurrences of this species within 5 miles of the project site (CDFW 2019b).

Townsend's big-eared bat

Townsend's big-eared bat is a CDFW Species of Special Concern (CDFW 2019a). It primarily roosts in limestone caves and lava tubes, man-made structures, and tunnels located in mesic habitat types. Townsend's big-eared bat generally forages along habitat edges. This species is extremely sensitive to their roosting sites (CDFW 2019c). The nearest documented occurrence is for one bat observed near Merced Falls Diversion Dam, approximately 14.4 miles northeast of the site (CDFW 2019b).

Buildings on and adjacent to the project site could provide roosting habitat for Townsend's big-eared bat, and the project site could be used for foraging; however, this species is highly sensitive to disturbance and regular use of the buildings on and around the developed portion of the project site results in low-quality roosting and foraging habitat for Townsend's big-eared bat (Appendix E).

Vernal pool fairy shrimp

Vernal pool fairy shrimp is federally listed as threatened with the potential to occur in the northwestern and central portions of the site (CDFW 2019a.) Vernal pool fairy shrimp is adapted to seasonally inundated features and occur primarily in vernal pools and seasonal wetlands (CDFW 2019c).

This species is not expected to occur within The Crossings component of the project site due to lack of vernal pools and seasonal wetlands but has potential to occur within the Remainder Area because aerial photography shows a likelihood that vernal pools and/or seasonal wetlands to be present in the northwestern and central portions of the site (Appendix E).

Vernal pool tadpole shrimp

Vernal pool tadpole shrimp is federally listed as endangered with the potential to occur in the northwestern and central portions of the site (CDFW 2019a.) This species is associated with seasonal pools in unplowed grasslands. The vernal pool tadpole shrimp is found only in ephemeral freshwater habitats, including vernal lakes, vernal pools, vernal swales, and other seasonal wetlands in California (CDFW 2019c).

This species is not expected to occur within The Crossings component of the project site due to lack of vernal pools and seasonal wetlands but has potential to occur within the Remainder Area

because aerial photography shows a likelihood that vernal pools and/or seasonal wetlands to be present in the northwestern and central portions of the site (Appendix E).

Western mastiff bat

Western mastiff bat is a CDFW Species of Special Concern (CDFW 2019a). This species occurs in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, chaparral, desert scrub, and urban. Suitable habitat consists of extensive open areas with abundant roost locations. It primarily roosts in rock crevices and shallow caves on cliff sides, but occasionally roosts in buildings. When roosting in rock crevices, needs vertical faces to drop off to take flight (CDFW 2019c). The nearest documented occurrence is for bats detected along the Merced River, approximately 9.5 miles north-northwest of the site (CDFW 2019b).

Although the project site provides potential foraging and roosting habitat, roosting opportunities within the project site are few and limited to non-riparian areas (Appendix E).

Western red bat

Western red bat is a state listed Species of Special Concern (CDFW 2019a) that primarily roosts in rock crevices and shallow caves on cliff sides but may occasionally roost in buildings. Their preferred habitat contains abundant roost sites in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, and urban (CDFW 2019c). The nearest documented occurrence, based on a 1991 collection, is mapped as in the vicinity of Merced, approximately 1.3 miles southwest of the site (CDFW 2019b).

Although the project site provides potential foraging and roosting habitat, roosting opportunities within the project site are few and limited to occupied residential and institutional dwellings (Appendix E).

Western spadefoot toad

The western spadefoot toad is a CDFW Species of Special Concern (CDFW 2019a) with the potential to occur in the northwestern and central portions of the site. This species inhabits areas with slightly moist, friable soils in mostly treeless habitats, and requires rain pools for spawning with little to no vegetation (CDFW 2019c).

This species is not expected to occur within The Crossings component of the project site due to lack of vernal pools and seasonal wetlands but has potential to occur within the Remainder Area because aerial photography shows a likelihood that vernal pools and/or seasonal wetlands to be present in the northwestern and central portions of the site (Appendix E).

3.4.3 Regulatory Setting

Federal Regulations

Federal Endangered Species Act

The federal Endangered Species Act (FESA) (16 U.S.C. 1533) gives joint authority to list a species as threatened or endangered to the Secretary of the Interior (represented by the USFWS) and the Secretary of Commerce (represented by the National Marine Fisheries Service [NMFS]). FESA prohibits the “take” of endangered or threatened fish, wildlife, or plant species or adverse modifications to critical habitat, in areas under federal jurisdiction. Under the Act “take” is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The USFWS and NMFS have interpreted the definition of “harm” to include significant habitat modification that could result in take of a species.

Projects that would result in “take” of any federally listed threatened or endangered species are required to obtain authorization from the NMFS and/or USFWS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project.

FESA requires the federal government to designate “critical habitat” for any listed species, which is defined as specific areas within the geographical area occupied by the species at the time of listing if they contain physical or biological features essential to the species conservation, and those features that may require special management considerations or protection. Additionally, it includes specific areas outside the geographical area occupied by the species if the regulatory agency determines that the area itself is essential for conservation.

USFWS and/or NMFS must authorize projects where a federally listed species is present and likely to be affected by an existing or proposed project. Generally, terrestrial and freshwater fish species are under the jurisdiction of USFWS, while marine and anadromous fish species are under the jurisdiction of NMFS. Project authorization may involve a letter of concurrence that the project is not likely to adversely affect a listed species, or a Biological Opinion that describes what measures must be undertaken to minimize the likelihood of an incidental take. Projects determined by USFWS and NMFS to jeopardize the continued existence of a species cannot be approved under a Biological Opinion. Take that is incidental to the lawful operation of a project is permitted under Section 10(a) through approval of a habitat conservation plan, where a federal agency is not authorizing, funding, or carrying out the project.

Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species, including raptors, as listed in Title 50, Section 10.13 of the Code of Federal Regulations. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country. It is enforced in the United States by the USFWS. .

Clean Water Act

The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Under Section 404 of the CWA, the ACOE has the authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. The ACOE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function.

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA, as well as the Porter–Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine regional boards. The Central Valley RWQCB has authority for Section 401 compliance in the project area. A request for certification is submitted to the RWQCB at the same time that an application is filed with the ACOE.

State Regulations

California Endangered Species Act

The California Endangered Species Act (CESA) and Section 2081 of the California Fish and Game Code identifies measures to ensure state-listed species and their habitats are conserved, protected, restored, and enhanced. The Act requires permits from the CDFW for activities that could result in take of a state-listed threatened or endangered species. "Take" is defined as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86). Section 2080 of the Fish and Game Code prohibits take of state-listed plants and animals unless otherwise permitted under Sections 2080.1, 2081, and 2835. Section 20814(b) affords CDFW the authority to issue permits for incidental take for otherwise lawful

activities. To authorize an incidental take, the impacts of the take must be minimized and fully mitigated such that the continued existence of a state-listed species is not jeopardized.

The California Fish and Wildlife Commission maintains a list of threatened and endangered species (Fish and Game Code Section 2070). The California Fish and Wildlife Commission maintains two additional lists: a Candidate species list, which identifies species under review for addition to either the endangered or threatened species list, and a Species of Special Concern list, which includes species, subspecies, or distinct populations of an animal native to California that currently satisfies one or more of the following criteria (which are not necessarily mutually exclusive):

- Is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role
- Is listed as threatened or endangered federally, but not by the state
- Meets the state definition of threatened or endangered, but has not formally been listed
- Is experiencing, or formerly experienced, serious noncyclical population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for threatened or endangered status by the state
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s) that, if realized, could lead to declines that would qualify it for threatened or endangered status by the state

The Species of Special Concern classification is intended to elicit special consideration for these animals by the CDFW, land managers, consulting biologists, and others; and to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them.

California Fully Protected Species

The classification of “fully protected” was the CDFW’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. California Fish and Game Code sections (fish at Section 5515, amphibians and reptiles at Section 5050, birds at Section 3511, and mammals at Section 4700) dealing with “fully protected” species state that these species may not be taken or possessed at any time, and no provisions in this code or any other law shall be construed to authorize permits for take of fully protected species.

California Department of Fish and Wildlife Wetlands Protection Regulations

CDFW derives its authority to oversee activities that affect wetlands from state legislation. This authority includes Sections 1600 through 1616 of the Fish and Game Code (lake and streambed

alteration agreements, discussed below), the California Endangered Species Act (protection of state-listed species and their habitats, which could include wetlands, discussed above), and the Keene–Nejedly California Wetlands Preservation Act of 1976 (states a need for an affirmative and sustained public policy program directed at wetlands preservation, restoration, and enhancement). In general, the CDFW asserts authority over wetlands within the state through any of the following: review and comment on ACOE Section 404 permits, review and comment on California Environmental Quality Act (CEQA) documents, preservation of state-listed species, or through lake and streambed alteration agreements.

California Fish and Game Code Sections 1600–1616 – Lake and Streambed Alteration Agreement

Under Sections 1600 through 1616 of the California Fish and Game Code, CDFW regulates activities that would substantially alter the flow, bed, channel, or bank of streams and lakes. Such activities require a 1602 Lake and Streambed Alteration Agreement from CDFW. The California Code of Regulations defines a stream as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). The term “stream” includes rivers, creeks, ephemeral streams, dry washes, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Removal of riparian vegetation also requires a Section 1602 Lake and Stream Alteration Agreement from CDFW.

Fish and Game Code Section 1940 – Sensitive Natural Communities

Section 1940 of the California Fish and Game Code requires CDFW to develop and maintain a vegetation mapping standard for the state. More than half of the vegetation communities in the state have been mapped through the Vegetation Classification and Mapping Program.

Natural vegetation communities are evaluated by CDFW and are assigned global (G) and state (S) ranks based on rarity of and threats to these vegetation communities in California. Natural communities with ranks of S1 through S3 are considered sensitive natural communities to be addressed in the environmental review processes of CEQA and its equivalents. Additionally, all vegetation associations within the alliances with ranks of S1 through S3 are considered sensitive habitats. CEQA requires that impacts to sensitive natural communities be evaluated and mitigated to the extent feasible.

Sensitive natural communities are communities that have a limited distribution and are often vulnerable to the environmental effects of projects. These communities may or may not contain

special-status species or their habitats. For purposes of this assessment, sensitive natural communities are considered to include vegetation communities listed in CDFW's CNDDDB and communities listed in the Natural Communities List with a rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable).

California Fish and Game Code Sections 3503, 3511, 3513

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

California Fish and Game Code Section 4150

California Fish and Game Code Section 4150 states a mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a non-game mammal. A non-game mammal may not be taken or possessed under this code. All bat species occurring naturally in California are considered non-game mammals and are therefore prohibited from take as stated in California Fish and Game Code Section 4150.

California Native Plant Protection Act

The California Native Plant Protection Act (California Fish and Game Code Sections 1900-1913) and the Natural Communities Conservation Planning Act provide guidance on the preservation of plant resources. Vascular plants which have no designated status or protection under state or federal endangered species legislation, but are listed as rare or endangered by the CNPS, are defined as follows:

- Rank 1A: Plants presumed extinct
- Rank 1B: Plants rare, threatened or endangered in California and elsewhere
- Rank 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere
- Rank 3: Plants about which more information is needed – a review list
- Rank 4: Plants of limited distribution – a watch list

Plants with CNPS Ranks 1A, 1B, or 2 are generally considered to meet the criteria for endangered, threatened, or rare species as outlined by Section 15380 of the CEQA Guidelines. These plants also meet the definition of Section 1901, Chapter 10 (Native Plant Protection Act)

and Sections 2062 and 2067 (CESA) of the California Fish and Game Code. Plants with CNPS Ranks 3 or and 4 generally do not meet these criteria or definitions unless they meet one or more of the following: a) the project area is considered a type locality (i.e., the area from which the plant was originally described) for that species; b) populations are at the periphery of a species range; c) occurrences are in areas where taxon is especially uncommon or has sustained heavy losses; or d) populations exhibit unusual morphology or occur on unusual substrates.

State Water Resources Control Board

The SWRCB administers Section 401 of the CWA, which requires that an applicant for a Section 404 permit first obtain a certification, or waiver thereof, that the project will not violate applicable state water quality standards. The SWRCB delegates authority to either grant certification or waive the requirement for certification to nine regional boards, including, in Merced County the Central Valley Regional Water Quality Control Board. The SWRCB protects all waters of the state but has special responsibility for isolated wetlands and headwaters. These water bodies have high resources value but are vulnerable to filling and may lack regulation by other programs. Projects that require a U.S. Army Corps of Engineers permit, or fall under other federal jurisdiction, and have the potential to impact waters of the state are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the state, the water boards have the option to regulate such activities under the Porter-Cologne Act authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

California Environmental Quality Act

Although federal and state statutes protect threatened and endangered species, Section 15380(b) of the CEQA Guidelines provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after definitions in FESA and the section of the California Fish and Wildlife Code dealing with rare or endangered plants and animals. CEQA Guidelines Section 15380(b) requires public agencies to determine whether projects would result in significant effects on species not listed by either the USFWS or CDFW (i.e., candidate species). Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

Local Regulations

The project site is currently within the boundaries of Merced County and within the City of Merced Sphere of Influence. The project proposes to annex the site to the City. Thus, the potential effects on biological resources would be subject to the City of Merced biological resources policies as identified in this section and Merced County policies and regulations would not be applicable.

Merced Vision 2030 General Plan

The City of Merced Vision 2030 General Plan, Chapter 7 Open Space, Conservation and Recreation provides guidance for new development and focuses on the protection of natural areas which provide habitat and cover for wildlife and vegetation. The City provides specific protection for biological resources, as described in the following policies and implementing actions (City of Merced 2012a).

Policy OS-1.1 Identify and mitigate impacts to wildlife habitats which support rare, endangered, or threatened species.

Implementing Actions:

- 1.1.a Identify, and recognize as significant, wetlands and critical habitat areas which meet the appropriate legal definition under Federal and State law. Wetlands, as defined by statute, have special regulations which must be followed as opposed to other riparian or “water” areas of the community. This policy provides for the identification of those lands subject to special Federal and State rules and standards and those which are solely subject to local policies and standards. Development applications will be reviewed to determine if potential wetland habitats exist on-site, and wetland delineation may be required in accordance with current U.S. Army Corps of Engineers guidelines.

“Wetlands” containing sensitive plant and/or animal species should be protected according to law. Specific protection policies should include: a) protection of wetland watershed areas; b) establishment of minimum setback areas around “wetlands” in accordance with the recommendations of California Department of Fish and Game, U.S. Fish and Wildlife Service, or a qualified wildlife biologist. c) Provision of compensation or wildlife mitigation banks if a site is not protected. The City, in cooperation with the County, may consider establishing a mitigation “banking” program in accordance with state and federal guidelines for vernal pools and other types of wetland habitats. Vernal pool preserves may be incorporated into other open space preserves (i.e. parks and trails) that would not be directly impacted by urban development.

1.1.b Urban development should occur away from identified sensitive species critical habitats areas unless specific provisions to ensure adequate protection and monitoring exist. When, as a result of specific site studies, it is determined that “potential” habitats actually contain sensitive or endangered species, development rules, policies and standards should be applied to assure that further degradation of these species does not occur. These policies should emphasize “avoidance” as a desirable mitigation alternative. In instances where open space areas are established to protect a sensitive wildlife species, those areas shall be subject to appropriate management principles as approved by the City upon recommendation of the California Department of Fish & Game [now called the California Department of Fish & Wildlife] or the U. S. Fish and Wildlife Service.

City of Merced Municipal Code

The City of Merced Street Tree Division requires property owners to water City trees (trees planted within 8-10 feet of City streets). If the project area is annexed to the City, removal of any City trees would require consultation with the City.

3.4.4 Impacts

Methods of Analysis

CEQA requires that projects analyze the potential impacts on special-status plant and animal species, as well as on sensitive habitats, wildlife corridors, and waters of the United States. Impacts on wildlife species that are not considered special-status under CEQA are generally not considered significant unless impacts are associated with the species’ migration routes or movements, or the species are considered locally important. In the area surrounding the project site, common species (e.g., skunk, raccoon, and Virginia opossum) would not be considered special-status species. Regardless of status, all nesting native bird species are protected under the state Fish and Game Code and the MBTA.

The analysis of potential project impacts to sensitive biological resources presented in this section is based on the Biological Resources Assessment (Appendix E) and relevant federal, state, and local regulations and plans. Preparation of the Biological Resources Assessment included a field assessment of the project site, which was conducted on December 1, 2016 by Dudek wildlife biologist Lisa Achter. The field assessment was performed by walking transects throughout The Crossings portion of the site and around its periphery to map vegetation communities and land cover types present and evaluate the site’s potential to support jurisdictional wetlands or waters of the U.S. and special-status plant and wildlife species. In addition, an aerial photograph (Google Earth 2016) with an overlay of the entire 68.6-acre project site, and surrounding buffer was used to map the vegetation communities/land cover types and record any special-status or sensitive

biological resources while in the field. Observations of the Remainder Area were made from The Crossings portion of the project site and perimeter roadways. In 2019, Dudek biologists updated the Biological Resources Assessment by reviewing multiple aerial images taken between 2016 and 2019 and completing an updated literature and database review.

The analysis in this section also reflects consideration of the NOP comments submitted by CDFW, which addressed potential impacts to special status wildlife, particularly Swainson's hawk, California tiger salamander, burrowing owl, and nesting birds. The comment letter is included in Appendix A.

Items Addressed in the Initial Study

The Initial Study, included in Appendix B, concluded that because the project site is a non-linear feature and bound by existing roads and development, it has little value as a potential wildlife corridor, habitat linkage or, native wildlife nursery site. Therefore, implementation of the proposed project would result in a less-than-significant impact and this issue is not further evaluated in this EIR.

In addition, the Initial Study documents that the project site is not located within or adjacent to any preserve or conservation area and that there are no adopted Habitat Conservation Plans or Natural Community Conservation Plans in Merced County. Therefore, the proposed project would have no impact and this issue is not further evaluated in this EIR.

Thresholds of Significance

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

- Result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, regulations, or by the CDFW or USFWS.
- Result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Result in a substantial adverse effect on federally regulated wetlands or waters as defined by Section 404 of the Clean Water Act and/or State protected wetlands as defined by the Porter-Cologne Water Quality Control Act through direct removal, filling, hydrological interruption, or other means.

- Conflict with any applicable land use plans, policies, regulations, or ordinances adopted by an agency with jurisdiction over the project for the purpose of protecting biological resources or avoiding and mitigating impacts to biological resources.

The impact analysis considers both direct and indirect effects to plant and wildlife species identified as candidate, sensitive, or special-status. Direct impacts refer to permanent and temporary effects to biological resources that are caused by and occur at the same time and place as construction activities. Direct impacts can include loss of on-site habitat or loss of the plant and wildlife species within that habitat. Indirect impacts refer to permanent and temporary effects of the project that occur at a later time or place but result in adverse impacts to species. Indirect impacts can include soil runoff into adjacent habitats that reduces water quality or an increase in noise and human activity that disrupts normal foraging and movement patterns of wildlife species.

Impacts and Mitigation Measures

Impact 3.4-1: Implementation of the proposed project may result in substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species by CDFW or USFWS. This would be a potentially significant impact.

The Crossings

The Crossings portion of the project site supports a dominance of non-native and/or ruderal species common to disturbed sites. The site is disked annually and used for production of row crops (Appendix E).

Special-Status Plants

As discussed in Section 3.4.2, Environmental Setting, although the CNDDDB and CNPS searches revealed 25 special-status plant species that occur in the project region, each requires a specific habitat or soil type that does not occur within the project site. There are no mesic habitats, such as vernal pools, marshes, and seeps, or alkaline, rocky, and serpentine soils within this portion of the site. Thus, the Biological Resources Assessment concludes that none of the special-status plant species in the region have the potential to occur in the project site because of the lack of suitable habitats and soil types and due to the disturbed nature of the project site, which creates unsuitable habitat conditions for special-status plant species (Appendix E). The Crossings component of the project is expected to result **no impact** to special-status plant species.

Special-Status Wildlife

As discussed in Section 3.4.2, The Crossings component of the project site provides suitable nesting and foraging habitat for burrowing owl, loggerhead shrike, and Swainson's hawk. Low quality roosting and foraging habitat exists for pallid bat, western mastiff bat, and Townsend's big eared bat. The project site provides marginal habitat for American badger and San Joaquin kit fox due to existing development and disturbances. Potential impacts to these species and their habitat are discussed below.

Burrowing Owl

Construction activities such as grading and operation of heavy equipment could result in the abandonment or failure of active nests either through direct destruction of burrows or through indirect effects from noise and vibration associated with construction equipment. Evidence of this species was not identified during the field survey, but the project area contains suitable habitat for this species, and there are occurrences of burrowing owl adjacent to the project site.

The Crossings portion of the project site currently provides foraging habitat for this species and would be converted to developed land uses, thereby reducing the available foraging habitat for burrowing owl. The removal of available nesting and foraging habitat constitutes a **potentially significant impact** to this species. This impact would be addressed with implementation of Mitigation Measure 3.4a, which requires completion of a habitat assessment of the project site for burrowing owls, and implementation of an exclusion plan if borrowing owls are found to be present prior to project construction. Subsequent surveys (if needed) would only be necessary if project construction would occur during the burrowing owl breeding season (February 1 through August 31).

Loggerhead Shrike and Nesting Birds

Although there is low quality breeding habitat for loggerhead shrike within the project area, the project's agricultural lands provide suitable foraging habitat for this species. The removal of approximately 28.4 acres of available foraging habitat is considered a **potentially significant impact**. In addition, nesting birds protected under California Fish and Game Code and the MBTA may be present within the project site. Disturbance to nesting birds through removal or destruction of nests or by interrupting nesting and breeding activities could occur if construction activities commence while nest building and tending is ongoing; this is considered a **potentially significant impact**. These impacts to nesting birds, including loggerhead shrike, would be addressed with implementation of Mitigation Measure 3.4b, which requires completion of a nesting bird survey prior to the start of construction.

Swainson's Hawk

There are several trees within the center of The Crossings component of the project site near the residence that could provide suitable nesting habitat for Swainson's hawk, and eight occurrences of Swainson's hawk exist within five miles of the project site. The nearest occurrence of Swainson's hawk is located approximately 2.5 miles east of the site. Swainson's hawks could be significantly impacted by the loss of suitable nesting and foraging habitat. Additionally, noise, light, and other activities associated with construction could result in nest failure if active nests are present within 0.5 mile of the project site at the time of construction.

In addition, the proposed project would result in the conversion of approximately 28.4 acres of agricultural land to residential and commercial development. The potential disturbance to nests and nesting activity as well as removal of this foraging habitat is considered a **significant** impact. This impact would be addressed with implementation of Mitigation Measure 3.4c, which requires a preconstruction survey for Swainson's hawk within 0.5 mile of the project site prior to the start of project construction if construction would begin during the Swainson's hawk breeding season (March 1 through August 31) or if construction is inactive for more than two weeks at any point during the Swainson's hawk breeding season and with implementation of Mitigation Measure 3.4d which requires the project applicant to provide compensation for the loss of foraging habitat.

Pallid Bat, Western Mastiff Bat and Townsend's Big Eared Bat, and Western Red Bat

Buildings and trees within and adjacent to the project site could provide roosting habitat for the pallid bat, western mastiff bat, and Townsend's big eared bat and the site also provides suitable foraging habitat for these species. Construction activities that disrupt foraging patterns such as by introducing light and noise during construction, as well as direct loss of roosting and foraging habitat by modification of resources within the project site is considered a **potentially significant impact**. This impact would be addressed with implementation of Mitigation Measure 3.4e, which requires completion of a preconstruction survey within 2 weeks prior to construction to assess whether bats are roosting onsite. The measure further requires that if a bat roosting or maternity colony cannot be completely avoided, a bat mitigation and monitoring plan would be prepared for CDFW review and approval.

American Badger and San Joaquin Kit Fox

The project site provides marginal habitat for American badger and San Joaquin kit fox due to existing development and disturbances, such as frequent disking, in the area. No potential burrow sites were observed during the field survey. Therefore, these species have a low potential to occur onsite and the project would result in a **less than significant** impact.

Remainder Area

The project proposes to pre-zone the Remainder Area with approximately 19.4 acres of Urban Transition (U-T) and approximately 20.8 acres of Low Density Residential (R-1-10). No new development within the Remainder Area is proposed at this time, however the portion of the Remainder Area that is proposed to be zoned R-1-10 could support single-family residential lots with a minimum size of 10,000 square feet. The portion of the Remainder Area zoned U-T would only allow new agricultural development unless further rezoning is approved, and thus the proposed project would not result in the potential for new development to occur on that portion of the site.

Special-Status Plants

As discussed in Section 3.4.2, the Remainder Area could not be accessed during the field survey conducted for the proposed project. Conditions such as soil and natural habitat types within the Remainder Area appear similar to those of The Crossings area, thus the potential for special status plants to occur within the Remainder Area is considered low. However, aerial photography indicates likely presence of seasonal wetlands and/or vernal pools in the northwestern portion of the Remainder Area and on the parcel between the eastern boundary of The Crossings component of the project site and the parcel that supports Stoneridge Christian School and Yosemite Church. Thus, there are several special-status plant species associated with seasonal wetlands and vernal pools that could occur in this area.

No new development within the Remainder Area is proposed at this time, however the portion of the Remainder Area that is proposed to be zoned R-1-10 could support single-family residential lots with a minimum size of 10,000 square feet. The portion of the Remainder Area zoned U-T would only allow new agricultural development unless further rezoning is approved, and thus the proposed project would not result in the potential for new residential units on that portion of the site. As shown on Figure 2-5, the portions of the Remainder Area that support aerial signatures of seasonally wet areas are within the portions proposed to be zoned U-T, thus future development of those areas is not considered to be a likely result of the proposed project. However, there is some potential for future development in these areas. Further because none of the Remainder Area was surveyed, it is possible that seasonally wet areas that could support special-status species could be present in the portions of the site proposed to be zoned R-1-10. In the event that development and/or redevelopment occurs, any special-status plant species could be disturbed or destroyed such as through vegetation removal, grading, excavation, and/or new construction. Thus, the project has a **potentially significant** impact to special-status plant species. This impact would be addressed with implementation of Mitigation Measure 3.4f, which requires a preconstruction floristic survey of any portion of the Remainder Area proposed for development and/or redevelopment and to take avoidance and compensatory measures should special-status plant species be identified within the development area.

Special-Status Wildlife

There is suitable habitat for several special-status wildlife species within the Remainder Area, as well as potential for additional wetlands or waters of the U.S. to be present. The Remainder Area is considered to have a moderate potential to support the same special-status wildlife species that have potential to occur within The Crossings component of the project site, which are burrowing owl, loggerhead shrike, Swainson's hawk, pallid bat, Townsend's big eared bat, western mastiff bat, and western red bat. In addition, the Remainder Area is considered to have a low potential to support American badger or San Joaquin kit fox due to the existing levels of disturbance and removal of natural habitat and vegetation cover. Further, the Remainder Area is considered to have potential to support the following special-status wildlife species that are associated with seasonal wetlands and vernal pools: conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, and western spadefoot toad. Because the Remainder Area could not be surveyed, and future development could impact special-status wildlife species such as through vegetation removal, grading, excavation, and/or new construction, the impact to special status wildlife species is considered **potentially significant**.

Mitigation Measures

Implementation of the mitigation measures 3.4a, 3.4b, 3.4c, 3.4d, and 3.4e, as discussed above, would reduce impacts to burrowing owl, loggerhead shrike and other nesting birds, Swainson's hawk, and bat species by ensuring the species are identified and protected during project construction activities and any breeding, nesting or foraging habitat is replaced and preserved in perpetuity to ensure the survival of the species. Further, Mitigation Measures 3.4f and 3.4g would address potential impacts to special-status plant species on the Remainder Area portion of the site.

The Crossings and Remainder Area

- 3.4a** To avoid impacts to burrowing owl, a qualified biologist shall conduct a habitat assessment of the project site for burrowing owl prior to ground-disturbance on the project site. Ideally, the assessment should be conducted prior to the breeding season to allow time for protocol surveys and/or passive relocation, should any suitable burrows and/or burrows with owl sign be detected during the survey. Surveys shall be conducted in accordance with the California Burrowing Owl Consortium's "Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and California Department of Fish and Wildlife's (CDFW) "Staff Report on Burrowing Owl Mitigation" (CDFG 2012). Specifically, CBOC and CDFW's Staff Report suggest three or more surveillance surveys conducted during daylight with each visit occurring at least three weeks apart during the peak breeding season

(April 15 to July 15), when BUOW are most detectable. If the habitat assessment is not conducted prior to the breeding season, a protocol survey for burrowing owls shall be conducted following these guidelines, with the final survey occurring no more than 14 days prior to commencement of construction. The habitat assessment and/or survey(s) shall cover the limits of ground disturbance and potentially suitable and accessible nesting habitat within 300 feet.

If nesting or non-nesting burrowing owls, or evidence of an active owl burrow are observed during the survey, construction shall be postponed until the qualified biologist can fully implement a California Department of Fish and Wildlife-approved burrow exclusion plan (to be prepared by the qualified biologist). The exclusion plan shall be conducted in accordance with the Staff Report on Burrowing Owl Mitigation (CDFG 2012). Once owls have been successfully excluded and unoccupied burrows evacuated, construction in the area may proceed.

Construction activities within 300 feet of occupied burrows shall be delayed until young owls have fledged and are independent of the burrow, as determined by a qualified biologist in coordination with CDFW. The qualified biologist may reduce the buffer based on the type, timing, extent, and intensity of the construction activity and other factors such as site topography and vegetation cover between the construction activity and the burrow. Once all young have fledged and are no longer dependent upon the nest burrow, the same burrow exclusion procedure described above shall be implemented prior to resuming construction activities in the area.

- 3.4b** To avoid impacts to nesting birds species (including loggerhead shrike and other special-status species), vegetation clearing operations, including pruning or removal of trees and shrubs, should be completed between September 1 and February 14, if feasible. Further, a pre-construction nesting bird survey shall be performed by a qualified biologist no more than ten days prior to ground-disturbing or vegetation removal activities conducted during the nesting season (February 1 through September 15). The survey shall cover the limits of disturbance and suitable nesting habitat within 500 feet for raptors and 250 feet for other nesting birds.

If any active nests are observed during surveys, a qualified biologist shall establish a suitable avoidance buffer from the active nest. The buffer distance, to be determined by the qualified biologist, usually ranges from 50 to 300 feet and shall be determined based on factors such as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. Limits of construction to avoid active

nests shall be established in the field with flagging, fencing, or other appropriate barriers and shall be maintained until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.

If ground-disturbing or vegetation removal activities are delayed, additional nest surveys shall be conducted such that no more than 7 days elapse between the survey and vegetation removal activities. Further, if construction activities lapse for more than 14 days, the pre-construction survey shall be repeated no more than 7 days prior to the re-start of construction activities.

If the pre-construction survey shows that there is no evidence of active nests, then a letter report shall be submitted to the City and no additional measures are required.

- 3.4c** To avoid impacts to Swainson's hawk, A qualified biologist shall conduct surveys for Swainson's hawk prior to ground-disturbance or vegetation removal activities, if undertaken during the Swainson's hawk nesting season (March 1 – August 31). The surveys shall be conducted in accordance with the Swainson's Hawk Technical Advisory Committee (TAC) Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (TAC 2000). The survey shall cover the limits of construction and accessible, suitable nesting habitat within 0.5 mile. If an active nest is observed in the survey area, construction within 0.5 mile of the nest shall be delayed until young hawks have fledged and are independent of the nest, as determined by a qualified biologist. In consultation with California Department of Fish and Wildlife biologists, the qualified biologist may reduce the buffer based on the type, timing, extent, and intensity of the construction activity and other factors such as site topography and vegetation cover between the construction activity and the nest. Construction within the no-disturbance buffer of the nest may reinitiate once all young have fledged and are no longer dependent upon the nest.
- 3.4d** To compensate for the loss of Swainson's hawk foraging habitat within The Crossings component of the project site, the project applicant shall provide for habitat mitigation by paying into a habitat mitigation bank and/or acquiring a conservation easement over land that provides Swainson's hawk foraging habitat and is located within 10 miles of the active Swainson's hawk nest nearest to the project site. In total, the compensatory mitigation shall be sufficient to protect an area equal to 75% of the acreage of foraging habitat lost to development. For The Crossings component of the project, the habitat mitigation shall be equal to 21.3 acres of foraging habitat. This is based on the expected loss of 28.4 acres of

foraging habitat and the CDFW recommendation to mitigated for 75% of the land lost to development when there is a known Swainson's hawk nest between 1 and 5 miles from the project site. This ratio may be increased to 100% of the land lost to development if an active Swainson's hawk nest is identified within 1 mile of the project site. The land protected under an agricultural conservation easement as required by Mitigation Measure 3.2a can be applied to this mitigation measure subject to confirmation by a qualified biologist that the conserved agricultural land provides Swainson's hawk foraging habitat that is of equal foraging value as provided at the project site, and subject to the agricultural conservation easement being located within 10 miles of the active Swainson's hawk nest nearest to the project site. For the Remainder Area, the amount of habitat mitigation required will depend on the area proposed for development/redevelopment that includes potential foraging habitat and shall be equal to 75% of that total area if the nearest active nest is between 1 and 5 miles of the Remainder Area, or equal to 100% of the total area to be developed if the nearest active nest is within 1 mile of the area to be developed.

- 3.4e** A pre-construction bat survey for pallid bat, Townsend's big eared bat, western mastiff bat, and western red bat shall be performed by a qualified biologist no earlier than 14 days prior to the onset of construction to assess whether roosting bats occur in the buildings slated for demolition on the project site. If roosting bats are detected, the qualified biologist shall consult with CDFW to identify appropriate measures to avoid/minimize impacts to the species, which can include approval to passively exclude any bats found on the project site. If a maternity roost is identified on the project site, an appropriate buffer shall be determined by the qualified biologist and the roost shall be avoided until the young have fledged (which may require halting building demolition).

Additional Mitigation Measures for the Remainder Area

- 3.4f** Prior to issuance of a discretionary permit or approval within the Remainder Area, the project applicant for that approval shall submit a biological assessment prepared by a qualified biologist to the City of Merced. The biological assessment shall identify special-status species, their habitat and/or other biological resources that could occur in the area subject to the requested discretionary permit or approval.

If the Biological Assessment determines that rare plants could be present, the project applicant shall retain a qualified botanist to conduct a floristic survey for special-status plant species within the area to be disturbed. The survey shall be conducted during the time of year when special-status plants with potential to occur

onsite are blooming and thus can be positively identified (generally March through June). The results of the survey shall be summarized in a report to the City of Merced.

If no special-status plants are located during the surveys, no further mitigation would be required.

If special-status plants are located during the survey, the project applicant shall implement the following measures:

(i) The project shall be redesigned to avoid the plants, to the extent feasible.

and

(ii) (a) If the plants cannot be avoided, the project applicant shall consult with the City and the Department of Fish and Wildlife (CDFW) regarding steps to take to off-set the loss of the plants on the project site, such as transplantation, collecting seed or clippings and replanting species in an onsite location, prior to approval of grading plans. The measures shall be sufficient to ensure the continued survival of the special status plants within the Middle San Joaquin-Lower Chowchilla watershed.

3.4g If the biological assessment prepared for any portion of the Remainder Area proposed for development identifies habitat that could support conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, and/or western spadefoot toad, the following requirements shall apply:

1. Conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp: Prior to issuance of a grading permit for any activities within seasonal wetlands or vernal pools, a protocol-level vernal pool branchiopod survey shall be performed by a qualified biologist (i.e., a biologist with several years' experience performing vernal pool surveys, capable of identifying signs of vernal pool fairy shrimp and/or vernal pool tadpole shrimp activity) to determine if conservancy fairy shrimp, vernal pool fairy shrimp and/or vernal pool tadpole shrimp are present on the project site. Alternatively, presence can be assumed. Where presence is identified or assumed, compensation for the loss of habitat for these species shall be provided at a ratio of 3 acres for every 1 acre affected (3:1). This ratio shall include creation of 1 acre of vernal pool habitat for every 1 acre impacts (1:1), and preservation of 2 acres of vernal pools for every 1 acre impacted (2:1), as described in the U.S. Fish and Wildlife Service (USFWS) programmatic biological opinion issued to the U.S. Army Corps of Engineers for small impacts to listed branchiopods (USFWS 1996). Mitigation for impacts to listed branchiopods

shall be implemented according to one of the following three options, to be determined and completed prior to impact: participation in a USFWS approved mitigation bank, off-site mitigation at a non-bank location approved by USFWS and subject to preservation in perpetuity such as through a conservation easement, or contribution to the USFWS Species Fund. In the event that protocol-level surveys demonstrate the absence of listed vernal pool branchiopods, mitigation shall not be required.

2. California Tiger Salamander: A qualified biologist with valid federal and state collecting permits shall conduct protocol-level surveys in accordance with the USFWS “Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander” (USFWS 2003) at the appropriate time of year to determine the existence and extent of California tiger salamander breeding and refugia habitat. The protocol-level surveys for California tiger salamander require more than one survey season and are dependent upon sufficient rainfall to complete. As a result, consultation with the California Department of Fish and Wildlife (CDFW) and the USFWS shall occur well in advance of beginning the surveys and prior to any planned vegetation- or ground-disturbing activities. The protocol-level survey shall include a 100-foot buffer around the proposed development area, subject to landowner authorization, in all areas of wetland and upland habitat that could support California tiger salamander. Protocol-level survey results for California tiger salamander are viable for two years after the results are reviewed by CDFW.

If California tiger salamander are encountered during the pre-construction survey, individuals shall be safely relocated to suitable habitat outside of the proposed development area. The approved biologist shall prepare a Salvage and Relocation Plan for California tiger salamander in consultation with, and for approval by, USFWS and CDFW. Any California tiger salamander relocations conducted during the pre-construction survey (as described above) shall be completed in accordance with the agency-approved plan. All relocation areas shall contain animal burrows or other suitable refugia and be identified and approved by USFWS and CDFW prior to the pre-construction survey. Relocated California tiger salamander shall be monitored until they have escaped into upland refugia or aquatic habitat with sufficient water.

If California tiger salamander are determined present within the proposed development area, then on-going monitoring by a qualified biologist may be required to ensure no impacts to this species and its habitat during construction and operation and maintenance activities for the project.

If impacts to California tiger salamander and/or their habitat cannot be avoided, impacts would require prior authorization from the regulatory agencies in the form of USFWS Section 7 Consultation and a CDFW Lake and Streambed Alteration Agreement. The project applicant shall also obtain “take” authorization for California tiger salamander from the USFWS and the CDFW prior to project implementation. The project may proceed after the Applicant has satisfied all pre-construction conditions in the “take” authorizations defined above. It is expected that avoidance and minimization measures associated with these authorizations will include requirements for providing methods to protect California tiger salamander during project construction and operation and maintenance activities, a Compensatory Mitigation Plan, a detailed California tiger salamander Monitoring Plan, and reporting requirements.

3. Western spadefoot toad: Surveys for western spadefoot toad shall be conducted by a qualified biologist no more than 48 hours prior to the start of grading or vegetation clearing within 200 feet of any vernal pools and/or seasonal wetlands. The survey shall be conducted by a biologist who has been approved by CDFW. If any western spadefoot toad individuals or populations are observed within the survey area, a no-disturbance area shall be established (flagged or fenced) within 200 feet of that location and no construction activity shall occur in that area until the animal voluntarily leaves the area. If no western spadefoot toads are observed, then a letter report documenting the results of the survey should be provided to the project proponent for their records, and no additional measures are recommended. If construction within each habitat feature that could support this species does not commence within 48 hours of the survey, a new survey shall be completed.

Impact 3.4-2: Implementation of the proposed project could result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS. This would be considered a potentially significant impact.

The Crossings

Due to the highly disturbed nature of the project site and the current agricultural usage, no riparian habitat or other sensitive natural communities were identified within the site. The agricultural ditches along the southern and northern boundaries of the project site appear to be regularly maintained and riparian vegetation is absent. Thus, there is no riparian habitat or other sensitive natural community within the project site and The Crossings component of the project would have **no impact** to such resources.

Remainder Area

The project proposes to pre-zone the Remainder Area with approximately 19.4 acres of Urban Transition (U-T) and approximately 20.8 acres of Low Density Residential (R-1-10). No new development within the Remainder Area is proposed at this time, however the portion of the Remainder Area that is proposed to be zoned R-1-10 could support single-family residential lots with a minimum size of 10,000 square feet. The portion of the Remainder Area zoned U-T would only allow new agricultural development unless further rezoning is approved, and thus the proposed project would not result in the potential for new development on that portion of the site.

The Remainder Area could not be accessed during the field survey, although no riparian habitat or sensitive natural communities were observed during a review of aerial photographs. Additional surveys would be required prior to issuance of any further discretionary approvals to determine the potential for riparian habitat or other sensitive communities to occur within the Remainder Area. If the Remainder Area supports riparian habitat or sensitive natural communities, those resources could be destroyed or damaged if further development that includes activities such as vegetation removal, grading, excavation, and/or new construction is proposed. This is considered a **potentially significant impact**.

Mitigation Measures

Compliance with Mitigation Measure 3.4h would ensure potential impacts to riparian habitat or other sensitive natural communities associated with future development could be reduced to a less-than-significant level.

The Crossings

No mitigation measures are required.

Remainder Area

- 3.4h** Prior to approval of any discretionary entitlements or issuance of a discretionary permit for the Remainder Area, the project applicant for that approval shall submit a biological assessment prepared by a qualified biologist to the City of Merced. The biological assessment shall identify special-status species, their habitat and/or other biological resources that could occur in the area subject to the approval. The biological assessment shall identify whether the Remainder Area (or the portion to which the requested discretionary permit or approval would apply) contains any sensitive natural communities, including riparian habitat.

If the Biological Assessment determines that sensitive natural communities are present, the Biological Assessment shall assess the nature and quality of those communities and identify avoidance and compensation measures that shall be implemented by the project applicant to ensure no net loss of these resources in the project region. If no sensitive natural communities are located during the surveys, no further mitigation would be required.

Impact 3.4-3: Implementation of the proposed project may result in placement of fill into potential jurisdictional waters of the U.S and State. This would be a potentially significant impact.

The Crossings

Preparation of the Biological Resources Assessment (Appendix E) included a constraints-level wetland assessment, which found two drainages along the northern and southern boundaries of the 28.4-acre study area for The Crossings component of the project, as shown in Figure 3.4-1, and described in Section 3.4.2 above. No potential Waters of the U.S., vernal pools, or wetlands were identified on The Crossings portion of the project site during the December 2016 field survey and no changes to site conditions were identified in a review of aerial photographs taken between 2016 and 2019. The Biological Resources Assessment notes that there are also three agricultural ditches northeast of the project site, but these features would be not be affected by project construction because they are outside the project boundaries.

Both of the drainages along the project site boundaries are man-made facilities that function as roadside and/or agricultural ditches. They were constructed in upland habitat to collect runoff and/or convey irrigation water. They are potentially under the joint regulation of the RWQCB and CDFW. The proposed project would require constructing three driveways across the ditch along the southern property boundary (Drainage 1) and may also require installing a new sewage conveyance line within or adjacent to the East Yosemite Avenue right-of-way. These actions could result in direct and indirect effects to Drainage 1. The proposed project would also require converting Drainage 2 from an open air canal channel to a piped underground canal, which would result in direct effects to Drainage 2. If either or both drainages meet the definition of waters of the state, impacts to these features would be a **significant** impact.

Remainder Area

Because the Remainder Area could not be accessed during the field survey, preparation of the Biological Resource Assessment included a review of aerial imagery to assess the potential for wetlands or other waters to present in this area. This review found that there are aerial signatures indicating seasonally wet areas visible on the four residential parcels in the northwest portion of

the study area, as well as in the undeveloped area between The Crossings portion of the site and the Stoneridge Christian School/Yosemite Church parcel.

No new development within the Remainder Area is proposed at this time, however the portion of the Remainder Area that is proposed to be zoned R-1-10 could support single-family residential lots with a minimum size of 10,000 square feet. The portion of the Remainder Area zoned U-T would only allow new agricultural development unless further rezoning is approved, and thus the proposed project would not result in the potential for new residential units on that portion of the site. As shown on Figure 2-5, the portions of the Remainder Area that support aerial signatures of seasonally wet areas are within the portions proposed to be zoned U-T, thus future development of those areas is not considered to be a likely result of the proposed project. However, there is some potential for future development in these areas. Further because none of the Remainder Area was surveyed, it is possible that wetlands or jurisdictional waters could be present in the portions of the site proposed to be zoned R-1-10. If the Remainder Area supports wetlands or jurisdictional waters, those resources could be destroyed or damaged if further development that includes activities such as vegetation removal, grading, excavation, and/or new construction is proposed. This is considered a **potentially significant impact**.

Mitigation Measures

The following mitigation measure would reduce potential impacts to wetland habitat less than significant by requiring the loss of aquatic habitat be replaced at a 1:1 ratio.

The Crossings and Remainder Area

- 3.4i** Prior to issuance of any grading or construction permits, the project applicant shall have a wetland delineation prepared by either a qualified biologist or wetland scientist to determine if the development to which the grading and/or construction permits would apply could result in any impacts to waters of the U.S. or waters of the State. This includes the ditches along the northern and southern project site boundaries, which would be affected by construction of The Crossings component of the project, as well as potential seasonal wetlands and vernal pools within the Remainder Area. A copy of the wetland delineation shall be provided to the City for their review prior to submission to the appropriate agency for verification (e.g., Army Corps of Engineers, Regional Water Quality Control Board, and/or California Department of Fish and Wildlife).

To mitigate for the loss of any waters of the U.S., the project applicant shall obtain a Section 404 permit from the U.S. Army Corps of Engineers and a Section 401 Water Quality Certification from the Regional Water Quality Control Board and shall provide compensation for the loss of such waters by creating, preserving, and/or

restoring an equivalent amount of jurisdictional waters sufficient to ensure no net loss of jurisdictional habitats, with a minimum ratio of 1:1. Actual mitigation acreage requirements may be adjusted by the authority of the U.S. Army Corps of Engineers and the Regional Water Quality Control Board.

To mitigate for the loss of any waters of the State, the project applicant shall obtain Waste Discharge Requirements or Certification of Waste Discharge Requirements from the Regional Water Quality Control Board and a Section 1602 Streambed Alteration Agreement from the and California Department of Fish and Wildlife and shall provide compensation for the loss of such waters by creating, preserving, and/or restoring an equivalent amount of jurisdictional waters sufficient to ensure no net loss of jurisdictional habitats, with a minimum ratio of 1:1. Actual mitigation acreage requirements may be adjusted by the authority of the Regional Water Quality Control Board and California Department of Fish and Wildlife.

For both waters of the U.S. and waters of the State, mitigation may be accomplished by either of the following or a combination of these:

- a. Creation of similar habitat either on- or off-site at an appropriate mitigation site;
or
- b. Purchase of the appropriate number of credits at an agency-approved off-site wetland mitigation bank.

Impact 3.4-4: Implementation of the proposed project would not conflict with the City of Merced land use plans, policies, regulations, or ordinances that address biological resources. This would be a less-than-significant impact.

The Crossings/Remainder Area

The City of Merced Street Tree Division requires property owners to water City trees (trees planted within 8 to 10 feet of City streets). The City does not have a tree ordinance that protects trees that are of a certain size or species. The project proposes to annex the project site to the City thus removal of any City trees would require consultation with the City's Tree Division and compliance with the City of Merced Street Tree Division. This would result in a **less-than-significant** impact related to conflict with existing land use policies.

Mitigation Measures

No mitigation measures are required.

3.4.5 Cumulative Impacts

Impact 3.4-5: The proposed project could contribute to cumulative impacts to special-status species in the region due to removal of foraging, cover and breeding habitat. This would be a potentially significant impact.

The Crossings/Remainder Area

The geographic region for consideration of cumulative biological resource impacts is the City of Merced including the Specific Urban Development Plan (SUDP) and Sphere of Influence (SOI). This region was chosen because it defines an area that supports a wide range of vegetation communities, hydrologic features, and plant and wildlife species and to ensure consideration of impacts to biological resources that would result from the planned expansion of the City into currently undeveloped areas.

The land development scenario for consideration of cumulative biological resource impacts is buildout of the City of Merced General Plan, including the SUDP. Properties to the south and west of the project site are currently developed and no major redevelopment projects are reasonably foreseeable in those areas. Properties to the north and east of the project site are located within the City's Sphere of Influence and currently designated Rural Residential in the General Plan Land Use Diagram (City of Merced 2015). There are no reasonably foreseeable development projects for any of the properties north and east of the project site. However, the General Plan anticipates future development within the SUDP, which would extend urban development into areas currently characterized primarily as agricultural and rural residential lands.

The General Plan EIR found that urban development projects in the City of Merced and surrounding municipalities has resulted in the loss of a large amount of historic foraging and nesting habitat for special-status raptors and birds, and special status plant species. The General Plan EIR also found that thousands of additional acres are proposed for development by the Merced County General Plan and the General Plans of its incorporated cities in addition to the proposed City of Merced SUDP/SOI area. The anticipated regional development, including road construction, site grading, infrastructure installation, and construction of residential, commercial, and public facilities uses could result in the direct loss of biological resource habitat. The General Plan EIR concluded that the cumulative impacts of development in accordance with the proposed General Plan and other General Plans in the County would be significant and unavoidable (City of Merced 2012b).

Special Status Plants

There are no special status plants considered to have potential to occur within The Crossings component of the proposed project, but there is potential for special status plants to occur within

the Remainder Area. Implementation of Mitigation Measures 4.3f and 3.4h would ensure that future development within the Remainder Area complies with the mitigation requirements in the General Plan EIR and that any impacts to special status plants within that portion of the project site would be avoided or off-set through compensatory measures. Thus, the project would not result in a cumulatively considerable contribution to the significant cumulative impact to special status plant species.

Special Status Wildlife

The proposed project would result in the conversion of approximately 28.4 acres of foraging habitat for Swainson's hawk, burrowing owl, and other raptors for development of the Crossings component. Although no development is proposed within the Remainder Area currently, at the time that such development is proposed, there is a potential for loss of 40.2 additional acres of foraging habitat for Swainson's hawk, burrowing owl, and other raptors. Other passerine bird species and bat species including the pallid bat, Townsend's big-eared bat, western mastiff bat and western red bat could also forage, nest, roost or use cover habitat within the project site. Additionally, if any portion of the Remainder Area that is proposed for development and/or redevelopment is found to support seasonal wetlands and/or vernal pools, the following special-status wildlife species could also be present: conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, and western spadefoot toad. With implementation of Mitigation Measures 3.4a, 3.4b, 3.4c, 3.4d, 3.4e, and 3.4g, the project's direct effects to special status wildlife species would be avoided through completion of pre-construction surveys, passive exclusion of bats and burrowing owls from nesting and roosting sites, avoidance of disturbance to active nests, provision of compensatory foraging habitat, and avoidance of direct effects to species dependent on seasonal wetlands and/or vernal pools. Thus, the project would not result in a cumulatively considerable contribution to the significant cumulative impact to special status wildlife species.

Jurisdictional Aquatic Resources

The proposed project would result direct effects to two drainage ditches that are potential waters of the State. Future development within the Remainder Area could also result in direct effects to jurisdictional aquatic resources if any portion of the Remainder Area that is proposed for development and/or redevelopment is found to support seasonal wetlands and/or vernal pools. Implementation of Mitigation Measure 3.4i would ensure that compensation for these direct impacts is provided sufficient to ensure no net loss of the biological function and values of jurisdictional aquatic resources. Thus, the project would not result in a cumulatively considerable contribution to the significant cumulative impact to waters of the U.S., waters of the State, and wetlands.

Mitigation Measures

Compliance with Mitigation Measures 3.4a through 3.4i would ensure impacts due to the loss of foraging, cover and breeding habitat for special-status species, loss of special status plant species, and loss of jurisdictional aquatic resources would be avoided and/or off-set through compensatory measures. No additional mitigation is required.

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SOURCE: Bing Maps (2016); County of Merced (2014); USDA NRCS

FIGURE 3.4-1
Soil Types and Potential Jurisdictional Resources

Yosemite Avenue - Gardner Avenue to Hatch Road Annexation Project

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