



City Of Merced Wastewater Collection System Master Plan

DRAFT ENVIRONMENTAL IMPACT REPORT

APPENDIX C
September 2020



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**CITY OF MERCED WASTEWATER COLLECTION SYSTEM MASTER PLAN UPDATE DRAFT
ENVIRONMENTAL IMPACT REPORT**

Appendix C Biological Resources
September 2020

Appendix C BIOLOGICAL RESOURCES

C.1 SPECIAL STATUS SPECIES POTENTIAL FOR OCCURRENCE ASSESSMENT

The table below lists the special status plant and wildlife species identified to occur within the Biological Study Area (BSA) (within five miles of the Program Study Area) or in database queries as described in the Draft EIR environmental setting (Section 3.4.3) and evaluated for potential impacts in the Draft EIR impact analysis (Section 3.4.4).

Appendix C.1 Special Status Species Determined to Have a Low or Very Low to Nonexistent Potential to Occur within the Program Study Area.

Common name Scientific name	Legal status			Geographic distribution/ Floristic province	Preferred habitat	Identification period	Level of potential to occur within the Program Study Area
	Federal	State	CNPS				
Plants							
Adobe navarretia <i>Navarretia nigelliformis</i> <i>ssp. nigelliformis</i>	–	S3	4.2	328–3,280 feet (100–1,000 meters)	Valley and foothill grasslands; vernal pools; clay, mesic, serpentinite.	April–June	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. There are documented occurrences within the Merced Quad, however the Program Study Area is not within the elevation range of this species.
Beaked clarkia <i>Clarkia rostrata</i>	–	S2S3	1B.3	196–1,641 feet (60–500 meters)	Cismontane woodland; valley and foothill grassland.	April–May	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	–	E, S2	1B.2	32–7,791 feet (10–2,375 meters)	Vernal pools; marshes, swamps; lake margins; clay.	April–August	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Brittlescale <i>Atriplex depressa</i>	–	S2	1B.2	3–1,050 feet (1–320 meters)	Chenopod scrub; meadows and seeps; playas; valley and foothill grassland; vernal pools; alkaline, clay.	April–October	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area; lacks suitable soils. No known occurrences within the BSA.
California alkali grass <i>Puccinellia simplex</i>	–	S2	1B.2	7–3,051 feet (2–930 meters)	Chenopod scrub; meadows and seeps; valley and foothill grassland; vernal pools; alkaline, vernal mesic; sinks, flats, and lake margins.	March–May	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. One known occurrence (1935) within the BSA.
Colusa grass <i>Neostaphia colusana</i>	T, X	E, S1	1B.1	16–656 feet (5–200 meters)	Large vernal pools; adobe.	May–August	Low. Limited to no suitable habitat within the Program Study Area. Known occurrences (1986, 2008, 2011, 2016) within the BSA and documented occurrences within the Merced Quad.
Delta button-celery <i>Eryngium racemosum</i>	–	E, S1	1B.1	10–98 feet (3–30 meters)	Riparian scrub; vernal mesic clay depressions.	June–October	Very Low to Nonexistent. No suitable habitat within the Program Study Area. No known occurrences within the BSA.
Dwarf downingia <i>Downingia pusilla</i>	–	S2	2B.2	3–1,459 feet (1–445 meters)	Valley and foothill grassland; vernal pools; mesic.	March–May	Low. Limited suitable habitat within the Program Study Area. Two known occurrences (1999) within the BSA and documented occurrences within the Merced Quad.
Ewan's larkspur <i>Delphinium hansenii</i> <i>ssp. ewanianum</i>	–	S3	4.2	197–1,968 feet (60–600 meters)	Cismontane woodland; valley and foothill grassland; rocky	March–May	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Forked hareleaf <i>Lagophylla dichotoma</i>	–	S2	1B.1	147–1,100 feet (45–335 meters)	Cismontane woodland; valley and foothill grassland; clay.	April–May	Low. Limited suitable habitat within the Program Study Area. One known occurrence (1915) within the BSA and documented occurrences within the Merced Quad.
Greene's Tuctoria <i>Tuctoria greenei</i>	E, X	R, S1	1B.1	98–3,510 feet (30–1,070 meters)	Vernal pools.	May–September	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Hairy Orcutt grass <i>Orcuttia pilosa</i>	E	E, S1	1B.1	151–656 feet (46–200 meters)	Vernal pools.	May–September	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. One known occurrence (1938) within the BSA and documented occurrences within the Merced Quad.
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	E	E, S2	1B.1	49–492 feet (15–150 meters)	Cismontane woodland; valley and foothill grassland; clay, acidic.	March–April	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.

Common name Scientific name	Legal status			Geographic distribution/ Floristic province	Preferred habitat	Identification period	Level of potential to occur within the Program Study Area
	Federal	State	CNPS				
Heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	–	S2	1B.2	0–1,837 feet (0–560 meters)	Chenopod scrub; meadows and seeps; valley and foothill grassland; sandy, saline, alkaline.	April–October	Low. Limited suitable habitat within the Program Study Area. Two known occurrences (1965 and 1988) within the BSA.
Henderson's bent grass <i>Agrostis hendersonii</i>	–	S2	3.2	230–1,001 feet (70–305 meters)	Valley and foothill grassland; vernal pools; mesic.	April–June	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. One known occurrence (1937) within the BSA.
Hogwallow starfish <i>Hesperervax caulescens</i>	–	S3	4.2	0–1,656 feet (0–505 meters)	Valley and foothill grassland; shallow vernal pools; mesic, clay, alkaline.	March–June	Low. Limited suitable habitat within the Program Study Area. No known occurrences within the BSA. However, there are documented occurrences within the Merced Quad.
Hoover's calycadenia <i>Calycadenia hooveri</i>	–	S2	1B.3	213–984 feet (65–300 meters)	Cismontane woodland; valley and foothill grassland; rocky.	July–September	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Hoover's spurge <i>Euphorbia hooveri</i>	T, X	S1	1B.2	80–820 feet (25–250 meters)	Vernal pools.	July–October	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Keck's checkerbloom <i>Sidalcea keckii</i>	E	S2	1B.1	246–2,132 feet (75–650 meters)	Cismontane woodland; valley and foothill grassland; serpentinite, clay.	April–June	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. One known occurrence (2005) within the BSA.
Lesser saltscale <i>Atriplex minuscula</i>	–	S2	1B.1	49–656 feet (15–200 meters)	Chenopod scrub; playas; valley and foothill grassland; alkaline, sandy.	May–October	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Merced phacelia <i>Phacelia ciliata</i> var. <i>opaca</i>	–	SH	3.2	196–492 feet (60–150 meters)	Valley and foothill grassland; clay, alkaline.	February–May	Low. Limited suitable habitat within the Program Study Area. Three known occurrences (1929, 1937, and 1977) within the BSA and documented occurrences within the Merced Quad.
Parry's rough tarplant <i>Centromadia parryi</i> ssp. <i>rudis</i>	–	S3	4.2	0–100 feet (0–300 meters)	Valley and foothill grassland; vernal pools.	May–October	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Pincushion navarretia <i>Navarretia myersii</i> ssp. <i>myersii</i>	–	S2	1B.1	66–1,083 feet (20–330 meters)	Vernal pools; acidic.	April–May	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Recurved larkspur <i>Delphinium recurvatum</i>	–	S2	1B.2	10–2,592 feet (3–790 meters)	Valley and foothill grassland; chenopod scrub; cismontane woodland; alkaline.	March–June	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
San Joaquin Valley Orcutt grass <i>Orcuttia inaequalis</i>	T, X	E, S1	1B.1	33–2,478 feet (10–755 meters)	Vernal pools.	April–September	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. Known occurrences (1980, 1987, 2001, 2016) within the BSA and documented occurrences within the Merced Quad.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	–	S3	1B.2	0–2,133 feet (0–650 meters)	Marshes and swamps; shallow freshwater.	May–November	Low. Limited suitable habitat within the Program Study Area. Three known occurrences (1980, 2010, 2012) within the BSA and documented occurrences within the Merced Quad.
Shining navarretia <i>Navarretia nigelliformis</i> ssp. <i>radians</i>	–	S2	1B.2	249–3,280 feet (76–1,000 meters)	Cismontane woodland; valley and foothill grassland; vernal pools; clay.	March–July	Low. Limited suitable habitat within the Program Study Area. Known occurrences (1999, 2001, 2006, 2009, 2017) within the BSA and documented occurrences within the Merced Quad. However, the Program Area is not within the elevation range for this species.
Small-flowered morning-glory <i>Convolvulus simulans</i>	–	S4	4.2	95–2,430 feet (30–740 meters)	Chaparral; openings; coastal scrub; valley and foothill grassland; clay; serpentinite seeps.	March–July	Low. Limited suitable habitat within the Program Study Area. No known occurrences within the BSA. However, there are documented occurrences within the Merced Quad.
Spiny-sepaled button-celery <i>Eryngium spinosepalum</i>	–	S2	1B.2	262–3,198 feet (80–975 meters)	Valley and foothill grassland; vernal pools.	April–June	Very Low to Nonexistent. Limited suitable habitat within the Program Study Area. Known occurrences (2001) within the BSA. However, the Program Area is not within the elevation range for this species.
Subtle orache <i>Atriplex subtilis</i>	–	S1	1B.2	131–328 feet (40–100 meters)	Valley and foothill grassland; alkaline.	June–October	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.

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	Federal	State	CNPS				
Succulent owl's-clover <i>Castilleja campestris</i> ssp. <i>succulenta</i>	T, X	E, S2S3	1B.2	164–2,461 feet (50–750 meters)	Vernal pools; acidic.	March–May	Low. Limited suitable habitat within the Program Study Area. Known occurrences (1997, 1999, 2001, 2004, 2008) within the BSA and documented occurrences within the Merced Quad.
Vernal pool smallscale <i>Atriplex persistens</i>	–	S2	1B.2	33–377 feet (10–115 meters)	Vernal pools; alkaline.	June–October	Low. Limited suitable habitat within the Program Study Area. Two known occurrences (1926, 2011) within the BSA.
Watershield <i>Brasenia</i>	–	S3	2B.3	95–7,220 feet (30–2,200 meters)	Freshwater marshes and swamp.	June–September	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Invertebrates							
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	E, X	S1	N/A	Six disjoint populations in Tehama, Butte, Jepson, Solano, Sacramento, Glenn, Merced, and Ventura Counties.	Vernal pools.	November–April	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. Known occurrences within the BSA.
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	–	S2S3	N/A	California's Central Valley; Southeastern Sacramento, Southern Sierra Foothill, San Joaquin, and Solano-Colusa Vernal Pool Regions.	Vernal pools.	Winter–Spring	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. Known occurrences within the BSA.
Molestan blister beetle <i>Lytta moesta</i>	–	S2	N/A	Central California	Associated with <i>Lupinus</i> , and <i>Trifolium wormskioldii</i> in dry vernal pools, and <i>Eriodium</i> .	April–July	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. One known occurrence (unknown date) within the BSA.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	S2	N/A	California Central Valley and foothills, majority below 500 feet (152 meters) elevation.	Elderberry shrubs (<i>Sambucus</i> sp.), with stems at least about one inch in diameter, along rivers and streams.	March–July	Low. Limited suitable habitat within the Program Study Area. No known occurrences within the BSA.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T, X	S3	N/A	Scattered throughout Central Valley, Coast Range, and Southern California.	Vernal pools.	December–May	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. Multiple known occurrences within the BSA.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	E, X	S3S4	N/A	Scattered throughout Central Valley. Shasta through Tulare Counties, and Alameda and Contra Costa Counties.	Ephemeral freshwater habitats. Alkaline pools; clay flats; vernal lakes; vernal pools; vernal swales; seasonal wetlands.	Winter–Spring	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. Known occurrences within the BSA.
Fish							
Delta smelt <i>Hypomesus transpacificus</i>	T	E, S1	N/A	From Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano, Yolo Counties.	Estuaries, river channels, tidally influenced backwaters. Shallow, fresh or slightly brackish water upstream of mixing zone (spawning).	January–June (spawning)	Very Low to Nonexistent. No suitable habitat within the Program Study Area. No known occurrences within the BSA.
Reptiles and Amphibians							
Blunt-nosed leopard lizard <i>Gambelia silus</i>	E	E, FP, S1	N/A	San Joaquin Valley and nearby valleys and foothills.	Inhabits sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief.	Year-round, breed May–June	Low. Limited suitable habitat within the Program Study Area. No known occurrences within the BSA.
California red-legged frog <i>Rana draytonii</i>	T	SSC, S2S3	N/A	Coastal Range of California, foothill range of Sierra Nevada mountains.	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Require animal burrows or other moist refuges for estivation.	Year-round, breed November–April	Low. No suitable breeding habitat within the Program Study Area. No known occurrences within the BSA.
California tiger salamander <i>Ambystoma californiense</i>	T, X	T, WL, S2S3	N/A	Central Valley, and additional isolated populations: Gray Lodge NWR, Sonoma County, and Santa Barbara County. 9–3,500 feet (3–1,067 meters)	Upland grassland, oak savanna, edges of mixed woodland and coniferous forest with vernal pools and ephemeral or perennial ponds for breeding.	Year-round, breed December–February	Low. Limited to no suitable habitat within the proposed Project area. There are known occurrences within the BSA; however, occurrences are farther from the Program Study Area than their known dispersal distance of approximately one mile. No habitat or species were observed during site surveys.

Common name Scientific name	Legal status			Geographic distribution/ Floristic province	Preferred habitat	Identification period	Level of potential to occur within the Program Study Area
	Federal	State	CNPS				
Giant gartersnake <i>Thamnophis gigas</i>	T	T, S2	N/A	Central Valley from Glenn County to the southern edge of San Francisco Bay Delta, and from Merced County to northern Fresno County. 0–400 feet (0–122 meters)	Highly aquatic, found in marshes, sloughs, irrigation ditches, canals, rice fields, slow-moving creeks with nearby vegetation.	Active March–October, breed in spring	Low. Limited suitable habitat within the Program Study Area. One known occurrence (1908) within the BSA .
Western pond turtle <i>Actinemys marmorata</i>	–	SSC, S3	N/A	West of the Sierra and Cascade Mountains and desert regions. 0–4,690 feet (0–1,430 meters)	Slow moving streams, marshes, wetlands, and ponds, at least 1.6 feet deep with overhanging vegetation and rock outcrops, and associated upland habitat, usually grasslands.	Year-round, breed April–May	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. One known occurrence (2006) within the BSA.
Western spadefoot <i>Spea hammondi</i>	–	SSC, S3	N/A	California Central Valley and adjacent foothills, southern Coastal Range. 0–4,460 feet (0–1,360 meters)	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Active October –May, breed January–May	Low. Limited suitable habitat within the Program Study Area. One known occurrence (2001) within the BSA.
Birds							
Bald eagle <i>Haliaeetus leucocephalus</i>	D	E, FP	N/A	Breeds in northern California, Sierra Nevada mountains and foothills, central coast range, inland southern California, and Santa Catalina Island. Winters throughout California except in arid southeastern areas.	Foraging areas include rivers, reservoirs, lakes, estuaries, and coastal marine ecosystems. Nests in large, old-growth, or dominant trees within one mile of foraging habitat.	Year-round	Very Low to Nonexistent. No suitable habitat within the Program Study Area. One known occurrence within the BSA at Yosemite Lake northeast of the Program Study Area.
Burrowing owl <i>Athene cunicularia</i>	BCC	SCC	N/A	Year-round in southeastern California and the Central Valley. Also winters in arid coastal and foothill areas and can be found in northeastern California in the summer.	Open, dry annual or perennial grasslands, deserts, and scrublands with by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, California ground squirrel.	Year-round	Moderate. Suitable nesting and foraging habitat exist within the immediate vicinity of the proposed Projects and there are known occurrences within the BSA. No species were observed during site surveys.
Clark's grebe <i>Aechmophorus clarkii</i>	BCC	–	N/A	Year-round along the coast of California and in large inland lakes and reservoirs throughout the state. Winters throughout California except the Sierra Nevada and arid southeast.	Marine subtidal and estuarine waters, large lakes. Nests in tall emergent vegetation.	Year-round, wintering	Very Low to Nonexistent. No suitable habitat within the Program Study Area. No known occurrences within the BSA.
Common yellowthroat <i>Geothlypis trichas</i>	BCC	–	N/A	Year-round in coastal and central California. Breeds in northern California and some desert areas. Migratory through desert and mountain ranges.	Wet meadows, fresh and saline wetlands, riparian, and grasslands with low, dense cover.	Wintering	Low. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Ferruginous hawk <i>Buteo regalis</i>	BCC	WL	N/A	Modoc Plateau, Central Valley, Coast Ranges, and the deserts of southwestern California.	Open grasslands, agricultural areas, sagebrush, desert scrub, low foothills, and pinyon-juniper woodland.	Wintering (September–April)	Low. No suitable nesting habitat and limited to no suitable foraging habitat within the Program Study Area. One known occurrence (2006) within the BSA.
Golden eagle <i>Aquila chrysaetos</i>	–	FP, WL	N/A	Throughout California, except center of Central Valley. 0–11,500 feet (0–3,833 meters)	Rolling foothills, mountain areas, sage-juniper flats, and desert. Nests in cliff-walled canyons and large trees in open areas.	Year-round	Low. No suitable nesting habitat and limited to no suitable foraging habitat within the Program Study Area. No known occurrences within the BSA.
Lawrence's goldfinch <i>Spinus lawrencei</i>	BCC	–	N/A	Year-round in the southern coastal range of California. Also breeds in foothills surrounding the Central Valley.	Open oak woodland, chaparral, and pinyon and juniper woodlands near water sources.	Year-round, breeding	Very Low to Nonexistent. No suitable habitat within the Program Study Area. No known occurrences within the BSA.
Long-billed curlew <i>Numenius americanus</i>	BCC	WL	N/A	Northeastern California, Central and Imperial Valleys, California coastline.	Estuaries, upland grasslands, wet meadows, croplands, and pastures.	Wintering (June–April)	Low. Limited suitable habitat within the Program Study Area and adjacent areas. No known occurrences within the BSA.
Mountain plover <i>Charadrius montanus</i>	BCC	SSC	N/A	Central Valley, San Joaquin foothills, southern California.	Valley and foothill or other short grasslands, agricultural fields, grazed areas, chenopod scrub.	Wintering (September–March)	Low. Limited suitable nesting habitat within the Program Study Area. One known occurrence (1999) within the BSA.
Nuttall's woodpecker <i>Picoides nuttallii</i>	BCC	–	N/A	Central Valley, coastal ranges of California, and low elevations of the Cascade Range and Sierra Nevada.	Oak and riparian woodland.	Year-round	Very Low to Nonexistent. No suitable habitat within the Program Study Area and adjacent areas. No known occurrences within the BSA.

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Oak titmouse <i>Baeolophus inornatus</i>	BCC	–	N/A	Throughout California, from Mexican border to Humboldt Co., except San Joaquin Valley and eastern Sierra Nevada and southern California.	Oak and pine-oak woodland, valley and foothill grassland, riparian woodland, western juniper woodland.	Year-round	Very Low to Nonexistent. No suitable habitat within the Program Study Area and adjacent areas. No known occurrences within the BSA.
Rufous hummingbird <i>Selasphorus rufus</i>	BCC	–	N/A	Northwestern California and the Sierra Nevada.	Riparian, open woodlands, scrub, chaparral, and mountain meadows.	Breeding (February–September)	Low. Limited suitable habitat within the Program Study Area and adjacent areas. No known occurrences within the BSA.
Song sparrow (“Modesto” population) <i>Melospiza melodia</i>	BCC	SSC	N/A	Throughout California, except high elevation and most deserts.	Riparian, wetlands, and wet meadows, thickets, and coastal scrub.	Year-round	Low. Limited suitable habitat within the Program Study Area and adjacent areas. No known occurrences within the BSA.
Swainson’s hawk <i>Buteo swainsoni</i>	BCC	T	N/A	Northwestern and western United States and Canada (breeding)	For nesting, scattered stands of trees near agricultural fields and grasslands.	Breeding (March–September)	Moderate. Suitable nesting and foraging habitat exist within the immediate vicinity of the proposed Projects and there are known occurrences within the BSA.
Spotted towhee <i>Pipilo maculatus</i>	BCC	–	N/A	Throughout California, except high elevation and southern deserts.	Chaparral, shrub, riparian, and low-elevation deciduous and conifer forests. Prefers tall, dense shrubs and riparian thickets.	Year-round	Low. Limited suitable habitat within the Program Study Area and adjacent areas. No known occurrences within the BSA.
Tricolored blackbird <i>Agelaius tricolor</i>	BCC	T, SSC	N/A	Highly colonial species, most numerous in Central Valley and Coastal Range.	Nest in wetlands cattails, willows, agricultural fields, blackberry thickets near stock ponds or irrigated pastures. Forage in cultivated fields and wetlands.	Year-round	Low. Limited to no suitable nesting and limited foraging habitat within the Program Study Area and adjacent areas. However, there are known occurrences within the BSA.
Whimbrel <i>Numenius phaeopus</i>	BCC	–	N/A	Coastal California, Central Valley, Imperial Valley, and Salton Sea.	Rocky intertidal, intertidal mudflats, sandy beach, estuarine, wet meadow, pasture.	Migration	Very Low to Nonexistent. No suitable habitat within the Program Study Area and adjacent areas. No known occurrences within the BSA.
Wrentit <i>Chamaea fasciata</i>	BCC	–	N/A	Year-round throughout coastal ranges and foothills of California. Also winters in the Central Valley.	Chaparral, coastal scrub, and other dense shrubland.	Year-round	Very Low to Nonexistent. No suitable habitat within the Program Study Area and adjacent areas. No known occurrences within the BSA.
Other nesting raptors and migratory birds	MBTA	FGC	N/A	Migrants and resident species	Tree, shrub, ground, grassland, and riparian vegetation.	February–August	High. Suitable habitat within the proposed Project corridors and adjacent areas and there are known occurrences of various species within the BSA.
Mammals							
Fresno kangaroo rat <i>Dipodomys nitratooides exilis</i>	E	E, SH	N/A	San Joaquin Valley floor, 200–1,800 feet (60–550 meters). Fresno County.	Chenopod scrub, alkali sink, dry, sandy grassland.	Year-round	Very Low to Nonexistent. Limited to no suitable habitat within the Program Study Area. No known occurrences within the BSA.
Hoary bat <i>Lasiurus cinereus</i>	–	S4	N/A	Throughout California from 0–13,200 feet (0–4,125 meters).	Dense foliage, medium to large trees; open habitats or habitat mosaics with access to trees for cover.	Year-round depending on location and temperature	Low. Limited suitable habitat within the Program Study Area. One known occurrence (1918) within the BSA.
Merced kangaroo rat <i>Dipodomys heermanni dixonii</i>	–	S2S3	N/A	San Joaquin Valley, eastern Merced and Stanislaus counties.	Valley and foothill grassland with fine, deep, well-drained soil.	Year-round	Low. Limited suitable habitat within the Program Study Area. However, there are known occurrences within the BSA.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E	T	N/A	San Joaquin Valley floor and surrounding foothills of the coastal ranges, Sierra Nevada, and Tehachapi mountains.	Inhabits annual grasslands or grassy open stages with scattered shrubby vegetation.	Year-round	Low. Limited suitable habitat within the Program Study Area. However, there are four known occurrences of foraging adults within the BSA.
Western mastiff bat <i>Eumops perotis californicus</i>	–	SSC	N/A	Central Valley, Coastal Range, southern and eastern California.	Open semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Year-round	Low. Limited suitable habitat within the Program Study Area. One known occurrence (1991) within the BSA.
Yellow-billed magpie <i>Pica nuttalli</i>	BCC	–	N/A	Central Valley, and coastal ranges from San Francisco Bay to Santa Barbara Co.	Open oak and riparian woodland, agricultural or urban areas with trees and grassland.	Year-round	Low. Limited suitable habitat within the Program Study Area and adjacent areas. No known occurrences within the BSA.

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	Federal	State	CNPS				

Notes:

Federal

T= threatened under federal Endangered Species Act

E = endangered under federal Endangered Species Act

BCC = bird of conservation concern

MBTA = Migratory Bird Treaty Act

– = no listing

CNPS = California Native Plant Society

NWR = National Wildlife Refuge

State

T = threatened under the California Endangered Species Act

SSC = Species of Special Concern

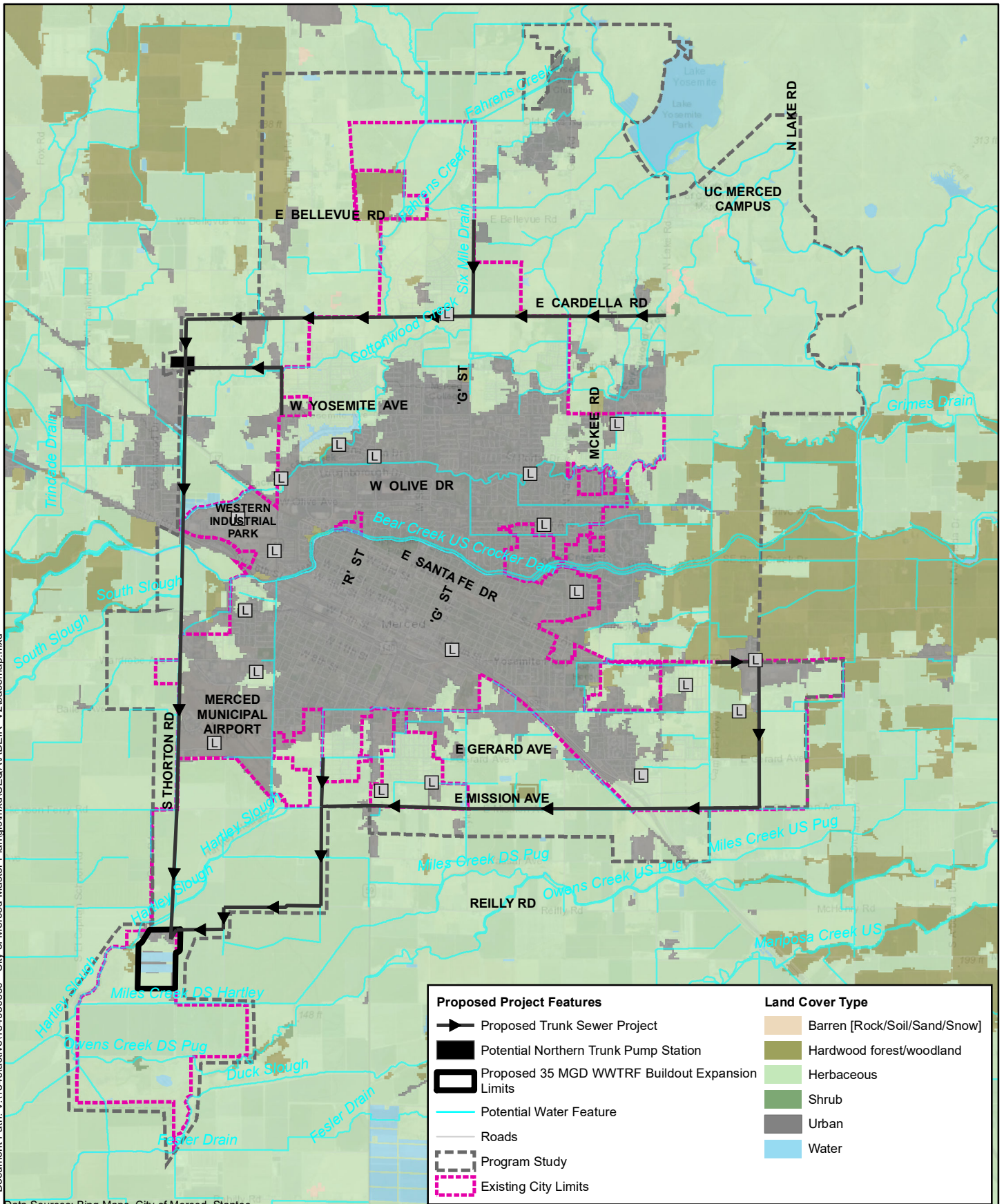
FGC = Fish and Game Code

– = no listing

Source: Cal EPA 2002, CaliforniaHerps 2018, CDFW 2006, CDFW 2018f–2018h, CDFW 2020b–2020c, CNPS 2018b, Cornell 2018, UC Davis 2018, USEPA 2010, USEPA 2016b, USFWS 2017c–2017f, USFWS 2018d, USFWS 2020a, WBWG 2017

C.2 BIOLOGICAL RESOURCES FIGURES

Document Path: V:\1840\active\184030360 - City of Merced Master Plan\GIS\mxd\CEQA\ADEIR_V2\basemap.mxd



Data Sources: Bing Maps, City of Merced, Stantec

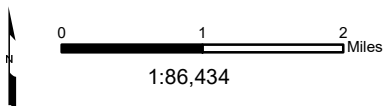
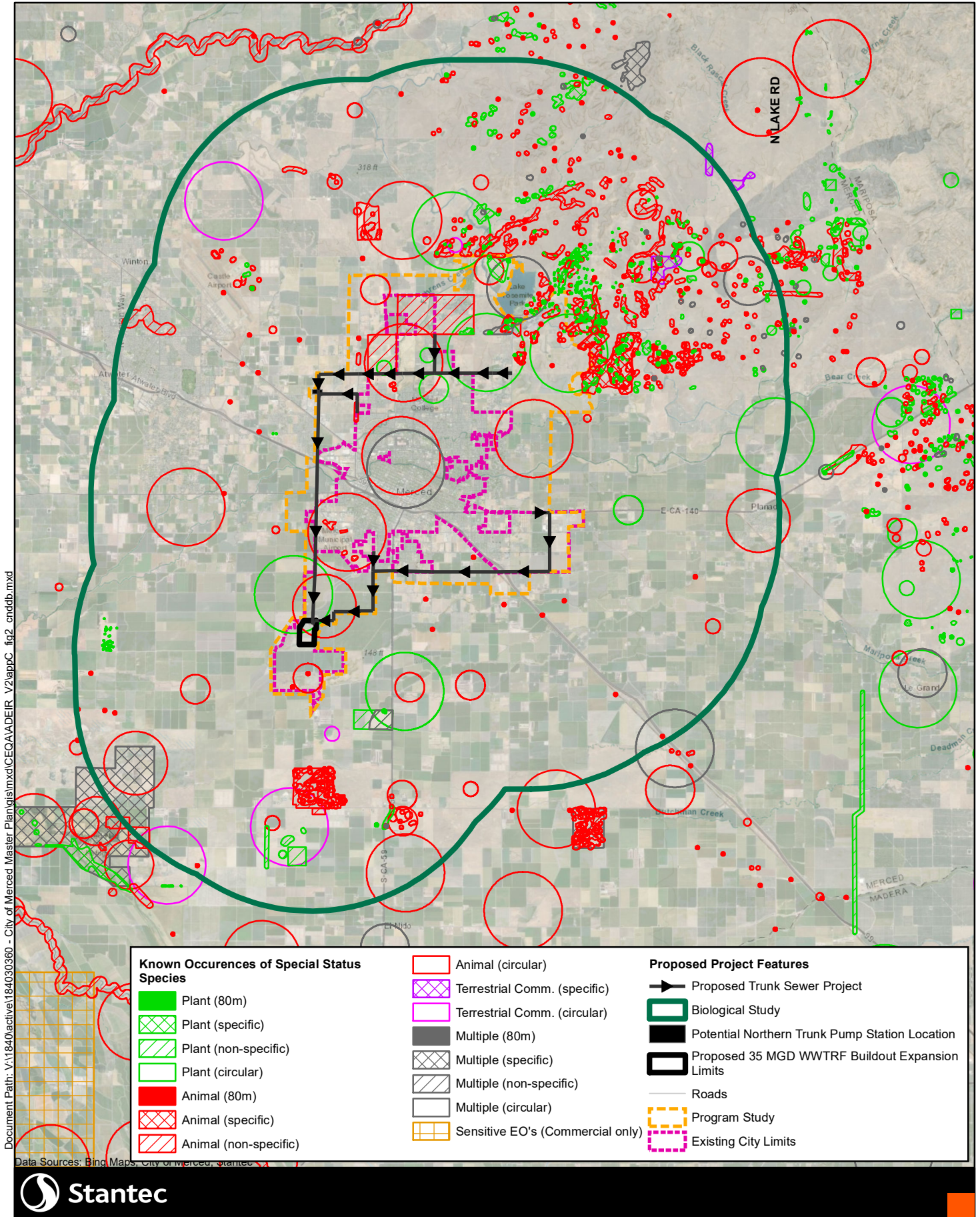


Figure 1
 CalVeg Land Cover
 City of Merced - Draft Environmental Impact Report



Document Path: V:\1840\active\184030360 - City of Merced Master Plan\GIS\mxd\CEQA\AEIR_V2\appC_fig2_cnddb.mxd

Data Sources: Bing Maps, City of Merced, Stantec

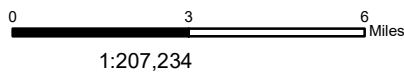
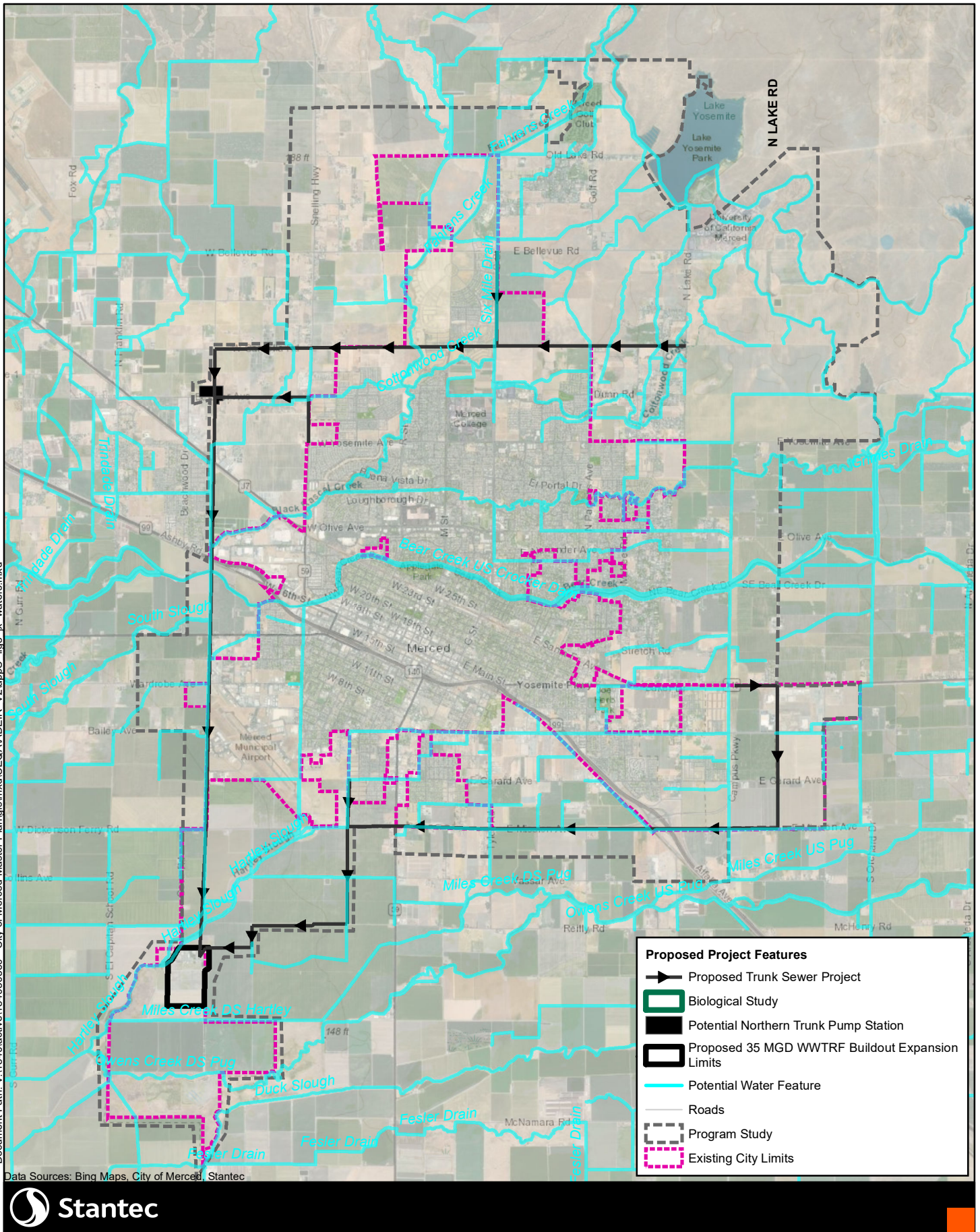


Figure 2
Known Occurrences of Special Status Species
City of Merced - Draft Environmental Impact Report

Document Path: V:\1840\active\184030360 - City of Merced Master Plan\GIS\mxd\CEQA\ADEIR_V2\appC_fig3_IX_waters.mxd
 Scale: Feet



Proposed Project Features

- Proposed Trunk Sewer Project
- Biological Study
- Potential Northern Trunk Pump Station
- Proposed 35 MGD WWTRF Buildout Expansion Limits
- Potential Water Feature
- Roads
- Program Study
- Existing City Limits

Data Sources: Bing Maps, City of Merced, Stantec

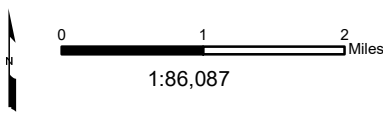


Figure 3
 Potentially Jurisdictional Waters
 City of Merced - Draft Environmental Impact Report