

Appendix B

Biological Resources Literature and Records Search

December 16, 2020

12826

Ino Cruz
Senior Project Manager
Hemet Hwy 74/79, LP
PO Box 1958
Corona, CA 92878

Subject: *Results of Biological Resources Records and Literature Search conducted for the Hemet Retail Center, Riverside County, California*

Dear Mr. Cruz:

Dudek conducted a review of available relevant literature and data on special-status biological resources (habitats, species, and aquatic resources) that occur or have the potential for occurrence within the project site, plus a 100-foot buffer (the study area). An aerial of the project site and vicinity is included as Attachment A.

Special-status biological resources present or potentially present on the study area were identified through a literature search using the following sources: USFWS's Critical Habitat and Occurrence Data (USFWS 2020a); CDFW's California Natural Diversity Database (CDFW 2020b); the California Native Plant Society's online Inventory of Rare and Endangered Plants (CNPS 2020); the Calflora database, which compiles observation and plant data from both private and public institutions, including the Consortium of California Herbaria (Calflora 2020); a Natural Resources Conservation Service soil map (USDA 2020); the USGS 7.5-minute topographic quadrangle (USGS 2020), and the National Wetland Inventory (USFWS 2020b). Searches were completed for the following USGS quadrangles (which include the quadrangle within which the study area is located and the eight surrounding quadrangles): Perris, Lakeview, San Jacinto, Romoland, Winchester, Hemet, Murrieta, Bachelor Mtn., and Sage.

Attachment B, Special-Status Plant Species Potentially Occurring in the Study Area, lists special-status plant species that have been documented in the USGS 7.5-minute Winchester quadrangle and the eight surrounding quadrangles (CDFW 2020; CNPS 2020). For each species listed, a determination was made regarding the potential for the species to occur in the study area based on information gathered during the literature search, including the location of the site, habitats present, current site conditions, and past and present land use.

Attachment C, Special-Status Wildlife Species Potentially Occurring in the Study Area, lists special-status wildlife species that have been documented in the USGS 7.5-minute Winchester quadrangle and the eight surrounding quadrangles (CDFW 2019). For each special-status wildlife species, a determination was made regarding potential use of the study area based on information gathered during the literature review, known habitat preferences, and knowledge of the species' relative distributions in the area.

The Biological Resources Literature and Records Search concluded that there are no listed species with a potential to occur within the project site or study area. There are no special-status plant or wildlife species with a moderate or high potential to occur; however, there are six special-status plant species, and six special-status wildlife species, California Species of Special Concern (SSC), which were determined to have a low potential to occur within the project site and study area. The 2012 MSHCP Vegetation Map classifies the entire project site as

Mr. Ino

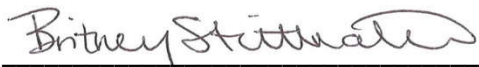
Subject: Results of Biological Resources Records Search conducted for the Hemet Retail Center, Riverside County, California

Developed/Disturbed Land (RCA 2012) and the project site is highly disturbed. A map of the MSHCP 2012 vegetation communities mapped within the project site and vicinity is included as Attachment D. For those species with a low potential to occur, this site does not support habitat conditions that could sustain populations of special-status species, nor would this site provide long-term conservation value.

In addition, Dudek conducted a desktop assessment of aerial imagery, the National Wetlands Inventory, the National Hydrography Dataset, and the Natural Resources Conservation Service Custom Soil Resource Report (included as Attachment E) to confirm no waters, wetlands, or hydric soils are present within the project site.

The complete impact analysis for biological resources will be included in the Initial Study/Mitigated Negative Declaration, pursuant to the California Environmental Quality Act statutes and guidelines. If you have any additional questions regarding the results of the Biological Resources Literature and Records Search, please contact me at 760.601.3416 or bstrittmater@dudek.com

Sincerely,



Britney Strittmater
Senior Biologist

Att.: Attachment A. Special-Status Plant Species Potentially Occurring in the Study Area
Attachment B. Special-Status Wildlife Species Potentially Occurring in the Study Area

References

- Calflora. 2020. The Calflora Database. Berkeley, California: Calflora. Accessed September 2020. <http://www.calflora.org>.
- CDFW. 2020. California Natural Diversity Database (CNDDDB). RareFind Version 5.0 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. Accessed September 2020. <https://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>.
- CNPS (California Native Plant Society). 2020. *Inventory of Rare and Endangered Plants*. Online ed. Version 8-02. Sacramento, California: CNPS. Accessed September 2020. <http://www.rareplants.cnps.org>.
- RCA. 2012. Vegetation – Western Riverside County Update. 2012. https://gis.data.ca.gov/datasets/e20142f8900543d9bd7701fc95c7b62d_0gov/datasets/e20142f8900543d9bd7701fc95c7b62d_0
- USDA (U.S. Department of Agriculture). 2020. Web Soil Survey. USDA Natural Resources Conservation Service, Soil Survey Staff. Accessed September 2020. <http://websoilsurvey.nrcs.usda.gov>.

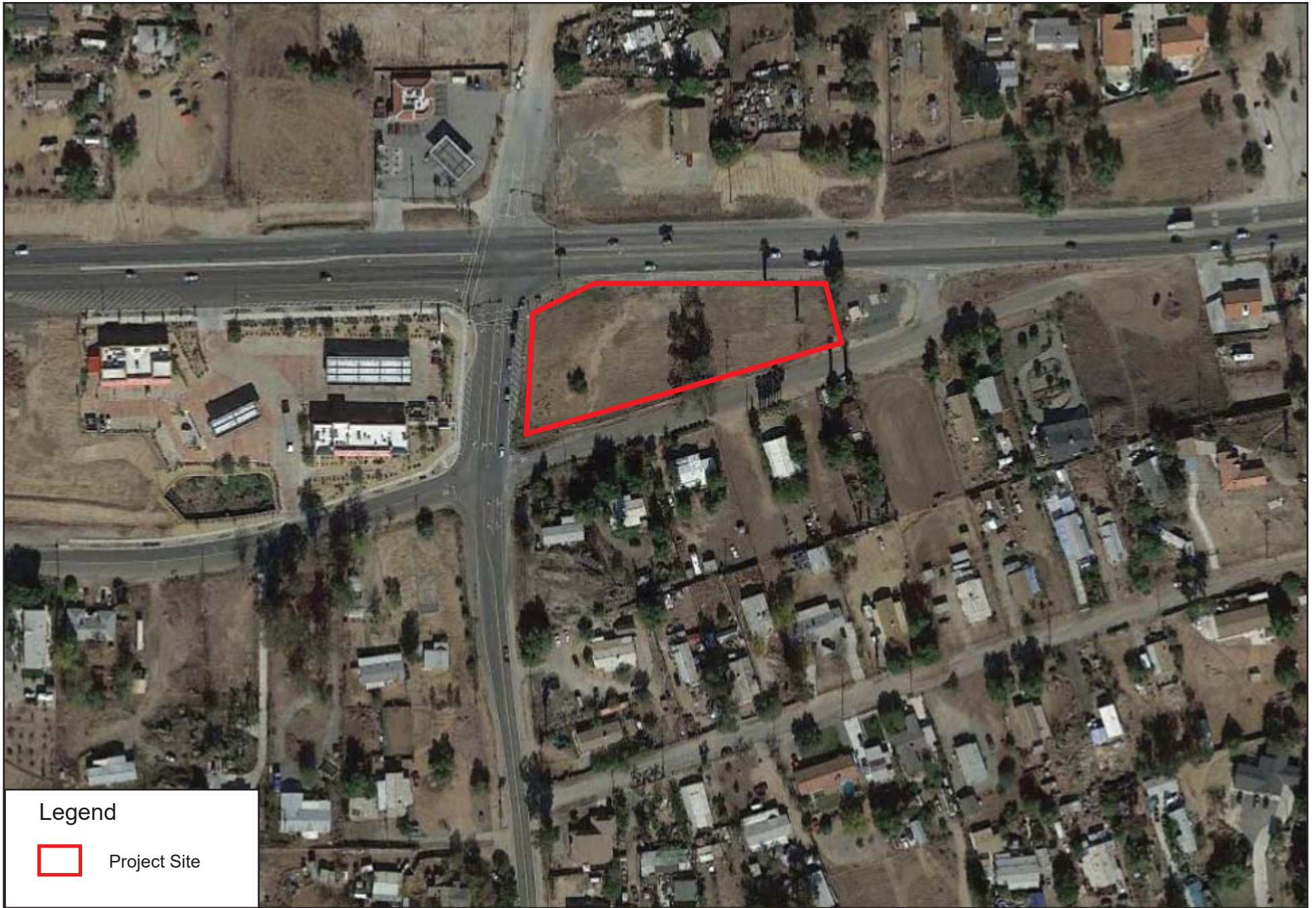
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USFWS (U.S. Fish and Wildlife Service). 2020a. Critical Habitat for Threatened and Endangered Species [digital GIS data]. September 28, 2018. Washington, DC: U.S. Fish & Wildlife Service. Accessed September 2020. <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>

USFWS (U.S. Fish and Wildlife Service). 2020b. "National Wetland Inventory." Last updated October 17, 2018. Accessed September 2020. <http://www.fws.gov/wetlands/Data/Mapper.html>.

USGS (U.S. Geological Survey). 2020. National Hydrography Dataset. <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>.



Legend

 Project Site

Source: Google Earth 2020.

APPENDIX B
SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING WITHIN THE STUDY AREA

Special-Status Plant Species

Scientific Name	Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet amsl)	Potential to Occur
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand- verbena	None/None/1B.1	Chaparral, Coastal scrub, Desert dunes; sandy/annual herb/(Jan)Mar–Sep/245–5,245	Not expected to occur. While the project site is located within the appropriate elevation range for this species, there is no chaparral, coastal scrub, or desert dunes habitat to support this species.
<i>Allium marvinii</i>	Yucaipa onion	None/None/1B.2	Chaparral (clay, openings)/perennial bulbiferous herb/Apr–May/2,490–3,490	Not expected to occur. The site is outside of the species' known elevation range.
<i>Allium munzii</i>	Munz's onion	FE/ST/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland; mesic, clay/perennial bulbiferous herb/Mar– May/970–3,510	Not expected to occur. The project site is within the appropriate elevation range for this species, and there is non-native grassland present; however, the vegetation present is too disturbed to support this species.
<i>Almutaster pauciflorus</i>	alkali marsh aster	None/None/2B.2	Meadows and seeps; alkaline/perennial herb/June– Oct/785–2,620	Not expected to occur. There is no suitable meadow and seep habitat present to support this species.
<i>Ambrosia pumila</i>	San Diego ambrosia	FE/None/1B.1	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; sandy loam or clay, often in disturbed areas, sometimes alkaline/perennial rhizomatous herb/Apr–Oct/65–1,360	Not expected to occur. The site is outside of the species' known elevation range.
<i>Amsinckia douglasiana</i>	Douglas' fiddleneck	None/None/4.2	Cismontane woodland, Valley and foothill grassland; Monterey shale, dry/annual herb/Mar–May/0–6,395	Not expected to occur. There is non-native grassland present; however, the project site is too disturbed to support this species. In addition, there are no CNDDB, CCH, or CNPS observations within 5 miles of the project site.
<i>Arctostaphylos rainbowensis</i>	Rainbow manzanita	None/None/1B.1	Chaparral/perennial evergreen shrub/Dec–Mar/670– 2,195	Not expected to occur. No suitable chaparral vegetation present to support this species.
<i>Astragalus pachypus</i> var. <i>jaegeri</i>	Jaeger's bush milk-vetch	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; sandy or rocky/perennial shrub/Dec–June/1,195–3,195	Not expected to occur. There is non-native grassland habitat present; however, the project site is highly disturbed, and there is no chaparral vegetation present.
<i>Atriplex coronata</i> var. <i>notator</i>	San Jacinto Valley crownscale	FE/None/1B.1	Playas, Valley and foothill grassland (mesic), Vernal pools; alkaline/annual herb/Apr–Aug/455–1,640	Not expected to occur. There is non-native grassland habitat present; however, the project site lacks the mesic conditions required to support this species.
<i>Atriplex pacifica</i>	South Coast saltscale	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/annual herb/Mar–Oct/0–460	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Atriplex parishii</i>	Parish's brittlescale	None/None/1B.1	Chenopod scrub, Playas, Vernal pools; alkaline/annual herb/June–Oct/80–6,230	Not expected to occur. There is no chenopod scrub, or vernal pool habitat present to support this species.

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<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale	None/None/1B.2	Coastal bluff scrub, Coastal scrub; alkaline/annual herb/Apr–Oct/30–655	Not expected to occur. The site is outside of the species' known elevation range.
<i>Berberis nevinii</i>	Nevin's barberry	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; sandy or gravelly/perennial evergreen shrub/(Feb)Mar–June/225–2,705	Not expected to occur. Sandy loam soil is present; however, there is no chaparral, or riparian habitat to support this species.
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT/SE/1B.1	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; often clay/perennial bulbiferous herb/Mar– June/80–3,670	Not expected to occur. There is non-native grassland present; however, the project site is highly disturbed, and surrounded by residential and commercial development, reducing the potential to occur. The project site lacks clay soils to support this species. There is a CNDDB observation from 2006 mapped approximately 2 miles southeast of the site (CNDDB 2020).
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	None/None/1B.1	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland, Vernal pools; mesic, clay/perennial bulbiferous herb/May–July/95–5,550	Not expected to occur. There is no wetland vegetation present to support this species.
<i>Brodiaea santarosae</i>	Santa Rosa Basalt brodiaea	None/None/1B.2	Valley and foothill grassland; basaltic/perennial bulbiferous herb/May–June/1,850–3,425	Not expected to occur. The site is outside of the species' known elevation range.
<i>Calochortus plummerae</i>	Plummer's mariposa lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; granitic, rocky/perennial bulbiferous herb/May–July/325–5,575	Low potential to occur. There is non-native grassland present; however, the project site is highly disturbed, and surrounded by residential and commercial development, reducing the potential to occur. There is a CCH observation from 2006 mapped approximately 1 mile southeast of the project site (Calflora 2020).
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland; rocky, calcareous/perennial bulbiferous herb/May– July/340–2,805	Not expected to occur. There is non-native grassland present; however, there is no rocky substrate present to support this species. In addition, the nearest CNDDB observation is from 1990 and mapped approximately 6.9 miles south of the project site (CNDDB 2020).
<i>Caulanthus simulans</i>	Payson's jewelflower	None/None/4.2	Chaparral, Coastal scrub; sandy, granitic/annual herb/(Feb)Mar–May(June)/295–7,215	Not expected to occur. There is no chaparral vegetation present to support this species.

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Scientific Name	Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet amsl)	Potential to Occur
<i>Centromadia pungens</i> <i>ssp. laevis</i>	smooth tarplant	None/None/1B.1	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; alkaline/annual herb/Apr–Sep/0–2,095	Low potential to occur. There is non-native grassland present; however, the project site is highly disturbed, and surrounded by residential and commercial development, reducing the potential to occur. There is no alkaline soils present to support this species. The nearest CNDDDB observation is from 1988 and mapped approximately 0.5 miles southeast of the project site (CNDDDB 2020).
<i>Chorizanthe</i> <i>leptotheca</i>	Peninsular spineflower	None/None/4.2	Chaparral, Coastal scrub, Lower montane coniferous forest; alluvial fan, granitic/annual herb/May–Aug/980– 6,230	Not expected to occur. There is no chaparral vegetation present to support this species.
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; sandy or rocky, openings/annual herb/Apr–June/900–4,000	Low potential to occur. There is non-native grassland habitat, and sandy loam soil present; however, the project site is highly disturbed and surrounded by residential and commercial development, reducing the potential to occur. The nearest CNDDDB observation is from 2006 and mapped approximately 0.6 miles southeast of the project site (CNDDDB 2020).
<i>Chorizanthe</i> <i>polygonoides</i> var. <i>longispina</i>	long-spined spineflower	None/None/1B.2	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; often clay/annual herb/Apr–July/95–5,015	Low potential to occur. There is non-native grassland habitat present; however, the project site is highly disturbed and surrounded by residential and commercial development, reducing the potential to occur. The nearest CNDDDB observation is from 2006 and mapped approximately 1.2 miles southeast of the project site (CNDDDB 2020).
<i>Clinopodium chandleri</i>	San Miguel savory	None/None/1B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland; Rocky, gabbroic or metavolcanic/perennial shrub/Mar– July/390–3,525	Not expected to occur. There is no rocky substrate, or chaparral vegetation present to support this species.
<i>Convolvulus simulans</i>	small-flowered morning-glory	None/None/4.2	Chaparral (openings), Coastal scrub, Valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar– July/95–2,425	Not expected to occur. There is no chaparral vegetation, or clay soils present to support this species.
<i>Cryptantha wigginsii</i>	Wiggins' cryptantha	None/None/1B.2	Coastal scrub; often clay/annual herb/Feb–June/65– 900	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

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<i>Deinandra mohavensis</i>	Mojave tarplant	None/SE/1B.3	Chaparral, Coastal scrub, Riparian scrub; mesic/annual herb/(May)June–Oct(Jan)/2,095–5,245	Not expected to occur. The site is outside of the species' known elevation range.
<i>Deinandra paniculata</i>	paniculate tarplant	None/None/4.2	Coastal scrub, Valley and foothill grassland, Vernal pools; usually vernal mesic, sometimes sandy/annual herb/(Mar)Apr–Nov(Dec)/80–3,080	Low potential to occur. There is non-native grasslands present; however, the project site is highly disturbed and surrounded by residential and commercial development, reducing the potential to occur. In addition, the project site lacks mesic conditions to support this species. The nearest CCH observation is from 1989 and mapped approximately 1 mile east of the project site (Calflora 2020).
<i>Dodecahema leptoceras</i>	slender-horned spineflower	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub (alluvial fan); sandy/annual herb/Apr–June/655–2,490	Not expected to occur. Sandy loam soil is present; however, there is no chaparral, or cismontane woodland vegetation to support this species.
<i>Dudleya multicaulis</i>	many-stemmed dudleya	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland; often clay/perennial herb/Apr–July/45–2,590	Not expected to occur. There is non-native grassland present; however, the project site is highly disturbed and surrounded by residential and commercial development, reducing the potential to occur. There are CCH, CNDDDB, or CNPS observations within 5 miles of the project site.
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	FE/SE/1B.1	Coastal scrub, Valley and foothill grassland, Vernal pools; mesic/annual / perennial herb/Apr–June/65–2,030	Not expected to occur. There is non-native grassland present; however, the project site is too disturbed, and lacks the mesic conditions to support this species.
<i>Erythranthe diffusa</i>	Palomar monkeyflower	None/None/4.3	Chaparral, Lower montane coniferous forest; sandy or gravelly/annual herb/Apr–June/4,000–6,000	Not expected to occur. The site is outside of the species' known elevation range.
<i>Erythranthe purpurea</i>	little purple monkeyflower	None/None/1B.2	Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest/annual herb/May–June/6,230–7,545	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	San Jacinto Mountains bedstraw	None/None/1B.3	Lower montane coniferous forest/perennial herb/June–Aug/4,425–6,885	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Githopsis diffusa</i> ssp. <i>filicaulis</i>	Mission Canyon bluecup	None/None/3.1	Chaparral (mesic, disturbed areas)/annual herb/Apr–June/1,475–2,295	Not expected to occur. There is no chaparral vegetation present, and the project site lacks the mesic conditions to support this species.

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<i>Harpagonella palmeri</i>	Palmer's grapplinghook	None/None/4.2	Chaparral, Coastal scrub, Valley and foothill grassland; Clay; open grassy areas within shrubland/annual herb/Mar–May/65–3,130	Not expected to occur. There is non-native grassland vegetation present; however, the project site is highly disturbed, and there are no clay soils present to support this species.
<i>Holocarpha virgata</i> <i>ssp. elongata</i>	graceful tarplant	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/annual herb/May– Nov/195–3,605	Not expected to occur. No suitable vegetation present.
<i>Hordeum intercedens</i>	vernal barley	None/None/3.2	Coastal dunes, Coastal scrub, Valley and foothill grassland (saline flats and depressions), Vernal pools/annual herb/Mar–June/15–3,280	Not expected to occur. There is no coastal scrub vegetation, or saline flats present to support this species.
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	None/None/1B.1	Chaparral (maritime), Cismontane woodland, Coastal scrub; sandy or gravelly/perennial herb/Feb– July(Sep)/225–2,655	Not expected to occur. No suitable vegetation present.
<i>Imperata brevifolia</i>	California satintail	None/None/2B.1	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps (often alkali), Riparian scrub; mesic/perennial rhizomatous herb/Sep–May/0–3,985	Not expected to occur. There is no chaparral, desert scrub, or riparian scrub vegetation, or mesic conditions present to support this species.
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	southwestern spiny rush	None/None/4.2	Coastal dunes (mesic), Meadows and seeps (alkaline seeps), Marshes and swamps (coastal salt)/perennial rhizomatous herb/(Mar)May–June/5–2,950	Not expected to occur. The project site lacks mesic or wetland conditions to support this species.
<i>Juncus luciensis</i>	Santa Lucia dwarf rush	None/None/1B.2	Chaparral, Great Basin scrub, Lower montane coniferous forest, Meadows and seeps, Vernal pools/annual herb/Apr–July/980–6,690	Not expected to occur. No suitable vegetation present.
<i>Lasthenia glabrata</i> <i>ssp. coulteri</i>	Coulter's goldfields	None/None/1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June/0–4,000	Not expected to occur. There is no marsh and swamp, playa, or vernal pool habitat present to support this species.
<i>Lepechinia</i> <i>cardiophylla</i>	heart-leaved pitcher sage	None/None/1B.2	Closed-cone coniferous forest, Chaparral, Cismontane woodland/perennial shrub/Apr–July/1,705–4,490	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/None/4.3	Chaparral, Coastal scrub/annual herb/Jan–July/0–2,900	Not expected to occur. No suitable vegetation present.
<i>Lycium torreyi</i>	Torrey's box- thorn	None/None/4.2	Mojavean desert scrub, Sonoran desert scrub; Sandy, rocky, washes, streambanks, desert valleys/perennial shrub/(Jan–Feb)Mar–June(Sep–Nov)/-,165–4,000	Not expected to occur. Sandy loam soil is present; however, there is no desert scrub vegetation, or rocky, washes, streambanks present to support this species.

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<i>Microseris douglasii</i> <i>ssp. platycarpa</i>	small-flowered microseris	None/None/4.2	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; clay/annual herb/Mar– May/45–3,510	Not expected to occur. There is no clay substrate present to support this species.
<i>Myosurus minimus</i> <i>ssp. apus</i>	little mousetail	None/None/3.1	Valley and foothill grassland, Vernal pools (alkaline)/annual herb/Mar–June/65–2,095	Not expected to occur. The project site lacks the mesic conditions required to support this species.
<i>Nama stenocarpa</i>	mud nama	None/None/2B.2	Marshes and swamps (lake margins, riverbanks)/annual / perennial herb/Jan–July/15–1,640	Not expected to occur. There is no marsh or swamp habitat to support this species.
<i>Navarretia fossalis</i>	spreading navarretia	FT/None/1B.1	Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, Vernal pools/annual herb/Apr–June/95–2,145	Not expected to occur. There is no chenopod scrub vegetation, or marsh and swamp, playa, or vernal pool habitat present to support this species.
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	None/None/1B.2	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools; Mesic/annual herb/Apr–July/5–3,965	Not expected to occur. The project site lacks the mesic conditions required to support this species.
<i>Orcuttia californica</i>	California Orcutt grass	FE/SE/1B.1	Vernal pools/annual herb/Apr–Aug/45–2,165	Not expected to occur. No suitable vegetation present.
<i>Penstemon californicus</i>	California beardtongue	None/None/1B.2	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; sandy/perennial herb/May– June(Aug)/3,835–7,545	Not expected to occur. The site is outside of the species' known elevation range.
<i>Polygala comuta</i> var. <i>fishiae</i>	Fish's milkwort	None/None/4.3	Chaparral, Cismontane woodland, Riparian woodland/perennial deciduous shrub/May–Aug/325– 3,280	Not expected to occur. No suitable vegetation present.
<i>Pseudognaphalium leucocephalum</i>	white rabbit- tobacco	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; sandy, gravelly/perennial herb/(July)Aug–Nov(Dec)/0–6,885	Not expected to occur. Sandy loam soils are present on site; however, there is no chaparral, coastal scrub, or riparian woodland vegetation present to support this species.
<i>Quercus engelmannii</i>	Engelmann oak	None/None/4.2	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/perennial deciduous tree/Mar–June/160–4,265	Not expected to occur. No suitable vegetation present.
<i>Scutellaria bolanderi</i> <i>ssp. austromontana</i>	southern mountains skullcap	None/None/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest; mesic/perennial rhizomatous herb/June–Aug/1,390–6,560	Not expected to occur. There is no chaparral vegetation present, and the project site lacks the mesic conditions required to support this species.

Special-Status Plant Species

Scientific Name	Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet amsl)	Potential to Occur
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None/None/2B.2	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; alkaline, mesic/perennial herb/Mar–June/45–5,015	Not expected to occur. There is no chaparral vegetation present, and the project site lacks the mesic conditions required to support this species.
<i>Symphotrichum defoliatum</i>	San Bernardino aster	None/None/1B.2	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Valley and foothill grassland (vernally mesic); near ditches, streams, springs/perennial rhizomatous herb/July–Nov(Dec)/5–6,690	Not expected to occur. There is no cismontane woodland, coastal scrub, or lower montane coniferous forest vegetation, or aquatic resources present to support this species.
<i>Texosporium sancti-jacobi</i>	woven-spored lichen	None/None/3	Chaparral (openings); On soil, small mammal pellets, dead twigs, and on <i>Selaginella</i> spp/crustose lichen (terricolous)/N.A./195–2,165	Not expected to occur. There is no chaparral vegetation present to support this species.
<i>Tortula californica</i>	California screw-moss	None/None/1B.2	Chenopod scrub, Valley and foothill grassland; sandy, soil/moss/N.A./30–4,790	Low potential to occur. There is non-native grassland present; however, the project site is highly disturbed and surrounded by residential and commercial development, reducing the potential to occur. There is a CNDDDB observation from 2012 mapped approximately 4.1 miles from the project site (CNDDDB 2020).
<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Wright's trichocoronis	None/None/2B.1	Meadows and seeps, Marshes and swamps, Riparian forest, Vernal pools; alkaline/annual herb/May–Sep/15–1,425	Not expected to occur. The site is outside of the species' known elevation range.

Notes: CDFW = California Fish and Wildlife Service,

* Region refers to the USGS 7.5-minute quadrangle in which the project site is located (Winchester) and the six surrounding quadrangles (Perris, Lakeview, San Jacinto, Romoland, Hemet, Murrieta, Bachelor Mtn., and Sage).

Status Legend**Federal**

FE: Federally listed as endangered

FT: Federally listed as threatened

FC: Federal candidate for listing as threatened or endangered

State

SE: State listed as endangered

ST: State listed as threatened

SR: State listed as rare

CRPR (California Rare Plant Rank)

CRPR 1A: Plants presumed extinct in California and either rare or extinct elsewhere

CRPR List 1B: Plants rare, threatened, or endangered in California and elsewhere

APPENDIX B

SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING WITHIN THE STUDY AREA

CRPR List 2A: Plants rare, threatened, or endangered in California but common elsewhere

CRPR List 2B: Plants rare, threatened, or endangered in California but more common elsewhere

Threat Rank

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

.2 Fairly endangered in California (20% to 80% of occurrences threatened/moderate degree and immediacy of threat)

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

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Calflora. 2020. The Calflora Database. Berkley, California: Calflora. Accessed September 2020. <http://www.calflora.org>.

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USDA (U.S. Department of Agriculture). 2020. Web Soil Survey: Santa Clara County Area. USDA, Natural Resources Conservation Service, Web Soil Survey Staff. Accessed September 2020. <http://websoilsurvey.nrcs.usda.gov/>.

Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
Amphibians				
<i>Spea hammondi</i>	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	Not expected to occur. The project site does not have the aquatic habitat to support this species.
<i>Taricha torosa</i> (Monterey Co. south only)	California newt	None/SSC	Wet forests, oak forests, chaparral, and rolling grassland	Not expected to occur. The project site does not have the aquatic habitat to support this species.
Reptiles				
<i>Actinemys marmorata</i>	northwestern pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. The project site does not have the aquatic habitat to support this species.
<i>Anniella stebbinsi</i>	southern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Not expected to occur. Sandy loam soils are present on the project site; however, the project site lacks mesic conditions and is located in an urbanized area reducing the potential to occur. A CNDDB observation from 2018 is mapped approximately 2.8 miles northwest of the project site.
<i>Arizona elegans occidentalis</i>	California glossy snake	None/SSC	Commonly occurs in desert regions throughout southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	Not expected to occur. Limited open sandy areas are present on the project site; however, the site lacks rocky areas and is located in an urbanized area reducing the potential to occur. A CNDDB observation from 2013 is mapped approximately 3.9 miles north of the project site.
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	None/WL	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Not expected to occur. There is no chaparral vegetation or aquatic habitat present to support this species.
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Not expected to occur. There is no chaparral vegetation or aquatic habitat present to support this species.
<i>Coleonyx variegatus abbotti</i>	San Diego banded gecko	None/SSC	Rocky areas within coastal scrub and chaparral	Not expected to occur. There is no chaparral habitat or rocky areas present to support this species.

Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
<i>Crotalus ruber</i>	red diamondback rattlesnake	None/SSC	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Not expected to occur. While there is non-native grassland present, the site lacks a rocky substrate.
<i>Diadophis punctatus modestus</i>	San Bernardino ring-necked snake	None/None	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed-conifer forest, and woodland	Not expected to occur. There is no aquatic habitat present to support this species.
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley-foothill hardwood, conifer, riparian, pine-cypress, juniper, and annual grassland habitats	Low potential to occur. Sandy loam soils and non-native grassland habitat are present within the project site; however, the project site is an urbanized area reducing the potential to occur. A CNDDDB observation from 2006 is mapped 1.5 miles east of the project site.
<i>Salvadora hexalepis virgulata</i>	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Not expected to occur. There is no suitable shrubby vegetation present within the project site.
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. There is no aquatic habitat present to support this species.
Birds				
<i>Accipiter cooperii</i> (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Not expected to occur. There is no suitable woodland vegetation present to support this species.
<i>Agelaius tricolor</i> (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. There is no suitable wetland vegetation present to support nesting.
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Not expected to occur. There is no chaparral vegetation present to support nesting or foraging.
<i>Aquila chrysaetos</i> (nesting & wintering)	golden eagle	BCC/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to nest in the project site; low potential to forage. There are no cliffs, and only a single large tree present that could be used for nesting. There is non-native grassland present that has the potential to be used for foraging; however, the nearest CNDDDB observation is mapped 6.4 miles from the site in 1974 (CNDDDB 2020).

Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
<i>Artemisospiza belli belli</i>	Bell's sage sparrow	BCC/WL	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Not expected to occur. There is no suitable chaparral vegetation present to support this species.
<i>Athene cunicularia</i> (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Low potential to occur. There is open habitat with non-native grasses present that has the potential to support this species; however, the project site is surrounded by commercial and residential development, reducing the potential to occur. There is a CNDDDB observation from 2006 mapped approximately 0.3 miles south from the site (CNDDDB 2020). However, the Western Riverside County Multiple Species Conservation Plan does not require burrowing owl surveys for the Assessor Parcel Numbers within the project site.
<i>Buteo regalis</i> (wintering)	ferruginous hawk	BCC/WL	Winters and forages in open, dry country, grasslands, open fields, agriculture	Low potential to occur. There is open, non-native grasslands present that has the potential to support foraging of this species. There is a CNDDDB observation mapped approximately 1.9 miles north of the project site (CNDDDB 2020).
<i>Buteo swainsoni</i> (nesting)	Swainson's hawk	BCC/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur. There is a large isolated tree present on the project site; however, there is no woodland, savanna, or riparian vegetation, and the non-native grassland vegetation present on site is highly disturbed. There are no CNDDDB observations within 5 miles of the project site (CNDDDB 2020).
<i>Campylorhynchus brunneicapillus sandiegensis</i> (San Diego & Orange Counties only)	coastal cactus wren	BCC/SSC	Southern cactus scrub patches	Not expected to occur. There are no cactus patches present on the project site to support this species.

Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
<i>Circus hudsonius</i> (nesting)	northern harrier	None/SSC	Nests in open wetlands (marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable wetland vegetation present for this species to nest in.
<i>Coccyzus americanus occidentalis</i> (nesting)	western yellow-billed cuckoo	FT, BCC/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable riparian vegetation is present for this species to nest in.
<i>Elanus leucurus</i> (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Low potential to occur. There is open, non-native grasslands present that has the potential to support foraging of this species, with a single large tree. However, there is no riparian or woodland vegetation. There is a CNDDDB observation from 2006 mapped approximately 1.9 miles east of the project site.
<i>Eremophila alpestris actia</i>	California horned lark	None/WL	This subspecies of horned lark occurs on the state's southern and central coastal slope and in the San Joaquin Valley. Nests and forages in grasslands, disturbed lands, agriculture, and beaches.	Low potential to occur. There is open, non-native grasslands present that have the potential to support nesting and foraging activities for this species. However, the nearest CNDDDB observation is mapped approximately 4.2 miles southeast of the project site (CNDDDB 2020).
<i>Haliaeetus leucocephalus</i> (nesting & wintering)	bald eagle	FDL, BCC/FP, SE	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	Not expected to occur. No suitable large bodies of water are located near the project site to support this species.
<i>Lanius ludovicianus</i> (nesting)	loggerhead shrike	BCC/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	Not expected to occur. There are no shrubs or small trees present that would create perching substrate to support foraging for this species.
<i>Plegadis chihi</i> (nesting colony)	white-faced ibis	None/WL	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries	Not expected to occur. There is no suitable emergent vegetation, or aquatic habitats present to support this species.

Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
<i>Poliophtila californica californica</i>	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. There is no suitable coastal sage scrub vegetation present to support this species.
<i>Setophaga petechia (nesting)</i>	yellow warbler	BCC/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. There is no riparian, chaparral, or woodland vegetation present to support this species.
<i>Toxostoma bendirei</i>	Bendire's thrasher	BCC/SSC	Nests and forages in desert succulent shrub and Joshua tree habitat in Mojave Desert; nests in yucca, cholla, and other thorny scrubs or small trees	Not expected to occur. There is no suitable Joshua tree habitat, or succulent shrub vegetation present to support this species.
<i>Vireo bellii pusillus (nesting)</i>	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. There is no suitable riparian vegetation present to support this species.
<i>Xanthocephalus xanthocephalus (nesting)</i>	yellow-headed blackbird	None/SSC	Nests in marshes with tall emergent vegetation, often along borders of lakes and ponds; forages in emergent wetlands, open areas, croplands, and muddy shores of lacustrine habitat	Not expected to occur. There is no suitable emergent vegetation, or aquatic habitats present to support this species.
Fishes				
<i>Gila orcuttii</i>	arroyo chub	None/SSC	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	Not expected to occur. There is no aquatic habitat present to support this species.
Mammals				
<i>Antrozous pallidus</i>	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Not expected to occur. There is suitable non-native grassland vegetation present to support foraging of this species; however, there are no rocky outcrops present on the project site. There are no CNDDDB observations mapped within 5 miles of the project site (CNDDDB 2020).
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	None/SSC	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	Not expected to occur. There is no suitable chaparral, or woodland vegetation present to support this species.

Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/SSC	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland	Not expected to occur. There is non-native grassland present on the site; however, there is no chaparral, or desert scrub vegetation present to support this species. The nearest CNDDDB observation is from 1992 and mapped 4.8 miles southwest of the project site (CNDDDB 2020).
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	Not expected to occur. There is no forest or riparian habitat, or natural or manmade structures present to support this species.
<i>Dipodomys merriami parvus</i>	San Bernardino kangaroo rat	FE/SSC, PSE	Sparse scrub habitat, alluvial scrub/coastal scrub habitats on gravelly and sandy soils near river and stream terraces	Not expected to occur. Sandy loam soils are present on the project site; however, there is no coastal scrub vegetation present to support this species. In addition, the project site is located in an urbanized area, reducing the potential to occur.
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE/ST	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Not expected to occur. There is non-native grassland present; however, the project site is surrounded by commercial and residential development, reducing the potential to occur. The nearest CNDDDB observation is mapped approximately 1.5 miles east of the project site (CNDDDB 2020).
<i>Eumops perotis californicus</i>	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to occur. There is no suitable chaparral habitat, or cliffs present to support this species.
<i>Lasiurus xanthinus</i>	western yellow bat	None/SSC	Valley-foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Not expected to occur. There is no suitable riparian vegetation present to support this species.

Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/SSC	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Low potential to occur. There is suitable non-native grasslands, and disturbed areas present; however, the project site is surrounded by development, limiting access to the site for this species and reducing the potential to occur. The nearest CNDDDB observation from 2006 is mapped approximately 1 mile southeast of the project site (CNDDDB 2020).
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. There is no suitable coastal scrub, or cacti vegetation, or rocky substrate present to support this species.
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	None/SSC	Grassland and sparse coastal scrub	Not expected to occur. There is non-native grassland present on the site; however, the site is highly disturbed, and located in an urbanized area, reducing the potential to occur. There is an outdated CNDDDB observation from 1938 mapped approximately 4.1 miles southwest of the project site (CNDDDB 2020).
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	None/SSC	Lower-elevation grassland, alluvial sage scrub, and coastal scrub	Not expected to occur. There is no coastal scrub vegetation present to support this species.
<i>Perognathus longimembris internationalis</i>	Jacumba pocket mouse	None/SSC	Desert scrub and sparse sage scrub in areas with fine sandy soils	Not expected to occur. Sandy loam soils are present; however, there is no desert scrub vegetation present to support this species.
<i>Taxidea taxus</i>	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. There is open non-native grassland present to support this species, the project site is located in an urbanized area. In addition, there are no CNDDDB observations mapped within 5 miles of the project site, that have been mapped within the last 30 years (CNDDDB 2020).
Invertebrates				
<i>Bombus crotchii</i>	Crotch bumble bee	None/PSE	Open grassland and scrub communities supporting suitable floral resources.	Not expected to occur. There are no suitable floral resources present to support this species.
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT/None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats	Not expected to occur. There is no aquatic habitat present to support this species.

Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. There is no aquatic habitat present to support this species.
<i>Euphydryas editha quino</i>	quino checkerspot butterfly	FE/None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include <i>Plantago erecta</i> , <i>Antirrhinum coulterianum</i> , and <i>Plantago patagonica</i> (Silverado Occurrence Complex)	Not expected to occur. There are no host plants for this species present to support this species.
<i>Linderiella occidentalis</i>	California linderiella	None/None	Cool soft-water vernal pools in grasslands below 1,000 feet above mean sea level	Not expected to occur. The project site is located above the species' elevation range, and there is no aquatic habitat to support this species.
<i>Linderiella santarosae</i>	Santa Rosa Plateau fairy shrimp	None/None	Seasonal basalt vernal pools with clear to milky waters	Not expected to occur. There is no aquatic habitat present to support this species.
<i>Socalchemmis icenoglei</i>	icenogle's socalchemmis spider	None/None	Known only from the type locality in the vicinity of Winchester, Riverside County	Not expected to occur. There is no coastal sage scrub vegetation, or manmade resources present to support this species.
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. There is no aquatic habitat present to support this species.

Notes: CDFW = California Department of Fish and Wildlife

* Region refers to the USGS 7.5-minute quadrangle in which the project site is located (Winchester) and the six surrounding quadrangles (Perris, Lakeview, San Jacinto, Romoland, Hemet, Murrieta, Bachelor Mtn., and Sage).

Status Legend**Federal**

BCC: Bird of Conservation Concern

FC: Candidate for federal listing as threatened or endangered

FDL: Federally delisted; monitored for 5 years

FE: Federally listed endangered

FT: Federally listed as threatened

State

PSE: Proposed state listing as endangered

SDL: State delisted

SSC: Species of Special Concern

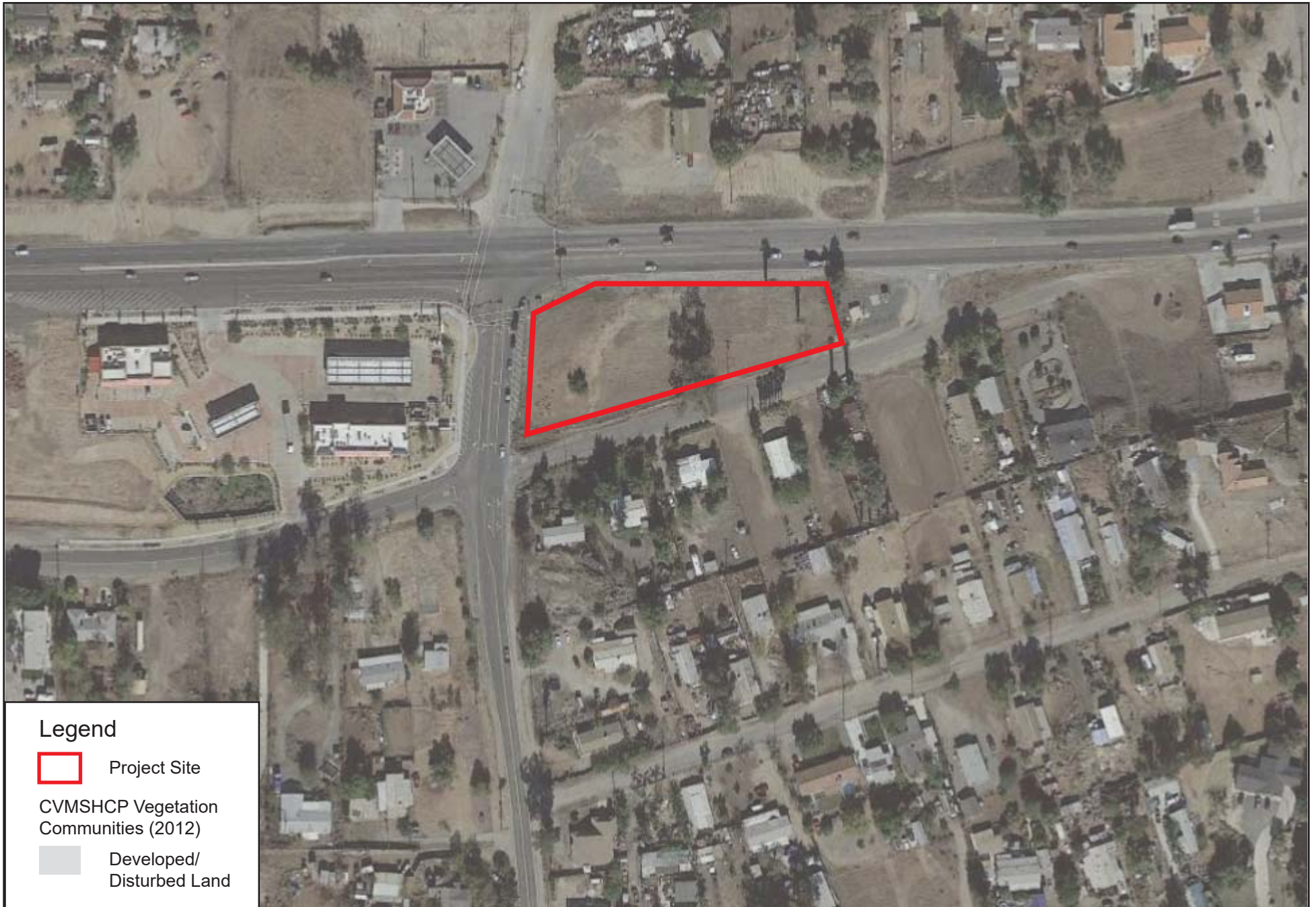
FP: California Department of Fish and Wildlife Protected and Fully Protected Species

SE: State listed as endangered

ST: State listed as threatened

References

CDFW. 2020. RareFind 5, Version 5.2.14. California Natural Diversity Database. Sacramento, California: CDFW, Biogeographic Data Branch. Accessed September 2020. <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>.



Source: Google Earth 2020; RCA 2012..

Attachment D
Western Riverside County MSHCP Vegetation Communities

Attachment E

NRCS Custom Soil Survey



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Western Riverside Area, California



September 22, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map


The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 13, May 27, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 25, 2019—Jun 25, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GyC2	Greenfield sandy loam, 2 to 8 percent slopes, eroded	0.8	46.6%
MnD2	Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded	0.9	53.4%
Totals for Area of Interest		1.8	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

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development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Western Riverside Area, California

GyC2—Greenfield sandy loam, 2 to 8 percent slopes, eroded

Map Unit Setting

National map unit symbol: hcvw
Elevation: 100 to 3,500 feet
Mean annual precipitation: 9 to 20 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 200 to 300 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Greenfield and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Greenfield

Setting

Landform: Alluvial fans, terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 26 inches: sandy loam
H2 - 26 to 43 inches: fine sandy loam
H3 - 43 to 60 inches: loam
H4 - 60 to 72 inches: stratified loamy sand to sandy loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R019XD029CA
Hydric soil rating: No

Minor Components

Pachappa

Percent of map unit: 3 percent

Hydric soil rating: No

Unnamed

Percent of map unit: 3 percent

Hydric soil rating: No

Hanford

Percent of map unit: 3 percent

Hydric soil rating: No

Ramona

Percent of map unit: 3 percent

Hydric soil rating: No

Arlington

Percent of map unit: 3 percent

Hydric soil rating: No

MnD2—Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded

Map Unit Setting

National map unit symbol: hcx8

Elevation: 700 to 2,500 feet

Mean annual precipitation: 10 to 18 inches

Mean annual air temperature: 63 to 64 degrees F

Frost-free period: 220 to 280 days

Farmland classification: Not prime farmland

Map Unit Composition

Monserate and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Monserate

Setting

Landform: Alluvial fans

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 10 inches: sandy loam

H2 - 10 to 18 inches: sandy clay loam

H3 - 18 to 45 inches: indurated

H4 - 45 to 57 inches: cemented

H5 - 57 to 70 inches: loamy coarse sand

Properties and qualities

Slope: 5 to 15 percent

Depth to restrictive feature: 10 to 20 inches to duripan

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Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D

Ecological site: R019XD060CA - SHALLOW LOAMY (1975)

Hydric soil rating: No

Minor Components

Hanford

Percent of map unit: 5 percent

Hydric soil rating: No

Tujunga

Percent of map unit: 5 percent

Hydric soil rating: No

Greenfield

Percent of map unit: 5 percent

Hydric soil rating: No

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