INFORMATION SUMMARY

A. Report Date: October 8th, 2022 (Updated June 18th, 2024)

B. Report Title: Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Sensitive Plant Surveys for the 87.68-Acre (10.98-Acre Offsite Impact Area) Riverside Perris Airport Center Project Site, City of Perris, Western Riverside County, California.

C. Case #: TPM 38412 (PLN22-05046)

D. APN#s: 330-090-031, 330-090-033, 330-090-034, 330-090-036, 330-090-038, 330-090-040, and 330-100-031 (including right of ways)

E. Project Location: USGS 7.5' Series Perris Quadrangle Township 5 South, Range 3 West, Section 5, Riverside County, South of Ellis Avenue, East of Goetz Road, West of Case Road as shown in Attachment A, *Project Site Map*.

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H. Date of Surveys: April 29th, May 21st, June 11th, 2019 and March 16th, April 22nd, May 13th, June 17th, July 15th, 2020, February 15th, March 16th, April 13th, May 16th, June 13th,2022, March 6th, April 23rd, May 20th, and June 13th, 2024.

I. Summary: The 87.68-acre project site (10.98-acre offsite impact area) is located within the Western Riverside County MSHCP Mead Valley Area Plan. A 10.04-acre portion of the Project Site (APN 330-100-031) is located within MSHCP Criteria Area Cell 3377, Subunit 4, San Jacinto River Lower and is completely developed. A 3.74-acre offsite impact area extends into MSHCP Criteria Area 3276, Subunit 4 – San Jacinto River Lower. A disturbed agricultural drainage ditch bisects the offsite impact area and ultimately drains to Proposed Constrained Linkage 19 (San Jacinto River).

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for narrow endemic plants, criteria area species, and specific wildlife species if suitable habitat is documented onsite and/or if the property is located within a predetermined "Survey Area" (MSHCP 2004).

The project site and offsite impact area occurs partially within an MSHCP predetermined Survey Area for nine (9) criteria area plant species as shown in Attachment B, *MSHCP Relationship Map*: Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), little mousetail (*Myosurus minimus* ssp. *apus*), mud nama (*Nama stenocarpum*), Parish's brittlescale (*Atriplex parishii*), round-leaved filaree (*Erodium macrophyllum*), San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), and thread-leaved brodiaea (*Brodiaea filifolia*) (RCA GIS Data Downloads 2020). Based on the presence of suitable alkali soils, focused MSHCP criteria area plant surveys were conducted during the spring of 2019, spring/summer of 2020, spring of 2022, and spring of 2024.

The project site and offsite impact area occurs partially within a predetermined Survey Area for six (6) MSHCP narrow endemic plant species as shown in Attachment B, *MSHCP Relationship Map:* Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), multi-stemmed dudleya (*Dudleya multicaulis*), spreading navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*) (RCA GIS Data Downloads 2020). Based on the presence of suitable alkali soils, focused MSHCP narrow endemic plant surveys were conducted during the spring of 2019, spring/summer of 2020, spring of 2022, and spring of 2024.

A total of approximately 100 smooth tarplant were documented within the eastern region of the Project Site as shown in Attachment I, *Sensitive Species Observation Map*. None of the additional eight (8) MSHCP criteria area plant or six (6) MSHCP narrow endemic plants were observed on the project site or offsite impact area. A total of approximately 25 paniculate tarplant (*Deinandra paniculata*) California Rare Plant Ranking 4.2 were documented outside of the project limits. No state or federally listed threatened or endangered plant species were detected on the project site or offsite impact area.

SUBJECT

Western Riverside County Multiple Species Habitat Conservation Plan Narrow Endemic & Criteria Area Sensitive Plant Surveys for the 87.68-Acre (10.98-Acre Offsite Impact Area) Riverside Perris Airport Center Project Site, City of Perris, Western Riverside County, California.

This report presents the findings of a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) focused narrow endemic and criteria area sensitive plant surveys conducted for the 87.68-acre (10.98-acre offsite impact area) Perris Valley Airport project site ("Project Site") located within the western region of Riverside County, City of Perris, California. Specifically, the Project Site is located within Assessor Parcel Numbers (APNs) 330-090-031, 330-090-033, 330-090-034, 330-090-036, 330-090-038, 330-090-040, and 330-100-031 (including adjacent right of ways).

The Project Site is located within United States Geological Survey (USGS) 7.5' Series Perris Quadrangle, Riverside County, Township 5 South, Range 3 West, Section 5. Specifically, the Project Site is located within the northern region of the Perris Valley Airport, extending south of Ellis Avenue, east of Goetz Road, and west of Case Road, as shown in Attachment A, *Project Site Map*. An offsite impact area extends southeast of the Project Site and is located immediately southwest of Case Road.

The Project Site is located within the Western Riverside County MSHCP Mead Valley Area Plan. A 10.04-acre portion of the Project Site (APN 330-100-031) is located within MSHCP Criteria Area Cell 3377, Subunit 4, San Jacinto River Lower and is completely developed. A 3.74-acre offsite impact area extends into MSHCP Criteria Area Cell 3276, Subunit 4 – San Jacinto River Lower and the disturbed agricultural drainage ditch located in this region ultimately drains into Proposed Constrained Linkage 19 (San Jacinto River) as shown in Attachment B, *MSHCP Relationship Map* (RCA GIS Data Downloads 2024).

A Joint Project Review (JPR) 08-07-31-01 (08-04-0012/WCA) consistency determination was issued on September 8th, 2008 following a review by the Regional Conservation Authority (RCA) for APN 330-100-031 as an independent industrial warehouse facility project. Subsequent to the 2008 JPR, APN 330-100-031 has been consolidated with the Perris Airport Logistics Center Project, as described above. Based upon the determinations of the Wildlife Agencies and RCA, the consolidated project is not required to undergo a new or amended JPR

The Project Site is currently dominated by disturbed/ruderal and ornamental trees as illustrated in Attachment, C *Vegetation Communities Map*, and Attachments D to F, *Current Project Site Photographs*. A disturbed agricultural drainage ditch (offsite impact area) extends from the Project Site southeast from the property extending toward the San Jacinto River as illustrated in Attachment G, *Current Project Site Photographs*.

The Project Site lies partially within a predetermined Survey Area for six (6) MSHCP narrow endemic and nine (9) MSHCP criteria area sensitive plant species as shown in

Attachment B, *MSHCP Relationship Map* (RCA GIS Data Downloads 2024), which includes:

MSHCP Narrow Endemic Plant Species

- Munz's onion (*Allium munzii*) [FE, ST, CRPR 1B.1];
- San Diego ambrosia (*Ambrosia pumila*) [FE, CRPR 1B.1];
- many-stemmed dudleya (*Dudleya multicaulis*) [CRPR 1B.2];
- spreading navarretia (*Navarretia fossalis*) [FT, CRPR 1B.1];
- California Orcutt grass (*Orcuttia californica*) [FE/SE, CRPR 1B.1]; and
- Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*) [CRPR 2.1].

MSHCP Criteria Area Plant Species

- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), CRPR 1B.1;
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), CRPR 1B.2;
- little mousetail (*Myosurus minimus* ssp. *apus*), CRPR 3.1;
- mud nama (*Nama stenocarpum*), CRPR 2.2;
- Parish's brittlebush (*Atriplex parishii*), CRPR 1B.1;
- Round-leaved filaree (*California macrophyllum*), CRPR 1B.1;
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*), FE, CRPR 1B.1;
- smooth tarplant (*Centromadia pungens* ssp. *laevis*), CRPR 1B.1; and
- thread-leaved brodiaea (*Brodiaea filifolia*), FT, SE, CRPR 1B.1.

Based on the results of a habitat assessment conducted on April 29th, 2019, March 16th, 2020 and February 15th, 2022, potential habitat is present on the property for MSHCP narrow endemic and criteria area sensitive plant based on the presence of alkali soils (Cadre Environmental 2020, 2021). According to the MSHCP guidelines, focused surveys are required during the appropriate flowering season to identify and document the presence/absence of target sensitive plant species if suitable habitat is present and if the property is located within a predetermined Survey Area (MSHCP 2004).

Therefore, focused surveys for MSHCP narrow endemic and criteria area plants within the Project Site were conducted during the spring of 2019. Dates of the field surveys include: April 29th, May 21st and June 11th, 2019. It should also be noted that four (4) surveys were conducted for burrowing owl on May 17th, 26th, June 7th, and 14th, 2019, during which time sensitive plants would have been documented, if present. Focused surveys for the offsite impact area were conducted on March 16th, April 22nd, May 13th, June 17th, and July 15th, 2020. Updated focused surveys were conducted throughout the Project Site and offsite impact area on February 15th, March 16th, April 13th, May 16th, June 13th 2022, March 6th, April 23rd, May 20th, and June 13th, 2024.

Each focused survey was conducted on-foot and covered all suitable habitats onsite according to MSHCP protocols and the U.S. Fish and Wildlife Service (USFWS), California Native Plant Society (CNPS), and California Department of Fish and Wildlife (CDFW) survey guidelines.

References and literature cited in this report are attached as Appendix A (Literature Cited and Selected References).

EXISTING CONDITIONS

The Project Site slopes slighting from northwest to southeast with elevations extending from 1,427 feet above mean sea level (AMSL) in the extreme northwest region to 1,413 AMSL along the southeast boundary. The Project Site is currently dominated by disturbed/ruderal and ornamental trees as illustrated in Attachment, C *Vegetation Communities Map*, and Attachments D to F, *Current Project Site Photographs*. A disturbed agricultural drainage ditch (offsite impact area) extends from the Project Site southeast from the property extending toward the San Jacinto River as illustrated in Attachment G, *Current Project Site Photographs*.

SOILS

The Soil Survey of Western Riverside Area has the following soils mapped within the boundary of the property as shown on Attachment H, *Soils Association Map*:

- **Dv – Domino silt loam, saline-alkali.**
- **Dw – Domino silt loam, strongly saline-alkali.**
- EpA – Exeter sandy loam, deep, 0-2% slopes.
- PaA - Pachappa fine sandy loam, 0-2% slopes.
- **Wn – Willows silty clay, deep, strongly saline-alkali.**
- **Wg – Willows silty clay, saline-alkaline**

Domino, and Willows soil types (Bold) are classified as sensitive substrates considered important for the conservation of certain plant species and vernal pool resources in the region (MSHCP 2004). The soils documented onsite are characterized as extending the full range from non- to highly saline levels and as being poorly to well drained (drainage class).

PLANT COMMUNITY/HABITAT CLASSIFICATION

Disturbed/Ruderal

The majority of the Project Site is dominated by annually disked disturbed/ruderal vegetation. Common dominant species documented within this habitat type include London rocket (*Sisymbrium irio*), stinknet (*Oncosiphon piluliferum*), cheeseweed *(Malva parviflora*), Russian thistle (*Salsola tragus*), tocalote (*Centaurea melitensis*), red-stemmed filaree (*Erodium cicutarium*), white-stemmed filaree (*Erodium moschatum*), prickly lettuce (*Lactuca serriola*), black mustard (*Brassica nigra*), tumbling pigweed (*Amaranthus albus*), nettle-leaved goosefoot (*Chenopodium murale*), hare barley (*Hordeum murinum* subsp. *glaucum*), Italian rye (*Lolium multiflorum*), foxtail chess (*Bromus madritensis*), ripgut grass (*Bromus diandrus*), wild oat (*Avena fatua*), slender wild oat (*Avena barbata*), canary grass (*Phalaris canariensis*), pineapple weed (*Matricaria*

discoides), cocklebur (*Xanthium strumarium*), and yellow sweetclover (*Melilotus officinalis*). Less common species include caterpillar phacelia (*Phacelia cicutaria*), alkali weed (*Cressa truxillensis*), slender goldfields (*Lasthenia gracilis*), Boccone's sand spurrey (*Spergularia bocconi*), and salt heliotrope (*Heliotropium curassavicum*).

Ornamental Trees

Several mature ornamental trees were documented within the Project Site along the northern boundary immediately south of Ellis Avenue including red gum tree (*Eucalyptus camaldulensis*).

Agricultural Drainage Ditch

An artificially created disturbed agricultural drainage ditch bisects the offsite impact area and is bordered to the northeast by Case Road (developed) and south by disturbed/ruderal vegetation. Species documented within the agricultural drainage ditch include but are not limited to canary grass, barnyard grass (*Echinochloa crus-galli*) alkali weed, Boccone's sand spurrey, English plantain (*Plantago lanceolata*), common plantain (*Plantago major*), annual sunflower (*Helianthus annuus*), prickly sow thistle (*Sonchus asper* subs. *asper*) saltgrass (*Distichlis spicata*), California burclover (*Medicago polymorpha*), tumbling pigweed, alkali mallow (*Malvella leprosa*), swiss chard (*Beta vulgaris*), mayweed (*Anthemis cotula*), sprawling saltbush (*Atriplex suberecta*), silverscale saltbush (*Atriplex argentea*), bush seepweed (*Suaeda nigra*), short pod mustard (*Hirschfeldia incana*), shepherd's purse (*Capsella bursa-pastoris*), and common fiddleneck (*Amsinckia menziesii*).

RAINFALL TOTALS

The rainfall totals for the City of Perris recorded from 2015 through June of 2024 are shown in Table 1, *Seasonal Rainfall Totals for Perris*. The average rainfall total recorded for the City of Perris is 12.97 inches per season. Rainfall totals for the 2018-2019 season was 17.68 inches and 15.56 inches for the 2019-2020 season. Accordingly, the project survey results for spring of 2019/2020 and 2024 were not constrained by low seasonal rainfall. However, rainfall totals for the 2021-2022 season as of June 13th are 5.16 inches, below average rainfall totals as of June 13th, 2022[1].

[1] WeatherCurrents: local weather history, Perris, CA. Available: https://weathercurrents.com/perris/ArchivePrecipitation.do. Accessed June 13th, 2024

Table 1
Seasonal Rainfall Totals for Perris
(Average rainfall per season is 12.97 inches)

Rainfall Season (Measured July 1 – June 30)	Precipitation Total
2023-2024	13.84*
2022-2023	12.79
2021-2022	5.16
2020 - 2021	5.15
2019 - 2020	15.56 inches
2018 – 2019	17.68 inches
2017 – 2018	4.90 inches
2016 – 2017	17.97 inches
2015 – 2016	9.70 inches

* total as of June 13th, 2022

METHODOLOGY

A site-specific survey program was developed to achieve the following goals: (1) characterize the vegetation; (2) prepare a detailed floristic compendium; (3) conduct focused surveys to document the distribution and abundance, or absence, of MSHCP narrow endemic plant species at the site; and 4) prepare botanical resource maps showing the distribution of vegetation communities and the location of the MSHCP target species observed onsite. The project surveys also proposed to document other CNPS sensitive plants or species of local concern onsite, if present.

The methodology and focus of the survey program are consistent with the MSHCP guidelines, but also conforms to scientific and technical standards listed by USFWS (1996), CNPS (2001), and CDFW (2009) for sensitive plant species surveys. The surveys were conducted on-foot throughout the Project Site, Attachment B, *Vegetation Communities Map*.

Literature Review

Existing biological resources within and adjacent to the Project Site were initially investigated through a review of pertinent literature and online data. The California Natural Diversity Database (CNDDB 2024a), and CNPS (2024). In addition, soil, local floras, and consultation with local experts were utilized in the identification of species, soils, or habitats that could support the target MSHCP sensitive plants within or adjacent to the Project Site. These and other references are listed below and in Appendix A– Literature Cited and Selected References.

Prior to conducting fieldwork, a thorough archival review was conducted using the following baseline resources:

- California Native Plant Society 8th Inventory Online (2024);
- California Natural Diversity Data Base for the USGS 7.5' Perris Quadrangle (CNDDB 2024);
- Soil Survey of Western Riverside Area (Knecht 1971; USDA-NRCS 2024);
- Vegetation Alliances of Western Riverside County, California (Klein and Evens 2005);
- Vascular Flora of Western Riverside County (Roberts et al. 2004); and
- Reports prepared by the Regional Conservation Authority, Western Riverside County (http://www.wrc-rca.org/about-rca/monitoring/monitoring-surveys/);

Focused Survey Program Developed for MSHCP Target Plants

Floristic and focused plant surveys were conducted in order to identify all species observed on the Project Site. Additionally, program goals would also locate, census, and map the target MSHCP plants, and other CNPS or species of local concern, if present, occurring onsite.

Field notes and site photographs were taken during each field survey. These notes recorded the date, location, plant species observed, and general habitat characteristics of each area of the project and habitats examined that day. All plant species encountered during the field surveys were identified and recorded in the field notes, including any special-status plants occurring on the Project Site. Surveys were performed in a manner consistent with the MSHCP and other applicable survey protocol requirements as outlined by USFWS (1996), CNPS (2001), and CDFW (2009).

Fieldwork was coordinated throughout the spring and blooming periods, site-specific habitat conditions, and vegetation-soil associations of the target species. Accordingly, eight (8) surveys were conducted onsite, including April 29th, May 21st, June 11th, 2019 and March 16th, April 22nd, May 13th, June 17th, and July 15th, 2020, which covered all suitable habitat areas within the Project Site and offsite impact area. Updated focused surveys were conducted throughout the Project Site and offsite impact area on February 15th, March 16th, April 13th, May 16th, June 13th 2022, and March 6th, April 23rd, May 20th, and June 13th, 2024.

All portions of the Project Site were surveyed on-foot by walking slowly and methodically across each habitat type. Scientific nomenclature and common names used in this report generally follow Roberts et al. (2004) and Baldwin et al. (2012), or Jepson Project eFlora (2024) for updated taxonomy. Cadre Environmental conducted the vegetation mapping during the initial habitat assessment as shown in Attachment B, *Vegetation Communities Map*.

RESULTS

Narrow Endemic Plants: None of the six (6) MSHCP narrow endemic sensitive plant species were detected during the project surveys and are therefore not expected to occur due to lack of observation as noted in Table 2, *Potential MSHCP Narrow Endemic and Criteria Area Plant Assessment.*

Criteria Area Plants: One (1) of the nine (9) MSHCP criteria area sensitive plant species (smooth tarplant) was detected during the project surveys as noted in Table 2, *Potential MSHCP Narrow Endemic and Criteria Area Plant Assessment.* Specifically, a total of approximately 100 smooth tarplant (MSHCP criteria area species) were documented within the eastern region of the Project Site as shown in Attachment I, *Sensitive Species Observation Map*.

Sensitive Plant Species: One (1) sensitive plant species, paniculate tarplant (*Deinandra paniculata*) CRPR 4.2 (approximately 25 plants) not covered by the MSHCP was detected during the project surveys outside of the project limits. No state or federally listed threatened or endangered plant species were detected onsite.

Table 2.
Potential MSHCP Narrow Endemic and Criteria Area Plant Assessment

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
MSHCP Criteria Area Plant Species		
San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*) FE CRPR List 1B.1 MSHCP CAPSA CA Endemic	The San Jacinto Valley crownscale occurs primarily in floodplains that support alkali scrub, alkali playas, vernal pools, and occasionally alkali grasslands.	San Jacinto Valley crownscale has a low potential to occur onsite based on the presence of suitable alkali soils and disturbed vegetation. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys. Historic records have been documented south of the Project Site as referenced in Appendix C – Historic Sensitive Plant Records.
Parish's brittlebush (*Atriplex parishii*) CRPR List 1B.1 MSHCP CAPSA	Parish's brittlescale is a small prostrate to decumbent annual, white scaly, and is often much less than eight inches in length. It blooms May to October. This species occurs on alkali or saline flats, alkali meadows, and in or along the margins of vernal pools or playa depressions.	Parish's brittlescale has a low potential to occur onsite based on the presence of suitable alkali soils and disturbed vegetation. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Davidson's saltscale (*Atriplex serenana* var. *davidsonii*) CRPR List 1B.2 MSHCP CAPSA	Davidson's saltscale is a decumbent to ascending annual that is sparsely scaly. It blooms April to October. It grows on coastal bluffs and alkaline alluvial terraces, and on alkali or saline flats in interior areas such as western Riverside County.	Davidson's saltscale has a low potential to occur onsite based on the presence of suitable alkali soils and disturbed vegetation. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.
Thread-leaved brodiaea (*Brodiaea filifolia*) FT/SE CRPR List 1B.1 MSHCP CAPSA CA Endemic	Thread-leaved brodiaea is a geophyte, which produces leaves and flower stalks that sprout from corms (underground bulb-like storage stems). Thread-leaved brodiaea blooms March to June. Thread-leaved brodiaea typically occurs on gentle hillsides, valleys, and floodplains in semi-alkaline flats of riparian areas, vernal pools, mesic southern needlegrass grassland, mixed native-annual grassland, and alkali grassland plant communities in association with clay, clay loam, or alkaline silty-clay soils.	Thread-leaved brodiaea is not expected to occur onsite based on a lack of suitable clay and clay associated substrates. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.
Smooth Tarplant (*Centromadia pungens ssp. laevis*) CRPR 1B.1 MSHCP CAPSA	Smooth tarplant is an annual member of the sunflower family (Asteraceae) that occurs in vernal pools, alkali playas and scrub, alkali grasslands, riparian areas, along watercourses and disturbed sites. It blooms April to September.	**Present** – Approx. 100 individuals were documented in the eastern region of the Project Site as shown in Attachment I, *Sensitive Species Observation Map*.
Round-leaved filaree (*Erodium macrophyllum*) CRPR List 2.1 MSHCP CAPSA CA Endemic	Habitats include open areas in cismontane woodland and valley and foothill grasslands, which are often associated with heavy clay soils below 3,600 feet elevation.	Round-leaved filaree is not expected to occur onsite based on a lack of suitable clay and clay associated substrates. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) CRPR List 1B.1 MSHCP CAPSA	Coulter's goldfields is associated with low-lying alkali and saline habitats along the coast and inland valleys. The majority of the populations are associated with coastal salt marsh. In Riverside County, Coulter's goldfields primarily grow in highly alkaline, silty clays associated with the Traver-Domino-Willows soils, and usually in the wet areas in the alkali vernal plain community.	Coulter's goldfields has a low potential to occur onsite based on the presence of suitable alkali soils and disturbed vegetation. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.
Little mousetail (*Myosurus minimus* ssp. *apus*) CRPR List 3.1 MSHCP CAPSA	Little mousetail is widespread in California. It occurs in alkaline vernal pools, and vernal alkali plains and grasslands, and blooms March to June.	Little mousetail has a low potential to occur onsite based on the presence of suitable alkali soils and disturbed vegetation. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.
Mud nama (*Nama stenocarpum*) CRPR List 2.2 MSHCP CAPSA	Mud nama grows on muddy embankments of marshes and swamps, lake margins, riverbank, meadow, playa, and vernal pools. In western Riverside County, it is known only from the north shore of Mystic Lake (Roberts et al. 2004).	Mud nama is not expected to occur onsite based on a lack of suitable marsh and vernal pool resources. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.
MSHCP Narrow Endemic Plant Species		
Munz's onion (*Allium munzii*) FE/ST CRPR List 1B.1 MSHCP NEPSA CA Endemic	Restricted to mesic clay soils in western Riverside County, California. It blooms from March to May. This species is found in southern needlegrass grassland, annual grassland, open coastal sage scrub, or occasionally, in cismontane juniper woodlands.	Munz's onion is not expected to occur onsite based on a lack of suitable soil conditions. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
San Diego ambrosia (*Ambrosia pumila*) FE CRPR List 1B.1 MSHCP NEPSA	San Diego ambrosia is known from Baja California, Mexico, and San Diego and Riverside counties in the United States. It blooms May to September. San Diego ambrosia occurs primarily on upper terraces of rivers and drainages as well as in open grasslands, openings in coastal sage scrub, and occasionally in areas adjacent to vernal pools.	San Diego ambrosia has a moderate to low potential to occur onsite based on the presence of suitable loam soils. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.
Multi-stemmed dudleya (*Dudleya multicaulis*) CRPR List 1B.2 MSHCP NEPSA	Many-stemmed dudleya is a succulent perennial in the stonecrop family. It blooms April to July. This species is known from several southern California counties, and typically occurs in dry, stony places on heavy soils in scrub and grassland habitats below 2,000 feet elevation. Many-stemmed dudleya is most often associated with clay soils in barren, rocky places, or thinly vegetated openings in chaparral, coastal sage scrub, and southern needlegrass grasslands.	Many-stemmed dudleya is not expected to occur onsite based on a lack of suitable soil conditions. Not detected within Project Site during focused spring 2019, 2020 or 2022 sensitive plant surveys.
Spreading navarretia (*Navarretia fossalis*) FT/SE CRPR List 1B.1 MSHCP NEPSA	Spreading navarretia is a member of the phlox family, and is found in vernal pools, chenopod scrub, edge of marshes, and playas on saline-alkali soils. It occasionally grows in ditches and depressions associated with degraded habitat or old stock ponds (Consortium 2012). Spreading navarretia is a small prostrate to occasionally erect annual. Spreading navarretia blooms April to June.	Spreading navarretia has a low potential to occur onsite based on the presence of suitable alkali soils and disturbed vegetation. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
California Orcutt grass (*Orcuttia californica*) FE/SE CRPR List 1B.1 MSHCP NEPSA	California Orcutt grass is a small, unique grass that occurs primarily in vernal pool habitats. In southern California, it is known from Orange (recently reported occurrence), Los Angeles, Riverside, Ventura, and San Diego Counties, and continues south into Baja California, Mexico. California Orcutt grass blooms April to August. In Riverside County, this species is found in southern basaltic claypan vernal pools at the Santa Rosa Plateau, and alkaline vernal pools such as Skunk Hollow, at Upper Salt Creek near Hemet, Menifee and elsewhere.	California Orcutt grass is not expected to occur onsite based on a lack of suitable vernal pool resources. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.
Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*) CRPR List 2.1 MSHCP NEPSA	The historic known range of Wright's trichocoronis includes the Great Valley of central California, western Riverside County, and south Texas and adjacent northeast Mexico. This plant grows in meadows and seeps, marshes, riparian scrub, and vernal pools. Wright's trichocoronis blooms May to September.	Wright's trichocoronis is not expected to occur onsite based on a lack of suitable habitat. Not detected within Project Site during focused spring 2019, 2020, 2022 or 2024 sensitive plant surveys.

California Native Plant Society (CNPS): California Rare Plant Rank (CRPR)
CRPR 1A – plants presumed extinct in California
CRPR 1B – plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 2A – plants presumed extirpated in California but common elsewhere
CRPR 2B – plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3 – plants about which we need more information, a review list
CRPR 4 – plants of limited distribution, a watch list
.1 – Seriously endangered in California
.2 – Fairly endangered in California
.3 – Not very endangered in California

Federal (USFWS) Protection and Classification
FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate for Listing

State (CDFW) Protection and Classification
SE – State Endangered
ST – State Threatened

ATTACHMENTS

Attachment A - Project Site Map

Attachment B - Vegetation Communities Map

Attachment C - MSHCP Relationship Map

Attachment D - Current Project Site Photographs

Attachment E - Current Project Site Photographs

Attachment F - Current Project Site Photographs

Attachment G - Current Project Site Photographs

Attachment H - Soils Association Map

Attachment I - Sensitive Species Observation Map

Certification

"*I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief*."

Author: _____ Date: June 18th, 2024

Fieldwork Performed By: _____ Date: June 18th, 2024

APPENDIX A

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APPENDIX B

FLORAL COMPENDIUM

DICOTYLEDONES - DICOTS

AMARANTHACEAE - AMARANTH FAMILY

Amaranthus albus ▪ tumbling pigweed

CHENOPODIACEAE - GOOSEFOOT FAMILY

Atriplex argentea var. *mohavensis* ▪ silverscale saltbush
Atriplex rosea ▪ tumbling oracle
Atriplex semibaccata ▪ Australian saltbush
Atriplex suberecta ▪ sprawling saltbush
Beta vulgaris ▪ swiss chard
Chenopodium murale ▪ nettle leaf goosefoot
Kochia scoparia ▪ summer cypress
Salsola tragus ▪ Russian thistle
Suaeda nigra ▪ bush seepweed

ASTERACEAE - SUNFLOWER FAMILY

Anthemis cotula ▪ mayweed
Carduus pycnocephalus ▪ Italian thistle
Centaurea melitensis ▪ tocalote
Centaurea solstitialis ▪ yellow star-thistle
Centromadia pungens ssp. laevis ▪ smooth tarplant CRPR 1B.1
Deinandra paniculata ▪ paniculate tarplant CRPR 4.2
Helianthus annuus ▪ annual sunflower
Lactuca serriola ▪ prickly lettuce
Lasthenia gracilis ▪ slender goldfields
Matricaria discoidea ▪ pineapple weed
Oncosiphon pilulifer ▪ stinknet
Senecio vulgare ▪ common groundsel
Sonchus asper subs. *asper* ▪ prickly sow thistle
Sonchus oleraceus ▪ common sow thistle
Xanthium strumarium ▪ cocklebur

BORAGINACEAE - BORAGE FAMILY

Amsinckia menziesii ▪ common fiddleneck
Heliotropium curassavicum var*. oculatum* ▪ salt heliotrope

BRASSICACEAE - MUSTARD FAMILY

Brassica nigra ▪ black mustard
Capsella bursa-pastoris ▪ shepherd's purse
Hirschfeldia incana short pod mustard
Lepidium virginicum ▪ Virginia pepperweed
Sisymbrium irio ▪ London rocket

CARYOPHYLLACEAE - PINK FAMILY

Spergularia bocconi ▪ Boccone's sand spurrey

CONVOLVULACEAE - MORNING-GLORY FAMILY

Convolvulus arvensis ▪ field bindweed
Cressa truxillensis ▪ alkali weed

FABACEAE - PEA FAMILY

Medicago polymorpha ▪ California burclover
Melilotus officinalis ▪ yellow sweetclover

GERANIACEAE - GERANIUM FAMILY

Erodium cicutarium ▪ red-stemmed filaree
Erodium moschatum ▪ white-stemmed filaree

HYDROPHYLLACEAE - WATERLEAF FAMILY

Phacelia cicutaria ▪ caterpillar phacelia

MALVACEAE - MALLOW FAMILY

Malvella leprosa ▪ alkali mallow
Malva parviflora ▪ cheeseweed

MYRTACEAE - MYRTLE FAMILY

Eucalyptus camaldulensis ▪ red gum tree

PLANTAGINACEAE - PLANTAIN FAMILY

Plantago lanceolata ▪ English plantain
Plantago major ▪ common plantain

MONOCOTYLEDONES - MONOCOTS

CYPERACEA - SEDGE FAMILY

Cyperus eragrostis ▪ flatsedge

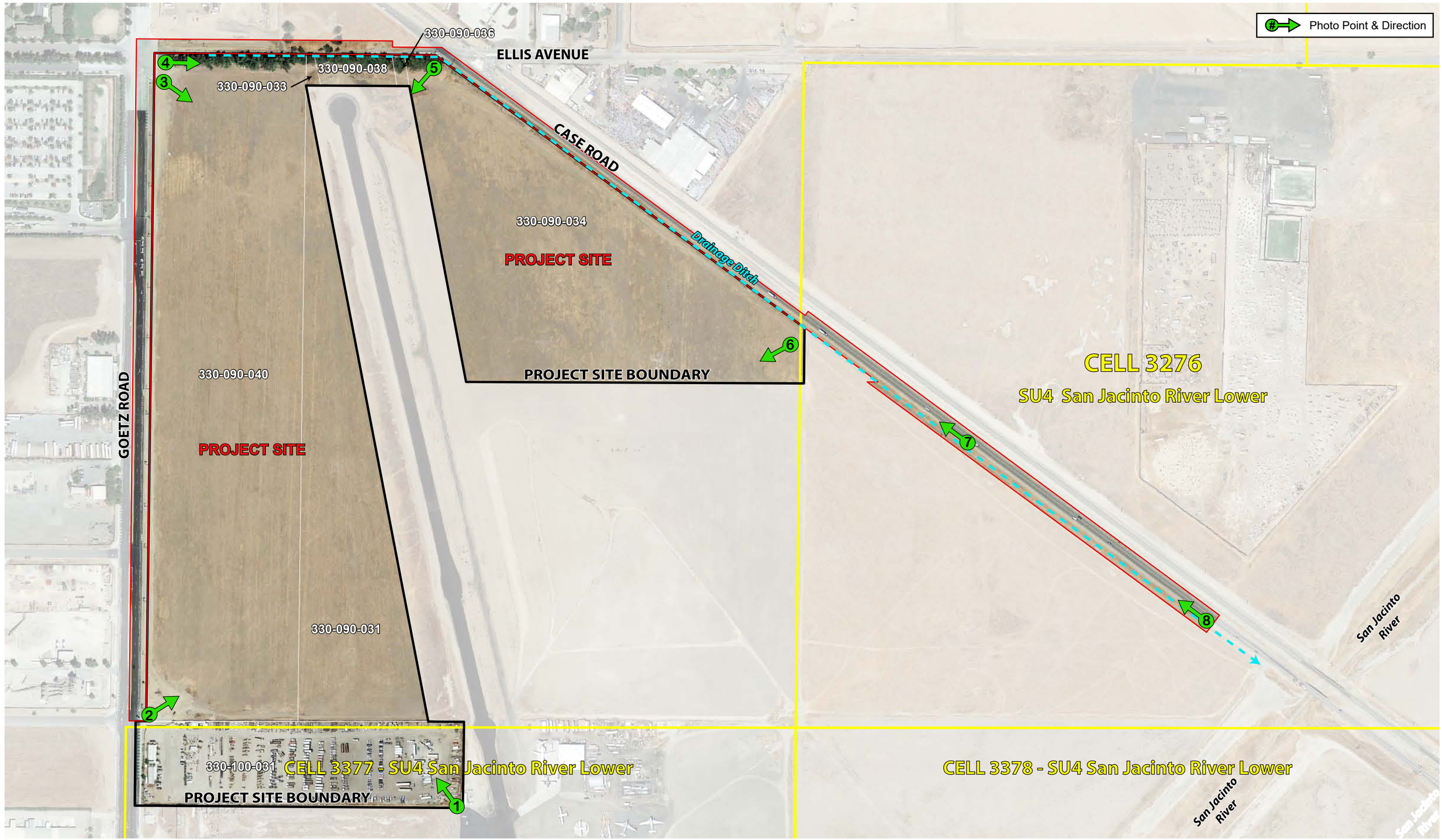
POACEAE - GRASS FAMILY

Avena barbata ▪ slender wild oat
Avena fatua ▪ wild oat
Bromus diandrus ▪ ripgut grass
Bromus hordeaceus soft chess
Bromus madritensis ▪ foxtail chess
Bromus rubens ▪ red brome
Cynodon dactylon ▪ Bermuda grass
Distichlis spicata ▪ saltgrass
Echinochloa crus-galli ▪ barnyard grass
Festuca perennis ▪ Italian ryegrass
Hordeum murinum ssp. *glaucum* ▪ glaucous barley
Phalaris canariensis ▪ canary grass
Phalaris minor ▪ little seed canarygrass
Polypogon monspeliensis ▪ rabbitsfoot grass
Schismus barbatus ▪ Mediterranean grass

APPENDIX C
Historic Sensitive Plant Records

Occurrence ID: UCR-BPS-66970
Secondary Catalog #: UCR-66970
Taxon: *Atriplex coronata var. notatior* Jeps.
Family: Chenopodiaceae
Collector: D.E. Bramlet
Number: 2050
Date: 1990-07-20
Verbatim Date: 1990-7-20
Locality: United States, California, Riverside, 2.3 km south of Perris, just east of Perris Valley Airport, c. 400 m east of northern part of runway; c. 500 m south of Case Road
33.76667 -117.21667
Verbatim Coordinates: T5S R5W sec5 SE/4 of NW/4
Elevation: 433 meters (1420ft)
Habitat: Alkali sink scrub assoc. with *Salsola iberica*, *Bromus diandrus, Atriplex semibaccata, A. argentea, A. canescens, Suaeda torreyana, Salicornia subterminalis, Haplopappus palmeri pachylepis*, etc Willows silty clay, strongly alkali-saline & Domino silt loam, strongly alkali-saline.
Reproductive Condition: Flowering & Fruiting
Notes: C. 100 individuals seen
Usage Rights: CC BY-NC (Attribution-Non-Commercial)
Record ID: 4135f90b-c8f4-4f0c-83b4-7265f95921c7

Occurrence ID: UCR-BPS-287008
Secondary Catalog #: UCR-287008
Taxon: *Atriplex coronata var. notatior* Jeps.
Family: Chenopodiaceae
Collector: D.E. Bramlet
Number: 3011
Date: 2000-05-05
Verbatim Date: 2000-5-5
Locality: United States, California, Riverside, Perris, south of Ellis Ave. & Case Rd., west of San Jacinto River crossing of RR tracks
33.76556 -117.21028
Verbatim Coordinates: 11S 0480534E 3736185N; T5S R3W sec05 SW/4 of NE/4
Elevation: 432 meters (1417ft)
Habitat: Alkali grassland with *Hordeum intercedens, Plagiobothrys leptocladus, Suaeda moquinii, Atriplex argentea, Lepidium dictyotum, Hemizonia pungens laevis*. Willows silty clay, strongly saline alkali.
Reproductive Condition: Flowering
Notes: 10-18 cm tall annuals. 186 plants observed.
Usage Rights: CC BY-NC (Attribution-Non-Commercial)
Record ID: bff56231-7faa-469d-bf95-853551623876



TPM 38412, APN's 330-090-031, 330-090-033, 330-090-034, 330-090-036, 330-090-038, 330-090-040, 330-100-031 (including right of ways).

Offsite Impact Area

Attachment A - Project Site Map

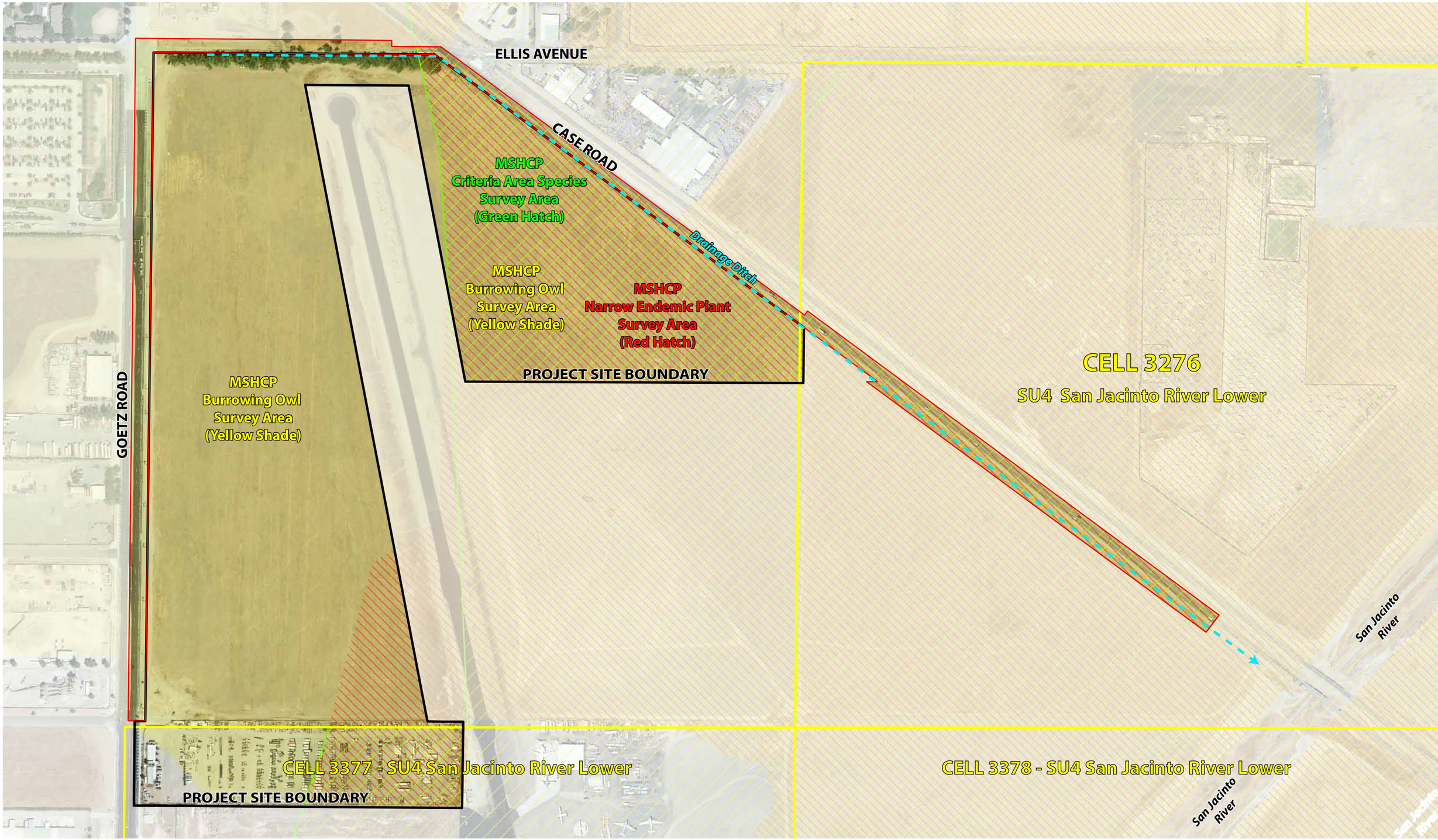
MSHCP Narrow Endemic & Criteria Area Sensitive Plant Surveys

Riverside Perris Airport Center, City of Perris

CADRE Environmental

N

1 inch = 350 feet



TPM 38412, APN's 330-090-031, 330-090-033, 330-090-034, 330-090-036, 330-090-038, 330-090-040, 330-100-031 (including right of ways).

Offsite Impact Area

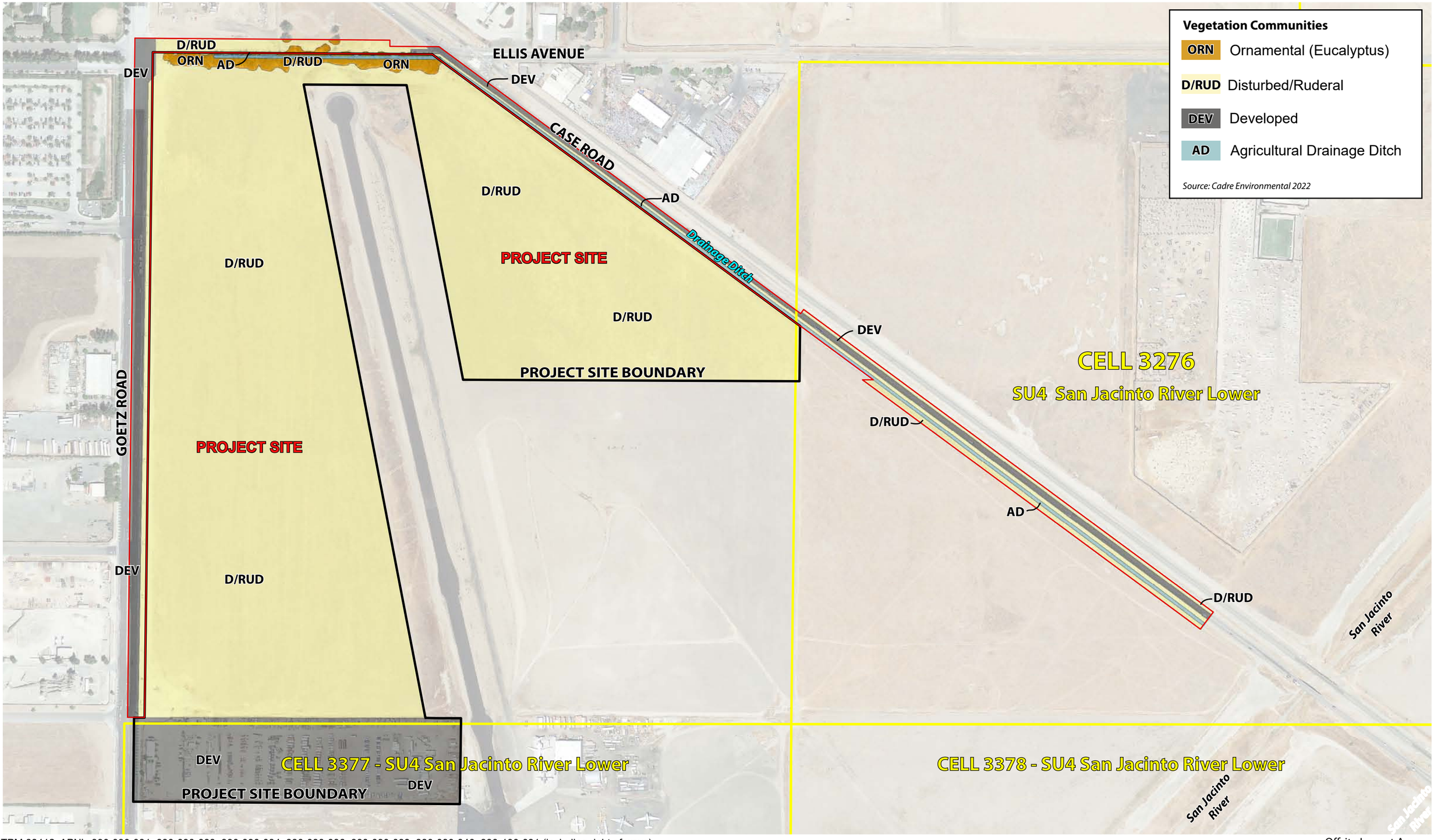
Attachment B- MSHCP Relationship Map

MSHCP Narrow Endemic & Criteria Area Sensitive Plant Surveys
Riverside Perris Airport Center, City of Perris

CADRE Environmental

N

1 inch = 350 feet



TPM 38412, APN's 330-090-031, 330-090-033, 330-090-034, 330-090-036, 330-090-038, 330-090-040, 330-100-031 (including right of ways).

Offsite Impact Area

Attachment C - Vegetation Communities Map

MSHCP Narrow Endemic & Criteria Area Sensitive Plant Surveys
Riverside Perris Airport Center, City of Perris

CADRE Environmental

1 inch = 350 feet

PHOTOGRAPH 1 - 2024

PHOTOGRAPH 2 - 2024

Refer to Attachment A - Project Site Map for Photographic Key

Attachment D - Current Project Site Photographs

MSHCP Narrow Endemic & Criteria Area Sensitive Plant Surveys
Riverside Perris Airport Center, City of Perris

CADRE Environmental

PHOTOGRAPH 3 - 2024

PHOTOGRAPH 4 - 2024

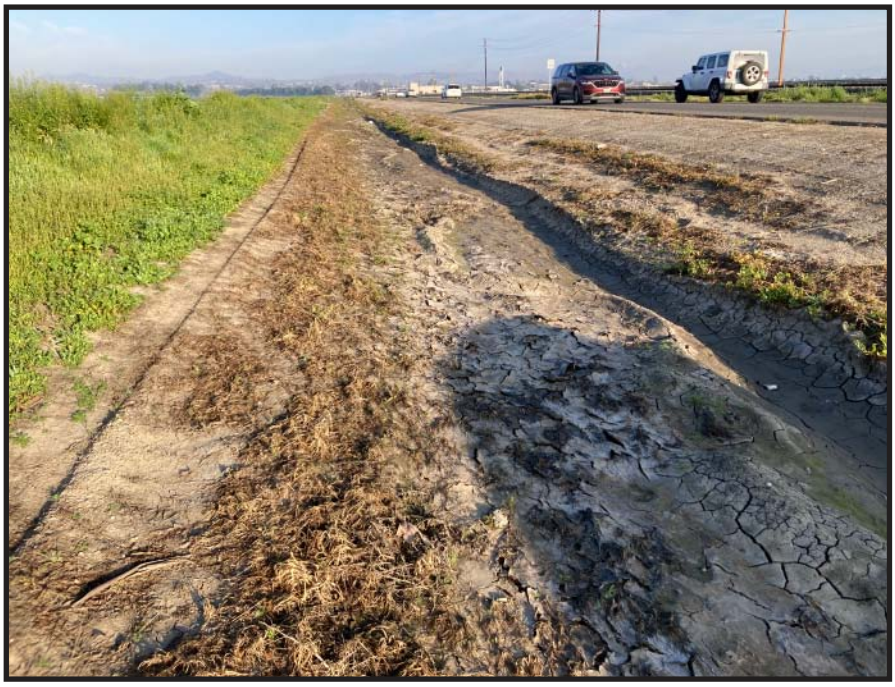
Refer to Attachment A - Project Site Map for Photographic Key

PHOTOGRAPH 5 - 2024

PHOTOGRAPH 6 - 2024

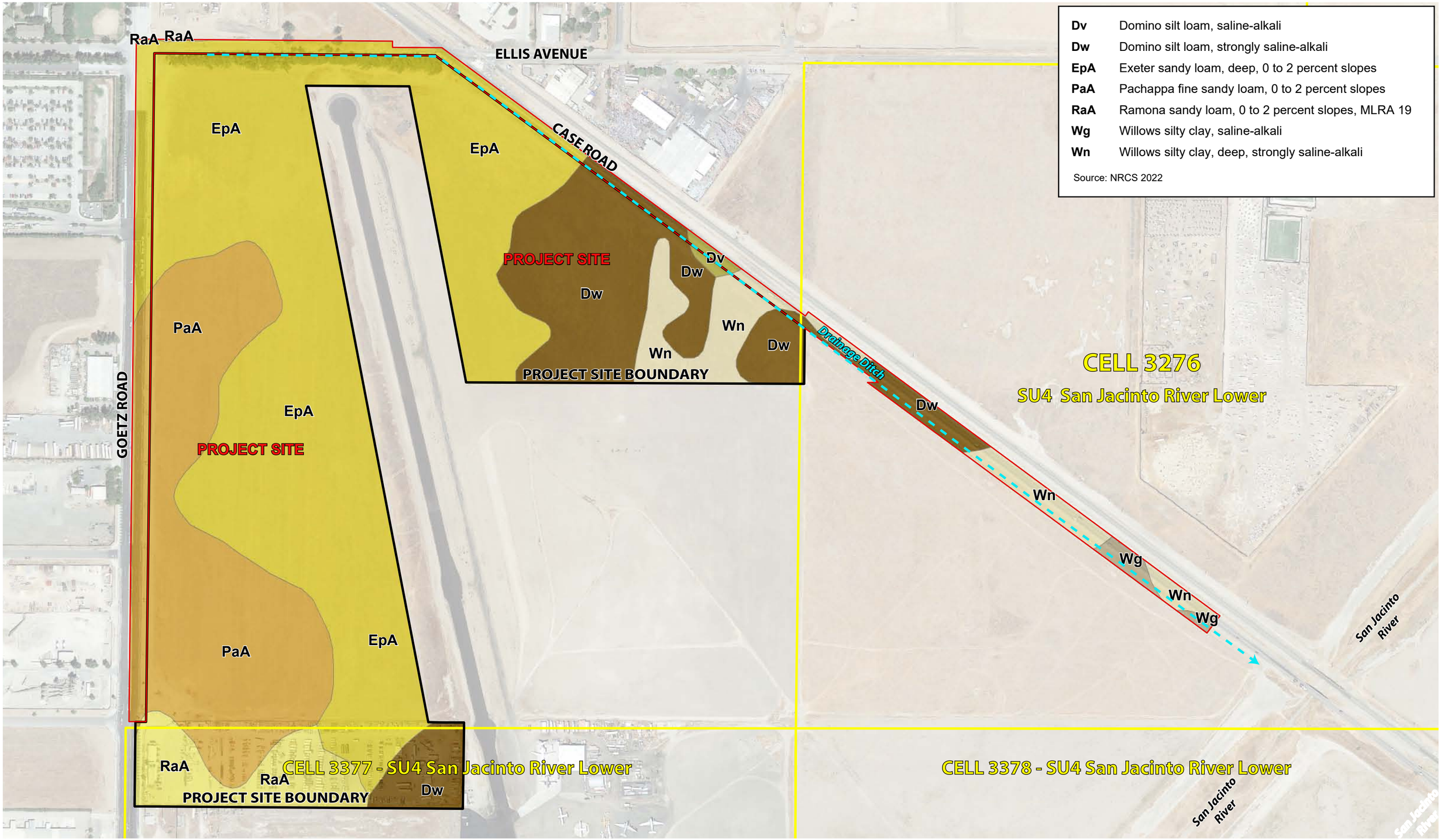
Refer to Attachment A - Project Site Map for Photographic Key

PHOTOGRAPH 7 - 2024



PHOTOGRAPH 8 - 2024

Refer to Attachment A- Project Site Map for Photographic Key



Dv	Domino silt loam, saline-alkali
Dw	Domino silt loam, strongly saline-alkali
EpA	Exeter sandy loam, deep, 0 to 2 percent slopes
PaA	Pachappa fine sandy loam, 0 to 2 percent slopes
RaA	Ramona sandy loam, 0 to 2 percent slopes, MLRA 19
Wg	Willows silty clay, saline-alkali
Wn	Willows silty clay, deep, strongly saline-alkali

Source: NRCS 2022

TPM 38412, APN's 330-090-031, 330-090-033, 330-090-034, 330-090-036, 330-090-038, 330-090-040, 330-100-031 (including right of ways).

Offsite Impact Area

Attachment H - Soils Association Map

MSHCP Narrow Endemic & Criteria Area Sensitive Plant Surveys

Riverside Perris Airport Center, City of Perris

CADRE Environmental

N

1 inch = 350 feet

Smooth tarplant (*Centromadia pungens* ssp. *laevis*), CRPR 1B.1 (approx 100)

Paniculate Tarplant (*Deinandra paniculata*) CRPR 4.2 (approx 25)

San Jacinto Valley Crownscale (*Atriplex coronata var. notatior*), Federally Endangered CRPR 1B.1
(Historic Observation, 1990 Occurrence ID: UCR-BPS-66970
Historic Observation, 2000 Occurrence ID: UCR-BPS-287008)

Vegetation Communities

- ORN Ornamental (Eucalyptus)
- D/RUD Disturbed/Ruderal
- DEV Developed
- AD Agricultural Drainage Ditch

Source: Cadre Environmental 2022

ELLIS AVENUE
CASE ROAD
GOETZ ROAD
Drainage Ditch
PROJECT SITE
PROJECT SITE BOUNDARY
CELL 3276
SU4 San Jacinto River Lower
CELL 3377 - SU4 San Jacinto River Lower
CELL 3378 - SU4 San Jacinto River Lower
San Jacinto River

TPM 38412, APN's 330-090-031, 330-090-033, 330-090-034, 330-090-036, 330-090-038, 330-090-040, 330-100-031 (including right of ways).

Offsite Impact Area

Attachment I - Sensitive Species Observation Map

MSHCP Narrow Endemic & Criteria Area Sensitive Plant Surveys
Riverside Perris Airport Center, City of Perris

CADRE Environmental

1 inch = 350 feet