

Appendix G



INFORMATION SUMMARY

- A. Report Date: June 5th, 2019
- B. Report Title: Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Sensitive Plant Surveys for the 15.78-Acre Sapphire Project Site, Western Riverside County, City of Murrieta, California.
- C. Case #: DP-2019-1887, TPM 2019-1886
- D. APN#s: 392-280-007
- E. Project Location: USGS 7.5' Series Murrieta Quadrangle, Riverside County, Township 6 South, Range 3 West, Section 36, 35451 McElwain Road, North of Linnel Lane and East of McElwain Road, City of Murrieta, California, as shown in Attachment A, *Biological Resources Map*.
- F. Applicant: Murrieta Development II, LLC
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Murrieta, CA 92562
Contact: Joseph Sapp (858) 228-7322
- G. MOU Principal: Cadre Environmental
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Contact: Ruben S. Ramirez, Jr. (949) 300-0212
USFWS permit #TE780566-14, CDFW permit #02243
- H. Date of Surveys: March 12th, April 9th, May 7th, and June 3rd, 2019.
- I. Summary: The 15.78-acre property and 0.91-acre offsite assessment area (McElwain Road, Linnel Lane and Delaney Circle Right-Of-Ways) collectively referenced as (project site, 16.69 acres total) are dominated by disturbed/ruderal, California buckwheat scrub, coastal sage scrub, and ornamental trees.

The project site is not located within an MSHCP Criteria Area, Cell Group, or Linkage Area.

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered

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(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 occurs within a predetermined Survey Area for six (6) narrow endemic plant species including 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 2019). Suitable soils and vegetation were documented onsite for a single MSHCP narrow endemic sensitive plant - San Diego ambrosia.

Focused surveys were conducted during the spring of 2019.

No state or federally listed threatened or endangered plant species were detected on the project site. None of the six (6) MSHCP narrow endemic plants was observed on the project site.

SUBJECT

Western Riverside County Multiple Species Habitat Conservation Plan Narrow Endemic Sensitive Plant Surveys for the 15.78-Acre Sapphire Project Site, Western Riverside County, California.

This report presents the findings of a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) focused narrow endemic sensitive plant survey conducted for the 15.78-acre property and 0.91-acre offsite assessment area (McElwain Road, Linnel Lane and Delaney Circle Right-Of-Ways (ROW's)) collectively referenced as "Project Site" 16.69 acres total located within the western region of Riverside County, California.

The Project Site is located within United States Geological Survey (USGS) 7.5' Series Murrieta Quadrangle, Riverside County, Township 6 South, Range 3 West, Section 36. Specifically, the Project Site is located at 35451 McElwain Road, north of Linnel Lane and east of McElwain Road, City of Murrieta, California, as shown in Attachment A, *Biological Resources Map*. The offsite assessment area includes improvements and proposed sewer extension within the existing developed ROWs of McElwain Road, Linnel Lane, and Delaney Circle.

The Project Site is located within the Western Riverside County MSHCP Southwest Area Plan. The Project Site is not located within an MSHCP Criteria Area, Cell Group, or Linkage Area.

The Project Site lies within a predetermined Survey Area for six (6) narrow endemic plant species (RCA GIS Data Downloads 2019), which includes:

MSHCP Narrow Endemic Plant Species

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

Based on the results of a habitat assessment conducted on November 28th 2018, potential habitat is present on the property for a single MSHCP narrow endemic sensitive plant - San Diego ambrosia. 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 plants was conducted during the spring of 2019. Dates of the field surveys include: March 12th, April 9th, May 7th, and June 3rd, 2019. 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), a floral compendium listing all native and non-native plants observed onsite is attached as Appendix B (Floral Compendium).

EXISTING CONDITIONS

The Project Site slopes slightly from north to south with elevations extending from 1,600 feet above mean sea level (AMSL) in the extreme northwest region to 1,565 AMSL along the southeast boundary.

The Project Site is currently dominated by disturbed/ruderal, California buckwheat scrub, coastal sage scrub, and ornamental trees as illustrated in Attachment, A *Biological Resources Map*, Attachments B and C, *Current Project Site Photographs*, and outlined in Table 1, *Project Site Vegetation Community Acreages*.

Table 1
Project Site Vegetation Community Acreages

Vegetation Community	Project Site Onsite (ac)	Project Site Offsite (ac)	Total (ac)
Disturbed/Ruderal	9.86	0.08	9.94
California Buckwheat Scrub	2.57	0.09	2.66
Coastal Sage Scrub/Black Sage Dominant	2.02	0.20	2.22
Deerweed Scrub	0.65	--	0.65
Developed	0.45	0.52	0.97
Coast Live Oaks	0.13	--	0.13
Ornamental Trees	0.05	--	0.05
Chamise Chaparral	0.04	--	0.04
Disturbed	0.01	0.02	0.03
TOTAL	15.78	0.91	16.69

Source: Cadre Environmental 2019.

SOILS

The Soil Survey of Western Riverside Area has classified the Project Site as Cajalco fine sandy loam, 2 to 8 percent slopes, eroded (CaC2), Cajalco fine sandy loam 8, to 15 percent slopes, eroded (CaD2), Cieneba rocky sandy loam, 8 to 15 percent slopes (CkD2), and Cajalco rocky fine sandy loam, 5 to 15 percent slopes, eroded (CbD2), as illustrated in Attachment D, *Soils Association Map*. All soils documented within the Project Site are characterized as being well drained (drainage class).

PLANT COMMUNITY/HABITAT CLASSIFICATION

Disturbed/Ruderal

The majority of the Project Site is dominated by disturbed/ruderal vegetation. Common species documented within this habitat type include Russian thistle (*Salsola tragus*), totalote (*Centaurea melitensis*), red-stemmed filaree (*Erodium cicutarium*), white-stemmed filaree (*Erodium moschatum*), black mustard (*Brassica nigra*), fascicled tarweed (*Deinandra fasciculata*), tobacco tree (*Nicotiana glauca*), and doveweed (*Croton setigerus*). Non-native grasses scattered within this vegetation community include ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), wild oat (*Avena fatua*), slender wild oat (*Avena barbata*), and Mediterranean schismus (*Schismus barbatus*).

Developed

The developed region of the Project Site includes the offsite assessment area - McElwain Road, Linnel Lane and Delaney Circle ROWs.

California Buckwheat Scrub/Deerweed Scrub

Several large patches of California buckwheat and deerweed scrub were documented onsite. California buckwheat (*Eriogonum fasciculatum*) and deerweed (*Acmispon glaber*) were the dominant plant species within these vegetation communities. Less common species associated with the understory include California aster (*Corethrogyne filaginifolia*) and non-native grasses.

Coastal Sage Scrub

Several patches of coastal sage scrub were documented onsite. Common species documented within the vegetation community include California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), California matchweed (*Gutierrezia californica*), valley cholla (*Cylindropuntia californica*), and California buckwheat.

Coast Live Oak

Two (2) mature coast live oaks (*Quercus agrifolia*) were documented adjacent to Drainage A in the southwest region of the Project Site.

Blue Elderberry

Several native blue elderberry trees (*Sambucus cerulea*) were scattered throughout the Project Site.

Chamise Chaparral

A single small patch of chamise chaparral was documented near the southern terminus of Drainage B. This vegetation community is dominated by Chamise (*Adenostoma fasciculatum*).

Ornamental Trees

Several ornamental trees were documented within the Project Site including red gum (*Eucalyptus camaldulensis*), athel (*Tamarisk aphylla*) and olive trees (*Olea europaea*).

Mulefat Scrub

A single patch of mulefat scrub was documented at the southern terminus of Drainage A. This vegetation community is dominated by mulefat (*Baccharis salicifolia*). Representative distribution and photographs of these habitat types are illustrated in Attachment A, *Biological Resources Map* and Attachments B and C, *Current Project Site Photographs*.

The rainfall totals for the City of Murrieta recorded from 2015 through 2019 are shown in Table 2, *Seasonal Rainfall Totals for Murrieta*. The average rainfall total recorded for the City of Murrieta is 12.97 inches per season. To date, rainfall totals for the 2018-2019 season is 17.68 inches, WeatherCurrents web site accessed on June 5th, 2019.¹ Accordingly, the project survey results were not constrained by low seasonal rainfall.

Table 2
Seasonal Rainfall Totals for Murrieta
(Average rainfall per season is 12.97 inches)

Rainfall Season (Measured July 1 – June 30)	Precipitation Total
2018 – 2019	17.68 inches*
2017 – 2018	4.90 inches
2016 – 2017	17.97 inches
2015 – 2016	9.70 inches

* total as of June 5th, 2019

¹ WeatherCurrents: local weather history, Murrieta, CA. Available:
<https://weathercurrents.com/murrieta/ArchivePrecipitation.do>. Accessed June 5th 2019

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 is 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, including the offsite project area located west and south of the Project Site, Attachment A, *Biological Resources 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 (CNDDDB 2019), and CNPS (2019). 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 (2019);
- California Natural Diversity Data Base for the USGS 7.5' Murrieta Quadrangle (CNDDDB 2019);
- Soil Survey of Western Riverside Area (Knecht 1971; USDA-NRCS 2019);
- 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, four (4) surveys were conducted onsite, including March 12th, April 9th, May 7th, and June 3rd, 2019, which covered all suitable habitat areas within the Project Site.

All portions of the Project Site were surveyed on-foot by walking slowly and methodically across each habitat type. A complete list of the plants observed can be found in Appendix B–Floral Compendium. Scientific nomenclature and common names used in this report generally follow Roberts et al. (2004) and Baldwin et al. (2012), or Jepson Project eFlora (2019) for updated taxonomy.

Cadre Environmental conducted the vegetation mapping during the initial habitat assessment conducted on November 28th 2018 as shown in Attachment A, *Biological Resources Map* (Cadre Environmental 2018).

RESULTS

Narrow Endemic Plants: None of the six (6) MSHCP narrow endemic sensitive plant species were detected during the project surveys and/or are not expected to occur due to lack of suitable habitat present onsite as noted in Table 1, *Potential MSHCP Narrow Endemic Plants Assessment*.

Table 3
Potential MSHCP Narrow Endemic Plants Assessment

Species Name (<i>Scientific Name</i>) Status	Habitat Description	Comments
Munz's onion (<i>Allium munzii</i>) 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 sensitive plant surveys.

Species Name (Scientific Name) Status	Habitat Description	Comments
<p>San Diego ambrosia (<i>Ambrosia pumila</i>)</p> <p>FE CRPR List 1B.1 MSHCP NEPSA</p>	<p>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.</p>	<p>San Diego ambrosia has a moderate to low potential to occur onsite based on the presence of suitable loam soils and vegetation communities.</p> <p>Not detected within Project Site during focused spring 2019 sensitive plant surveys.</p>
<p>Many-stemmed dudleya (<i>Dudleya multicaulis</i>)</p> <p>CRPR List 1B.2 MSHCP NEPSA</p>	<p>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.</p>	<p>Many-stemmed dudleya is not expected to occur onsite based on a lack of suitable soil conditions.</p> <p>Not detected within Project Site during focused spring 2019 sensitive plant surveys.</p>
<p>Spreading navarretia (<i>Navarretia fossalis</i>)</p> <p>FT/SE CRPR List 1B.1 MSHCP NEPSA</p>	<p>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.</p>	<p>Many-stemmed dudleya is not expected to occur onsite based on a lack of suitable alkali soils and vernal pool resources.</p> <p>Not detected within Project Site during focused spring 2019 sensitive plant surveys.</p>
<p>California Orcutt grass (<i>Orcuttia californica</i>)</p> <p>FE/SE CRPR List 1B.1 MSHCP NEPSA</p>	<p>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</p>	<p>California Orcutt grass is not expected to occur onsite based on a lack of suitable vernal pool resources.</p> <p>Not detected within Project Site during focused spring 2019 sensitive plant surveys.</p>

Species Name (Scientific Name) Status	Habitat Description	Comments
	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.	
Wright's trichocoronis (<i>Trichocoronis wrightii</i> var. <i>wrightii</i>) 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 sensitive plant surveys.

No other CNPS, special-status plants, or species of local concern were observed onsite.

CONCLUSION

No state or federally listed threatened or endangered plant species were detected onsite. None of the MSHCP narrow endemic plants was observed onsite during the focused surveys conducted during the spring of 2019.

ATTACHMENTS

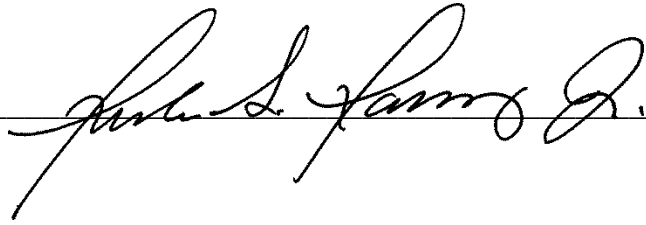
Attachment A - Biological Resources Map

Attachment B - Current Project Site Photographs

Attachment C - Current Project Site Photographs

Attachment D – Soil Associations Map

Author: _____

A handwritten signature in black ink, appearing to read "Paul L. Harny". The signature is written in a cursive, flowing style with a large initial "P" and "L".

Date: June 5th, 2019

APPENDIX A

LITERATURE CITED AND SELECTED REFERENCES

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. *The Jepson manual: Vascular plants of California*, 2nd ed. University of California Press, Berkeley.
- Cadre Environmental. 2018. General MSHCP Habitat Assessment/Constraints Analysis for the 14.34-Acre Murrieta Project Site, Western Riverside County, California.
- California Department of Fish and Wildlife (CDFW), Natural Diversity Data Base (CNDDDB). 2018a. Sensitive Element Record Search for the Murrieta Quadrangle. California Department of Fish and Wildlife. Sacramento, California. Accessed November 2018.
- California Department of Fish and Wildlife (CDFW). 2018b. Endangered, Threatened, and Rare Plants of California. Natural Heritage Division, Natural Diversity Data Base.
- California Department of Fish and Wildlife (CDFW). 2018c. Special Vascular Plants, Bryophytes, and Lichens. Natural Heritage Division, Natural Diversity Data Base.
- California Department of Fish and Wildlife (CDFW). 2018d. California Sensitive Natural Communities, www.wildlife.ca.gov/Data/VegCAMP/Naturalcommunities#sensitive natural communities. Accessed November 2018.
- California Native Plant Society. 2019. California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 05 June 2019].
- Caltrans. 2007. Final rare plant survey report. State Route 79 Realignment Project: Domenigoni Parkway to Gilman Springs Road. Realign State Route 79 between Domenigoni Parkway and Gilman Springs Road in the Cities of Hemet and San Jacinto and the County of Riverside, Riverside County, California. Riverside County Transportation Commission and CH2M HILL.
- Jepson Flora Project. 2019. Jepson eFlora, <http://ucjeps.berkeley.edu/eflora/> [accessed on June 2019].
- Knecht, A. 1971. Soil survey of western Riverside Area, California. United States Department of Agriculture, Soil Conservation Service, Washington, DC.

Regional Conservation Authority, Western Riverside County. 2017. Rare plant survey report 2017. MSHCP Biological Monitoring Program, Riverside County.

Riverside County Integrated Project (RCIP) Multiple Species Habitat Conservation Plan (MSHCP), March 2004.

Roberts, F. M., Jr., S. D. White, A. C. Sanders, D. E. Bramlet, and S. Boyd. 2004. The vascular plants of western Riverside County, California: An annotated checklist. F.M. Roberts Publications, San Luis Rey, CA.

Sawyer, J.O., T. Keeler-Wolf, and J. Evans. 2009. A Manual of California Vegetation, 2nd Edition. Sacramento: California Native Plant Society.

U.S. Fish and Wildlife Service. 1996. Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants. Department of the Interior, U.S. Fish and Wildlife Service, Portland, OR.

U.S. Fish and Wildlife Service. 2004. Endangered and Threatened Wildlife and Plants: Proposed Designation of Critical Habitat for *Navarretia fossalis* (spreading navarretia). Federal Register 69 (194): 60110-60134. 2004.

U.S. Fish and Wildlife Service. 2005. Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for *Brodiaea filifolia* (thread-leaved brodiaea); Final Rule. Federal Register 70:73820-73863. December 13, 2005.

U.S. Fish and Wildlife Service. 2005. Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for *Navarretia fossalis* (spreading navarretia); Final Rule. Federal Register 70:60658-60694. October 18, 2005.

U.S. Fish and Wildlife Service. 2012. Designation of revised critical habitat for *Allium munzii* (Munz's onion) and *Atriplex coronata* var. *notatior* (San Jacinto Valley crownscale). U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, Carlsbad, CA. Federal Register 77 (74): 23008–23056.

APPENDIX B

SAPPHIRE PROJECT – FLORAL COMPENDIUM

(*) asterisk indicates a non-native species

MONOCOTYLEDONES – MONOCOTS

LILIACEAE – LILY FAMILY

Calochortus splendens SPLENDID MARIPOSA LILY.

POACEAE (GRAMINEAE) – GRASS FAMILY

**Avena barbata* SLENDER WILD OAT.

**Avena fatua* WILD OAT.

**Bromus diandrus* COMMON RIPGUT GRASS.

**Bromus hordeaceus* SOFT CHESS.

**Bromus madritensis* subsp. *rubens* FOXTAIL CHESS or RED BROME.

**Festuca myuros* RATTAILED FESCUE.

**Hordeum murinum* subsp. *glaucum* GLAUCOUS BARLEY.

**Lamarckia aurea* GOLDENTOP.

**Schismus barbatus* MEDITERRANEAN SCHISMUS.

THEMIDACEAE – BRODIAEA FAMILY

Dichelostemma capitatum subsp. *capitatum* BLUE-DICKS.

EUDICOTYLEDONES – EUDICOTS

ADOXACEAE – ELDERBERRY FAMILY

Sambucus nigra subsp. *caerulea* BLUE ELDERBERRY.

APIACEAE (UMBELLIFERAE) – CARROT FAMILY

Daucus pusillus WILD CARROT

ASTERACEAE (COMPOSITAE) – SUNFLOWER FAMILY

Ambrosia psilostachya var. *californica* WESTERN RAGWEED.

Artemisia californica COASTAL SAGEBRUSH.

Baccharis salicifolia MULE FAT.

**Centaurea melitensis* TOCALOTE.

Corethrogyne filaginifolia SAND ASTER.

Deinandra fasciculata FASCICLED TARPLANT.

Ericameria pinifolia PINE GOLDENBUSH.

Erigeron foliosus var. *foliosus* LEAFY DAISY.

Eriophyllum multicaule MANY-STEMMED WOOLLY DAISY.

Gutierrezia californica CALIFORNIA MATCHWEED.

Helianthus annuus WESTERN SUNFLOWER.

**Helminthotheca echioides* BRISTLY OX-TONGUE.

Heterotheca grandiflora TELEGRAPH WEED.

**Hypochaeris glabra* SMOOTH CAT'S EAR.

**Lactuca serriola* PRICKLY or WILD LETTUCE.

Lasthenia californica CALIFORNIA GOLDFIELDS.

- Logfia filaginoides*** CALIFORNIA FILAGO or FLUFFWEED.
****Logfia gallica*** NARROW-LEAVED FILAGO.
Malacothrix saxatilis* var. *tenuifolia SLENDER-LEAVED MALACOTHRIX.
****Oncosiphon piluliferum*** STINK-NET.
****Senecio vulgaris*** COMMON GROUNDSEL.
****Sonchus asper*** PRICKLY SOW-THISTLE.
****Sonchus oleraceus*** COMMON SOW-THISTLE.

BORAGINACEAE – BORAGE or WATERLEAF FAMILY

- Amsinckia intermedia*** COMMON FIDDLENECK.
Cryptantha intermedia COMMON CRYPTANTHA.
Emmenanthe penduliflora* var. *penduliflora WHISPERING BELLS.
Eucrypta chrysanthemifolia* var. *chrysanthemifolia COMMON EUCRYPTA.
Pectocarya linearis SLENDER PECTOCARYA.
Phacelia cicutaria CATERPILLAR PHACELIA.
Phacelia minor WILD CANTERBURY-BELL.

BRASSICACEAE (CRUCIFERAE) – MUSTARD FAMILY

- **Brassica nigra*** BLACK MUSTARD.
****Sisymbrium irio*** LONDON ROCKET.
****Sisymbrium orientale*** HARE'S-EAR CABBAGE.

CACTACEAE – CACTUS FAMILY

- Cylindropuntia californica*** VALLEY CHOLLA.

CHENOPODIACEAE – GOOSEFOOT FAMILY

- **Atriplex suberecta*** SERRATE-LEAVED SALTBUCH.
****Chenopodium murale*** NETTLE-LEAVED GOOSEFOOT
****Salsola tragus*** RUSSIAN-THISTLE.

CRASSULACEAE – STONECROP FAMILY

- Crassula connata*** SAND PIGMY-STONECROP.

EUPHORBIACEAE – SPURGE FAMILY

- Croton setigerus*** DOVEWEED.
Chamaesyce albomarginata RATTLESNAKE SPURGE.

FABACEAE (LEGUMINOSAE) – PEA FAMILY

- Acmispon glaber* var. *glaber*** COASTAL DEERWEED.
Acmispon strigosus STRIGOSE LOTUS.
Lupinus bicolor MINIATURE LUPINE.
****Melilotus indica*** SOURCLOVER.

FAGACEAE – OAK FAMILY

- Quercus agrifolia* var. *agrifolia*** COAST LIVE OAK.

GERANIACEAE – GERANIUM FAMILY

- **Erodium botrys*** LONG-BEAKED FILAREE.
****Erodium cicutarium*** RED-STEMMED FILAREE.

****Erodium moschatum*** WHITE-STEMMED FILAREE.

LAMIACEAE (LABIATAE) – MINT FAMILY

****Marrubium vulgare*** COMMON HOREHOUND.

Salvia columbariae CHIA.

Salvia mellifera BLACK SAGE.

MELIACEAE – MAHOGONY FAMILY

****Melia azedarach*** CHINA BERRY or PERSIAN LILAC.

MONTIACEAE – MINER'S LETTUCE FAMILY

Calandrinia menziesii RED MAIDS

MYRSINACEAE – MYRSINE FAMILY

****Anagallis arvensis*** L. SCARLET PIMPERNEL.

MYRTACEAE – MYRTLE FAMILY

****Eucalyptus camaldulensis*** RED GUM.

NYCTAGINACEAE – FOUR-O'CLOCK FAMILY

Mirabilis laevis CALIFORNIA WISHBONE BUSH.

OLEACEAE – OLIVE FAMILY

****Olea europea*** COMMON OLIVE.

ONAGRACEAE – EVENING PRIMROSE FAMILY

Camissonia strigulosa STRIGULOSE EVENING PRIMROSE.

Camissoniopsis bistorta CALIFORNIA SUN CUP.

PLANTAGINACEAE – PLANTAIN FAMILY

Nuttallanthus texanus LARGER BLUE TOAD-FLAX.

Plantago erecta CALIFORNIA PLANTAIN.

POLEMONIACEAE – PHLOX FAMILY

Gilia angelensis LOS ANGELES GILIA.

Navarretia atractylodes HOLLY-LEAVED SKUNKWEED.

POLYGONACEAE – BUCKWHEAT FAMILY

Chorizanthe fimbriata var. ***fimbriata*** FRINGED SPINEFLOWER.

Eriogonum fasciculatum INTERIOR CALIFORNIA BUCKWHEAT.

Eriogonum gracile SLENDER BUCKWHEAT.

Lastarriaea coriacea LASTARRIAEA.

****Polygonum aviculare*** subsp. ***depressum*** COMMON KNOTWEED.

Pterostegia drymarioides GRANNY'S HAIRNET.

ROSACEAE – ROSE FAMILY

Adenostoma fasciculatum var. ***fasciculatum*** CHAMISE.

Heteromeles arbutifolia TOYON or CHRISTMAS BERRY.

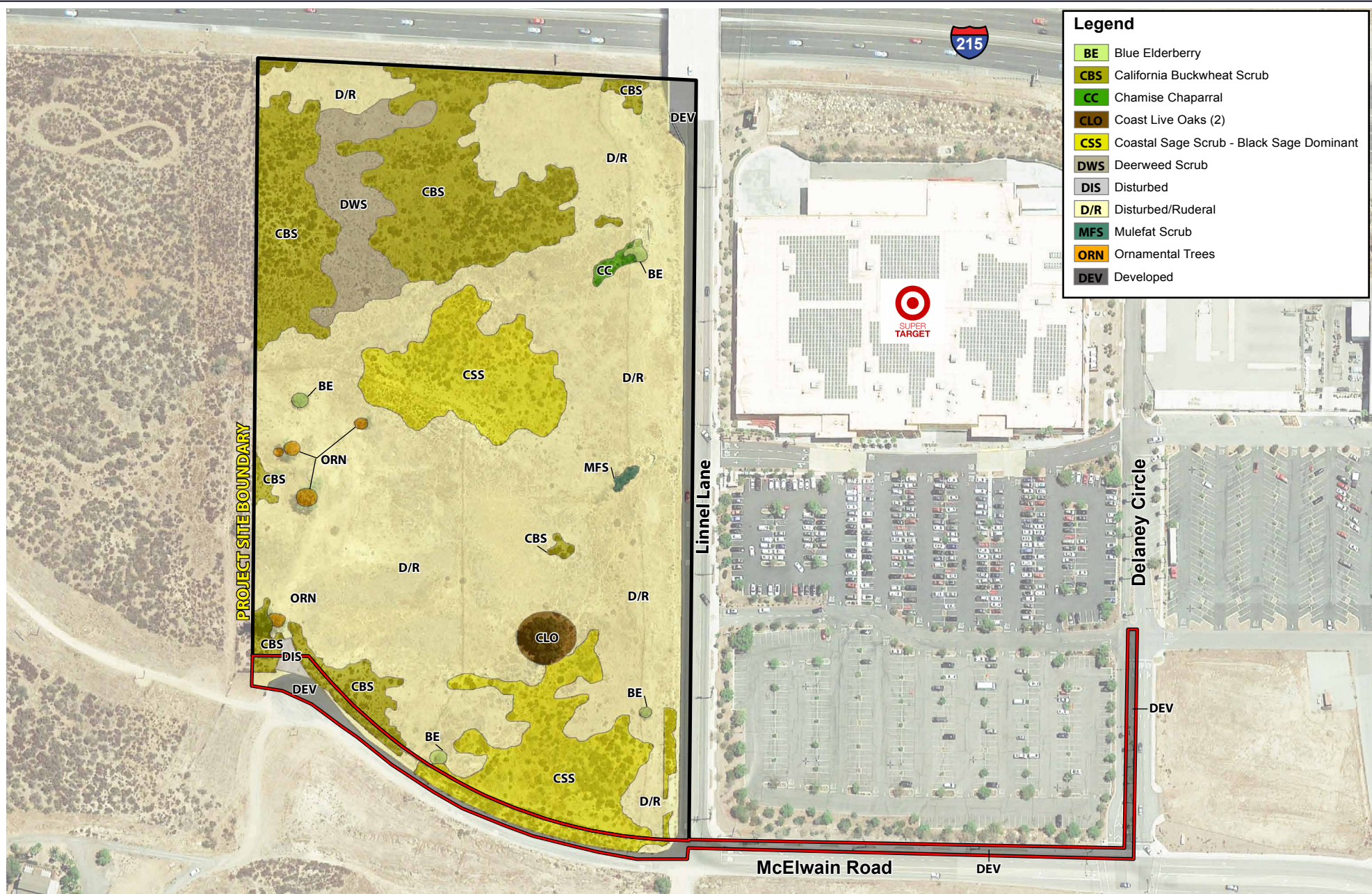
SOLANACEAE – NIGHTSHADE FAMILY

****Nicotiana glauca*** Grah. TREE TOBACCO.

Solanum xanti CHAPARRAL NIGHTSHADE.

TAMARICACEAE – TAMARISK FAMILY

****Tamarix aphylla*** ATHEL.



Attachment A - Biological Resources Map

MSHCP Narrow Endemic Sensitive Plant Surveys
Sapphire Project Site - APN 392-280-007

CADRE
Environmental



1 inch = 200 feet



PHOTOGRAPH 1 - Northeast view of Project Site from coastal sage scrub (black sage dominant) toward two coast live oak trees documented onsite.



PHOTOGRAPH 2 - Southward view of one of two drainage features which bisect the Project Site in a southward direction and exit through culverts extending under Linnel Lane.

Attachment B - Current Project Site Photographs

*MSHCP Narrow Endemic Sensitive Plant Surveys
Sapphire Project Site - APN 392-280-007*



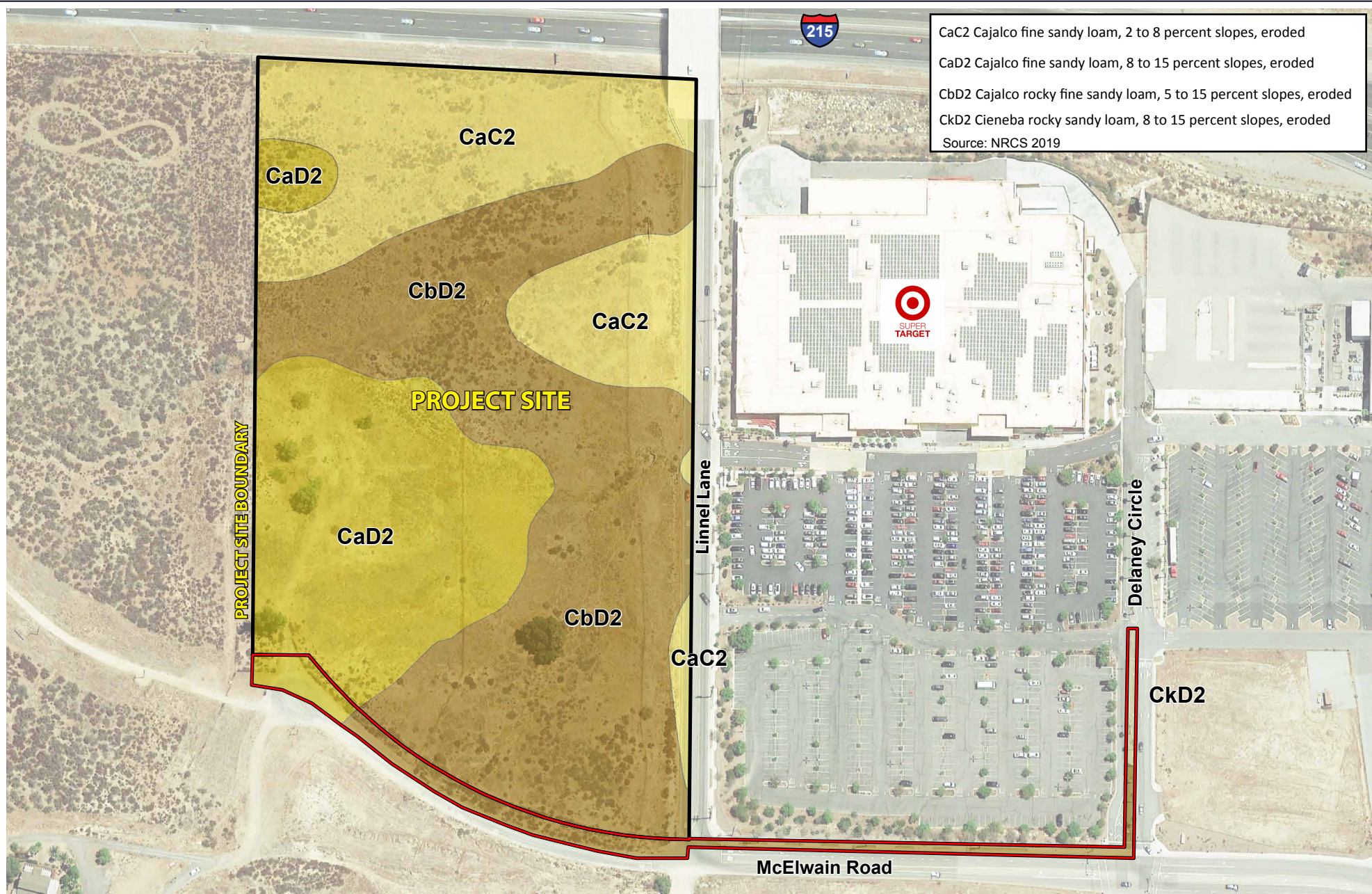
PHOTOGRAPH 3 - Westward view of the northern region of the Project Site. California buckwheat scrub is shown in the foreground.



PHOTOGRAPH 4 - Westward view of the dominant disturbed/ruderal vegetation documented onsite.

Attachment C - Current Project Site Photographs

*MSHCP Narrow Endemic Sensitive Plant Surveys
Sapphire Project Site - APN 392-280-007*



Offsite Assessment Area

Attachment D - Soils Association Map

MSHCP Narrow Endemic Sensitive Plant Surveys
Sapphire Project Site - APN 392-280-007

CADRE
Environmental



1 inch = 200 feet