

Appendix B

**WESTERN RIVERSIDE COUNTY MULTIPLE
SPECIES HABITAT CONSERVATION PLAN
(MSHCP) BIOLOGICAL RESOURCES
COMPLIANCE ANALYSIS FOR THE
15.78-ACRE SAPPHIRE PROJECT SITE**

**CITY OF MURRIETA,
WESTERN RIVERSIDE COUNTY, CALIFORNIA**

APN 392-280-007

Submitted to:

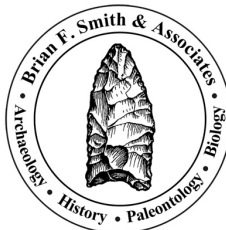
**City of Murrieta
1 Town Square
Murrieta, California 92562**

Prepared on Behalf of:

**Joseph Sapp
Murrieta Development II, LLC
23656 Bellwood Court
Murrieta, California 92562**

Prepared by:

**Ruben S. Ramirez, Jr.
Cadre Environmental
c/o Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064**



June 5, 2019

INFORMATION SUMMARY



- A. Report Date: June 5th, 2019
- B. Report Title: Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Biological Resources Compliance Analysis for the 15.78-Acre Sapphire Project Site, Western Riverside County, City of Murrieta California.
- C. Case #: DP-2019-1887, TPM 2019-1886
- D. APNs#: 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, *Regional Location Map* and Attachment B, *Project Site Map*.
- F. Applicant: Murrieta Development II, LLC
23656 Bellwood Court
Murrieta, CA 92562
Contact: Joseph Sapp (858) 228-7322
- G. MOU Principal: Cadre Environmental
701 Palomar Airport Road, Suite 300
Carlsbad, CA. 92011
Contact: Ruben S. Ramirez, Jr. (949) 300-0212
USFWS permit #TE780566-14, CDFW permit #02243
- H. Date of Surveys: November 28th, 2018, March 5th, 12th, 25th, April 9th, 16th, May 7th, 14th, 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 located within the MSHCP Southwest Area Plan. The project site is not located within an MSHCP Criteria Area, Cell Group, or Linkage Area. Therefore, no Habitat Evaluation and Acquisition Negotiation Strategy (HANS) or Joint Project Review (JPR) are required.

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 does not occur within a predetermined Survey Area for criteria area plant species. (RCA GIS Data Downloads 2018). No additional surveys are required.

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*), many-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 2018) as shown in Attachment C, *MSHCP Relationship Map*. Suitable soils and vegetation were documented onsite for a single sensitive plant - San Diego ambrosia. Focused surveys were conducted during the spring of 2019. No MSHCP narrow endemic plants detected within the project site (Cadre Environmental 2019b).

The project site does not occur within a predetermined Survey Area for amphibians (RCA GIS Data Downloads 2018). No additional surveys are required.

The project site does not occur within a predetermined Survey Area for mammals (RCA GIS Data Downloads 2018). No additional surveys are required.

The project site occurs completely within a predetermined Survey Area for the burrowing owl (*Athene cunicularia*) as shown in Attachment C, *MSHCP Relationship Map*. Suitable burrowing owl burrows potentially utilized for refugia and/or nesting were documented within the property including foraging habitat documented throughout the project site. Based on the presence of suitable habitat, focused MSHCP burrowing owl surveys were conducted during the spring of 2019. No burrowing owl or characteristic sign such as white-wash, feathers, tracks, or pellets were detected within or immediately adjacent to the project site (Cadre Environmental 2019a). At a minimum, an MSHCP 30-day preconstruction survey will be required immediately prior to the initiation of construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP.

Two (2) drainage features bisect the project site in a southeast direction extending offsite through existing culverts which extend under Linnel Lane as shown in Attachment H, *MSHCP Riparian and Riverine Resources Map*. Both Drainage A and B extend offsite in a southwest direction through natural and constructed flood control basins and channels which ultimately drain into Murrieta Creek. Drainage B represents a “blue line stream”. Both drainage features represent MSHCP Section 6.1.2 riverine resources. The 0.02-acre patch of mulefat scrub (total of 6 distressed shrubs) located within Drainage A represent an MSHCP Section 6.1.2 riparian resource. Direct or indirect impacts to these MSHCP Section 6.1.2 resources will require the development of an MSHCP Determination of Biological Equivalent or Superior Preservation (DBESP).

The 0.02-acre patch of mulefat scrub (total of 6 distressed shrubs) does not represent suitable habitat for the least Bell’s vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*) or western yellow-billed cuckoo (*Coccyzus americanus*) as detailed in the following report and shown in Attachment D, *Biological Resources Map*, and Attachments E and F, *Current Project Site Photographs*. No additional surveys are required.

Two (2) mature coast live oaks (*Quercus agrifolia*) and six (6) mature ornamental trees are located within the project site (BSA 2019). A site-specific tree study and mitigation plan has been developed. A tree removal permit will be required and include information outlined in the City of Murrieta Tree Preservation Ordinance (16.42 Tree Preservation).

The two (2) drainage features that bisect the project site represent jurisdictional resources which would be regulated by the Santa Ana Regional Water Quality Control Board, California Department of Fish and Wildlife and United States Army Corps of Engineers. A formal jurisdictional delineation will be required and all applicable regulatory permits acquired for direct or indirect impacts to these features.

SUBJECT

Western Riverside County Multiple Species Habitat Conservation Plan Biological Resources Compliance Analysis for the 15.78-Acre Sapphire Project Site, Western Riverside County, California.

This report presents the findings of a biological resources Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) compliance analysis 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. Specifically, the Project Site is located within APN 392-280-007. The purpose of this study, conducted by Cadre Environmental, is to document the existing biological resources, identify general vegetation types, and assess the potential biological and regulatory constraints associated with the proposed development and ensure compliance with the Western Riverside County MSHCP.

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, *Regional Location Map* and Attachment B, *Project Site 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 Multiple Species Habitat Conservation Plan (MSHCP) Southwest Area Plan. The Project Site is not located within an MSHCP Criteria Area, Cell Group, or Linkage Area.

This report incorporates the findings of an extensive literature review, compilation of existing documentation, field reconnaissance, and focused surveys conducted on November 28th, 2018, March 5th, 12th, 25th, April 9th, 16th, May 7th, 14th, and June 3rd, 2019. This documentation is consistent with accepted scientific and technical standards, the requirements of the United States Fish and Wildlife Service (USFWS), and the California Department of Fish and Wildlife (CDFW). When appropriate, general biological resources are described in summary form in an effort to provide the reader with adequate background information. However, the report focuses on documenting those resources considered to be significant and/or sensitive as outlined by the California Environmental Quality Act (CEQA) and the Western Riverside County MSHCP.

The following report provides a summary of topographic features, soils and habitats observed onsite. Onsite resources were also analyzed to determine which if any are subject to the United States Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act, CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Wildlife Code, the Santa Ana Regional Water Quality Control

Board (RWQCB) 401 certification/Waste Discharge Requirements (WDR's), and MSHCP jurisdiction pursuant to section 6.1.2 (MSHCP 2004).

Accordingly, this report provides an overview of potential USACE, RWQCB, CDFW, MSHCP riparian/riverine/vernal pool jurisdictional resources and a habitat assessment for species that may require additional focused surveys as outlined by the MSHCP.

METHODS OF STUDY

APPROACH

Prior to visiting the Project Site, a review of all available and relevant data on the biological characteristics, sensitive habitats, and species potentially present on or adjacent to the Project Site was conducted. Additionally, aerial photography, and USGS topographic map were examined. After reviewing the available information, Cadre Environmental conducted a physical site assessment.

As required by the MSHCP, and during the initial property assessment process, all Project Site APN's were searched using the Regional Conservation Authority (RCA) Geographic Information System (GIS) Data to determine if the property falls within a "Criteria Area" and if additional surveys for narrow endemic/criteria area plant species or wildlife not adequately covered by the MSHCP may be required as shown in Attachment C, *MSHCP Relationship Map*.

Data, which contain digital images derived from aerial photography with orthographic projection properties, were used in conjunction with Cadre Environmental's in-house geographic information system (GIS) database as an important base layer to identify vegetation communities, drainage features, and USFWS designated critical habitat boundaries. Vegetation communities were then "ground-truthed" during field observations to obtain characteristic descriptions.

LITERATURE REVIEW

The study was initiated with a review of relevant literature on the biological resources of the Project Site and vicinity. The MSHCP list of covered species potentially occurring onsite was also examined (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). In addition, federal register listings, protocols, and species data provided by USFWS were reviewed in conjunction with anticipated federally listed species potentially occurring at the Project Site. The California Natural Diversity Database (CNDDDB),¹ a review of the California Native Plant Society sixth inventory (Tibor 2001), and Roberts et al. (2004) were also reviewed for pertinent information regarding the location of known occurrences of sensitive species in the vicinity of the property. In addition, numerous regional floral and faunal field guides were utilized in the identification

¹ California Natural Diversity Data Base, Department of Fish and Game. November 2018. Natural Heritage Program: RareFind, Murrieta Quadrangle.

of species and suitable habitats. Documents consulted regarding potential onsite biological conditions are listed in the references section at the end of this report.

FIELD INVESTIGATION

The Project Site was initially surveyed on November 28th, 2018. The survey included complete coverage of the Project Site, with special attention focused toward sensitive species or those habitats potentially supporting sensitive flora or fauna that would be essential to efficiently implementing the terms and conditions of the Western Riverside County MSHCP including features potentially subject to MSHCP 6.1.2 jurisdiction. Aerial photography of the Project Site and vicinity was utilized to accurately locate and survey the property. General plant communities were preliminarily mapped directly on the aerial photo using visible landmarks in the field, which are depicted in Attachment D, *Biological Resources Map*. Representative photographs of the Project Site's natural resources were taken during the field survey Attachment E and F, *Current Project Site Photographs*).

Plant Community/Habitat Classification and Mapping

Plant communities were preliminarily mapped with the aid of an aerial photograph using the MSHCP uncollapsed vegetation communities classification system when appropriate. When a vegetation community could not be accurately characterized using this information, an updated community classification code was developed to more accurately represent onsite habitat types.

General Plant Inventory

All plants observed during the survey efforts were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy and nomenclatural changes follow Baldwin et al. (2012) or the Jepson Flora Project (2018). Common names used in this report generally follow Roberts et al. (2004) or Baldwin et al. (2012). Scientific names are included only at the first mention of a species; thereafter, common names alone are used.

General Wildlife Inventory

General wildlife surveys were not conducted during the general biological habitat assessment. However, animals identified during the reconnaissance survey by sight, call, tracks, nests, scat, remains, or other signs were recorded in field notes. All wildlife was identified in the field with the aid of binoculars and taxonomic keys (if applicable). Vertebrate taxonomy followed in this report is according to the Center of North American Herpetology (2018) for amphibians and reptiles, the American Ornithologists' Union (1998 and supplemental) for birds, and Bradley et al. (2014) for mammals. Scientific names are used during the first mention of a species; common names only are used in the remainder of the text (if applicable).

MSHCP Narrow Endemic Sensitive Plant Focused Surveys

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, including the offsite project area located west and south of the Project Site.

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.

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. 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.

MSHCP Burrowing Owl Habitat Assessment/Focused Surveys

The Project Site occurs within a MSHCP burrowing owl (*Athene cunicularia*) survey area and a habitat assessment was conducted for the species to ensure compliance with MSHCP guidelines for the species.

In accordance with the MSHCP Burrowing Owl Survey Instructions (2006), survey protocol consists of two steps, Step I – Habitat Assessment and Step II – Locating Burrows and Burrowing Owls. The following section describes the approach to conducting the habitat assessment.

Step I – Habitat Assessment

Step 1 of the MSHCP habitat assessment for burrowing owl consists of a walking survey to determine if suitable habitat is present onsite. Cadre Environmental conducted the habitat assessment on November 28th, 2018. Upon arrival at the Project Site, and prior to initiating the assessment survey, Cadre Environmental used binoculars to scan all suitable habitats on and adjacent to the property, including perch locations, to ascertain owl presence.

All suitable areas of the Project Site were surveyed on foot by walking slowly and methodically while recording/mapping areas that may represent suitable owl habitat onsite. Primary indicators of suitable burrowing owl habitat in western Riverside County include, but are not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels (*Otospermophilus beecheyi*) or badgers (*Taxidea taxus*), but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock,

wood debris piles, openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or in close proximity to man-made structures.

According to the MSHCP guidelines, if suitable habitat is present, the biologist should also walk the perimeter of the property, which consists of a 150-meter (approximately 500 feet) buffer zone around the Project Site boundary. If permission to access the buffer area cannot be obtained, the biologist shall not trespass, but visually inspect adjacent habitats with binoculars. In addition to surveying the entire Project Site all bordering natural habitats located immediately adjacent to the Project Site were assessed.

Results from the habitat assessment indicate that suitable resources for burrowing owl are present throughout the Project Site. Accordingly, if suitable habitat is documented onsite or within adjacent habitats, both Step II, focused surveys and the 30-day preconstruction surveys are required in order to comply with the MSHCP guidelines.

Step II – Locating Burrows and Burrowing Owls

Concurrent with the initial habitat assessment, a detailed focused burrow survey was conducted and included documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl - as part of the MSHCP protocol, which is described below under Part A. Focused Burrow Survey. The MSHCP protocol indicated that no more than 100 acres should be surveyed per day/per biologist.

Part A: Focused Burrow Survey

A systematic survey for burrows, including burrowing owl sign, was conducted by walking across all suitable habitats mapped within the Project Site on November 28th, 2019. Pedestrian survey transects were spaced to allow 100% visual coverage of the ground surface. The distances between transect centerlines were no more than 20 meters (approximately 66 ft.) apart, and owing to the terrain, often much smaller. Transect routes were also adjusted to account for topography and in general ground surface visibility.

All observations of suitable burrows or dens, natural or man-made, or sightings of burrowing owl, were recorded and mapped during the survey.

Part B: Focused Burrowing Owl Surveys

Four (4) focused burrowing owl surveys (in addition to the initial focused burrow survey – Step II, Part A) were conducted on March 5th, 25th, April 16th, and May 14th, 2019 from one hour before sunrise to two hours after sunrise as outlined in Table 1, *Burrowing Owl Survey Schedule*. During visual surveys, all potentially suitable burrow or structure entrances were investigated for signs of owl occupation, such as feathers, tracks, or pellets, and carefully observed to determine if burrowing owls utilize these features, when present. All burrows are monitored at a short distance from the entrance, and at a location that would not interfere with potential owl behavior, when present. In addition to monitoring potential burrow locations, all suitable habitats in the Project Site were walked along transects averaging 20 meters (approximately 66 feet) between centerlines.

Regional Connectivity/Wildlife Movement Corridor Assessment

The analysis of wildlife movement corridors associated with the Project Site and its immediate vicinity is based on information compiled from literature, analysis of the aerial photograph, and direct observations made in the field during the site visit.

A literature review was conducted that included documents on island biogeography (studies of fragmented and isolated habitat “islands”), reports on wildlife home range sizes and migration patterns, and studies on wildlife dispersal. Wildlife movement studies conducted in southern California were also reviewed. Use of field-verified digital aerial data, in conjunction with the GIS database, allowed proper identification of vegetation communities and drainage features. This information was crucial to assessing the relationship of the property to large open space areas in the immediate vicinity and was also evaluated in terms of connectivity and habitat linkages. Relative to corridor issues, the discussions in this report are intended to focus on wildlife movement associated with the property and the immediate vicinity.

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, D *Biological Resources Map*, Attachments E and F, *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), Cienega 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 G, *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 (*Opuntia parryi*), 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 Eucalyptus (*Eucalyptus* sp.), tamarisk (*Tamarisk* sp.) 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 D, *Biological Resources Map* and Attachments E and F, *Current Project Site Photographs*.

WILDLIFE POPULATIONS

General wildlife species documented onsite or within the vicinity during the site visit include red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), house wren (*Troglodytes aedon*), American crow (*Corvus brachyrhynchos*), Cassin's kingbird (*Tyrannus vociferans*), Say's phoebe (*Sayornis saya*), California towhee (*Pipilo crissalis*), western meadowlark (*Sturnella neglecta*), northern mockingbird (*Mimus polyglottos*), yellow-rumped warbler (*Setophaga coronata*), song sparrow (*Melospiza melodia*), house finch (*Carpodacus mexicanus*), and house sparrow (*Passer domesticus*).

REGIONAL CONNECTIVITY/WILDLIFE MOVEMENT

Overview

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and

Wilson 1967, Soule 1987, Harris and Gallagher 1989, Bennett 1990). Corridors effectively act as links between different populations of a species. A group of smaller populations (termed “demes”) linked together via a system of corridors is termed a “metapopulation.” The long-term health of each deme within the metapopulation is dependent upon its size and the frequency of interchange of individuals (immigration vs. emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population’s genetic variability is generally associated with an increase in a population’s health.

Corridors mitigate the effects of habitat fragmentation by (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Noss 1983, Fahrig and Merriam 1985, Simberloff and Cox 1987, Harris and Gallagher 1989). Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies, such as “wildlife corridor”, “travel route”, “habitat linkage”, and “wildlife crossing” to refer to areas in which wildlife moves from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

Travel Route: A landscape feature (such as a ridge line, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relatively direct link between target habitat areas.

Wildlife Corridor: A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as “habitat or landscape linkages”) can provide both transitory and resident habitat for a variety of species.

Wildlife Crossing: A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through

an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often “choke points” along a movement corridor.

Wildlife Movement within the Project Site

The Project Site does not represent a wildlife movement corridor. The property is bordered to the east by Interstate 215 and south by commercial development. The Project Site is not located within a MSHCP designated core, extension of existing core, non-contiguous habitat block, constrained linkage, or linkage area.

SENSITIVE BIOLOGICAL RESOURCES

OVERVIEW OF CLASSIFICATIONS

The following discussion describes the plant and wildlife species present, or potentially present, within the property boundaries, that have been afforded special recognition by federal, state, or local resource conservation agencies and organizations, principally due to the species’ declining or limited population sizes, usually resulting from habitat loss. Also discussed are habitats that are unique, of relatively limited distribution, or of particular value to wildlife. Protected sensitive species are classified by either state or federal resource management agencies, or both, as threatened or endangered under provisions of the state and federal Endangered Species Acts. Vulnerable or “at-risk” species that are proposed for listing as threatened or endangered are categorized administratively as “candidates” by the USFWS. The CDFW uses various terminology and classifications to describe vulnerable species. There are additional sensitive species classifications applicable in California. These are described below.

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, or rare. The CDFW, the USFWS, and special groups like the California Native Plant Society (CNPS) maintain watch lists of such resources. For the purpose of this assessment, sources used to determine the sensitive status of biological resources are:

Plants: USFWS (2018), CDFW (2018d, 2018e), CNDDDB (2018a), and CNPS (Skinner and Pavlik 1994).

Wildlife: California Wildlife Habitat Relationships Database System (CWHRDS 1991), USFWS (2018), CDFW (2018b, 2018c), CNDDDB (2018a).

Habitats: CNDDDB (2018a), CDFW (2018f).

Federal Protection and Classifications

The Federal Endangered Species Act of 1973 (FESA) defines an endangered species as “any species that is in danger of extinction throughout all or a significant portion of its range.” Threatened species are defined as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under provisions of Section 9(a)(1)(B) of the FESA, it is unlawful to “take” any listed species. “Take” is defined as follows in Section 3(18) of the FESA: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the USFWS, through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification as forms of a “take.” These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with the USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants. Recently, the USFWS instituted changes in the listing status of former candidate species. Former C1 (candidate) species are now simply referred to as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing at this time) and C3 species (either extinct, no longer a valid taxon, or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. However, some USFWS field offices have issued memoranda stating that former C2 species are henceforth to be considered Federal Species of Concern. This term is employed in this document, but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing, or a candidate) include the most current published status or candidate category to which each species has been assigned by the USFWS. For purposes of this assessment, the following acronyms are used for federal status species:

FE	Federal Endangered
FT	Federal Threatened
FPE	Federal Proposed Endangered
FPT	Federal Proposed Threatened
FC	Federal Candidate for Listing

State of California Protection and Classifications

The California Endangered Species Act (CESA) defines an endangered species as “...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.” The State defines a threatened species as “...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although

not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species.” Candidate species are defined as “...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.” Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the federal FESA, the CESA does not include listing provisions for invertebrate species.

Article 3, sections 2080 through 2085 of the CESA addresses the taking of threatened or endangered species by stating “no person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided...” Under the CESA, “take” is defined as “...hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Exceptions authorized by the state to allow “take” require “...permits or memorandums of understanding...” and can be authorized for “...endangered species, threatened species, or candidate species for scientific, educational, or management purposes.” Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

Additionally, some sensitive mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the California Fish and Game Code, sections 4700 and 3511, respectively. California Species of Special Concern (“special” animals and plants) listings include special status species, including all state and federal protected and candidate taxa, Bureau of Land Management and U.S. Forest Service sensitive species, species considered to be declining or rare by the CNPS or National Audubon Society, and a selection of species that are considered to be under population stress but are not formally proposed for listing. This list is primarily a working document for the CDFW CNDDDB project. Informally listed taxa are not protected per se, but warrant consideration in the preparation of biotic assessments. For some species, the CNDDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites. For the purposes of this assessment, the following acronyms are used for state status species:

SE	State Endangered
ST	State Threatened
SCE	State Candidate Endangered
SCT	State Candidate Threatened
SFP	State Fully Protected
SP	State Protected

SR	State Rare
CSC	California Species of Special Concern
WL	California Watch List

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in the state. This organization has compiled an inventory comprised of the information focusing upon geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California (Tibor 2001). The list serves as the candidate list for listing as threatened and endangered by the CDFW. The CNPS has developed five categories of rarity (California Rare Plant Rank [CRPR]):

CRPR 1A	Presumed extinct in California
CRPR 1B	Rare, threatened, or endangered in California and 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	Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat

As stated by the CNPS:

Threat Rank is an extension added onto the California Rare Plant Rank and designates the level of endangerment by a 1 to 3 ranking with 1 being the most endangered and 3 being the least endangered. A Threat Rank is present for all California Rare Plant Rank 1B, 2, 4, and the majority of California Rare Plant Rank 3. California Rare Plant Rank 4 plants are seldom assigned a Threat Rank of 0.1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a California Rare Plant Rank. In addition, all California Rare Plant Rank 1A (presumed extinct in California), and some California Rare Plant Rank 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension (CNPS 2012).

0.1	Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
0.2	Fairly threatened in California (20-80 percent occurrences threatened/moderate degree and immediacy of threat)

0.3	Not very threatened in California (<20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)
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POTENTIALLY SENSITIVE SPECIES/RESOURCES

Determinations of MSHCP sensitive species that could potentially occur on the Project Site are based on one or both of the following: (1) a record reported in the CNDDDB or CNPS inventory and; (2) the Project Site is within the known distribution of a species and contains suitable habitat or species documented onsite.

Sensitive Plant Communities

As stated by CDFG:

“One purpose of the vegetation classification is to assist in determining the level of rarity and imperilment of vegetation types. Ranking of alliances according to their degree of imperilment (as measured by rarity, trends, and threats) follows NatureServe’s Heritage Methodology, in which all alliances are listed with a G (global) and S (state) rank. For alliances with State ranks of S1-S3, all associations within them are also considered to be highly imperiled” (CDFG 2012)

No sensitive plant communities were documented onsite.

Sensitive Plant Species

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 and/or criteria area species if suitable habitat is documented onsite and/or if the property is located within a predetermined “Survey Area” (MSHCP 2004).

The Project Site does not occur within a predetermined Survey Area for MSHCP criteria area plant species. (RCA GIS Data Downloads 2018).

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*), many-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 2018). Suitable soils and vegetation were documented onsite for a single sensitive plant - San Diego ambrosia as shown in Table 2, *Potential MSHCP Narrow Endemic Plants Assessment*.

No MSHCP narrow endemic sensitive plant species were detected within the Project Site during spring 2019 focused surveys (Cadre Environmental 2019b).

Table 2
Potential MSHCP Narrow Endemic Plants Assessment

Species Name (Scientific Name) 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 (Cadre Environmental 2019b).
San Diego ambrosia (<i>Ambrosia pumila</i>) 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 and vegetation communities. Not detected within Project Site during focused spring 2019 sensitive plant surveys (Cadre Environmental 2019b).
Many-stemmed dudleya (<i>Dudleya multicaulis</i>) 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 sensitive plant surveys (Cadre Environmental 2019b).
Spreading navarretia (<i>Navarretia fossalis</i>) 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	Many-stemmed dudleya is not expected to occur onsite based on a lack of suitable alkali soils and vernal pool resources. Not detected within Project Site

Species Name (<i>Scientific Name</i>) Status	Habitat Description	Comments
	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.	during focused spring 2019 sensitive plant surveys (Cadre Environmental 2019b).
California Orcutt grass (<i>Orcuttia californica</i>) 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 sensitive plant surveys (Cadre Environmental 2019b).
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 (Cadre Environmental 2019b).

Tree Resources

Two (2) mature coast live oaks (*Quercus agrifolia*) and six (6) mature ornamental trees are located within the Project Site (BSA 2019). A site-specific tree study and mitigation plan has been developed. A tree removal permit will be required and include information outlined in the City of Murrieta Tree Preservation Ordinance (16.42 Tree Preservation) if the proposed project would directly or indirectly impact these resources.

Sensitive Wildlife Species

The Project Site does not occur within a predetermined Survey Area for amphibians (RCA GIS Data Downloads 2018).

The Project Site does not occur within a predetermined Survey Area for mammals (RCA GIS Data Downloads 2018).

Burrowing Owl

The Project Site occurs completely within a predetermined Survey Area for the burrowing owl (*Athene cunicularia*) as shown in Attachment C, *MSHCP Relationship Map*. Suitable burrowing owl burrows potentially utilized for refugia and/or nesting were documented within the property including foraging habitat documented throughout the Project Site. Based on the presence of suitable habitat, focused MSHCP burrowing owl surveys were conducted during the spring of 2019. No burrowing owl or characteristic sign such as white-wash, feathers, tracks, or pellets were detected within or immediately adjacent to the Project Site (Cadre Environmental 2019a)

The 0.02-acre patch of mulefat scrub (total of 6 distressed shrubs) does not represent suitable habitat for the least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*) or western yellow-billed cuckoo (*Coccyzus americanus*) as shown in Attachment D, *Biological Resources Map*, and Attachments E and F, *Current Project Site Photographs*. No riparian forest or woodland habitat is located within or adjacent to the Project Site.

Least Bell's Vireo

As stated by MSHCP:

"The least Bell's vireo occupies a more restricted nesting habitat than the other subspecies of Bell's vireo as summarized in USFWS (1986). Least Bell's vireos primarily occupy riverine riparian habitats that typically feature dense cover within 1-2 meters of the ground and a dense, stratified canopy. It inhabits low, dense riparian growth along water or along dry parts of intermittent streams. Typically, it is associated with southern willow scrub, cottonwood forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, wild blackberry, or mesquite in desert localities. (MSHCP 2004).

As stated by the USFWS:

"Least Bell's vireo also occupies a more restricted nesting habitat than the other subspecies. It only inhabits dense willow -dominated riparian habitats with lush understory vegetation, which is limited in its range to the immediate vicinity of water courses... It presently nests in small, remnant segments of willow dominated riparian habitats (USFWS 1985).

The six (6) distressed mulefat shrubs documented onsite possess an open canopy and no willow riparian overstory, and do not represent even low-quality habitat for this species. The species was also not detected during five (5) site surveys conducted during the breeding season for this species when detectability is highest.

Southwestern Willow Flycatcher

As stated by the USFWS:

“The southwestern willow flycatcher occurs in riparian habitats along rivers, streams, or other wetlands, where dense growths of willows (Salix sp.) Baccharis, arrowweed (Pluchea sp.) tamarisk (Tamarix sp.), or other plants are present, often with a scattered overstory of cottonwood (Populus sp.). (USFWS 1993).

No riparian forest or woodland habitat are located within or adjacent to the Project Site and no suitable breeding habitat is present.

Western Yellow-Billed Cuckoo

As stated by the USFWS:

“Western yellow-billed cuckoos appear to require large blocks of riparian habitat for nesting. Along the Sacramento River in California, nesting yellow-billed cuckoos occupied home ranges which included 25 acres (10 hectares) or more of riparian habitat. Another study on the same river found riparian patches with yellow-billed cuckoo pairs to average 99 acres (40 hectares). Home ranges in the South Fork of the Kern River in California averaged about 42 acres (17 hectares)” (USFWS 2019)

No riparian forest or woodland habitat are located within or adjacent to the Project Site and no suitable breeding habitat is present.

Stephens' Kangaroo Rat

The Project Site falls within the Stephens' kangaroo rat (*Dipodomys stephensi*, SKR) Fee Area outlined in the Riverside County SKR Habitat Conservation Plan (HCP).

Nesting Bird Habitat

The vegetation communities and trees documented onsite represent potential nesting habitat for common and MSHCP covered sensitive bird and raptor species. Potential direct/indirect impacts to regulated nesting birds will require compliance with the federal Migratory Bird Treaty Act (MBTA) and CDFG Code, Section 3503, 3503.5, and 3513.

MSHCP Riparian, Riverine, Vernal Pool Resources

Two (2) drainage features bisect the Project Site in a southeast direction extending offsite through existing culverts which extend under Linnel Lane as shown in Attachment H, *MSHCP Riparian and Riverine Resources Map*. Both Drainage A and B extend offsite in a southwest direction through natural and constructed flood control basins and channels which ultimately drain into Murrieta Creek. Drainage B represents a “blue line stream”. Both drainage features represent MSHCP Section 6.1.2 riverine resources. The 0.02-acre patch of mulefat scrub (total of 6 distressed shrubs) located within Drainage A represents an MSHCP Section 6.1.2 riparian resource.

No vernal pool resources, seasonal depressions or associated clay substrates were documented onsite.

Jurisdictional Resources

The two (2) drainage features that bisect the Project Site represent jurisdictional resources which would be regulated by the Santa Ana Regional Water Quality Control Board, California Department of Fish and Wildlife and United States Army Corps of Engineers. A formal jurisdictional delineation will be required and all applicable regulatory permits acquired for direct and/or indirect impacts to these features.

SUMMARY OF COMPLIANCE WITH MSHCP POLICIES

The purpose of this report is to document the existing biological resources, identify general vegetation types, and assess the potential biological and regulatory constraints associated with the proposed development within the Project Site as outlined by the MSHCP. The following sections summarize the Project Site’s relationship to MSHCP criteria areas and MSHCP compliance guidelines.

CRITERIA AREAS

The 15.78-acre Project Site including offsite assessment area (0.91-acre) are 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.

No Habitat Evaluation and Acquisition Negotiation Strategy (HANS) or Joint Project Review (JPR) are required.

CRITERIA AREA SPECIES SURVEY AREA

The Project Site does not occur within a predetermined Survey Area for MSHCP criteria area plant species; therefore, no surveys are required (RCA GIS Data Downloads 2018).

The project is consistent with MSHCP Section 6.3.2.

NARROW ENDEMIC PLANT SPECIES SURVEY AREA

The Project Site occurs within a predetermined Survey Area for six (6) narrow endemic plant species including Munz's onion, San Diego ambrosia, many-stemmed dudleya, spreading navarretia, California Orcutt grass, and Wright's trichocoronis (RCA GIS Data Downloads 2018). Suitable soils and vegetation were documented onsite for a single sensitive plant - San Diego ambrosia.

Focused surveys for MSHCP narrow endemic sensitive plant surveys were conducted during the spring of 2019. No MSHCP narrow endemic sensitive plants were documented within the Project Site.

The project will be consistent with MSHCP Section 6.1.3

AMPHIBIAN SPECIES SURVEY AREA

The Project Site is not within the Amphibian Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2018).

The project is consistent with MSHCP Section 6.3.2.

MAMMAL SPECIES SURVEY AREA

The Project Site is not within the Mammal Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2018).

The project is consistent with MSHCP Section 6.3.2.

BURROWING OWL SURVEY AREA

The Project Site occurs completely within a predetermined Survey Area for the burrowing owl as shown in Attachment C, *MSHCP Relationship Map*. Suitable burrowing owl burrows potentially utilized for refugia and/or nesting were documented within the property including foraging habitat documented throughout the Project Site.

Based on the presence of suitable habitat, focused MSHCP burrowing owl surveys were conducted during the spring of 2019. No burrowing owl or characteristic sign such as white-wash, feathers, tracks, or pellets were detected within or immediately adjacent to the project site (Cadre Environmental 2019a).

Following submittal, review and approval of the 30-day preconstruction survey report by the City of Murrieta and compliance with all species-specific conservation goals, if detected within or adjacent to the Project Site, the project will be consistent with MSHCP Section 6.3.2.

MSHCP RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

The 0.02-acre patch of mulefat scrub (total of 6 distressed shrubs) does not represent suitable habitat for the least Bell's vireo, southwestern willow flycatcher or western yellow-billed cuckoo as shown in Attachment D, *Biological Resources Map*, and Attachments E and F, *Current Project Site Photographs*. No additional surveys are required.

Two (2) drainage features bisect the Project Site in a southeast direction extending offsite through existing culverts which extend under Linnel Lane as shown in Attachment H, *MSHCP Riparian and Riverine Resources Map*. Both Drainage A and B extend offsite in a southwest direction through natural and constructed flood control basins and channels which ultimately drain into Murrieta Creek. Drainage B represents a "blue line stream". Both drainage features represent MSHCP Section 6.1.2 riverine resources. The 0.02-acre patch of mulefat scrub located within Drainage A represents an MSHCP Section 6.1.2 riparian resource.

Direct or indirect impacts to these MSHCP Section 6.1.2 resources will require the development of an MSHCP Determination of Biological Equivalent or Superior Preservation (DBESP).

Following submittal, review and approval of the DBESP report by the City of Murrieta the project will be consistent with MSHCP Section 6.1.2.

URBAN/WILDLANDS INTERFACE

The MSHCP Urban/Wildlands Interface guidelines presented in Section 6.1.4 are intended to address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to a MSHCP Conservation Area. The Project Site is not located adjacent to an existing or proposed MSHCP Conservation Area.

The project is consistent with MSHCP Section 6.1.4.

FUELS MANAGEMENT

The fuels management guidelines presented in Section 6.4 of the MSHCP are intended to address brush management activities around new development within or adjacent to MSHCP Conservation Areas. The Project Site is not located adjacent to an existing or proposed MSHCP Conservation Area.

The project is consistent with MSHCP Section 6.4.

SUMMARY OF POTENTIAL CONSTRAINTS & REQUIREMENTS

The following section summarizes potential constraints, survey requirements and conditions of approval which will need to be implemented to ensure development of the Project Site remains in compliance with CEQA and MSHCP guidelines.

MSHCP Local Development Mitigation Fee

The project applicant shall pay MSHCP Local Development Mitigation fees as established and implemented by the City of Murrieta.

SKR Mitigation Fee

The Project Site falls within the SKR Fee Area outlined in the Riverside County SKR HCP. The project applicant shall pay the fees pursuant to County Ordinance 663.10 for the SKR HCP Fee Assessment Area as established and implemented by the County of Riverside.

City of Murrieta Tree Removal Permit

Two (2) mature coast live oaks (*Quercus agrifolia*) and six (6) mature ornamental trees are located within the Project Site (BSA 2019). A site-specific tree study and mitigation plan has been developed. A tree removal permit will be required and include information outlined in the City of Murrieta Tree Preservation Ordinance (16.42 Tree Preservation) if the proposed project would directly or indirectly impact these resources.

MSHCP 30-Day Burrowing Owl Preconstruction Surveys

A 30-day burrowing owl preconstruction surveys will be required to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. The surveys will be conducted in compliance with both MSHCP and CDFW guidelines (MSHCP 2006, CDFW 2012). A report of the findings prepared by a qualified biologist shall be submitted to the City of Murrieta for review and approval prior to any permit or ground disturbing activities.

If burrowing owls are detected onsite during the 30-day preconstruction survey, during the breeding season (February 1st to August 31st) then construction activities shall be limited to beyond 300 feet of the active burrows until a qualified biologist has confirmed that nesting efforts are completed or not initiated. In addition to monitoring breeding activity, if construction is proposed to be initiated during the breeding season or active relocation is proposed, a burrowing owl mitigation plan will be developed based on the City of Murrieta, CDFW and USFWS requirements for the relocation of individuals to predetermined preserve.

Federal Migratory Bird Treaty Act & CDFG Code Compliance

Mitigation for potential direct/indirect impacts on common and MSHCP covered sensitive bird and raptor species will require compliance with the federal MBTA and CDFG Code Section 3503, 3503.5, and 3513. Construction outside the nesting season (between September 16th and January 31st) do not require pre-removal nesting bird surveys. If construction is proposed between February 1st and September 15th, a qualified biologist must conduct a nesting bird survey(s) no more than three (3) days prior to initiation of grading to document the presence or absence of nesting birds within or directly adjacent (100 feet) to the Project Site.

The survey(s) would focus on identifying any bird or raptor nests that would be directly or indirectly affected by construction activities. If active nests are documented, species-specific measures shall be prepared by a qualified biologist and implemented to prevent abandonment of the active nest. At a minimum, grading in the vicinity of a nest shall be deterred until the young birds have fledged. A minimum exclusion buffer of 100 feet shall be maintained during construction, depending on the species and location. The perimeter of the nest setback zone shall be fenced or adequately demarcated with stakes and flagging at 20-foot intervals, and construction personnel and activities restricted from the area. A survey report by a qualified biologist verifying that no active nests are present, or that the young have fledged, shall be submitted to the City of Murrieta for review and approval prior to initiation of grading in the nest-setback zone. The qualified biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur.

Any nest permanently vacated for the season would not warrant protection pursuant to the MBTA.

MSHCP Riverine and Riparian Resources Section 6.1.2 Compliance

Both drainage features documented onsite represent MSHCP Section 6.1.2 riverine resources. The 0.02-acre patch of mulefat scrub ((total of 6 distressed shrubs) located within Drainage A represents an MSHCP Section 6.1.2 riparian resource. Direct or indirect impacts to these MSHCP Section 6.1.2 resources will require the development of an MSHCP DBESP.

To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset impacts to any MSHCP riverine or riparian habitat as directed by the City of Murrieta. Specifically, an MSHCP DBESP will be prepared and submitted to the City of Murrieta, and wildlife agencies for review and approval.

USACE/CDFW/RWQCB Regulatory Resources, Permits and Certifications

Prior to issuance of a grading permit, the project applicant will conduct a formal jurisdictional delineation to determine the extent of resources onsite regulated by the USACE, CDFW, or RWQCB. The project applicant will be required to obtain all applicable permits which may include, 404 Nationwide Permit from the USACE, 1602 Streambed Alteration Agreement from CDFW, and a 401 Certification issued by the RWQCB pursuant to the California Water Code Section 13260. During the permit process a Habitat Mitigation Monitoring Plan (HMMP) would be developed and approved by the City of Murrieta, applicable regulatory and wildlife agencies, and incorporated into the MSHCP DBESP.

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ATTACHMENTS

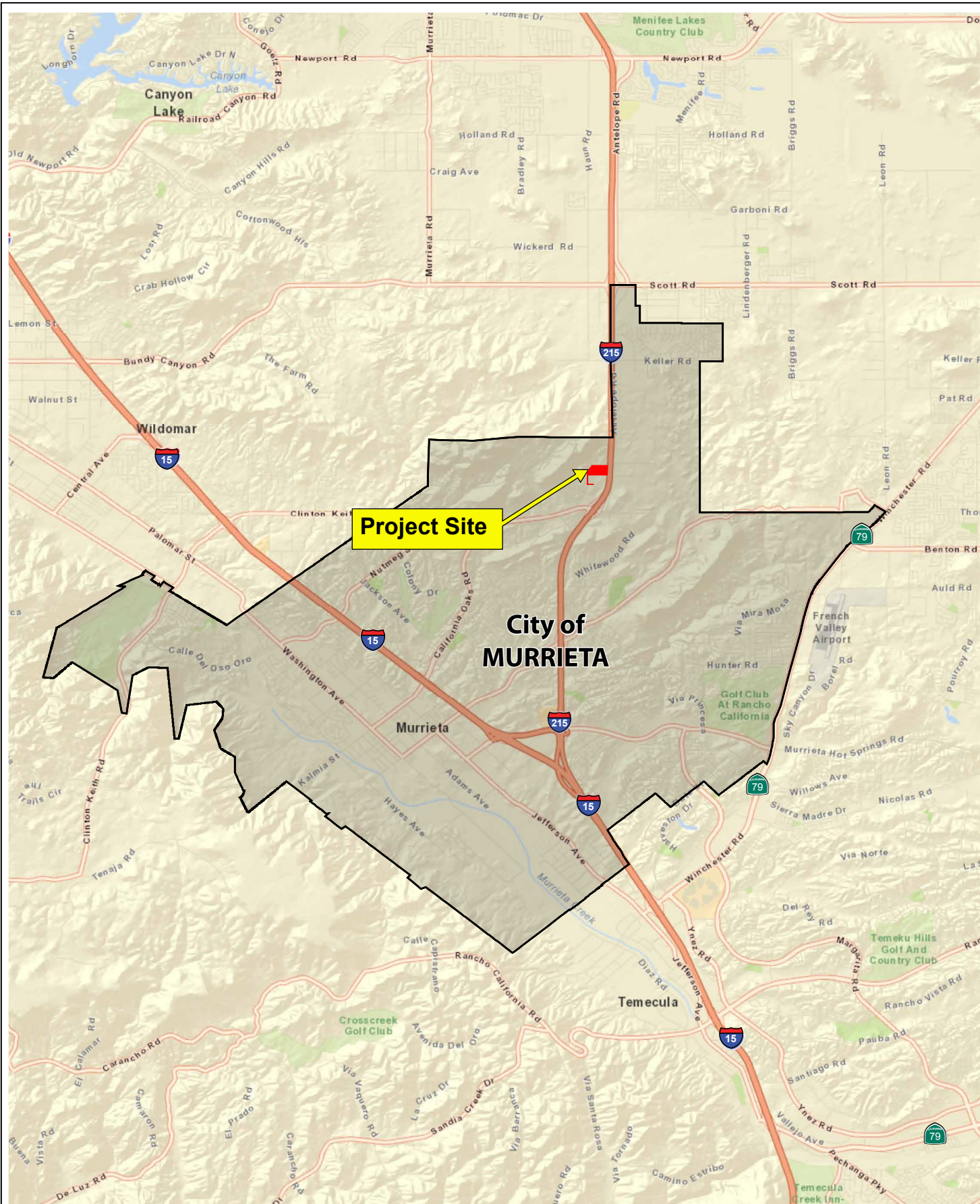
- A – Regional Location Map
- B – Project Site Map
- C – Biological Resources Map
- D – MSHCP Relationship Map
- E – Current Project Site Photographs
- F – Current Project Site Photographs
- G – Soil Associations Map
- H – MSHCP Riparian and Riverine Resources Map

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"

Author:  Date: June 5th, 2019.

Fieldwork Performed by:  Date: June 5th, 2019.



Attachment A - Regional Location Map

*MSHCP Biological Resources Compliance Analysis
Sapphire Project Site - APN 392-280-007*

CADRE
Environmental



not to scale



#➔ Photo Point & Direction

— Offsite Assessment Area

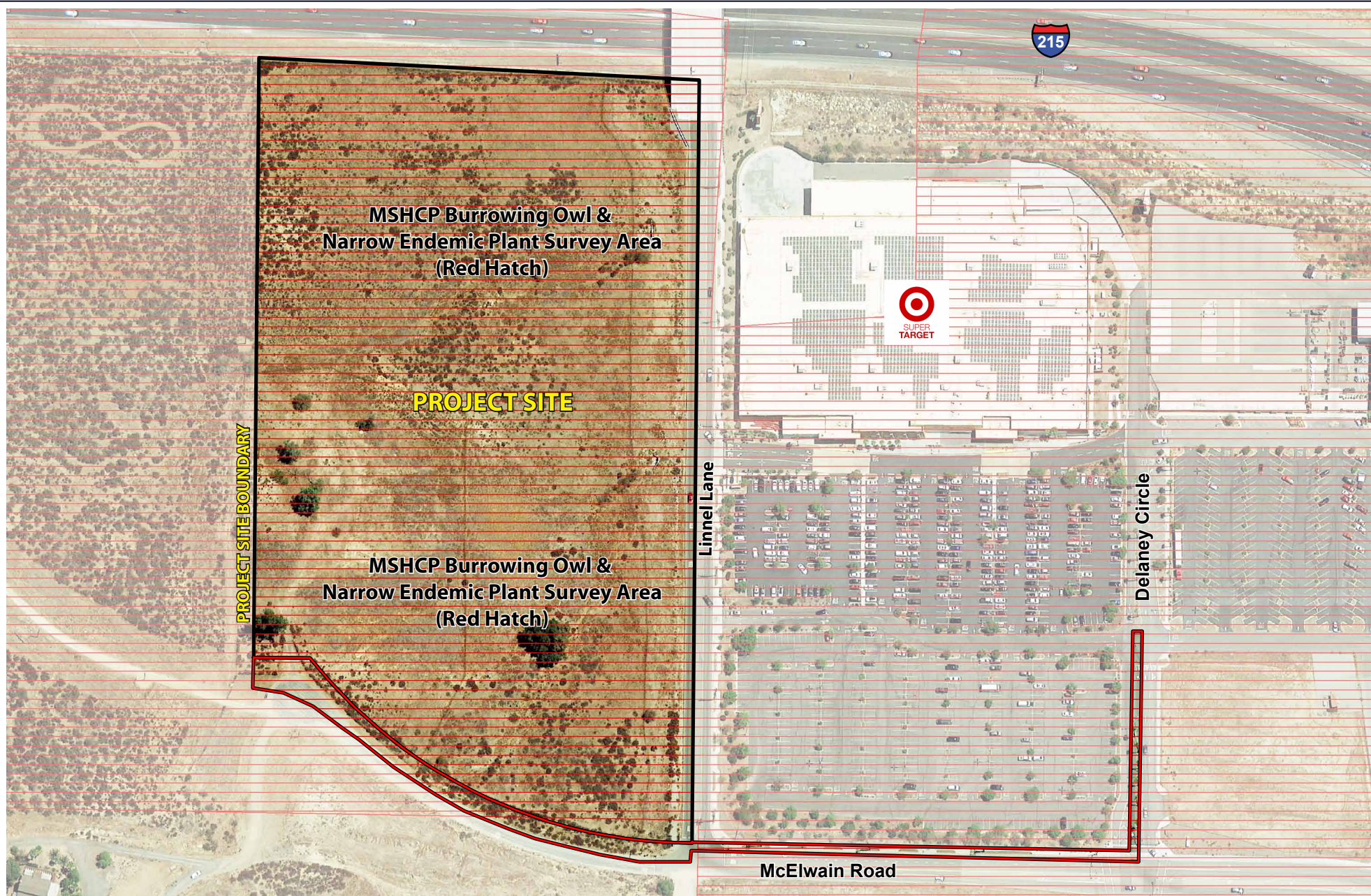
Attachment B - Project Site Map

MSHCP Biological Resources Compliance Analysis
Sapphire Project Site - APN 392-280-007

CADRE
Environmental



1 inch = 200 feet



 Offsite Assessment Area

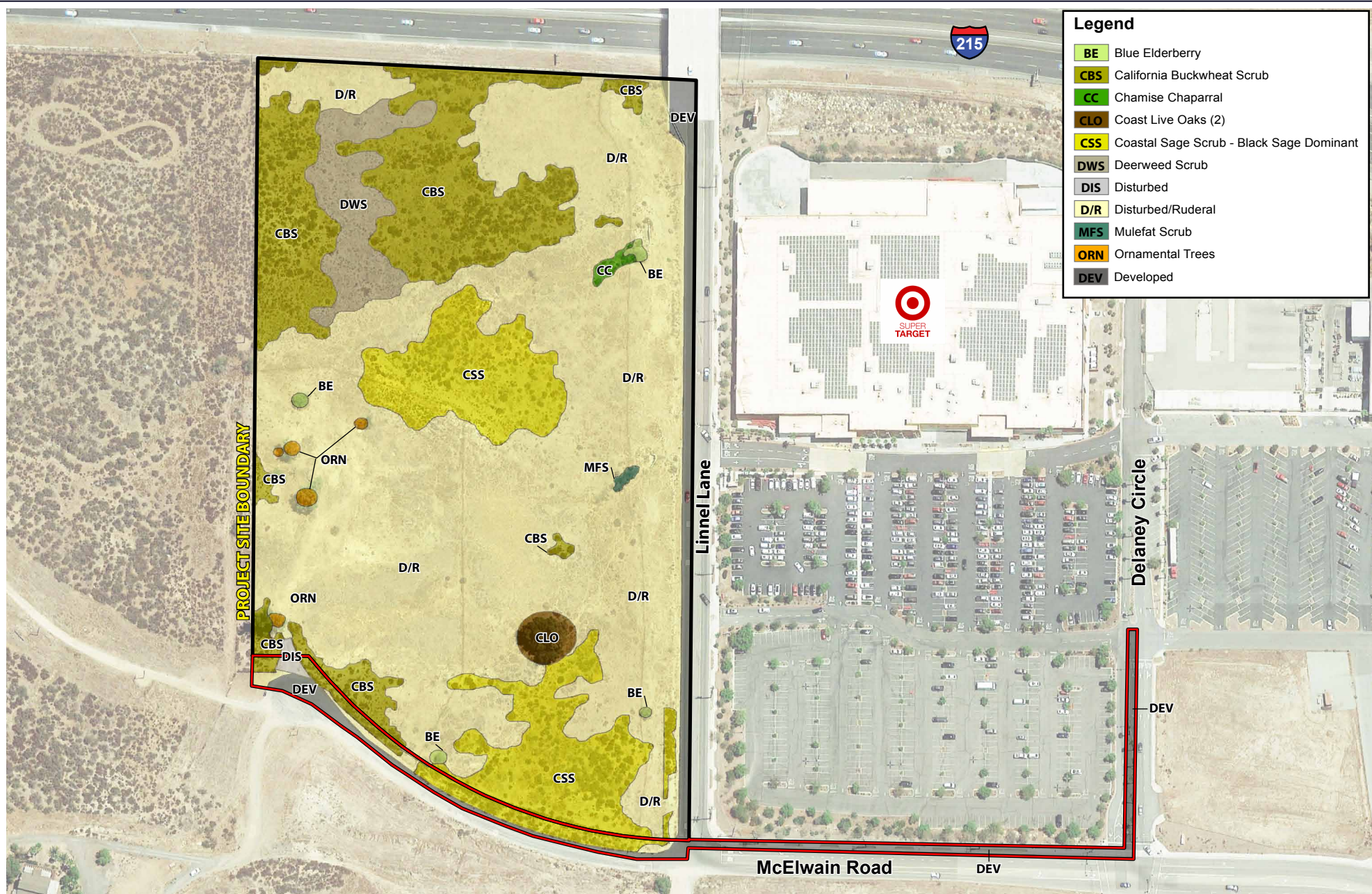
Attachment C - MSHCP Relationship Map

*MSHCP Biological Resources Compliance Analysis
Sapphire Project Site - APN 392-280-007*

CADRE
Environmental



1 inch = 200 feet



Offsite Assessment Area

Attachment D - Biological Resources Map

MSHCP Biological Resources Compliance Analysis
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.

Refer to Attachment B for Photographic Key Map

Attachment E - Current Project Site Photographs

*MSHCP Biological Resources Compliance Analysis
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.

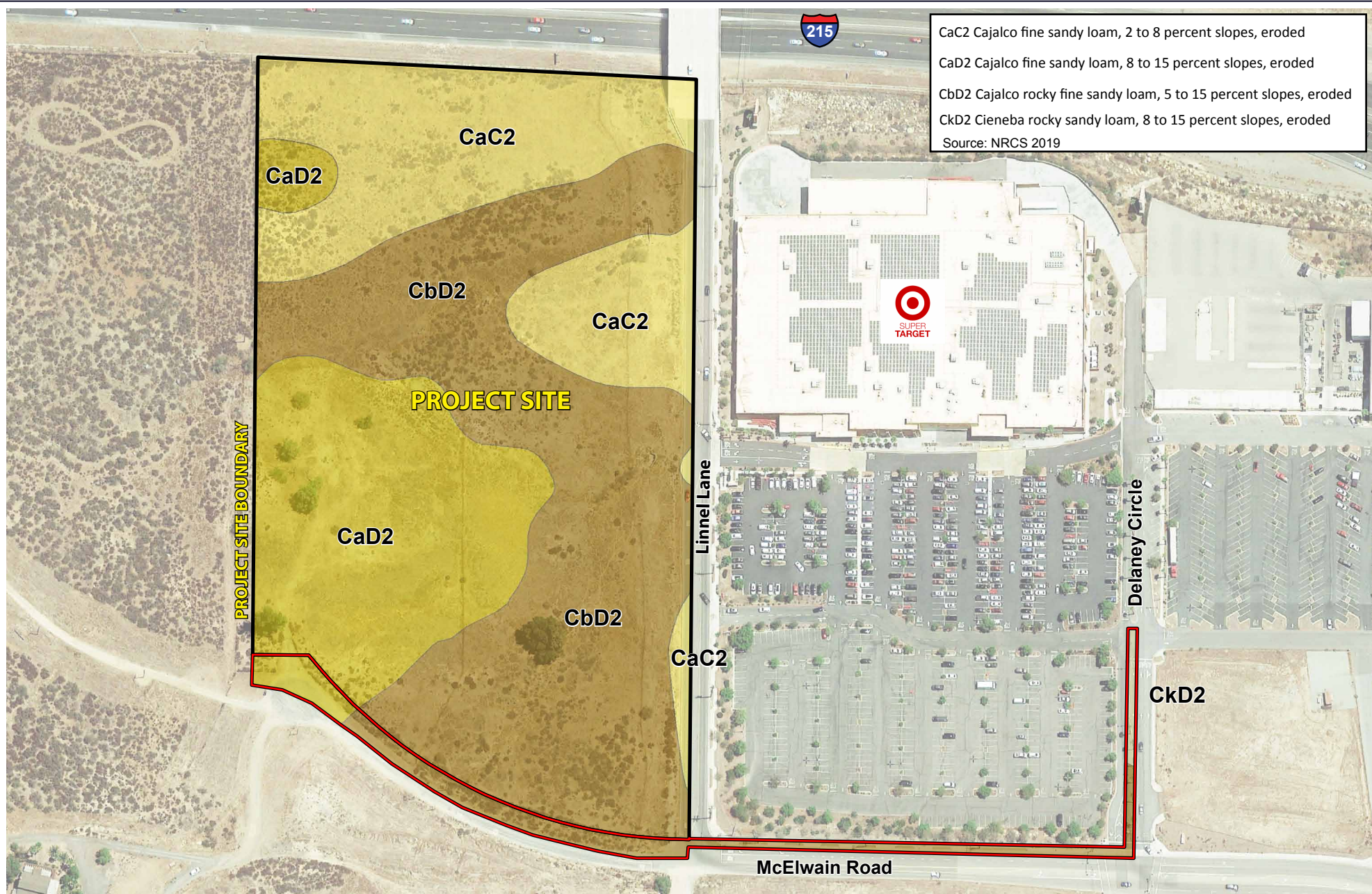


PHOTOGRAPH 4 - Westward view of the dominant disturbed/ruderal vegetation documented onsite.

Refer to Attachment B for Photographic Key Map

Attachment F - Current Project Site Photographs

*MSHCP Biological Resources Compliance Analysis
Sapphire Project Site - APN 392-280-007*



Attachment G - Soils Association Map

MSHCP Biological Resources Compliance Analysis
Sapphire Project Site - APN 392-280-007

CADRE
Environmental



1 inch = 200 feet



 Offsite Assessment Area
  Flowpatterns - Drain South Offsite through Existing Culverts and Floodcontrol Channels to Murrieta Creek

Attachment H - MSHCP Riparian & Riverine Resources Map
 MSHCP Biological Resources Compliance Analysis
 Sapphire Project Site - APN 392-280-007

CADRE
 Environmental



1 inch = 200 feet