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## IV. ENVIRONMENTAL IMPACT ANALYSIS

### E. BIOLOGICAL RESOURCES

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#### INTRODUCTION

The information and analysis in this section is based primarily on the following report (refer to Appendix IV.E):

- *Biological Resources Technical Report*, Cadre Environmental, June 2013.

The Biological Resources Technical Report incorporates the following previous biological surveys and studies of the Project site:

- *US Fish and Wildlife Service Dry Season Protocol Level Survey for Vernal Pool and Riverside Fairy Shrimp*, Helix Environmental Planning, 2006.
- *Multiple Species Habitat Conservation Plan Consistency Analysis*, Helix Environmental Planning, 2007.
- *Results of Burrowing Owl Survey for the Garrett Ranch Property*, Helix Environmental Planning, 2007.
- *Jurisdictional Delineation Report – Garrett Ranch*, Helix Environmental Planning, 2007.
- *Biological Technical Report – Garrett Ranch*, Helix Environmental Planning, 2007.
- *Determination of Biologically Equivalent or Superior Preservation Analysis – Garrett Ranch*, Helix Environmental Planning, 2007.
- *US Fish and Wildlife Service Wet Season Protocol Level Survey for Vernal Pool and Riverside Fairy Shrimp*, Helix Environmental Planning, 2008.
- *Conceptual Vernal Pool Restoration Plan for Garrett Ranch*, Helix Environmental Planning, 2008.
- *CRAM Assessment Report for the Ramona Creek Project*, Glenn Lukos Associates, 2013.
- *Multiple Species Habitat Conservation Plan Focused Surveys*, Cadre Environmental, 2013.
- *General MSHCP Habitat Assessment, Regulatory Constraints, and MSHCP Consistency Analysis for the 209.21-Acre Ramona Creek Project Site*, Cadre Environmental, 2013.
- *Jurisdictional Delineation & MSHCP Vernal Pool & Riparian and Riverine Assessment, Ramona Creek*, Cadre Environmental, 2013.

## **ENVIRONMENTAL SETTING**

### **Regulatory Setting**

#### ***Federal***

##### *Federal Endangered Species Act*

Pursuant to Section 7 of the Federal Endangered Species Act (FESA), any federal agency undertaking a federal action (including issuance of Section 404 permits) that may affect a species listed or proposed as threatened or endangered under the FESA must consult with US Fish and Wildlife Service (USFWS). In addition, any federal agency undertaking a federal action that may result in adverse modification of critical habitat for a federally listed species must consult with USFWS.

Various actions, including the “take” (e.g., harm, harass, pursue, injure, kill) of an animal species listed as threatened or endangered are regulated by the FESA. Destruction or adverse modification of habitat, either directly or indirectly, also constitutes a “take.” Section 7 and Section 10 of the FESA provide procedures for permitting takes that are incidental to, and not the purpose of, the carrying out of otherwise lawful activity (such as construction activity) in coordination with USFWS review. The USFWS may provide comments and recommendations outside their regulatory authority even if it is determined that a project will not adversely affect an endangered species.

The USFWS also regulates the “take” of migratory birds under the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712), which provides that it is unlawful to “pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not.” The USFWS maintains a list of migratory birds that are protected under the Act.

The Multiple Species Habitat Conservation Plan (MSHCP, discussed in detail below under “Local”) serves as a Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the FESA, allowing participating jurisdictions to authorize “take” of plant and wildlife species. The MSHCP has been issued under this Section and provides incidental take for all covered species.

The FESA defines an endangered species as “any species that is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species which is likely to become an endangered species in the foreseeable future throughout all or significant portions of its range.” The Sacramento, California USFWS Field Office describes a Federal Species of Concern (FSC) as “a sensitive species that has not been listed, proposed for listing, or placed in candidate status.” The FSC receives no legal protection and use of the term does not necessarily mean the species will eventually be proposed for listing as a threatened or endangered species. The federal listing status is as follows:

- **FE** Federally listed as Endangered
- **FT** Federally listed as Threatened
- **FPT** Federally Proposed as Threatened
- **FPE** Federally Proposed as Endangered
- **FPD** Federally Proposed for delisting
- **FC** Federal Candidate Species
- **FSC** Federal Species of Concern

#### *Clean Water Act*

Pursuant to Section 404 of the Clean Water Act (CWA), the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and/or fill material into waters of the United States. Although not expressly defined, it is assumed that the USACE Manual (Environmental Laboratory 1987) for delineating wetlands should be used in determining the presence of wetland indicators in vernal pools. With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

As stated by the USACE: “(a) The term *waters of the United States* means, (1) all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) all interstate waters including interstate wetlands; and (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters” (33 C.F.R. § 328.3).

The USACE generally takes jurisdiction within rivers and streams to the "ordinary high water mark," determined by erosion, the deposition of vegetation or debris, and changes in vegetation or soil characteristics (33 C.F.R. § 328.4). However, if there is no federal nexus to navigable waters, these waters are considered "isolated" and thus not subject to their jurisdiction. No USACE jurisdictional features are present on the Project Site and no 404 permit is required.

#### *Migratory Bird Treaty and Bald and Golden Eagle Protection Acts*

Migratory birds including resident raptors and passerines are protected under the federal Migratory Bird Treaty Act (MBTA). The MBTA of 1918 implemented the 1916 convention between the United States and Great Britain for the protection of birds migrating between the U.S. and Canada. Similar conventions between the United States and Mexico (1936), Japan (1972) and the Union of Soviet Socialist Republics (1976) further expanded the scope of international protection of migratory birds. Each new treaty has been incorporated into the MBTA as an amendment and the provisions of the new treaty are implemented

domestically. These four treaties and their enabling legislation, the MBTA, established Federal responsibilities for the protection of nearly all species of birds, their eggs and nests.

The MBTA made it illegal for people to "take" migratory birds, their eggs, feathers or nests. Take is defined in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing or transporting any migratory bird, nest, egg, or part thereof. The Bald and Golden Eagle Protection Act affords additional protection to all bald and golden eagles.

### ***State***

#### *California Endangered Species Act*

The California Endangered Species Act (CESA) is similar to the FESA in that it contains a process for listing of species regulating potential impacts to listed species. Section 2081 of the CESA authorizes the California Department of Fish and Wildlife (CDFW) to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes.

The 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. Any animal determined by the [California Fish and Game] commission as rare on or before January 1, 1985 is a threatened species.” A candidate species is 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 CDFG 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 Commission. Unlike FESA, CESA does not include listing provisions for invertebrate species. The State listing status is as follows:

- **SE** State listed as Endangered
- **ST** State listed as Threatened
- **SR** State listed as Rare (plants only)
- **CSC** California Species of Special Concern
- **CWL** California Watch List
- **SFP** State Fully Protected
- **SP** State Protected
- **SCE** State Candidate for Endangered

- **SCT** State Candidate for Threatened
- **Special Animal** CNDDDB Special Animal

The MSHCP serves as an HCP pursuant to the Natural Communities Conservation Plan (NCCP) under the NCCP Act of 2001, allowing participating jurisdictions to authorize "take" of plant and wildlife species. As stated by CDFW:

*On June 22, 2004, the Department issued NCCP Approval and Take Authorization for the Western Riverside County MSCHP per Section 2800 et seq. of the California Fish and Game Code. The MSHCP establishes a multiple species conservation program to minimize and mitigate habitat loss and the incidental take of covered species in association with activities covered under the permit. (CDFG 2004)*

The State of California also maintains the California Natural Diversity Database (CNDDDB), which is a computerized inventory of information on the location of California's rare, threatened, endangered, and otherwise sensitive plants, animals, and natural communities published by the CDFG. Updates to the CNDDDB are issued twice annually. Valuable information regarding the species' occurrences, population numbers, observers, occurrence dates, and potential threats to the organism(s) are included for each occurrence record.

The California Native Plant Society (CNPS) is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The CNPS separates plants of interest into five categories. CNPS has compiled an inventory comprised of the information focusing on the geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California. The list serves as the candidate list for listing as Threatened and Endangered by the CDFG. The five categories within the CNPS are:

- **CRPR 1A** Presumed extinct in California
- **CRPR 1B** Rare, threatened, or endangered in California and elsewhere
- **CRPR 2** Rare, threatened, or endangered in California, but more common elsewhere
- **CRPR 3** Plants about which more information is needed (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.

Additionally, the CNPS assigns a "Threat Rank" as an extension to the above categories that designates the level of endangerment by a 1 to 3 ranking, with 1 being the most endangered and 3 being the least endangered.

#### *Native Plant Protection Act*

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in plants that are listed. The

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CESA follows the NPPA and covers both plants and wildlife determined to be threatened with extinction or endangered. Plants listed as rare under the NPPA are designated as threatened under the CESA. No plants listed under the CESA occur on the Project Site or in the potential off-site impact areas.

#### *Porter-Cologne Water Quality Control Act*

The Regional Water Quality Control Board (RWQCB) regulates activities pursuant to Section 401 of the federal CWA and the California Porter-Cologne Water Quality Control Act of 1969 (California Water Code). The RWQCB regulates activities pursuant to Section 401(a)(1) of the federal CWA as well as the Porter-Cologne Act (Water Code section 13260). Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters. The certification shall originate from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable water at the point where the discharge originates or will originate. Any such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA. The Porter Cologne Act requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements (WDRs))" (Water Code § 13260(a)(1)). Discharge of fill material into "waters" of the State which do not fall under the jurisdiction of the USACE pursuant to Section 404 of the CWA may require authorization through application for WDRs or through waiver of WDRs.

#### *Streambed Alteration Agreement*

The CDFW regulates activities within streambeds, lakes, and wetlands pursuant to Division 2, Chapter 6, Section 1600 of the California Fish and Game Code (Streambed Alteration) and has jurisdiction over "waters" of the State. Regulated activities are those that "will substantially divert, obstruct, or substantially change the natural flow or bed, channel or bank of any river, stream, or lake or extends to the limit of the adjacent riparian vegetation designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit." (California Fish & Wildlife Code, §1602).

#### **Local**

##### *Western Riverside County Multiple Species Habitat Conservation Plan*

The Project site is located completely within the area covered by the Western Riverside County MSHCP, which is a comprehensive multi-jurisdictional effort that includes western Riverside County and 18 cities, including the City of Hemet. Rather than addressing sensitive species on an individual basis, the MSHCP focuses on conservation of 146 species, including those listed as threatened or endangered at the federal and state levels and those that could become listed in the future. The MSHCP proposed a reserve system of approximate 500,000 acres, of which 347,000 acres are currently within public ownership and 153,000

acres will need to be assembled from lands currently in private ownership. The MHSCP allows the County and other permittees (including the City of Hemet) to issue take permits for listed species so that applicants do not need to receive endangered species incidental take authorization from the USFWS and/or the CDFW.

On June 7, 2003, the Riverside County Board of Supervisors adopted the MSHCP, certified the Environmental Impact Report/Environmental Impact Statement, and authorized the Chairman to sign the Implementing Agreement with the respective wildlife agencies. The Incidental Take Permit was issued by the wildlife agencies on June 22, 2004. The City of Hemet is a permittee under the MSHCP.

### San Jacinto Valley Area Plan

Regions of the MHSCP have been organized into Area Plans that generally coincide with logical political boundaries, including city limits or long-standing unincorporated communities. Both the parcel containing the Project site and potential off-site impact areas are located within the San Jacinto Valley Area Plan, which encompasses areas within the San Jacinto and Hemet city limits and the surrounding unincorporated communities. The San Jacinto Valley Area Plan has a target conservation acreage of 11,540 to 19,465 acres, of which 620 to 1,000 acres are intended to be within the City of Hemet boundaries.

### Riparian/Riverine Areas and Vernal Pools

Regulated activities within inland streams, wetlands and riparian areas in western Riverside County fall under the jurisdiction of the MSHCP. The MSHCP requires, among other things, assessments for riparian/riverine and vernal pool resources. As projects are proposed within the MSHCP area, an assessment of the potentially significant effects of those projects on riparian/riverine areas, and vernal pools is required, using available information augmented by project-specific mapping provided to and reviewed by the permittee's biologist(s). Riparian/riverine areas and vernal pools are defined as follows in accordance with Section 6.1.2, Vol. I, of the Final MSHCP Plan:

*Riparian/Riverine Areas are lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year. (MSHCP 2004)*

It is assumed the first part of the definition above defines riparian habitat, and the second part defines riverine areas. Vernal pools are defined as:

*...seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative*

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wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. (MSHCP 2004)

#### *Stephens' Kangaroo Rat Habitat Conservation Plan*

The Project site is located completely within the Stephens' Kangaroo Rat (SKR) Habitat Conservation Plan (HCP) fee area, which is administered by the Riverside County Habitat Conservation Agency (RCHCA). The SKR fee is established at \$500 per acre. As stated by the City:

*The SKR HCP mitigates impacts on the SKR caused by development by establishing a network of preserves and a system of managing and monitoring them. (City of Hemet 2012)*

#### *City of Hemet General Plan – Open Space and Conservation Element*

As outlined below, the City General Plan Open Space and Conservation Element (Chapter 7) establishes Goals and Policies for the preservation and protection of critical open space and natural resources. Goals and Policies with applicability to the Project and/or Project site include the following:

- OS-1.1      Development Proposals:** Require development proposals to identify significant biological resources and to provide mitigation, including the use of adequate buffering and sensitive site planning techniques, selective preservation, provision of replacement habitats, and other appropriate measures as may be identified in habitat conservation plans or best practices related to particular resources.
- OS-1.2      Vernal Pools:** Preserve the integrity of the vernal pool complex by ensuring adequate hydration, providing appropriate conservation buffers, and the preservation of native plants, in accordance with the requirements of the MSHCP.
- OS-1.3      Wetland Habitats:** Require project applicants to conserve wetland habitats along the San Jacinto River, the Upper Salt Creek watershed, and elsewhere as identified where conservation serves to maintain watershed processes that enhance water quality and contribute to the hydrologic regime, and comply with Clean Water Act (CWA) Section 404. Identify and, to the maximum extent possible, conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.
- OS-1.4      Resource Protection in Development Design:** Require appropriate resource protection measures to be incorporated within specific plans and subsequent development proposals. Such requirements may include the preparation of a vegetation management program that addresses landscape maintenance, fuel modification zones, management of passive open

space areas, provision of corridor connections for wildlife movement, conservation of water courses, rehabilitation of biological resources displaced in the planning process, and use of project design, engineering, and construction practices that minimize impacts on sensitive species, MSHCP conservation areas, and designated critical habitats.

- OS-1.5**      **Restriction of Use:** As needed to protect resources, limit recreational use in open space areas where sensitive biological resources exist.
- OS-1.6**      **Habitat Conservation Plans:** Coordinate with Riverside County and other relevant agencies to implement the Western Riverside County MSHCP, the SKR HCP, and any other applicable habitat plan.
- OS-1.7**      **Wildlife Movement Corridor:** Continue efforts to establish a wildlife movement corridor in areas such as the San Jacinto River corridor, Santa Rosa Hills, Lakeview Mountains, and the open space areas surrounding Diamond Valley Lake. As applicable, new development in these areas shall incorporate such corridors. To minimize impediments to riparian wildlife movement, new roadways over ravines, arroyos, and drainages shall maintain wildlife corridors by incorporating bridges or culverts, where practical.
- OS-1.8**      **Local Resource Preservation:** Maintain and enhance the natural resources of the Santa Rosa Hills, Tres Cerritos Hills, Salt Creek, Bautista Canyon, San Jacinto River/Bautista Creek, Reinhardt Canyon, Lakeview Mountains, Diamond Valley Lake, and all other waterways, ecosystems, and critical vegetation to ensure the long-term viability of habitat, wildlife, and wildlife movement corridors.
- OS-1.9**      **Partnerships:** Support efforts of local, state, and federal agencies and private conservation organizations to preserve, protect, and enhance identified open spaces and natural resources.

*City of Hemet Municipal Code – Chapter 31, MSHCP Mitigation Fee*

The City's Municipal Code identifies land use categories, development standards, and other general provisions that ensure consistency between the City's General Plan and proposed development projects. As stated by the City, the following are provisions within the City's Municipal Code that are relevant to the Project:

- **Sec. 31-7 – An MSHCP Mitigation Fee** is necessary in order to supplement the financing of the acquisition of lands supporting species covered by the MSHCP and to pay for new development's fair share of this cost. In order to assist in providing revenue to acquire and conserve lands necessary to implement the MSHCP, the Western Riverside County MSHCP Mitigation Fee shall be paid for each residential unit, development project or portion thereof to be constructed.

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Subject to an adjustment of the fee as set forth in this article, the following fee shall be paid for each development project within the boundaries of the Western Riverside County MSHCP Fee Area. Five categories of the fee are defined and include:

1. Residential, density less than 8.0 dwelling units per acre \$1,938 per dwelling unit;
  2. Residential, density between 8.1 and 14.0 dwelling units per acre \$1,241 per dwelling unit;
  3. Residential, density greater than 14.1 dwelling units per acre \$1,008 per dwelling unit;
  4. Commercial \$6,597 per acre;
  5. Industrial \$6,597 per acre.
- **Sec. 31-9 – Imposition of Fees.** Notwithstanding any provision of Chapter 90 to the contrary, no building permit shall be issued for any residential unit or development project except upon the condition that the Western Riverside County MSHCP Fee required by this chapter be paid.
  - **Sec. 30-10 Payment of Fees.** The fee shall be paid as follows:
    - The fee shall be paid in full at the time a certificate of occupancy is issued for the residential unit or development project or upon final inspection, whichever occurs first. No final inspection shall be made, and no certificate of occupancy shall be issued, prior to full payment of the Western Riverside County MSHCP Fee. However, this section shall not be construed to prevent payment of the fee prior to the issuance of an occupancy permit or final inspection.
    - A fee shall be assessed one time per lot or parcel except in cases of changes in land use. The fee required to be paid when there is a change in land use shall be reduced by the amount of any previously paid fee for that property. No refunds shall be provided for changes in land use to a lower fee category. It shall be the responsibility of the applicant to provide documentation of any previously paid fee.
    - The fee for commercial and industrial development projects shall be paid in its entirety for the project area and shall not be prorated. The fee required to be paid shall be the fee in effect at the time of payment.
    - There shall be no deferment of the fee beyond final inspection or issuance of certificate(s) of occupancy.
    - Notwithstanding any other written requirements to the contrary, the fee shall be paid whether or not the development project is subject to city conditions of approval imposing the requirement to pay the fee.
    - If all or part of the development project is sold prior to payment of the fee, the project shall continue to be subject to the requirement to pay the fee as provided herein.
    - For development projects which the city does not require a final inspection or issuance of a certificate of occupancy, the fee shall be paid prior to any use or occupancy.

- For purposes of this chapter, congregate care residential facilities and recreational vehicle parks shall pay the commercial acreage fee.

### Study Methodology

Existing biological resource conditions within and adjacent to the Project site were initially investigated through review of pertinent scientific literature. Federal register listings, protocols, and species data provided by the USFWS were reviewed in conjunction with anticipated federally listed species potentially occurring within the Project site. The CNDDDB, a CDFW Natural Heritage Division species account database, was also reviewed for all pertinent information regarding the locations 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 of species and suitable habitats. Combined, the sources reviewed provided an excellent baseline from which to inventory the biological resources potentially occurring in the area. Other sources of information included the review of unpublished biological resource letter reports and assessments. Other CDFW reports and publications consulted include the following:

- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2013c);
- Special Animals (CDFW 2011);
- Endangered, Threatened, and Rare Plants of California (CDFW 2013b); and
- Special Vascular Plants and Bryophytes List (CDFW 2013a).

An initial reconnaissance survey of the Project site was conducted by Cadre Environmental during the spring of 2012 in order to characterize and identify potential sensitive plant and wildlife habitats, and to establish the accuracy of the data identified in the literature search. Geologic and soil maps were examined to identify local soil types that may support sensitive taxa. Aerial photograph, topographic maps, and vegetation and rare plant maps prepared by previous studies in the region were used to determine community types and other physical features that may support sensitive plants/wildlife, uncommon taxa, or rare communities that occur within the Project site.

The MSHCP has determined that all of the sensitive species potentially occurring within the Project site 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 plant, criteria area, and specific wildlife species if suitable habitat is documented on-site and/or if the property is located within a predetermined "Survey Area" (MSHCP 2004). Based on the initial MSHCP review of predetermined Survey Areas and habitat assessments for target species, focused surveys were conducted for the following eighteen species:

- Riverside fairy shrimp (*Streptocephalus woottoni*)
- vernal pool fairy shrimp (*Branchinecta lynchi*)

- burrowing owl (*Athene cunicularia*)
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*)
- Davidson's saltscale (*Atriplex davidsonii*)
- Parish's brittle scale (*Atriplex parishii*)
- thread-leaved brodiaea (*Brodiaea filifolia*)
- smooth tarplant (*Centromadia pungens* subsp. *laevis*)
- round-leaved filaree (*Erodium macrophyllum*)
- Coulter's goldfields (*Lasthenia glabrata* subsp. *coulteri*)
- little mousetail (*Myosurus minimus* subsp. *apus*)
- mud nama (*Nama stenocarpum*)
- Munz's onion (*Allium munzii*)
- San Diego ambrosia (*Ambrosia pumila*)
- many-stemmed dudleya (*Dudleya multicaulis*)
- spreading navarretia (*Navarretia fossalis*)
- California Orcutt grass (*Orcuttia californica*)
- Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*)

### ***Vegetation Communities/Habitat Classification Mapping***

Natural community names and hierarchical structure follows the CDFW “List of California Terrestrial Natural Communities” and/or Holland (1986) classification systems, which have been refined and augmented where appropriate to better characterize the habitat types observed on-site when not addressed by the MSHCP classification system.

### ***Floristic Plant Inventory***

A general plant survey was conducted throughout the Project site during the initial reconnaissance in a collective effort to identify all species occurring on-site. All plants observed during the survey efforts were either identified in the field or collected and later identified using taxonomic keys.

### ***Wildlife Resources Inventory***

All animals identified during the reconnaissance survey by sight, call, tracks, scat, or other characteristic sign were recorded onto a 1:200 scale orthorectified color aerial photograph or documented using a global positioning system (GPS). In addition to species actually detected, expected use of the site by other wildlife was derived from the analysis of habitats on the site, combined with known habitat preferences of regionally occurring wildlife species.

### ***Regional Connectivity/Wildlife Movement Corridors***

The analysis of wildlife movement corridors associated with the Project site and immediate vicinity is based on information compiled from literature, analysis of the aerial photograph and Digital Orthophoto Quarter Quads (DOQQ) data, and direct observations made in the field during the reconnaissance site visit.

A literature review was conducted that includes 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 DOQQ data, in conjunction with the GIS database, allowed proper identification of regional vegetation communities and drainage features. This information was crucial to assessing the relationship of the Project site 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 are intended to focus on wildlife movement associated within the Project site and the immediate vicinity.

### ***MSHCP Criteria Area and Narrow Endemic Plant Surveys***

The Project site occurs within a predetermined MSHCP Survey Area for fifteen criteria area and narrow endemic plant species (RCIP Conservation Report Summary Generator 2012). According to the MSHCP guidelines, focused surveys are required during the appropriate flowering season to document the presence/absence of these species if suitable habitat is present and if the property is located within a predetermined Survey Area (MSHCP 2004). Potential habitat is present on or immediately adjacent to the property for several of these species in ruderal/disturbed saline-alkali soil habitats, agricultural fields, agricultural ditches and disturbed vernal pools. Habitat assessments and focused surveys were conducted for all fifteen species, which includes:

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### Criteria Area Plant Species

- San Jacinto Valley Crownscale [Federal endangered, California Rare Plant Rank<sup>1</sup>- CRPR 1B.1];
- Davidson's saltscale [CRPR 1B.2];
- Parish's brittlescale [CRPR 1B.1];
- thread-leaved brodiaea [Federal threatened, State endangered, CRPR 1B.1];
- smooth tarplant [CRPR 1B.1];
- round-leaved filaree [CRPR 1B.1];
- Coulter's goldfields [CRPR 1B.1];
- little mousetail [CRPR 3.1]; and
- mud nama [CRPR 2.2].

### Narrow Endemic Plant Species

- Munz's onion [Federal endangered, State threatened, CRPR 1B.1];
- San Diego ambrosia [Federal endangered, CRPR 1B.1];
- many-stemmed dudleya [CRPR 1B.2];
- spreading navarretia [Federal threatened, CRPR 1B.1];
- California Orcutt grass [Federal/State endangered, CRPR 1B.1]; and
- Wright's trichocoronis [CRPR 2.1].

Focused surveys for MSHCP criteria area and narrow endemic plants were conducted for all suitable habitat areas within and immediately adjacent to the Sensitive Plant Survey Areas. Each focused survey was conducted on foot according to MSHCP protocols and the USFWS, California Native Plant Society (CNPS), and CDFW survey guidelines. The Project surveys were coordinated with the blooming periods of several reference populations to aid detection of rare plants in 2012.

Many annual and geophyte (corm or bulb-forming) perennial plant species may fail to germinate, grow, and/or bloom during sub-optimal rainfall years. Accordingly, plant surveys conducted during adverse weather conditions may not accurately document the presence/absence of special-status annual or geophyte-species that occur on a site. Therefore, it is important to provide rainfall data for the time period when the focused surveys were conducted in order to show that the results of these surveys were not constrained by low precipitation for a region in any given year. The average rainfall for Hemet

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<sup>1</sup> *In the spring of 2011, the California Native Plant Society (CNPS) officially changed the name "CNPS List" to "California Rare Plant Rank (CRPR)," which is reflected in this report. However, the definitions of the ranks and the ranking system have not changed.*

recorded from 2004 through 2012 is 12.29 inches per season. Hemet received 8.56 inches of rain during the 2011-2012 water year (July through June). However, despite the lower than average rainfall season, examination of reference populations indicate many of the target MSHCP sensitive annual and bulbiferous species germinated and/or bloomed during the 2012 survey season.

A site-specific survey program was developed to achieve the following goals: (1) characterize the vegetation associations; (2) prepare a detailed floristic compendium; (3) conduct focused surveys to document the distribution and abundance, or absence, of MSHCP criteria area or narrow endemic plant species at the site; and (4) prepare botanical resource maps showing the distribution of sensitive vegetation communities and the location of the MSHCP target species or other special-status plants observed on-site.

The Project surveys also proposed to document other CNPS sensitive plants or species of local concern on-site, if present. The methodology and focus of the program is consistent with the MSHCP guidelines, but also conforms to scientific and technical standards listed by USFWS (1996), CNPS (2001), and California Department of Fish and Game (CDFG: 2009) for sensitive plant species surveys. Field surveys were coordinated with the blooming periods of many reference populations in order to determine whether the target species were identifiable at the time of the survey and therefore aid detection on-site.

Fieldwork was coordinated throughout the spring, summer, and autumn blooming periods of local reference populations, site-specific habitat conditions, and vegetation-soil associations of the target species. Accordingly, seven focused surveys were conducted on-site, including March 31, April 30, May 27, June 23, July 23, August 24, and September 27, 2012. Also, several reference populations were visited in order to determine whether the target species were identifiable at the time of the survey. All portions of the Project site and adjacent lands were surveyed on foot by walking slowly and methodically across each habitat type, including the agricultural fields. A complete list of the plants observed on-site can be found in Appendix A of the Biological Resources Technical Report (see Appendix IV.E to this Draft EIR).

### ***MSHCP Burrowing Owl Surveys***

In accordance with the MSHCP Burrowing Owl Survey Instructions (County of Riverside 2006), survey protocol consists of two steps, Step I – Habitat Assessment and Step II – Locating Burrows and Burrowing Owls. Step II is comprised of two parts, Part A: Focused Burrow Surveys and Part B: Focused Burrowing Owl Surveys. In addition to complying with MSHCP survey guidelines, the protocol was augmented to ensure compliance with the CDFW updated Staff Report on Burrowing Owl Mitigation breeding season survey guidelines (CDFG 2012). Specifically, the guidelines incorporated into the MSHCP survey protocol included:

- Four surveys with at least one conducted between February 15 and April 15, and a minimum of three surveys spaced three weeks apart conducted between April 15 and July 15, with at least one survey after June 15; and
- Survey transects spaced between 7 to 20 meters apart.

Surveys were conducted during weather that is conducive to observing owls outside their burrows and detecting burrowing owl sign. Surveys were not conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. None of the surveys were conducted within five days of measurable precipitation. In addition to the MSHCP guidelines, field notes were taken daily. These notes recorded the date, location, animal species observed, and general habitat characteristics of each area and habitat examined that day.

#### *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 on-site. Cadre Environmental conducted the habitat assessment on April 2, 2012 (Cadre Environmental 2013). 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 on-site. 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 (*Spermophilus beecheyi*) or badgers (*Taxidea taxus*), but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles, or 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.

Results from the habitat assessment indicate that suitable foraging habitat and burrows were documented primarily within the agricultural croplands and adjacent rockpiles. Accordingly, if suitable habitat is documented on-site, both Step II surveys and the 30-day pre-construction surveys are required in order to comply with the MSHCP guidelines.

### *Step II – Locating Burrows and Burrowing Owls*

A focused burrow survey that includes documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl was conducted 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. Therefore, the Project site was separated into two burrowing owl survey areas, each totaling approximately 100 acres each.

#### Part A: Focused Burrow Survey

A systematic survey for burrows, including burrowing owl sign, was conducted by walking across all suitable habitats mapped within and adjacent to each Project site on April 2 and 3, 2012. 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 feet) apart, and owing to the terrain, often much smaller. Transect routes were also adjusted to account for ridge lines 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. As previously stated, burrows sufficiently sized to support burrowing owl were found scattered throughout the Project site.

Since natural conditions that could potentially support burrowing owl were documented within the Burrowing Owl Survey Areas, focused visual surveys were implemented as prescribed in Part B: Focused Burrowing Owl Surveys of the MSHCP guidelines throughout the property and buffer habitat.

#### Part B: Focused Burrowing Owl Surveys

Four focused burrowing owl surveys (the first was conducted as part of the focused burrow survey – Step II, Part A) were conducted between April and June 2012 from one hour before sunrise to two hours after sunrise. During each visual survey, 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. All burrows were monitored at a short distance from the entrance, and at a location that would not interfere with potential owl behavior. In addition to monitoring potential burrow locations, all suitable habitats in each survey area were walked along transects averaging 20 meters (approximately 66 feet) between centerlines. Weather conditions were conducive to a high level of bird activity on-site.

### ***Fairy Shrimp Surveys***

Protocol USFWS dry and wet season surveys were conducted by Helix Environmental Planning during the 2005-2006 seasons to determine the presence/absence of the federally endangered Riverside fairy shrimp and the federally threatened vernal pool fairy shrimp. As stated by Helix Environmental Planning, Inc.:

*A wet season protocol level fairy shrimp survey was planned for winter/spring 2006 but could not be completed because of a lack of rainfall. Helix biologist Dale Ritenour visited the site bi-weekly from March to May 2006, but no water was observed ponding in the base area. Ponding was not observed in the vicinity before March, during the 2005-06 hydrological year. A dry season protocol level fairy shrimp survey was conducted, since the wet season survey did not produce results. Soils collection for the dry season survey was conducted on June 8, 2006. (Helix Environmental Planning, Inc. 2007)*

### ***MSHCP Riparian/Riverine/Vernal Pool Resources***

The Project site was initially assessed to determine the presence/absence and extent of MSHCP riparian, riverine and vernal pool resources in accordance with the RCIP definition (Section 6.1.2, Volume I, Final MSHCP) in June 2005 (Helix Environmental Planning, Inc. 2007). An updated assessment was conducted in May 2012 by Cadre Environmental (Cadre Environmental 2013) to assess changes to the conditions documented during the 2005 field effort.

The vernal pool matrix documented by Helix Environmental Planning, Inc. did not inundate during the 2012 spring survey. Therefore, the previous vernal pool delineation was utilized during the following impact analysis. As stated by Helix Environmental, Inc. Planning:

*Vernal pools were delineated two ways: (1) if they supported at least one vernal pool indicator species (i.e., dwarf wooly-heads [*Psilocarphus brevissimus* var. *brevissimus*], slender plantain [*Plantago elongata*], or slender popcorn flower [*Plagiobothrys stipitatus*]); or (2) if they supported sensitive vernal pool species (i.e., little mousetail or spreading navarretia). The vernal pool was then delineated using a GPS unit. A list of plant species was recorded for each vernal pool delineated. Because the vernal pool assessment was conducted outside the rainy season some areas that ponded water and supported vernal pool species during the rainy season may have been missed, or the size of the vernal pool may have been underestimated. (Helix Environmental Planning, Inc. 2007)*

A hydrological evaluation of the vernal pool complex was conducted by JLC Engineering & Consulting, Inc. during the winter of 2012 and included a microwatershed analysis of soils, infiltration rates, topography, soil-cover complex, runoff potential for a 24 hour storm event, and storm frequency ranging from two to 100 years. As stated by JLC Engineering & Consulting, Inc.:

*Using the data obtained from the local and federal agencies, the table above indicates that the soil conditions do not allow for runoff to be produced by the project site for the storm events between the 2 year and 100 year events. However, if the 100 year event is evaluated using the Antecedent Moisture Condition of AMC III, the project site would result in 1.38 inches of rainfall. Based on the hydrological analyses provided in this*

*technical memorandum, JLC's opinion is that the vernal pools are primarily hydrated vertically from rainwater generated by local storms. The study also indicates that the soils allow for the rainfall to be infiltrated through the soil media. (JLC Engineering & Consulting, Inc., 2012)*

Updated information on vegetation, hydrology and soil within each MSHCP riparian, riverine, or vernal pool matrix was documented concurrently during the jurisdictional delineation as described below.

### ***Jurisdictional Delineation***

The Project site was assessed for jurisdiction by the USACE, CDFW, RWQCB, and MSHCP Section 6.1.2 in May 2012 (Cadre Environmental 2013). Non-wetland waters of the United States were delineated based on the limits of the Ordinary High Water Mark (OHWM) as determined by erosion, the deposition of vegetation or debris, and changes in vegetation and soil characteristics. The delineation utilized the methodology for routine wetland determination according to the methods outlined in the USACE Wetland Delineation Manual (Environmental Laboratory 1987) and the Arid West Wetland Delineation Supplement (USACE 2008), and updated regulatory guidance letters. Wetlands are identified by the presence of three characteristics: hydrophytic vegetation, wetland hydrology, and hydric soils. If any of these criteria were met, one or more transects were run to determine the extent of the wetland.

Aerial cover of vegetation was estimated by visually determining the percent coverage of the vegetation within two randomly placed circular plots. Tree and shrub cover was estimated using 30-foot radius circular plots; sapling, shrub, and forb cover was estimated using 10-foot radius plots. Plant species in each stratum were ranked according to their dominance, following the Corps' Arid West Wetland Delineation Supplement field datasheet. Species that contributed to a cumulative total of 50 percent of the total dominant coverage plus any species that comprised at least 20 percent of the total dominant coverage were recorded on the wetland data sheets. The wetland indicator status was assigned to each species using the Region 0 List of Plant Species that Occur in Wetlands (Reed, 1988). If greater than 50 percent of the dominant species from all strata were Obligate, Facultative-Wetland, or Facultative species, the criteria for wetland vegetation was considered to be met.

The presence of wetland hydrology was evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil pits. In addition, indicators of wetland or riverine hydrology were recorded, including water marks, drift lines, rack, debris, and sediment deposits. The lateral extent of the hydrology indicators were used as a guide for locating soil pits for evaluation of hydric soils. In portions of the stream where the flow was divided between multiple channels with intermediate sand bars, the entire area between the outermost edges of each channel was considered within the ordinary high water mark and the wetland hydrology indicator was considered met for the entire area, assuming surface water was present.

Soil characteristics were verified by digging soil pits along each transect to a depth of at least 12 inches, where applicable. In areas of recent deposition of sand or other overburden material, the soil pit was dug to a depth of 12 inches below the depth of the overburden material. At each soil pit the soil texture and color were recorded by comparison with standard plates within a Munsell soil color chart. Any indicators of hydric soils, such as redoximorphic features, buried organic matter, organic streaking, reduced soil conditions, gleyed or low-chroma soils, or sulfidic odor were also recorded. The limits of wetland hydrology indicators were used as a guide for locating soil pits. In most cases, in areas where wetland hydrology and riparian vegetation were not observed nor could be reasonably expected, soil pits were not undertaken.

In addition to the limits of USACE and RWQCB jurisdiction, the limits of CDFW jurisdiction were also measured. If no riparian vegetation was present, CDFW jurisdiction was defined as the area within the OHWM, and thus the USACE, RWQCB, and CDFW jurisdiction would be identical. If riparian or wetland vegetation was present, CDFW jurisdiction was defined as the width of the riparian vegetation corridor to the drip line of the vegetation.

### ***California Rapid Assessment Method***

A functional assessment of riverine (agricultural ditches) and vernal pool resources (vernal pool complex) was conducted on-site using the California Rapid Assessment Method (CRAM) during the spring of 2013 (GLA Associates 2013). Two single Assessment Areas (AAs) were identified, assessed, and scored in accordance with CRAM User's Manual Version 6.0 (March 2012), CRAM Riverine Wetlands Field Book Version 6.0 (March 2012), and CRAM Individual Vernal Pools Field Book Version 6.0 (March 2012). The results of this analysis are presented in the Biological Resources Technical Report (see Appendix IV.E to this Draft EIR).

### **Existing Site Characteristics**

The 208.87-acre Project site, Assessor's Parcel Number (APN) 448-090-003 (including adjacent right-of-way centerlines, West Devonshire, Myers Road, Celeste Road, Old Warren Road, and Florida Avenue), is located in the City of Hemet. Specifically, the Project site is located within the Western Riverside County MSHCP San Jacinto Valley Plan Area and 0.34-acre right-of-way (Florida Avenue SR74/Warren Road) is located within Criteria Cell 3584 (Cell Group D) – SU4 Hemet Vernal Pool Areas East. Although a 0.09-acre sliver of the western Project site boundary is identified as occurring within Criteria Cell 3584 (Riverside County Integrated Project [RCIP] Conservation Summary Report Generator 2012), this is expected and commonly represents a mapping error based on the resolution limitations of Geographic Information System (GIS) features that are based on USGS section boundaries. The Project site extends north of Florida Avenue (State Route 74), south of Celeste Road's proposed eastern extension, east of Old Warren Road, and west of Myers Street.

The majority of the Project site is characterized as flat, highly disturbed active agricultural lands with elevations ranging from 1,508 feet above mean sea level (AMSL) to 1,512 feet AMSL. Field croplands, ruderal disturbed, developed and exotic landscaping primarily occupy the Project site. Man-made agricultural ditches occur along portions of the west, east, and southern boundaries. Two disturbed vernal pools occur within the extreme southwestern region of the Project site. The majority of flat lowlands on-site are currently being farmed (wheat production).

### **Site Topography and Soils**

The 208.87-acre Project site consists primarily of active field croplands and ruderal/disturbed saline-alkali soil habitats.<sup>2</sup> Agricultural ditches and disturbed vernal pools are also found on-site. The native vegetation communities, disturbed habitats, and agricultural lands mapped for the site are illustrated and tabulated on Figure IV.E-1.

Soils mapped by the Soil Conservation Service (SCS) within the Project site consist primarily of the Traver series. The Traver series are slightly-to-strongly saline soils, which are moderately well drained soils that occur on valley plains and in basins. The Soil Survey of Western Riverside Area (Soil Survey Staff 2013) has the following soils mapped within the boundary of the property as illustrated on Figure IV.E-2:

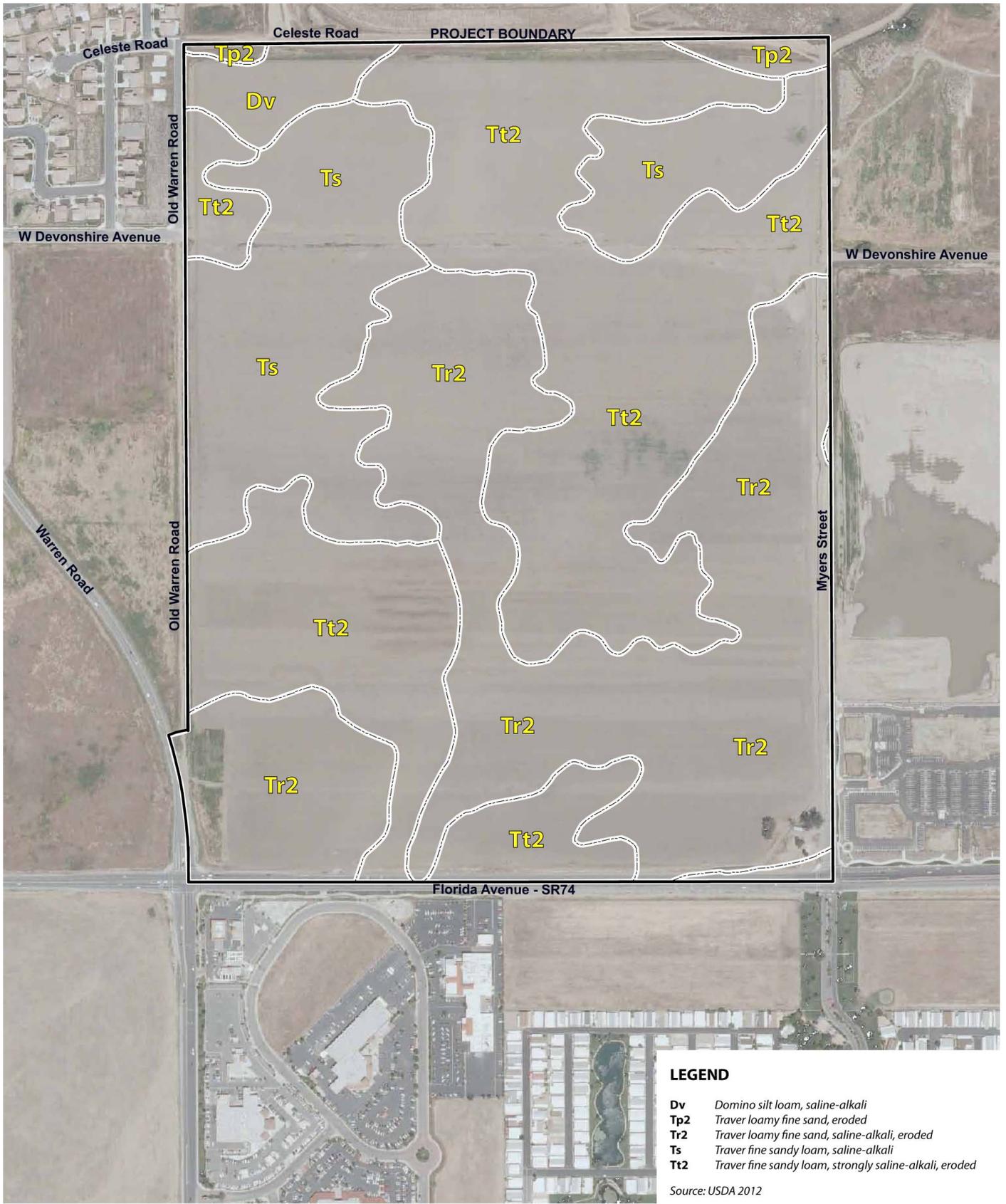
- Traver loamy fine sand, saline-alkali, eroded (Tr2);
- Traver fine sandy loam, strongly saline-alkali, eroded (Tt2);
- Traver fine sandy loam, saline-alkali (Ts);
- Traver loamy fine sand, eroded (Tp2); and
- Domino silt loam, saline-alkali (DV).

In addition, the Domino silt loam saline-alkali (DV) is mapped only in the northwest corner of the property. The Domino series consist of moderately well drained to somewhat poorly drained saline-alkali soils that occur in basins and on alluvial fans.

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<sup>2</sup> SCS is now known as the National Resource Conservation Service or NRCS.





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Source: Cadre Environmental, June 2013.

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## **Vegetation Communities**

Natural community names and hierarchical structure follows the CDFW “List of California Terrestrial Natural Communities” and/or Holland (1986) classification systems, which have been refined and augmented where appropriate to better characterize the habitat types observed on-site when not addressed by the MSHCP classification system.

### ***Agricultural Lands - Field Croplands***

The majority (90 percent) of the low-lying areas found on the Project site are dominated by active field croplands (187.54 acres). Cultivated barley (*Hordeum vulgare*) is currently the dominant species documented within this annually disked and/or dry farmed region of the Project site. Additional species documented within this plant community include pigweed (*Amaranthus albus*), common sow thistle (*Sonchus oleracens*), Australian saltbush (*Atriplex semibaccata*), bindweed (*Convolvulus arvensis*), London rocket (*Sisymbrium irio*), cheeseweed (*Malva parviflora*), alkali weed (*Cressa truxillensis*), summer cypress (*Kochia scoparia*), alkali heliotrope (*Heliotropium curassavicum*), wild radish (*Raphanus sativa*) and common knotweed (*Polygonum arenastrum*).

### ***Developed/Disturbed Land - Ruderal Disturbed/Developed***

Ruderal disturbed (16.42 acres) and developed (3.93 acres) habitats includes those regions of the Project site generally devoid of vegetation and/or dominated by ruderal/disturbed species and include dirt roads or regions adjacent to the northern and extreme southwestern Project site boundary apparently cleared as part of annual disking activities and previous development activities. Species scarcely documented within this habitat type include common fiddleneck (*Amsinckia menziesii*) and cheeseweed.

Man-made agricultural ditches dominated by ruderal species are located along portions of the western, southeastern, and southern Project site boundaries. The 0.59 acre of agricultural ditches support mostly exotic facultative weedy species such as grass poly (*Lythrum hyssopifolium*), perennial ryegrass (*Lolium perenne*), littleseed canary grass (*Phalaris minor*), paradox canary grass (*Phalaris paradoxa*), curly dock (*Rumex crispus*), broad-leaved peppergrass (*Lepidium latifolium*), tamarisk (*Tamarix ramosissima*), Boccone’s sand spurry (*Spergularia bocconei*), and annual beard grass (*Polypogon monspeliensis*). A few native species are also present, including valley pineapple weed (*Chamomilla occidentalis*), saltgrass (*Distichlis spicata*), golden dock (*Rumex maritimus*), common peppergrass (*Lepidium densiflorum*), alkali heliotrope, and Mexican sprangletop (*Leptochloa uninervia*). Standing water and/or soils saturated to the surface were observed in the agricultural ditches from March to late April.

### ***Exotic - Eucalyptus***

Exotic species, including eucalyptus (*Eucalyptus* sp.), totaling 0.28 acre were documented in the extreme southeastern region of the Project Site where previous development activities occurred. The understory of this region is dominated by non-native grassland species including slender oat (*Avena barbata*), wild

oat (*Avena fatua*), foxtail chess (*Bromus madritensis*), ripgut grass (*Bromus diandrus*), Russian thistle (*Salsola tragus*) and perennial ryegrass.

### ***Vernal Pools - Alkaline***

Two disturbed vernal pools were documented on-site by Helix Environmental Planning (2007) during the spring of 2005. The pools total 0.45-acre. Plant species documented in the depressions include slender popcorn flower (*Plagiobothrys stipitatus*), water speedwell (*Veronica Anagallis-aquatica*), peppergrass (*Lepidum* sp.), and ruby sand-spurry (*Spergularia rubra*). These pools have been highly disturbed by agricultural practices and were originally mapped in 2005 during an exceptionally wet year (over 30 inches of rainfall). During the 2012 surveys, however, ponded water was not observed in the disturbed vernal pools, most likely due to the combination of below average rainfall (8.56 inches), ongoing agricultural practices, and the recently constructed ditch adjacent to Myers Street. Owing to ongoing dryland farming practices, the largest pool in the complex did not pond water and a clearly defined basin was not visible in the plowed field during the 2012 survey efforts. Although standing water was not present in 2012, soils were saturated to the surface during spring in the smaller, northernmost pool. Obligate vernal pool plants, such as wire-stem popcorn flower (*Plagiobothrys leptocladus*), were present. In 2012, however, weedy exotic species dominated the vernal pool habitat, including perennial ryegrass, Lemmon's canary grass (*Phalaris lemmonii*), red-stemmed filaree (*Erodium cicutarium*), hare barley, common knotweed, and prickly lettuce (*Lactuca serriola*). Native plants include coast goldfields (*Lasthenia gracilis*), common tidy tips (*Layia platyglossa*), alkali weed, common peppergrass, alkali heliotrope, and valley pineapple weed. Helix Environmental Planning Inc. (2007) performed focused plant surveys during the wet year of 2005, and did not detect any of the MSHCP target plants associated with the vernal pool habitat on-site. In addition, the 2012 Project surveys did not record any sensitive plants growing in this habitat area.

The acreages both on-site and in potential off-site impact zones within each of these vegetation communities are presented on Table IV.E-1. A complete list of common plant and wildlife species documented on-site is included in Appendix A of the Biological Resources Technical Report (refer Appendix IV.E).

### **Jurisdictional Resources**

Several man-made drainage ditches are located within the Project site and are subject to the jurisdiction of the RWQCB, CDFW, and MSHCP. Two vernal pools were delineated by Helix Environmental Planning, Inc. (2007) and these resources are regulated by the RWQCB and the Riverside County MSHCP. No jurisdictional resources regulated by the USACE were delineated on-site.

**Table IV.E-1  
Vegetation Communities Acreages**

<b>Vegetation Communities</b>	<b>On-site (acres)</b>	<b>Off-site (acres)</b>	<b>On-site/ Off-site Totals (acres)</b>
<b>Agriculture</b>			
Field Croplands	184.02	3.52	187.54
<b>Developed/Disturbed</b>			
Ruderal Disturbed	11.47	4.95	16.42
Exotic-Eucalyptus	0.28	--	0.28
Agricultural Ditch	0.24	0.35	0.59
Developed	0.15	3.78	3.93
<b>Vernal Pool - Alkaline</b>			
Vernal Pool Matrix	0.45	--	0.45
<b>TOTAL</b>	<b>196.61</b>	<b>12.60</b>	<b>209.21</b>
<i>Source: Cadre Environmental 2013.</i>			

The Project site contains three ephemeral agricultural ditches (Drainage A, B, and C) that flow along and adjacent to the southern, western and eastern perimeter. These drainages total 0.59 acre and extend for a total of 7,731 linear feet as illustrated on Figure IV.E-3, and tabulated on Table IV.E-2. All ditches have been excavated from upland areas. These areas are not regulated by the USACE since they are man-made drainage ditches constructed from uplands and do not exhibit perennial flow. The mapped drainages fall both within and outside the property limits. However, all man-made drainage ditches are expected to be impacted as a result of the Project. Therefore, acreage and linear feet referenced in the report reflect totals for all features that would be impacted as a result of Project initiation.

The Project site also contains a historic vernal pool complex in the southwestern corner of the property (Helix Environmental Planning, Inc. 2007). At the time of the most recent delineation, only one small relic depression containing upland vegetation was present. Subsequent to the initial delineation of the vernal pools by Helix Environmental Planning, Inc., a drainage ditch (Drainage C) was created within and immediately east of the property boundary as a result of the Myers Street improvement project constructed in 2009. This feature is expected to reduce if not eliminate the majority of natural flows that historically occurred through the property and partially contributed to the inundation of the vernal pool complex. Upstream watershed flows that enter the Project site in the northeast region are now directed to a drainage ditch that extends south along the eastern property boundary and leads to a drainage ditch located immediately north of Florida Avenue (State Route 74). This vernal pool complex, as initially delineated by Helix Environmental Planning, Inc., totaled 0.45 acre and is regulated by the RWQCB and the Western Riverside County RCA through the MSHCP.



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Source: Cadre Environmental, June 2013.

**Table IV.E-2  
Jurisdictional Resource Acreages**

<b>Drainage Name (linear feet)</b>	<b>USACE (acres)</b>	<b>RWQCB (acres)</b>	<b>CDFW (acres)</b>	<b>MSHCP Riparian/ Riverine (acres)</b>	<b>MSHCP Vernal Pool (acres)</b>
Drainage A (2,820 lf)	--	0.19	0.19	0.19	--
Drainage B (2,395 lf)	--	0.11	0.11	0.11	--
Drainage C (2,516 lf)	--	0.29	0.29	0.29	--
Vernal Pool Alkaline	--	0.45	--	--	0.45
<b>TOTAL</b>	--	<b>1.04</b>	<b>0.59</b>	<b>0.59</b>	<b>0.45</b>
<i>Source: Cadre Environmental 2013</i>					

Within Drainages A and B, upland vegetation persists where no water pumping into the channels occur. Where water pumping is present in Drainages A, B, and C, Facultative (FAC) and Facultative Wetland (FACW) plant species are found within the channels. The dominant plant species include annual sunflower (*Helianthus annuus*) [FAC], fiddle dock (*Rumex pulcher*) [FAC], and curly dock [FACW]. The 0.59 acre of drainage ditches found within and adjacent to the Project site also contain ox-tongue (*Picris echioides*) [FACW], cocklebur (*Xanthium strumarium*) [FAX], curly dock [FACW], toad rush (*Juncus bufonius*) [FACW], prickly lettuce [FAC], and Shepard's purse (*Capsella bursa-pastoris*) [FAC]. Detailed characteristics of each drainage feature and vernal pool complex are presented below.

### ***Drainage A***

Drainage A is situated within and along the western border of the Project site and is an ephemeral agricultural ditch excavated from uplands and does not exhibit perennial flows. It flows approximately 2,820 linear feet from north to south and terminates at the southwestern portion of the site where it flows into an 18-inch culvert and exits the site. The width of this drainage ranges from 2 to 4 feet wide and is approximately 3 feet deep. This channel is largely unvegetated, but contains scattered annual vegetation including pigweed [Upland: UPL], Italian ryegrass [FAC], fiddle dock and western sunflower. Soil pits excavated throughout Drainage A revealed no hydric characteristics. The USACE hydrology criteria was not met, as mentioned above, based upon Drainage Patterns (USACE Criterion B10) and Sediment Deposits (USACE Criterion B2). This drainage contains 0.19 acre of CDFW, RWQCB, and MSHCP regulated streambed.

The current watershed drains to several retention basins located within existing developments upstream of the Project site. These basins are drained via the use of temporary pumps or evaporation. The pumps drain the runoff to existing curb and gutter within the streets. Where curb and gutters do not exist, water

is conveyed along drainage ditches on-site. The roadside drainage ditches are artificial features and are constructed from uplands and do not exhibit perennial flows; therefore they are not regulated features by the USACE.

### ***Drainage B***

Drainage B (excavated ephemeral upland agricultural drainage ditch) is situated adjacent to the southern Project site boundary. It flows approximately 2,395 linear feet and runs the entire length of the southern limits of the site. Flow is divided in Drainage B with a portion flowing west where it terminates at the southwestern portion of the site into an 18" culvert and exits the site. On the eastern side of the site, it merges with Drainage C and flows in an eastward direction off-site toward the intersection of Florida Avenue and Myers Street. The width of this drainage ranges from 2 to 4 feet wide and is approximately 3 feet deep. This channel is largely unvegetated, but contains scattered annual vegetation including western sunflower, perennial ryegrass ([FAC], curly dock, Mexican sprangletop [FACW], and annual beard grass [FACW]. Soil pits excavated throughout Drainage B revealed no hydric characteristics. The USACE hydrology criteria were not met, as mentioned above, based upon Drainage Patterns (USACE Criterion B10) and Sediment Deposits (USACE Criterion B2). This drainage contains 0.11 acre of CDFW, RWQCB and MSHCP regulated streambed.

The current watershed drains to several retention basins located within existing developments upstream of the Project site. These basins are drained by the use of temporary pumps or evaporation. The pumps drain the runoff to existing curb and gutter within the streets. Where curb and gutters do not exist, water is conveyed along drainage ditches on-site. The roadside drainage ditches are artificial features and are constructed from uplands; therefore they are not regulated features by the Corps.

### ***Drainage C***

Drainage C was constructed in 2009 as part of the Myers Street improvement project. This agricultural ditch did not exist during the 2007 Helix Environmental Planning delineation. Drainage C is located within and adjacent to the eastern Project site boundary and is an ephemeral drainage ditch excavated from uplands. It flows approximately 2,516 linear feet and runs the entire length of the eastern limits of the site (south of West Devonshire Avenue), diverging slightly in the southeastern portion of the site flowing to the west of an existing eucalyptus grove. Water within this drainage ditch flows to the south and intercepts Drainage B, which then flows to the west off-site. The width of this drainage ranges from 5-8 feet wide and is approximately 4 feet deep. This channel was inundated for the first two site visits and was dry during the third and final site visit. Emerging vegetation within the channel bottom included canary grass (*Phalaris californica*) [FAC], curly dock, annual beard grass, and Mexican sprangletop. Soil was saturated during the first two visits and exhibited significant soil cracking during the final site visit, due to the high clay content. The USACE hydrology criteria were not met, as mentioned above, based upon Drainage Patterns (USACE Criterion B10) and Sediment Deposits (USACE Criterion B2). This drainage contains 0.29 acre of CDFW, RWQCB and MSHCP regulated streambed.

The current watershed drains to several retention basins located within existing developments upstream of the Project site. These basins are drained via temporary pumps or evaporation. The pumps drain the runoff to existing curb and gutter within the streets. Where curb and gutters do not exist, water is conveyed along drainage ditches on-site. The roadside drainage ditches are artificial features and are constructed from uplands and does not exhibit perennial flows; therefore they are not regulated features by the USACE.

### ***Vernal Pool Complex***

As discussed above, Helix Environmental Planning, Inc. previously conducted a vernal pool assessment in 2007 during which time a vernal pool complex was documented in the southwestern portion of the site. Plant species documented in the depressions by Helix in 2007 included slender popcorn flower, water speedwell, peppergrass (*Lepidum* sp.), and ruby sand-spurry (Helix Environmental Planning, Inc. 2007). The vernal pool complex is hydrated/inundated by vertical rainfall and a ponded backwater condition that occurs at the intersection of Florida Avenue and Warren Road and totals 0.45 acre.

Although the Helix Environmental Planning, Inc. (2007) report identified two vernal pools in the southwestern corner of the site, no evidence of the presence of these pools was noted during the spring fieldwork in 2012. The smaller pool area was identified with staking but no evidence of ponding or hydrophytic vegetation was documented. As noted previously, the absence of vernal pool hydrology may be due to the change in hydrologic conditions on-site as a result of the Myers Street (Drainage C) improvement project construction completed in 2009 prior to the applicant purchasing the site in 2011.

The vernal pools were surveyed for rare plants during the spring of 2012. During the 2012 surveys, no vernal pool or hydrophytes were identified within the area where the vernal pools were previously mapped. The pools were surveyed for sensitive fairy shrimp during spring 2006 (dry season sampling) and winter 2007/spring 2008 (wet season sampling) (Helix Environmental Planning, Inc. 2006, 2008). The common versatile fairy shrimp (*Branchinecta lindahli*) were documented. No federally listed species including the vernal pool or Riverside fairy shrimp were detected.

Soils in this area are the Traver series, which under undisturbed conditions would perch and retain water sufficient for vernal pool plants and hydrology to persist. However during the site visit, there was no evidence of soil ponding in this area as well as the smaller pool area location. Soil pits were dug in both these locations and they did not exhibit hydric soil characteristics in 2012.

2011-12 rainfall data reported by weathercurrents.com brought approximately 7.52 inches of rain from October 2011-through April 15, 2012 to East Hemet, with most of the rainfall occurring in November and March. From 2002 through 2012, average annual rainfall was between 4.2 inches/year and 30 inches/year, averaging 11 inches/year, discounting the maximum and minimum values. During the field inspections, which were conducted during a below-average rainfall year, the vernal pool areas were dry.

***US Army Corps of Engineers Jurisdictional Resources***

There are no jurisdictional wetland or waters of the United States or vernal pool resources regulated by the USACE present on-site. The on-site ephemeral drainage features are non-tidal drainage ditches excavated from upland areas and thus are specifically exempt from jurisdiction per §33CFR328.3, and is upheld per the Rapanos and Carabell court decisions (126 S. Ct. 2208 (2006) and draft guidance letters from the USACE (that determined that roadside or field side drainage ditches excavated from uplands that do not exhibit perennial flow are not regulated). The preamble to the USACE November 13, 1986, final rule states the non-tidal drainage and irrigation ditches excavated on dry land are generally not considered to be waters of the United States, but the USACE and Environmental Protection Agency (EPA) reserve the right on a case-by-case basis to determine whether a particular water body is a water of the United States (see 51 FR 41217).

The mapped soil type indicates the primary condition necessary for vernal pools to be present under undisturbed conditions. In 2007, Helix Environmental Planning, Inc. mapped two vernal pools on the southwest corner of the property. The vernal pools do not connect to navigable waters and they would not be regulated by the USACE.

***California Department of Fish and Wildlife Jurisdictional Resources***

Drainages A, B and C contain a defined bed and bank that transport water conveyed artificially to them to downstream tributaries via either roadside ditches or the City of Hemet's storm drain system. Thus the on-site ephemeral drainage channels are considered to be non-wetland waters of the State of California regulated by the CDFW.

***Regional Water Quality Control Board Jurisdictional Resources***

The RWQCB generally follows the guidelines of the USACE, but may take jurisdiction of Drainages A, B and C under the Porter-Cologne Act. The RWQCB would take jurisdiction of any vernal pool under the Porter-Cologne Act if they determine one to be present on-site.

In March 2012, a draft Wetland Area Protection and Dredge and Fill Permitting policy was issued by the State Water Resources Control Board (SWRCB) which, if adopted, could change the definition of "wetland" and may extend the State Board's permitting jurisdiction over a broader area of waters of the State. Until this policy is adopted, however, the standard method for jurisdictional delineations is being used for this analysis.

***MSHCP Riparian/Riverine/Vernal Pool Resources***

The Project site supports areas that meet the Western Riverside County MSHCP definition of vernal pool resources. The disturbed vernal pool complex is located in the extreme southwest region of the Project site and is primarily hydrated/inundated by vertical rainfall. None of the vernal pools mapped on-site

ponded in 2012, most likely because of the combination of below average rainfall and ongoing agricultural practices, which caused limited germination of potential vernal pool sensitive plants that could occur on-site. Helix Environmental Planning, Inc. (2007) performed focused plant surveys in 2005, an exceptionally wet year, and did not detect any of the target MSHCP criteria area or narrow endemic plants typically associated with vernal pool habitats. The common versatile fairy shrimp was documented within the larger of the two pools (Helix Environmental Planning, Inc. 2006). However, no federally listed species including the vernal pool or Riverside fairy shrimp were detected.

Although the MSHCP states that it does not regulate man-made features, the RCA determined that the 0.59-acre of made-made agricultural ditches meet the MSHCP definition of riverine resources. No suitable habitat for the least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), or western yellow-billed cuckoo (*Coccyzus americanus*) was detected within or adjacent to the Project site.

### **Sensitive Biological Resources**

The following section describes the plant and wildlife species present, or potentially present within the site 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 state and/or federal resource management agencies, or both, as threatened or endangered, under provisions of the FESA and CESA. Vulnerable or "at-risk" species that are proposed for listing as threatened or endangered (and thereby for protected status) are categorized administratively as "candidates" by the USFWS. CDFW uses various terminology and classifications to describe vulnerable species. 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, USFWS, and groups such as the CNPS maintain watch lists of such resources.

#### ***Sensitive Habitats On-site***

One plant community documented on-site (vernal pool – alkaline) is listed by CDFW as southern vernal pool. Although this resource does not have a Global (G) ranking and has no State Ranking (SNR), the disturbed vernal pool complex is regulated by CDFW, RWCQB, and MSHCP (section 6.1.2), as referenced below.

#### ***Sensitive Plants On-site***

One of the fifteen criteria area or narrow endemic plant species, smooth tarplant (a small population consisting of 34 individual plants) and one MSHCP covered species, vernal barley, was detected during the focused survey program as summarized on Table IV.E-3. The remaining fourteen MSHCP criteria

area or narrow endemic plant species were not detected and/or are not expected to occur on-site due to a lack of suitable habitat.

*MSHCP Criteria Area or Narrow Endemic Plant Species Documented on or Adjacent to the Site*

Narrow Endemic Plants: No target MSHCP narrow endemic plants were found during the 2012 surveys within or adjacent to the Project site (Narrow Endemic Plant Survey Areas - NEPSA) and/or are not expected on-site due to lack of suitable habitat.

**Table IV.E-3  
Sensitive Plant Species with Potential to Occur On-site**

<b>Species Name (Scientific Name) Status</b>	<b>Habitat Description</b>	<b>Comments</b>
<b>Munz's onion</b> ( <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 was not observed during focused surveys conducted in 2012, and is not present within or adjacent to the Project site due to lack of detection and lack of suitable habitat. Also, it was not detected on-site during focused surveys conducted by Helix Environmental Planning, Inc. (2007), which were performed during a wet year.
<b>San Diego ambrosia</b> ( <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 was not observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). This species is not expected within the Project site due to lack of detection.
<b>San Jacinto Valley crownscale</b> ( <i>Atriplex coronata</i> var. <i>notatior</i> )  FE CRPR List 1B.1 MSHCP CAPSA CA Endemic	The San Jacinto Valley crownscale occurs primarily in floodplains that support alkali scrub, alkali playas, vernal pools, and occasionally alkali grasslands.	The San Jacinto Valley crownscale was not observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). It is not expected within the Project site due to lack of detection.
<b>South coast saltbush</b> ( <i>Atriplex pacifica</i> )  CRPR List 1B.2 MSHCP Covered	South coast saltbush prefers mildly disturbed coastal bluff scrub with the surrounding habitat of open Diegan coastal sage scrub, although it is found on alkaline flats in areas devoid of taller shrubs (Helix Environmental Planning, Inc. 2007d).	South coast saltbush was not observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). It is not expected within the Project site due to the lack of detection.
<b>Parish's brittlebush</b>	Parish's brittlebush is a small	Parish's brittlebush was not

**Table IV.E-3  
Sensitive Plant Species with Potential to Occur On-site**

Species Name (Scientific Name) Status	Habitat Description	Comments
<i>(Atriplex parishii)</i>  CRPR List 1B.1 MSHCP CAPSA	prostrate to decumbent annual, white scaly, and is often much less than eight inches in length. It blooms May to October. This species occurs on alkali or saline flats, alkali meadows, and in or along the margins of vernal pools or playa depressions.	observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). This species is not expected within the Project site due to lack of detection.
<b>Davidson's saltscale</b> <i>(Atriplex serenana var. davidsonii)</i>  CRPR List 1B.2 MSHCP CAPSA	Davidson's saltscale is a decumbent to ascending annual that is sparsely scaly. It blooms April to October. It grows on coastal bluffs and alkaline alluvial terraces, and on alkali or saline flats in interior areas such as western Riverside County.	Davidson's saltscale was not observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). This species is not expected within the Project site due to lack of detection.
<b>Thread-leaved brodiaea</b> <i>(Brodiaea filifolia)</i>  FT.SE CRPR List 1B.1 MSHCP CAPSA CA Endemic	Thread-leaved brodiaea is a geophyte, which produces leaves and flower stalks that sprout from corms (underground bulb-like storage stems). Thread-leaved brodiaea blooms March to June. Thread-leaved brodiaea typically occurs on gentle hillsides, valleys, and floodplains in semi-alkaline flats of riparian areas, vernal pools, mesic southern needlegrass grassland, mixed native-annual grassland, and alkali grassland plant communities in association with clay, clay loam, or alkaline silty-clay soils.	Thread-leaved brodiaea was not observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). This species is not expected within the Project site due to lack of detection.
<b>Multi-stemmed dudleya</b> <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.	Suitable habitat for many-stemmed dudleya is not present on-site. In addition, many-stemmed dudleya was not observed during focused surveys conducted in 2012, and is therefore is not expected within the Project site due to lack of detection. It was also not detected on-site during focused surveys conducted by Helix Environmental Planning, Inc. (2007), which were performed during a wet year.
<b>Round-leaved filaree</b> <i>(Erodium macrophyllum)</i>	Habitats include open areas in cismontane woodland and valley and	Round-leaved filaree was not observed during focused surveys

**Table IV.E-3  
Sensitive Plant Species with Potential to Occur On-site**

Species Name (Scientific Name) Status	Habitat Description	Comments
CRPR List 2.1 MSHCP CAPSA CA Endemic	foothill grasslands, which are often associated with heavy clay soils below 3,600 feet elevation.	conducted in 2012, and is not expected within the Project site due to lack of detection and lack of suitable habitat. It was also not detected on-site during focused surveys conducted by Helix Environmental Planning, Inc. (2007), which were performed during a wet year.
<b>Coulter's goldfields</b> ( <i>Lasthenia glabrata</i> ssp. <i>coulteri</i> )  CRPR List 1B.1 MSHCP CAPSA	Coulter's goldfields is associated with low-lying alkali and saline habitats along the coast and inland valleys. The majority of the populations are associated with coastal salt marsh. In Riverside County, Coulter's goldfields primarily grow in highly alkaline, silty clays associated with the Traver-Domino-Willows soils, and usually in the wet areas in the alkali vernal plain community.	Coulter's goldfields was not observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). This species is not expected within the Project site due to lack of detection.
<b>Little mousetail</b> ( <i>Myosurus minimus</i> ssp. <i>apus</i> )  CRPR List 3.1 MSHCP CAPSA	Little mousetail is widespread in California. It occurs in alkaline vernal pools, and vernal alkali plains and grasslands, and blooms March to June.	Little mousetail was not observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). This species is not expected within the Project site due to lack of detection.
<b>Mud nama</b> ( <i>Nama stenocarpum</i> )  CRPR List 2.2 MSHCP CAPSA	Mud nama grows on muddy embankments of marshes and swamps, lake margins, riverbank, meadow, playa, and vernal pools. In western Riverside County, it is known only from the north shore of Mystic Lake.	Round-leaved filaree was not observed during focused surveys conducted in 2012, and is not expected within the Project site due to lack of detection and lack of suitable habitat.
<b>Spreading navarretia</b> ( <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 in ditches and depressions associated with degraded habitat or old stock ponds. Spreading navarretia is a small prostrate to occasionally erect annual. Spreading navarretia blooms April to June.	Spreading navarretia was not observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). This species is not expected within the Project site due to lack of detection.

**Table IV.E-3  
Sensitive Plant Species with Potential to Occur On-site**

Species Name (Scientific Name) Status	Habitat Description	Comments
<p><b>California Orcutt grass</b> (<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 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.</p>	<p>California Orcutt grass was not observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). This species is not expected within the Project site due to lack of detection.</p>
<p><b>Wright’s trichocoronis</b> (<i>Trichocoronis wrightii</i> var. <i>wrightii</i>)</p> <p>CRPR List 2.1 MSHCP NEPSA</p>	<p>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.</p>	<p>Wright’s trichocoronis was not observed on-site during the focused surveys conducted in 2012, nor was it detected in 2005 by Helix Environmental Planning, Inc. (2007). This species is not expected within the Project site due to lack of detection.</p>
<p><i>Source: Helix Environmental Planning, Inc. 2007, Cadre Environmental 2013, 2013.</i></p>		

Criteria area plants: One criteria area species, the smooth tarplant, was identified within and adjacent to the Project site (Criteria Area Plant Survey Areas – CAPSA). Smooth tarplant is an annual member of the sunflower family (Asteraceae) that occurs in vernal pools, alkali playas and scrub, alkali grasslands, riparian areas, and disturbed sites in alkaline soils. Smooth tarplant is tolerant of mild disturbance, and is often found in agricultural lands or other disturbed mesic alkaline habitats. It blooms April to September. This species is easily detected when present, even in small numbers.

Smooth tarplant occurs from southwestern San Bernardino County, south through western Riverside County and San Diego County to Baja California, Mexico. The largest numbers of populations occur in western Riverside County where this plant is widely scattered throughout the Perris Basin. Within Riverside County, substantial populations occur within the San Jacinto River floodplain, the Salt Creek watershed near Hemet, Temecula Creek, and the Elsinore Valley. It is uncommon outside of western

Riverside County. Smooth tarplant has been reported in the immediate vicinity of the Project site on lands north of Florida Avenue and mostly west of Warren Road.

At the Project site, smooth tarplant was detected on disturbed saline-alkali soils at the northeastern corner of the Project site (north of Devonshire Road along Myers Road - 33 plants) and in agricultural land (south of Devonshire Road along Old Warren Road - single plant). A single smooth tarplant was reported on the Project site by Helix Environmental Planning, Inc. (2007). The locations of smooth tarplant detected in 2012 and the single location reported by Helix Environmental Planning, Inc. are depicted on

*Other California Native Plant Society Special-Status Plant Species/MSHCP Covered Species Found On or Adjacent to the Site*

A small population (fewer than 50 plants) of vernal barley was found along Old Warren Road during the 2012 surveys at the edge of the agricultural ditch, which is shown on Figure IV.E-4. Vernal barley is an MSHCP covered species and is an annual grass that grows on alkali or saline flats, in alkali grasslands, and vernal pools. Historically, this species occurred from Baja California, Mexico, north to Mono County. In southern California, this species still occurs in large numbers in western Riverside County in the San Jacinto River and Salt Creek watersheds.

*MSHCP Species That Can Be Excluded From the Project Site Based on the Negative Results of The 2012 Surveys and/or Lack of Suitable Habitat*

With the exception of smooth tarplant and vernal barley, no additional MSHCP covered, narrow endemic, or criteria area species were detected on or adjacent to the Project site as listed on Table IV.E-3.

***Sensitive Wildlife On-site***

One target planning species, burrowing owl, was detected during the focused 2012 survey program as summarized below. The remaining two MSHCP planning species were not detected and/or are not expected to occur on-site due to a lack of suitable habitat or non-detection during focused survey efforts.

*MSHCP Planning Species Documented on or Adjacent to the Site*

**Burrowing owls** (*Athene cunicularia*) [CSC] – A pair of burrowing owls and a single juvenile were detected within the Project site boundaries during the spring 2012 updated focused survey efforts as shown on Figure IV.E-4. As documented and stated by Helix Environmental Planning (2007):

*During the burrowing owl survey, three individual burrowing owls were observed on the proposed project site. No burrowing owls were observed within the 500-foot buffer zone... The owls were observed on separate areas of the property. One owl was located in the northeast (Buow 1), a second (Figure 8) was located near the center of the*



LEGEND		Acres
<b>Agriculture</b>		
FC	Field Croplands	187.54
<b>Developed Disturbed</b>		
AD	Agricultural Ditch	0.59
RUD-DIS	Ruderal Disturbed	16.42
DEV	Developed	3.93
EX-EUC	Exotic-Eucalyptus	0.28
<b>Vernal Pool - Alkaline</b>		
VP	Vernal Pool (Currently Field Croplands)	0.45
<b>TOTAL</b>		<b>209.21</b>

Sensitive Species Observations	
	Smooth Tarplant ( <i>Centromadia pungens laevis</i> ), CRPR 1.B1 - 34 total, 2012
	Smooth Tarplant ( <i>Centromadia pungens laevis</i> ), CRPR 1.B1 - 1 total (Helix 2005)
	Vernal Barley ( <i>Hordeum intercedens</i> ), CRPR 3.2
	Burrowing Owl (Pair + 1 Young) 2012, CDFW Species of Special Concern
	Burrowing Owl (3 Individuals) Helix 2007, CDFW Species of Special Concern
	Raven Nest

APN 448-090-003

Source: Cadre Environmental, June 2013.

property (Buow 2), and a third toward the southwest (Buow 3). Buow 1 and 2 were observed on multiple occasions while Buow 3 was observed only on March 2, 2007 during the second of four surveys. Buow 1 and 2 both had burrows (Figure 8b) with signs of owl occupation, including whitewash, feathers, and pellets. Neither Buow 1 nor 2 was observed with a mate despite follow up surveys to attempt to determine if either owl was paired. A definitive burrow was not detected for Buow 3. A potential burrow with several feathers was located close to the location where Buow 3 was observed, but this burrow had a spider web in the entrance and did not have whitewash. The lack of whitewash and the presence of a spider web indicate that this burrow was not currently occupied. Buow 3 is believed to have been foraging or migrating and does not currently have an active burrow on the property.

Incidental MSHCP covered species documented during the initial habitat assessments conducted by Helix Environmental Planning (2007) and Cadre Environmental (2013) included the northern harrier [CSC], California horned lark ([CSC], coyote [CSC], and San Diego black-tailed jackrabbit [CSC]. As previously stated, the MSHCP has determined that all of these sensitive species documented within the Project site have been adequately covered (MSHCP Table 2-2, Species Considered for Conservation Under the MSHCP Since 1999, 2004).

*MSHCP and Sensitive Species That Can Be Excluded From the Project Site Based on the Negative Results of the 2012 Surveys and/or Lack of Suitable Habitat*

Sensitive species known to occur within the region, but not documented within or adjacent to the Project site are presented on Table IV.E-4. Critical habitat designations by the USFWS were researched to determine if any portion of the Project site is located within USFWS critical habitat. The Project site does not occur within a designated critical habitat for any federally endangered or threatened species.

**Table IV.E-4  
Sensitive Wildlife Species with Potential to Occur On-site**

Species Name (Scientific Name) Status	Habitat Description	Comments
<b>INVERTEBRATES</b>		
<b>Vernal pool fairy shrimp</b> ( <i>Branchinecta lynchi</i> )  FT MSHCP Covered Species	Vernal pool fairy shrimp is restricted to seasonal vernal pools. The vernal pool fairy shrimp prefers cool-water pools that have low to moderate dissolved solids, are unpredictable, and often short lived.	Not expected to occur on-site. Focused wet and dry season surveys in the vernal pools located on-site were conducted with negative results (Helix Environmental Planning, Inc. (2008))
<b>Riverside fairy shrimp</b> ( <i>Streptocephalus woottoni</i> )  FE	<i>S. woottoni</i> is restricted to deep seasonal vernal pools, vernal pool like ephemeral ponds, and stock ponds and other human	Not expected to occur on-site. Focused wet and dry season surveys in the vernal pools located on-site were conducted with negative results

**Table IV.E-4  
Sensitive Wildlife Species with Potential to Occur On-site**

<b>Species Name (Scientific Name) Status</b>	<b>Habitat Description</b>	<b>Comments</b>
MSHCP Covered Species	modified depressions. Riverside fairy shrimp prefer warm-water pools that have low to moderate dissolved solids, are less predictable, and remained filled for extended periods of time.	(Helix Environmental Planning, Inc. (2008))
<b>Quino checkerspot butterfly</b> ( <i>Euphydras editha quino</i> )  FE MSHCP Covered Species	Quino checkerspot butterfly (QCB) is restricted to low elevation meadow habitats or clearings usually characterized by clay or cryptogamic deposits, inhabited by host plants including <i>Plantago erecta</i> , <i>Plantago patagonica</i> , <i>Castilleja exserta</i> , and <i>Cordylanthus rigidus</i> . Adult QCB often occur on open or sparsely vegetated rounded hilltops, ridgelines, and occasionally rocky outcrops.	Not expected to occur on-site. No suitable host plant located within or adjacent to the Project site.
<b>AMPHIBIANS</b>		
<b>Western spadefoot</b> ( <i>Spea hammondi</i> )  CSC MSHCP Covered Species	The western spadefoot population is patchily but widely distributed throughout the Riverside Lowlands and San Jacinto Foothills Bioregions. Primary habitat for this species includes suitable breeding habitat below 1500 meters ( <i>i.e.</i> , vernal pools or other standing water that is free of exotic species) with secondary habitats including adjacent chaparral, sage scrub, grassland, and alluvial scrub habitats.	Not expected to occur on-site. No suitable aestivation habitat documented on-site. The majority of the site is actively farmed and disked annually.
<b>REPTILES</b>		
<b>Belding's Orange-throated Whiptail</b> ( <i>Aspidoscelis hyperythra beldingi</i> )  CSC MSHCP Covered Species	The Belding's orange-throated whiptail occurs in a wide variety of habitats but is more closely tied to coastal sage scrub and chaparral habitats with less than 90 percent vegetative cover.	Not expected to occur on-site based on a lack of suitable habitat.
<b>Coastal Western Whiptail</b> ( <i>Aspidoscelis tigris stejnegeri</i> )  CSC MSHCP Covered Species	The coastal western whiptail occurs in a wide variety of habitats including coastal sage scrub, desert scrub, Riversidean alluvial fan scrub, woodlands,	Not expected to occur on-site based on a lack of suitable habitat.

**Table IV.E-4  
Sensitive Wildlife Species with Potential to Occur On-site**

Species Name (Scientific Name) Status	Habitat Description	Comments
	grasslands, playas, and respective ecotones between these habitats.	
<b>Coast horned lizard</b> ( <i>Phrynosoma blainvillii</i> )  CSC MSHCP Covered Species	The horned lizard occurs primarily in scrub, chaparral, and grassland habitats. The species is common in most areas of the Plan Area except where adjacent to urban situations.	Not expected to occur on-site based on a lack of suitable habitat.
<b>Red-diamond rattlesnake</b> ( <i>Crotalus ruber</i> )  CSC MSHCP Covered Species	The red-diamond rattlesnake is often found in areas with dense vegetation especially chaparral and sage scrub up to 1,520 meters in elevation.	Not expected to occur on-site based on a lack of suitable habitat.
<b>Coast patch-nosed snake</b> ( <i>Salvadora hexalepis virgultea</i> )  CSC MSHCP Covered Species	The coast patch-nosed snake prefers brushy coastal sage scrub/ chaparral habitats.	Not expected to occur on-site based on a lack of suitable habitat.
<b>Coastal rosy boa</b> ( <i>Lichanura trivirgata roseofusca</i> )  MSHCP Covered Species	The coastal rosy boa prefers rocky habitats within coastal sage scrub and chaparral habitats.	Not expected to occur on-site based on a lack of suitable habitat.
BIRDS		
<b>Bell's sage sparrow</b> ( <i>Amphispiza belli belli</i> )  CSC MSHCP Covered Species	Bell's sage sparrow is an uncommon to fairly common but localized resident breeder in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains.	Not expected to occur on-site based on a lack of suitable habitat.
<b>Coastal California gnatcatcher</b> ( <i>Poliptila californica californica</i> )  FT/CSC MSHCP Covered Species	The coastal California gnatcatcher is a non-migratory bird species that primarily occurs within sage scrub habitats in coastal southern California dominated by California sagebrush ( <i>Artemisia californica</i> ), and California buckwheat ( <i>Eriogonum fasciculatum</i> ).	Not expected to occur on-site based on a lack of suitable habitat.
<b>Cooper's hawk</b> ( <i>Accipiter cooperi</i> )  CSC MSHCP Covered Species	Cooper's hawk is most commonly found within or adjacent to riparian/oak forest and woodland habitats. This uncommon resident of	Not expected to breed on-site based on a lack of suitable habitat. The species may occasionally forage on-site. However, these occurrences are expected to be low based on the lack

**Table IV.E-4  
Sensitive Wildlife Species with Potential to Occur On-site**

Species Name (Scientific Name) Status	Habitat Description	Comments
	California increases in numbers during winter migration.	of suitable habitat within the vicinity of the Project site.
<b>Grasshopper sparrow</b> ( <i>Ammodramus savannarum</i> )  MSHCP Covered Species	The grasshopper sparrow generally prefers moderately open grasslands and prairies with patchy bare ground.	Low potential for seasonal foraging when the Project site is not being activity farmed.
<b>Least Bell's vireo</b> ( <i>Vireo bellii pusillus</i> )  FE/SE MSHCP Covered Species	Least Bell's vireo resides in riparian habitats with a well-defined understory including southern willow scrub, mule fat, and riparian forest/woodland habitats.	Not expected to occur on-site based on a lack of suitable habitat.
<b>Loggerhead shrike</b> ( <i>Lanius ludovicianus</i> )  CSC MSHCP Covered Species	Loggerhead shrike prefer open ground for foraging and thick trees and shrubs including sage scrub, chaparral, and desert scrub habitats for nesting.	Low potential for foraging on-site. One individual observed in vicinity (Helix Environmental Planning, Inc. 2007).
<b>Mountain plover</b> (wintering) ( <i>Charadrius montanus</i> )  FPT/CSC MSHCP Covered Species	The mountain plover is narrowly distributed at relatively few locations within the Plan Area in suitable habitat. The mountain plover uses playas and vernal pool, grassland, and some agriculture habitats during the winter in the Plan Area. Although playa and vernal pool habitat is well identified for the Plan Area, it encompasses a relatively small portion. The remaining habitats, grassland and agriculture land, are well distributed within the Plan Area but the mountain plover uses only a small portion of what is available.	Low potential to occur on-site based on limited distribution within plan area.
<b>Sharp-shinned hawk</b> ( <i>Accipiter striatus</i> )  CSC MSHCP Covered Species	For the purpose of the conservation analysis, potential habitat for the sharp-shinned hawk includes montane coniferous forest for potential breeding areas (none have been documented) and riparian scrub, woodland, and forest habitat, oak woodland and forest, chaparral, coastal sage scrub, desert scrub, and Riversidean alluvial fan sage scrub for	Not expected to occur on-site based on a lack of suitable habitat.

**Table IV.E-4  
Sensitive Wildlife Species with Potential to Occur On-site**

<b>Species Name (Scientific Name) Status</b>	<b>Habitat Description</b>	<b>Comments</b>
	foraging.	
<b>Southern California rufous-crowned sparrow</b> <i>(Aimophila ruficeps canescens)</i>  CSC MSHCP Covered Species	Southern California rufous-crowned sparrow is a non-migratory bird species that primarily occurs within sage scrub and grassland habitats and to a lesser extent chaparral sub-associations. This species generally breeds on the ground within grassland and scrub communities in the western and central regions of California.	Not expected to occur on-site based on a lack of suitable habitat.
<b>Southwestern willow flycatcher</b> <i>(Empidonax traillii extimus)</i>  FE/SE MSHCP Covered Species	The southwestern willow flycatcher is narrowly distributed at few locations within the Plan Area. Although the preferred habitat, riparian woodland and select other forests, is well distributed within all bioregions and spread over the entire Plan Area, few current locations for the willow flycatcher have been documented.	Not expected to occur on-site based on a lack of suitable habitat.
<b>Turkey vulture (breeding)</b> <i>(Cathartes aura)</i>  MSHCP Covered Species	The focus of this planning effort is on the nesting of the turkey vulture. There are two recorded nest sites within the Plan Area: Bernasconi Hills near Lake Perris and Rawson Canyon near Lake Skinner.	Not expected to breed on-site based on a lack of suitable habitat.
<b>Western yellow-billed cuckoo</b> <i>(Coccyzus americanus occidentalis)</i>  SE MSHCP Covered Species	Although the preferred habitat, riparian scrub and forest, is well distributed at scattered locations within the Plan Area in the Riverside Lowland Bioregions, the western yellow-billed cuckoo apparently no longer inhabits much of this habitat.	Not expected to occur on-site based on a lack of suitable habitat.
<b>White-faced ibis</b> <i>(Plegadis chihi)</i>  CSC MSHCP Covered Species	The white-faced ibis is sparsely distributed throughout the Riverside Lowlands Bioregions of the MSHCP Plan Area within its suitable Habitat. It occurs at some of the areas of freshwater marsh habitat but is only documented for breeding at two	Not expected to breed on-site based on a lack of suitable habitat. However, may occasional use agricultural ditches for foraging.

**Table IV.E-4  
Sensitive Wildlife Species with Potential to Occur On-site**

<b>Species Name (Scientific Name) Status</b>	<b>Habitat Description</b>	<b>Comments</b>
	locations: Prado Basin and Mystic Lake/San Jacinto Wildlife Area.	
<b>White-tailed kite</b> <i>(Elanus leucurus)</i>  SFP MSHCP Covered Species	The white-tailed kite is found in riparian, oak woodlands adjacent to large open spaces including grasslands, wetlands, savannahs and agricultural fields. This non-migratory bird species occurs throughout the lower elevations of California and commonly nests in coast live oaks.	Not expected to breed on-site based on a lack of suitable habitat. However, may occasional forage on-site.
<b>Wilson's Warbler</b> <i>(Wilsonia pusilla)</i>  MSHCP Covered Species	The Wilson's warbler has a sparse and widespread distribution within almost every habitat that occurs within the MSHCP Plan Area. Although few documented records exist for the Wilson's warbler within the Plan Area, the literature suggests that the species forages within the Riverside Lowland and Foothills Bioregions of the Plan Area in almost every habitat as a transient in the spring and fall and breeds within the Mountain Bioregions in shrub and scrub habitat, wet and montane meadow, and edges of riparian and forested habitats.	Not expected to breed on-site based on a lack of suitable habitat.
<b>Yellow Warbler</b> <i>(Setophaga petechia)</i>  CSC MSHCP Covered Species	Habitat characteristics of the yellow warbler are well known to include riparian scrub and forest and woodland.	Not expected to breed on-site based on a lack of suitable habitat.
<b>Yellow-breasted Chat</b> <i>(Icteria virens)</i>  CSC MSHCP Covered Species	The yellow-breasted chat is associated with riparian woodland and riparian scrub habitats.	Not expected to breed on-site based on a lack of suitable habitat.
<b>MAMMALS</b>		
<b>Bobcat</b> <i>(Lynx rufus)</i>  MSHCP Covered Species	The bobcat requires large expanses of relatively undisturbed brushy and rocky habitats near springs or other perennial water sources.	Not expected to breed on-site based on a lack of suitable habitat.

**Table IV.E-4  
Sensitive Wildlife Species with Potential to Occur On-site**

Species Name (Scientific Name) Status	Habitat Description	Comments
<b>Los Angeles pocket mouse</b> <i>(Perognathus longimembris brevinasus)</i>  CSC MSHCP Covered Species	The Los Angeles pocket mouse appears to be limited to sparsely vegetated habitat areas in patches of fine sandy soils associated with washes or of aeolian (windblown) origin, such as dunes.	Not expected to breed on-site based on a lack of suitable habitat.
<b>Northwestern San Diego pocket mouse</b> <i>(Chaetodipus fallax fallax)</i>  CSC MSHCP Covered Species	The northwestern San Diego pocket mouse occurs throughout the Plan Area in coastal sage scrub (including Diegan and Riversidean upland sage scrubs and alluvial fan sage scrub), sage scrub/grassland ecotones, chaparral, and desert scrubs at all elevations up to 6,000 feet.	Not expected to breed on-site based on a lack of suitable habitat.
<b>Stephens' kangaroo rat</b> <i>(Dipodomys stephensi)</i>  FE/ST MSHCP Covered Species	The Stephens' kangaroo rat is found almost exclusively in open grasslands or sparse shrublands with cover of less than 50 percent during the summer.	Not expected to breed on-site based on a lack of suitable habitat.
<i>Source: Helix Environmental Planning, Inc. 2007, Cadre Environmental 2013, 2013.</i>		

**Regional Connectivity/Wildlife Movement Corridors**

Wildlife corridors link 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. 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:

- allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity;
- 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
- serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

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. Urban land areas or other areas unsuitable for wildlife usually bound wildlife corridors. 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 Project Site***

The Project site does not represent a regional wildlife movement corridor. The Colorado River Aqueduct, located approximately 1,200 feet west of the Project site, is considered to significantly restrict potential movement between the Project site and large open space lands located in unincorporated regions of Riverside County west of the City of Hemet. The Project site provides extremely limited cover, food, and no natural unrestricted watercourses that would facilitate local wildlife movement. Also, the existing high traffic roads that bisect the property (West Devonshire Street and Florida Avenue) provide for limited local wildlife travel between open space habitats located north and southwest of the Project site.

The Project site is not located within an MSHCP designated core, extension of existing core, non-contiguous habitat block, constrained linkage, or linkage area.

**ENVIRONMENTAL IMPACT ANALYSIS****Thresholds of Significance**

In accordance with Appendix G of the CEQA Guidelines, a project could have a significant environmental impact if the project would result in one or more of the following:

- a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in the City or regional plans, policies, regulations by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh vernal pool, coastal, etc.) Through direct removal, filling, hydrological interruption, or other means;
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands); or
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## Project Impacts

***Impact IV.E-1: With implementation of Mitigation Measures E-1 through E-7, impacts related to biological resources would be less than significant.***

Direct effects are defined as actions that may cause an immediate effect on the species or its habitat, including the effects of interrelated actions and interdependent actions. Indirect effects are caused by or result from the proposed actions, are later in time, and are reasonably certain to occur. Indirect effects may occur outside of the area directly affected by the proposed action.

The Project is a long-range plan for the development of a multiple-use commercial and residential community concentrated around parks and open space amenities. Specifically, the open space corridor (Ramona Creek) will provide recreational amenities and contribute to addressing the Regional Drainage Plan.

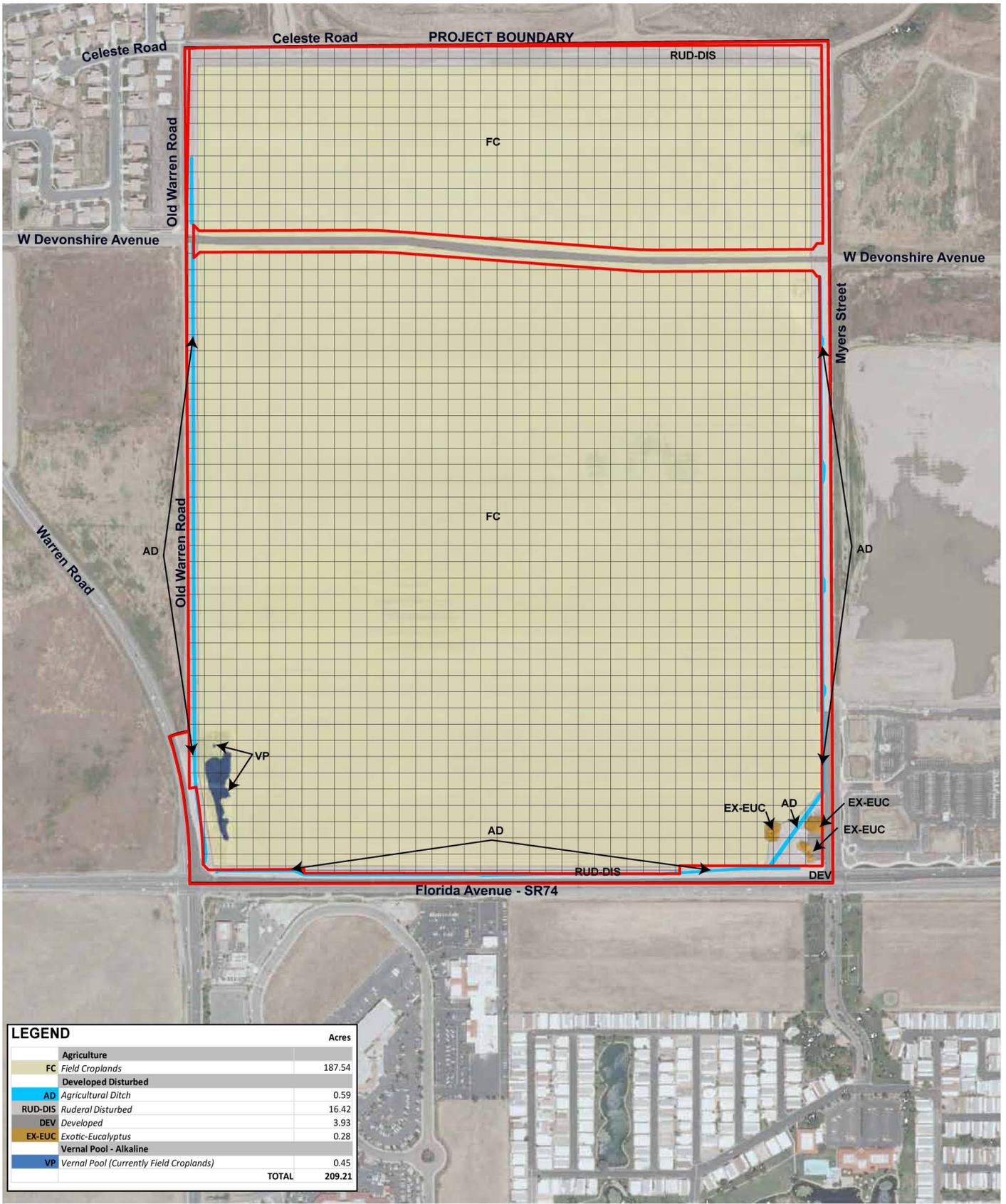
### ***Direct Impacts***

#### *Vegetation Communities*

All 196.61 acres of on-site vegetation communities, including 12.60 acres off-site (associated with roadway improvements on Florida Avenue, Warren Road, Myers Avenue, and West Devonshire Avenue), will be directly impacted as a result of Project implementation, as summarized on Table IV.E-5, and illustrated on Figure IV.E-5. Direct impacts to field croplands, ruderal/disturbed, developed and exotic-eucalyptus would be less than significant. However, impacts to 0.59 acre of agricultural ditches and 0.45 acre of vernal pool matrix would be considered significant prior to mitigation.

**Table IV.E-5  
Vegetation Community Impacts On-site/Off-site**

<b>Vegetation Communities</b>	<b>On-site Impact (acres)</b>	<b>Off-site Impact (acres)</b>	<b>On-site/Off-site Impact Totals (acres)</b>
<b><i>Agriculture</i></b>			
Field Croplands	184.02	3.52	187.54
<b><i>Developed/Disturbed</i></b>			
Ruderal Disturbed	11.47	4.95	16.42
Exotic-Eucalyptus	0.28	--	0.28
Agricultural Ditch	0.24	0.35	0.59
Developed	0.15	3.78	3.93
<b><i>Vernal Pool - Alkaline</i></b>			
Vernal Pool Matrix	0.45	--	0.45
<b>TOTAL</b>	<b>196.61</b>	<b>12.60</b>	<b>209.21</b>
<i>Source: Cadre Environmental 2013.</i>			



LEGEND		Acres
	Agriculture	
FC	Field Croplands	187.54
	Developed Disturbed	
AD	Agricultural Ditch	0.59
RUD-DIS	Ruderal Disturbed	16.42
DEV	Developed	3.93
EX-EUC	Exotic-Eucalyptus	0.28
	Vernal Pool - Alkaline	
VP	Vernal Pool (Currently Field Croplands)	0.45
<b>TOTAL</b>		<b>209.21</b>

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Onsite Impact Areas
  Offsite Impact Areas

Source: Cadre Environmental, June 2013.

### *Jurisdictional Resources*

All 1.04 acres of on-site jurisdictional resources (0.59 acre agricultural ditch, 0.45 acre vernal pool matrix) regulated by CDFW and RWQCB would be directly impacted by the Project, as summarized on Table IV.E-6, and illustrated on Figure IV.E-6. These impacts are considered to be significant prior to mitigation. No USACE jurisdictional resources occur within the Project site and no impacts to such resources would result from Project implementation.

**Table IV.E-6  
Jurisdictional Resources Impacts**

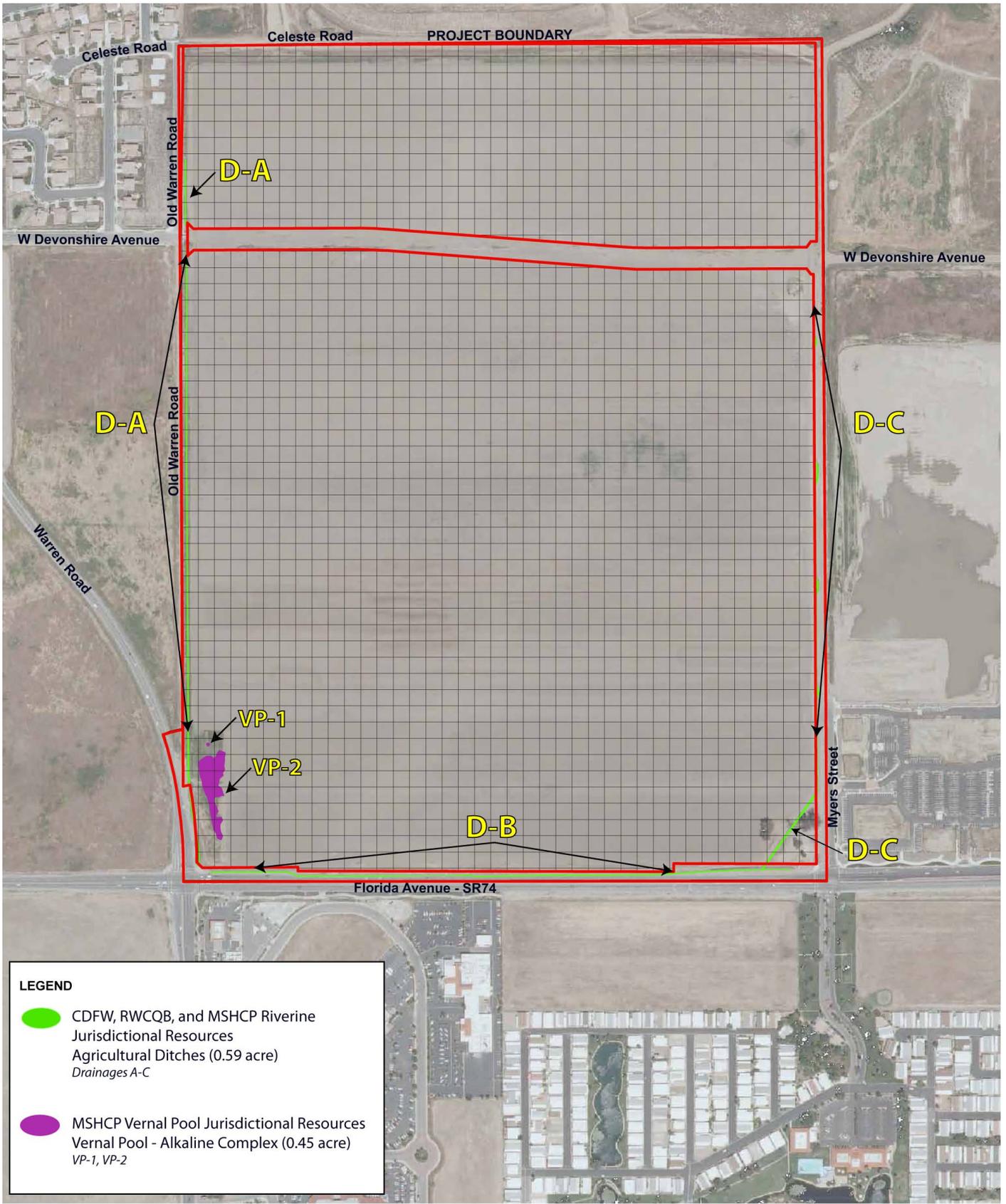
<b>Drainage Name (linear feet)</b>	<b>USACE Impacts (acres)</b>	<b>RWQCB Impacts (acres)</b>	<b>CDFW Impacts (acres)</b>	<b>MSHCP Riparian/ Riverine Impacts (acres)</b>	<b>MSHCP Vernal Pool Impacts (acres)</b>
Drainage A (2,820 lf)	--	0.19	0.19	0.19	--
Drainage B (2,395 lf)	--	0.11	0.11	0.11	--
Drainage C (2,516 lf)	--	0.29	0.29	0.29	--
Vernal Pool - Alkaline	--	0.45	--	--	0.45
<b>TOTAL</b>	<b>--</b>	<b>1.04</b>	<b>0.59</b>	<b>0.59</b>	<b>0.45</b>

*Source: Cadre Environmental 2013.*

### *Sensitive Plants*

The Project would not impact any federal/state threatened or endangered plant species. The Project site occurs within a predetermined Survey Area for nine MSHCP criteria area plant species. Initial MSHCP criteria area plant surveys were conducted in spring 2005 and a single smooth tarplant was documented on-site. Updated sensitive plant surveys were conducted during the spring/summer of 2012. Smooth tarplant remains the only MSHCP criteria area sensitive plant documented on-site. Thirty-four plants have been documented within and adjacent to the northeastern/western Project site boundaries. This small population is located within habitat characterized as ruderal/disturbed and extends north within the currently vacant Tres Cerritos project that has already been graded (pads/basins/road network). Approximately 8,500 individuals of this species occur in the near vicinity.

Based on initial consultation with the County of Riverside Environmental Programs Division, the limited distribution of this species on-site is not expected to have long-term conservation value and no additional mitigation obligations specific to this species is expected. Project impacts to the smooth tarplant would therefore be less than significant.



**LEGEND**

- CDFW, RWCQB, and MSHCP Riverine Jurisdictional Resources  
Agricultural Ditches (0.59 acre)  
*Drainages A-C*
- MSHCP Vernal Pool Jurisdictional Resources  
Vernal Pool - Alkaline Complex (0.45 acre)  
*VP-1, VP-2*

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  Onsite Impact Areas      Offsite Impact Areas

Source: Cadre Environmental, June 2013.

A small population (fewer than 50 plants) of vernal barley was found along Old Warren Road during the 2012 surveys at the edge of the agricultural ditch. Vernal barley is an MSHCP covered species. Because this species still occurs in large numbers in western Riverside County in the San Jacinto River and Salt Creek watersheds, Project impacts to the vernal barley would be less than significant.

### *Sensitive Wildlife*

The Project would not impact any federal/state threatened or endangered wildlife species. A pair of burrowing owls and a single juvenile was detected within the Project site boundaries during the updated spring 2012 focused survey. The MSHCP states:

*If the site (including adjacent areas) support three or more pairs of burrowing owls and supports greater than 35 acres of suitable habitat and is non-contiguous with MSHCP Conservation areas lands, at least 90 percent of the areas within long-term conservation value and burrowing owl pairs will be conserved onsite.*

Results of the initial burrowing owl surveys conducted during the spring of 2007 and updated surveys conducted in 2012 do not meet the MSHCP requirements of three or more pairs for a site requiring on-site conservation. Impacts to nesting burrowing owls would be considered significant prior to mitigation.

Implementation of the Project would result in direct impacts to raptor foraging habitat. Several raptors documented on-site, including the red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), may utilize the large trees (eucalyptus sp.) for roosting and nesting, and the loss of an active raptor nest of common and sensitive species would be considered a violation of the CDFG Code, Section 3503, 3503.5, 3513 and MBTA. Therefore, the loss of any nest, roosting and/or foraging habitat would be considered a significant impact prior to mitigation.

### ***Indirect Impacts***

The Urban/Wildlands Interface guidelines presented in Section 6.1.4 of the MSHCP address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to an MSHCP Conservation Area. Although the Project site is not located adjacent to an existing MSHCP Conservation Area, final project design will be developed to ensure best management practices are incorporated into the Project to address and minimize edge effects associated with the Urban/Wildlands Interface, including the maintenance and conveyance of seasonal clean water flows through the Project site to the MSHCP Criteria Area where alkali vernal plain habitat is located west and southwest of the property (MSHCP Noncontiguous Habitat Block 7).

### *Water Quality/Hydrology*

As discussed in Section IV.J (Hydrology and Water Quality) of this Draft EIR, the Project would comply with all applicable water quality regulations, including Waste Discharge Requirements and conditions

established in National Pollutant Discharge Elimination System (NPDES) permits. These permit requirements would include the treatment of all surface runoff from paved and developed areas, the implementation of applicable Best Management Practices (BMPs) during construction activities, and the installation and proper maintenance of structural BMPs to ensure adequate long-term treatment of water before entering into any stream course or off-site conservation area.

Significant vernal pool resources and sensitive plant species are located west and southwest of the Project site and were historically inundated by periodic flows that bisected the site. Although the existing agricultural ditches have significantly altered the downstream hydrology, any additional impacts to flows southwest of the Project site would be considered significant. In addition to preserving lands southwest of the Project site to offset impacts to vernal pools and agricultural ditches, the Project proponent would provide design elements that would contribute to the Regional Drainage Plan and significantly improve the existing hydrology contributing to the sensitive resources located southwest of the Project site. Specifically, the Project would safely convey the region-wide peak flows (the maximum flow rate associated with a 100-year storm event), as well as the increased surface flows that will result from the development of the site, from the intersection of Myers Street and Devonshire Road to the intersection of Warren Road and Florida Avenue (see Section IV.J for more detail). The watershed runoff would be discharged into an existing channel system along Warren Road, which then extends south of Florida Avenue and recharges the vernal pool system southwest of the Project site. Runoff patterns would be recreated to mimic the pre-channelization (existing agricultural ditches) conditions within the Project site and, as a result, impacts to downstream hydrology would be less than significant.

#### *Toxics*

As discussed in Section IV.J (Hydrology and Water Quality) of this Draft EIR, stormwater treatment systems within the Project would be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant material, or other elements that could degrade or harm downstream biological or aquatic resources. Toxic sources within the Project site would be limited to those commonly associated with residential, commercial, and mixed use development, such as pesticides, insecticides, herbicides, fertilizers, and vehicle emissions. In order to mitigate the potential effects of these toxics, the Project will incorporate structural BMPs, as required in association with compliance with WDRs and the NPDES permit system, in order to reduce the level of toxins introduced into the drainage system and the surrounding areas. Runoff patterns will be recreated to mimic the pre-channelization (existing agricultural ditches) conditions within the Project site, water quality measures will be implemented, and, as a result, impacts would be less than significant.

#### *Lighting*

Although the Project site is not located adjacent to an existing MSHCP Conservation Area, night lighting associated with the proposed development that is adjacent to the open space areas located west (Criteria Cell 3584) of the Project site would be directed away to reduce potential indirect impacts to wildlife

species (for more detail, see Section IV.B Aesthetics). As a result, impacts on wildlife would be less than significant.

#### *Noise*

As discussed in Section IV.L (Noise) of this Draft EIR, the Project would not result in noise levels that exceed residential, commercial or mixed-use noise standards established for Riverside County. As a result, wildlife within proposed open space habitats would not be subject to noise that exceeds these established standards. Short-term construction-related noise impacts would be reduced by the implementation of Mitigation Measures L-1 through L-3 (see Section IV.L). As a result, noise impacts on wildlife would be less than significant.

#### *Invasive Species*

The landscape plans for the proposed residential, commercial and mixed development do not include the use of invasive species for the portions of the development areas adjacent to the open space areas. None of the invasive plants included on Table 6-2 of the MSHCP, Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area, are proposed to be included in Project landscaping. Thus, impacts would be less than significant.

#### *Barriers*

Barriers are intended to reduce or minimize unauthorized public access and associated impacts to protected resources. The Project site is not located adjacent to an existing MSHCP Conservation Area and, therefore, no on-site protected resources are proposed. Impacts would be less than significant.

The Project has been designed to minimize adverse effects on conservation areas and would minimize management challenges that can arise during development located adjacent to open space and/or conservation habitat. The Project design and BMPs incorporated into the Project will address and minimize edge effects associated with the Urban/Wildlands interface. Implementation of all Urban/Wildlands Interface guidelines will minimize the potential occurrence of adverse Project indirect impacts and is consistent with MSHCP Section 6.1.4.

#### ***Other Regulatory Consistency***

The below-listed interagency meetings were held to present/discuss existing biological conditions, anticipated impacts to jurisdictional features, and mitigation approaches. Representative agencies/jurisdictions included the City of Hemet, Western Riverside County Regional Conservation Authority, California Department of Fish and Wildlife, and United States Fish and Wildlife Service.

- February 21, 2013, MSHCP – Western Riverside County Regional Conservation Authority/Wildlife Agencies

- April 10, 2013, MSHCP Pre Application
- May 6, 2013, RWQCB Pre-application

In addition, the City and/or project applicant attended the following meetings to discuss/present existing biological conditions, anticipated impacts to jurisdictional features, and mitigation approaches.

- January 2014 Delineation site visit with ACOE
- January 13, 2014 RWQCB and CDFW Pre-application

Although the initial design of the Project included the avoidance of the disturbed vernal pool matrix located in the southwest region of the Project Site, the regulating agencies concurred that the jurisdictional features located on-site, including agricultural ditches, provided no long-term conservation value. Thus, no on-site preservation is warranted and off-site mitigation will be directed immediately southwest of the Project site. A detailed description of the drainage plan for this area is provided in Section IV.J (Hydrology and Water Quality) of this Draft EIR.

#### *Consistency with MSHCP*

A small portion (0.09 acre) of the parcel containing the Project site and 0.34 acre of off-site impacts are situated in Subunit 4 (Hemet Vernal Pool Areas East) of the San Jacinto Valley Area Plan (Criteria Cell 3584). Target conservation acreage within Subunit 4 is 940 to 1,445 acres. Planning species for Subunit 4 include burrowing owl, mountain plover, vernal pool fairy shrimp, California Orcutt's grass, Davidson's saltscale, little mousetail, spreading navarretia, thread-leaved brodiaea, and vernal barley. As stated in the MSHCP:

*Conservation within this Cell Group will contribute to assembly of Proposed Noncontiguous Habitat Block 7. Conservation within this Cell Group will focus on playas/vernal pool habitat and agricultural land. Areas conserved within this Cell Group will be connected to playas/vernal pool habitat proposed for conservation in Cell #3793 to the east, in Cell #3891 and #3892 to the south and in Cell #3684 and #3791 both in the Harvest Valley/Winchester Area Plan to the west. Conservation within this Cell Group will range from 70%-80% of the Cell Group focusing in the central portion of the Cell Group. (MSHCP 2004)*

*Conservation within the Southwest Area Plan Cell Group S will contribute to the assembly of Proposed Extension of Existing Core 7, Proposed Constrained Linkage 17 and Proposed Constrained Linkage 18 including focus on the conservation on chaparral, coastal sage scrub, grassland, riparian scrub, woodland, and forest habitats. (MSHCP 2004)*

Biological issues and considerations for Subunit 4 are as follows.

- Conserve alkali soils supporting California Orcutt grass, Davidson’s saltscale, little mousetail, spreading navarretia, thread-leaved brodiaea, and vernal barley;
- Conserve existing vernal pool complexes;
- Maintain vernal pool hydrology; and
- Conserve grassland habitat for wintering mountain plover and burrowing owl.

The MSHCP will assemble currently private lands into the reserve system through the application of conservation criteria that are assigned to criteria cells. Although the Riverside County Integrated Project (RCIP) Conservation Summary Report Generator (2012) indicates that portions of the Project site (APN 448-090-003) are located within 0.09 acre of Criteria Cell 3584, these “slivers” represent GIS mapping errors. Criteria Cell boundaries are intended to correspond with USGS boundaries.

A 0.34-acre portion of the off-site impact area is located within an existing right-of way with no associated APN (Florida Avenue SR74/Warren Street intersection) and occurs within Criteria Cell 3584 (Cell Group D). Although a total of 0.43 acre of the Project site’s (on-site and off-site) western boundary is identified as occurring within Criteria Cell 3584 (RCIP Conservation Summary Report Generator 2012), the RCA and City of Hemet have concurred that the Project is not required to be reviewed through the Habitat Acquisition and Negotiation Strategy (HANS) or the RCA’s Joint Public Review (JPR).

The 0.09-acre sliver is not located within Criteria Cell 3584 and no conservation is proposed or requested by the RCA and wildlife agencies. In addition, the 0.34-acre existing road easement located immediately adjacent to the southwest region of the Project site is located within Criteria Cell 3584 and does not provide long-term conservation value. No conservation is proposed or requested to occur within the Project site by the RCA, City of Hemet or wildlife agencies. Therefore, the Project is consistent with MSHCP Section 6.1.1.

Smooth tarplant remains the only MSHCP criteria area sensitive plant documented on-site. Thirty-four plants have been documented within and adjacent to the northeastern/western Project site. This small population is located within habitat characterized as ruderal/disturbed and extends north within the currently abandoned Tres Cerritos project that has already been graded (pads/basins/road network). Based on initial consultation with the County of Riverside Environmental Programs Division, the limited distribution of this species on-site is not expected to have long-term conservation value and no additional mitigation obligations specific to this species is expected. The Project is therefore consistent with MSHCP Section 6.3.2.

No MSHCP narrow endemic plant species have been documented within the Project site. The Project is therefore consistent with MSHCP Section 6.1.3.

The Project site is not located within an MSHCP Amphibian or Mammal Species Survey Area; therefore, no surveys were required. The Project is therefore consistent with MSHCP Section 6.3.2.

A pair of burrowing owls and a single juvenile were detected within the Project site boundaries during the updated spring 2012 focused survey efforts. As discussed previously, results of the initial burrowing owl surveys conducted during the spring of 2007 and updated surveys conducted in 2012 do not meet the MSHCP requirements of three or more pairs for a site requiring on-site conservation. Regardless, at a minimum, a 30-day preconstruction survey will be conducted immediately prior to the initiation of construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. If burrowing owls are detected on-site during the 30-day preconstruction survey, a burrowing owl mitigation plan will be developed for the passive/active relocation of individuals to the Lake Mathews Preserve. No conservation is required. The Project is therefore consistent with MSHCP Section 6.3.2.

As previously presented, the Project site supports 0.45 acre of disturbed vernal pools and 0.59 acre of disturbed agricultural ditches that meet the MSHCP/RCA definition of vernal pool and riverine resources. The common versatile fairy shrimp was documented within the larger of the two pools. However, no federally listed species including the vernal pool or Riverside fairy shrimp were detected. The RCA and wildlife agencies characterized the on-site disturbed vernal pool matrix and agricultural ditch as having no long-term conservation value. A Determination of Biological Equivalent or Superior Preservation (DBESP) has been prepared to ensure compliance with Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, of the MSHCP. The proposed offsite mitigation strategy presented in the DBESP has been determined to be superior to the preservation of the onsite disturbed vernal pool matrix and agricultural ditches.

No riparian habitat suitable for the least Bell's vireo, southwestern willow flycatcher or western yellow-billed cuckoo is present within or adjacent to the Project site. The Project is therefore consistent with MSHCP Section 6.1.2.

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. Although the Project site is not located adjacent to an existing MSHCP Conservation Area, the final Project design will ensure that no fuel modification will extend into adjacent open space lands. The Project is therefore consistent with MSHCP Section 6.4.

Implementation of the Project would be consistent with all provisions, guidelines and objectives of the MSHCP following implementation of mitigation measures.

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*Consistency with City of Hemet General Plan – Open Space and Conservation Element*

Relevant policies, goals, and objectives in the Open Space and Conservation Element of the City of Hemet General Plan are again presented below, along with a brief discussion of Project consistency with each policy:

***OS-1.1 Development Proposals*** *Require development proposals to identify significant biological resources and to provide mitigation, including the use of adequate buffering and sensitive site planning techniques, selective preservation, provision of replacement habitats, and other appropriate measures as may be identified in habitat conservation plans or best practices related to particular resources.*

Interagency meetings have been conducted with the RCA, wildlife, jurisdictional agencies, and the City of Hemet to ensure that all Project elements including proposed off-site mitigation are consistent with the provisions and goals of the MSHCP.

***OS-1.2 Vernal Pools*** *Preserve the integrity of the vernal pool complex by ensuring adequate hydration, providing appropriate conservation buffers, and the preservation of native plants, in accordance with the requirements of the MSHCP.*

Interagency meetings have been conducted with the RCA, wildlife, jurisdictional agencies, and the City of Hemet to ensure that all Project elements including proposed off-site mitigation for impacts to disturbed on-site vernal pools are consistent with the provisions and goals of the MSHCP.

***OS-1.3 Wetland Habitats*** *Require project applicants to conserve wetland habitats along the San Jacinto River, the Upper Salt Creek watershed, and elsewhere as identified where conservation serves to maintain watershed processes that enhance water quality and contribute to the hydrologic regime, and comply with Clean Water Act (CWA) Section 404. Identify and, to the maximum extent possible, conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.*

Interagency meetings have been conducted with the RCA, wildlife, jurisdictional agencies, and the City of Hemet to ensure that all Project elements including proposed off-site mitigation for impacts to disturbed on-site agricultural ditches are consistent with the provisions and goals of the MSHCP.

***OS-1.4 Resource Protection in Development Design*** *Require appropriate resource protection measures to be incorporated within specific plans and subsequent development proposals. Such requirements may include the preparation of a vegetation management program that addresses landscape maintenance, fuel modification zones, management of passive open space areas, provision of corridor connections for wildlife*

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*movement, conservation of water courses, rehabilitation of biological resources displaced in the planning process, and use of project design, engineering, and construction practices that minimize impacts on sensitive species, MSHCP conservation areas, and designated critical habitats.*

Interagency meetings have been conducted with the RCA, wildlife, jurisdictional agencies, and the City of Hemet to ensure that all Project elements including proposed off-site mitigation are consistent with the provisions and goals of the MSHCP.

***OS-1.5 Restriction of Use*** *As needed to protect resources, limit recreational use in open space areas where sensitive biological resources exist.*

Interagency meetings have been conducted with the RCA, wildlife, jurisdictional agencies, and the City of Hemet to ensure that all Project elements including proposed off-site mitigation are consistent with the provisions and goals of the MSHCP. No on-site conservation is proposed.

***OS-1.6 Habitat Conservation Plans*** *Coordinate with Riverside County and other relevant agencies to implement the Western Riverside County MSHCP, the SKR HCP, and any other applicable habitat plan.*

Interagency meetings have been conducted with the RCA, wildlife, jurisdictional agencies, and the City of Hemet to ensure that all Project elements including proposed off-site mitigation are consistent with the provisions and goals of the MSHCP.

***OS-1.7 Wildlife Movement Corridor*** *Continue efforts to establish a wildlife movement corridor in areas such as the San Jacinto River corridor, Santa Rosa Hills, Lakeview Mountains, and the open space areas surrounding Diamond Valley Lake. As applicable, new development in these areas shall incorporate such corridors. To minimize impediments to riparian wildlife movement, new roadways over ravines, arroyos, and drainages shall maintain wildlife corridors by incorporating bridges or culverts, where practical.*

Interagency meetings have been conducted with the RCA, wildlife, jurisdictional agencies, and the City of Hemet to ensure that all Project elements including proposed off-site mitigation are consistent with the provisions and goals of the MSHCP. The Project site does not represent a wildlife movement corridor.

***OS-1.8 Local Resource Preservation*** *Maintain and enhance the natural resources of the Santa Rosa Hills, Tres Cerritos Hills, Salt Creek, Bautista Canyon, San Jacinto River/Bautista Creek, Reinhardt Canyon, Lakeview Mountains, Diamond Valley Lake, and all other waterways, ecosystems, and critical vegetation to ensure the long-term viability of habitat, wildlife, and wildlife movement corridors.*

Interagency meetings have been conducted with the RCA, wildlife, jurisdictional agencies, and the City of Hemet to ensure that all Project elements including proposed off-site mitigation are consistent with the provisions and goals of the MSHCP.

***OS-1.9 Partnerships** Support efforts of local, state, and federal agencies and private conservation organizations to preserve, protect, and enhance identified open spaces and natural resources.*

Interagency meetings have been conducted with the RCA, wildlife, jurisdictional agencies, and the City of Hemet to ensure that all Project elements including proposed off-site mitigation are consistent with the provisions and goals of the MSHCP.

#### *Consistency with Other State Regulations*

An application for WDRs would be submitted by the Project Applicant to the RWQCB to address impacts to non-federal waters of the state covered under Section 13260 of the State Water Code (the Porter-Cologne Act), including both the on-site vernal pool and agricultural ditches. Issuance of the WDRs by RWQCB would be required prior to disturbance of these features.

An application for Section 1602 SAA will be submitted by the Project Applicant to CDFW for impacts to the agricultural ditches only. Issuance (or waiver) of the Section 1602 SAA would be required prior to disturbance of these features.

## **CUMULATIVE IMPACTS**

Cumulative impacts refer to incremental, individual environmental effects of two or more projects when considered together. These impacts taken individually may be minor but may be collectively significant. Cumulative effects include future tribal, local, or private actions that are reasonably certain to occur in the proposal vicinity considered in this report. A cumulative impact to biological resources may occur if a project has the potential to collectively degrade the quality of the environment, substantially reduce the habitat of wildlife species, or cause a population to drop below self-sustaining levels, thereby threatening to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal species.

The temporary direct and/or indirect impacts of the Project would not result in significant cumulative impacts to environmental resources within the region of the Project site. Cumulative impacts refer to incremental effects of an individual project when assessed with the effects of past, current, and proposed projects. Although the Project would result in the loss of 208.87 acres of primarily agricultural lands, the MSHCP was developed to address the comprehensive regional planning effort and anticipated growth in the City of Hemet. In addition, potential cumulative projects that could result in significant adverse impacts with respect to the biological resources thresholds evaluated in this section would be required to comply with biological and other related permit requirements, including those set forth in the MSHCP,

intended to mitigate such impacts. As such, it is unlikely that development of the Project site in conjunction with development of the potential cumulative projects would have a negative cumulative effect on biological resources within the surrounding Project area. The Project has been designed and mitigated to remain in compliance with all MSHCP conservation goals and guidelines. Therefore, implementation of the Project in conjunction with the potential cumulative projects would not result in cumulatively considerable impacts on biological resources; thus cumulative impacts would be less than significant.

## **MITIGATION MEASURES**

The following biological mitigation measures address those adverse impacts determined to be potentially significant, or are relevant to the protection of biological resources to the extent practicable as part of ensuring compliance and consistency with all MSHCP conservation goals and guidelines:

### **E-1: MSHCP Local Development Mitigation Fee**

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

### **E-2: SKR Fee Area**

The Project site falls within the Stephens' kangaroo rat (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 Riverside County SKR HCP Fee Assessment Area as established and implemented by the County.

### **E-3: Burrowing Owl 30-Day Preconstruction Surveys**

A 30-day burrowing owl preconstruction survey shall be conducted immediately prior to the initiation of ground-disturbing construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. The survey 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 Hemet prior to any permit or approval for ground disturbing activities.

If burrowing owls are detected on-site during the 30-day preconstruction survey, during the breeding season (February 1 to August 31), then construction activities shall be limited to beyond 300 feet of the active burrows until a qualified biologist has confirmed that nesting efforts are complete or not initiated. In addition to monitoring breeding activity, if construction would occur during the breeding season and/or if active relocation is proposed, a burrowing owl mitigation plan shall be developed based on the County of Riverside Environmental Programs Division,

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CDFW and USFWS requirements for the active relocation of individuals to the Lake Mathews Preserve.

**E-4: Federal Migratory Bird Treaty Act**

Mitigation for potential direct/indirect impacts to common and MSHCP covered sensitive passerine and raptor species will require compliance with the federal MBTA. Construction outside the nesting season (between September 16<sup>th</sup> and January 31<sup>st</sup>) does not require pre-removal nesting bird surveys. If construction is proposed between February 1<sup>st</sup> and September 15<sup>th</sup>, a qualified biologist must conduct a nesting bird survey(s) no more than fourteen 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 raptors and/or passerines 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 Hemet 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. A report of the findings prepared by a qualified biologist shall be submitted to the City of Hemet prior to construction that has the potential to disturb any active nests during the nesting season. Any nest permanently vacated for the season would not warrant protection pursuant to the MBTA.

**E-5: MSHCP Riparian/Riverine/Vernal Pool Resources**

To meet the criteria of a biologically equivalent or superior alternative, the applicant shall offset impacts to 0.45 acre of vernal pools and 0.59 acre of agricultural ditches by preserving a minimum of 2.08 acre of vernal pool habitat within Criteria Cell 3684 Cell Group D (APN 465-020-030, Hemet Marketplace) as directed by the RCA, USFWS, CDFW, USACE, and RWQCB. The 2.08 acres of mitigation lands (2:1 ratio) shall be identified, preserved and conveyed in fee title, or by conservation easement, to the RCA. The proposed mitigation study area within which 2.08 acres will be preserved is located south of Florida Avenue and west of Warren Road in the City of Hemet, California. Specifically, the study area is located within the MSHCP San Jacinto Valley Area Plan, Subunit 4: Hemet Vernal Pool Areas East in Cell 3584.

In addition to preserving lands southwest of the Project site, the Project proponent shall also provide design elements that will contribute to the Regional Drainage Plan. Specifically, the Project shall safely convey the region-wide peak flows (the maximum flow rate associated with a 100-year storm event), as well as the increased surface flows that will result from the development of the site, from the intersection of Myers Street and Devonshire Road to the intersection of Warren Road and Florida Avenue. The watershed runoff shall be discharged into an existing channel system along Warren Road, which then extends south of Florida Avenue and recharges the vernal pool system. Runoff patterns shall be recreated to mimic pre-development conditions.

**E-6: CDFW/RWQCB**

Prior to issuance of a grading permit, the Project applicant shall obtain a 1602 SAA from CDFW and a WDR permit issued by the RWQCB pursuant to the California Water Code Section 13260. At a minimum, the Project Applicant shall comply with Mitigation Measure E-5 to mitigate its impacts to CDFW/RWQCB resources, and shall otherwise comply with the applicable permit conditions of the 1602 SAA and WDR permit.

**E-7: Indirect Impacts**

Final Project design shall be developed to ensure that best management practices incorporated into the Project address and minimize edge effects associated with the Urban/Wildlands Interface of open space lands proposed within the southwest region of the property (vernal pool – alkaline complex), including the maintenance and conveyance of season clean water flows through the Project site to the MSHCP Criteria Area where alkali vernal plain habitat is located west and southwest of the property (Noncontiguous Habitat Block 7).

## **LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Implementation of Mitigation Measures E-1 through E-7 would reduce all significant and potentially significant impacts of the Project on biological resources to a less than significant level.

Impacts to all vegetation communities located within the Project site would be mitigated to a less than significant level by implementing Mitigation Measures E-1, E-5, and E-6.

Impacts to CDFW and RWQCB regulated resources located within the Project site would be mitigated to a less than significant level by implementing Mitigation Measures E-5 and E-6.

Potential impacts to nesting burrowing owl located within the Project site would be mitigated to a less than significant level by implementing Mitigation Measures E-3 and E-4.

Impacts to raptor foraging and potential nesting habitat would be reduced to a less than significant level with the implementation of Mitigation Measure E-4.

Mitigation Measure E-5 is considered biologically superior because the existing vernal pools located on-site are of very low quality (no sensitive resources), the on-site hydrology will be difficult to maintain, and the off-site restoration will be part of a larger reserve area within the central portion of the Cell Group (south of SR 74) with appropriate hydrology to support vernal pools. This proposed mitigation approach is consistent with the direction received from the RCA, wildlife and regulatory agencies, and City of Hemet and would reduce Project impacts on riparian, riverine, and vernal pool resources to a less than significant level.