Appendix B:

Biological Studies

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THIRD STREET STORM DRAIN PROJECT

CITY OF LAKE ELSINORE, RIVERSIDE COUNTY, CALIFORNIA

Habitat Assessment and MSHCP Consistency Analysis

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November 2016
JN 148215

THIRD STREET STORM DRAIN PROJECT

CITY OF LAKE ELSINORE, RIVERSIDE COUNTY, CALIFORNIA

Habitat Assessment and MSHCP Consistency Analysis

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.

Thomas C. Millington
Biologist
Natural Resources

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Vice President
Natural Resources

November 2016
JN 148215

Executive Summary

This report contains the findings of Michael Baker International's Habitat Assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for the Third Street Storm Drain Project located in the City of Lake Elsinore, Riverside County, California.

The project site primarily consist of disturbed areas associated with existing roadways and surrounding rural-residential properties. These disturbances have greatly reduced, if not eliminated, the natural plant communities that once occurred on the project site and have resulted in a majority of the project site being dominated by non-native vegetation and heavily compacted soils.

No special-status plant species were observed during the habitat assessment and are presumed absent from the project site based on specific habitat requirements for special-status plant species, known distributions, and availability and quality of the on-site habitat. Further, no special-status plant communities occur within the boundaries of the project site.

No special-status wildlife species were observed on-site during the habitat assessment. Based on existing site conditions, it was determined that the project site has a high potential to support Cooper's hawk (*Accipiter cooperii*) and sharp-shinned hawk (*Accipiter striatus*), a moderate potential to support Allen's hummingbird (*Selasphorus sasin*) and Lawrence's goldfinch (*Spinus lawrencei*), and a low potential to support California horned lark (*Eremophila alpestris actia*). All remaining special-status wildlife species are presumed absent from the project site based on specific habitat requirements for special-status wildlife species, known distributions, and availability and quality of the on-site habitat. Cooper's hawk, sharp-shinned hawk, and California horned lark are all fully covered under the MSHCP and require no further analysis. Allen's hummingbird and Lawrence's goldfinch are not covered under the MSHCP; however, based on the proposed project design, these two species are not expected to be directly or indirectly affected by construction.

No jurisdictional drainage, ponds, basins, gravel pits, and/or potential wetland features were identified within the project site during the habitat assessment that would be considered jurisdictional by the U.S. Army Corps of Engineers, Regional Water Quality Control Board, or the California Department of Fish and Wildlife (CDFW). In addition, there are no habitats within the project site that would qualify as riparian/riverine habitat as defined under Section 6.1.2 of the MSHCP.

The project site is located in the Elsinore Area Plan of the MSHCP, but is not located within any MSHCP identified criteria cells, conservation areas, cores, or linkages. The project is considered to be a current Covered Activity under Section 7.1 of the MSHCP. Pursuant to this section, public and private development, including the construction of buildings, structures, infrastructure and all alterations of the land, that are carried out by Permittees that are outside of Criteria Areas and Public/Quasi-Public Lands are permitted under the MSHCP, subject to consistency with the policies that apply outside the Criteria Area.

With completion of recommendations provided in Section 5 of this report and payment of the MSHCP Local Development Mitigation Fee, the proposed project is fully consistent with the MSHCP.

Pursuant to the Migratory Bird Treat Act (MBTA) and California Fish and Game Code, the removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season (February 1 – August 31). If ground disturbance and/or vegetation removal activities cannot occur outside of the nesting season, a pre-construction clearance survey for nesting birds should be conducted within three days of the start of any ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For raptor species, including burrowing owl, this buffer is expanded to 500 feet. It is recommended that a biological monitor be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, normal construction activities can occur. As part of the nesting bird clearance survey, a pre-construction burrowing owl clearance survey shall be conducted to ensure that burrowing owls remain absent from the project site.

Pursuant to California Fish and Game Code Section 3503, it is unlawful to destroy any bird's nest or any bird's eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks and owls) are protected under California Fish and Game Code Section 3503.5 which makes it unlawful to take, possess, or destroy their nest or eggs. Consultation with CDFW will be required prior to the removal of any raptor nest on the project site, if found.

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EXHIBITS

APPENDIX

LIST OF ACRONYMS

CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of Lake Elsinore
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	United States Army Corps of Engineers
CWA	Clean Water Act
° F	Degrees Fahrenheit
GIS	Geographic Information System
MBTA	Migratory Bird Treaty Act
Michael Baker	Michael Baker International
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
NRCS	Natural Resources Conservation Service
P/QP	Public/Quasi-Public
RCB	Reinforced Concrete Box
RCIP	Riverside County Integrated Project
RCP	Reinforced Concrete Pipe
Regional Board	Regional Water Quality Control Board
SKR HCP	Stephens' Kangaroo Rat Habitat Conservation Plan
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

Section 1 Introduction

This report contains the findings of Michael Baker International's (Michael Baker) habitat assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis for the Third Street Storm Drain Project (Project) located in the City of Lake Elsinore, Riverside County, California (project site).

A habitat assessment was conducted between Cambern Avenue and Collier Avenue by Michael Baker biologists Ashley M. Barton and Thomas C. Millington on July 12, 2016 to document baseline conditions and assess the potential for special-status[1] plant and wildlife species to occur on the project site that could pose a constraint to development. Michael Baker Biologists Ryan S. Winkleman and Thomas C. Millington conducted a second field survey on November 2, 2016 to assess the conditions within the project boundaries on Third Street between Cambern Avenue and Welch Drive. Special attention was given to the suitability of the on-site habitat to support burrowing owl (*Athene cunicularia*) and several other special-status plant and wildlife species identified by the MSHCP, the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), and other electronic databases as potentially occurring in the vicinity of the project site. In addition, this report includes a jurisdictional assessment of state and federal waters, including potential wetlands, occurring within and adjacent to the project site.

1.1 PROJECT LOCATION

The project site is generally located south of State Route 74 (Central Avenue) in the western portion of the City of Lake Elsinore, Riverside County, California (Exhibit 1, *Regional Vicinity*). The project site is located within the Lake Elsinore quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Section 31 of Township 5 south, Range 4 west. (Exhibit 2, *Site Vicinity*). Specifically, the project site includes portions of Cambern Avenue, Collier Avenue, Conard Avenue, Third Street, and Welch Drive (Exhibit 3, *Project Site*).

1.2 PROJECT DESCRIPTION

The Project proposes the phased installation of an underground reinforced concrete pipe (RCP) and a reinforced concrete box (RCB) structure in order to adequately collect and convey the drainage flows of approximately 704 tributary acres under a 100-year flood event. More specifically, the Project involves the construction of a master drainage facility which would provide flood protection to the existing Third Street channel watershed and adjacent properties.

[1] As used in this report, "special-status" refers to plant and wildlife species that are federally, State, and MSHCP listed, proposed, or candidates; plant species that have been designated with a California Native Plant Society Rare Plant Rank; wildlife species that are designated by the California Department of Fish and Wildlife as fully protected, species of special concern, or watch list species; and specially protected natural vegetation communities as designated by the CDFW.

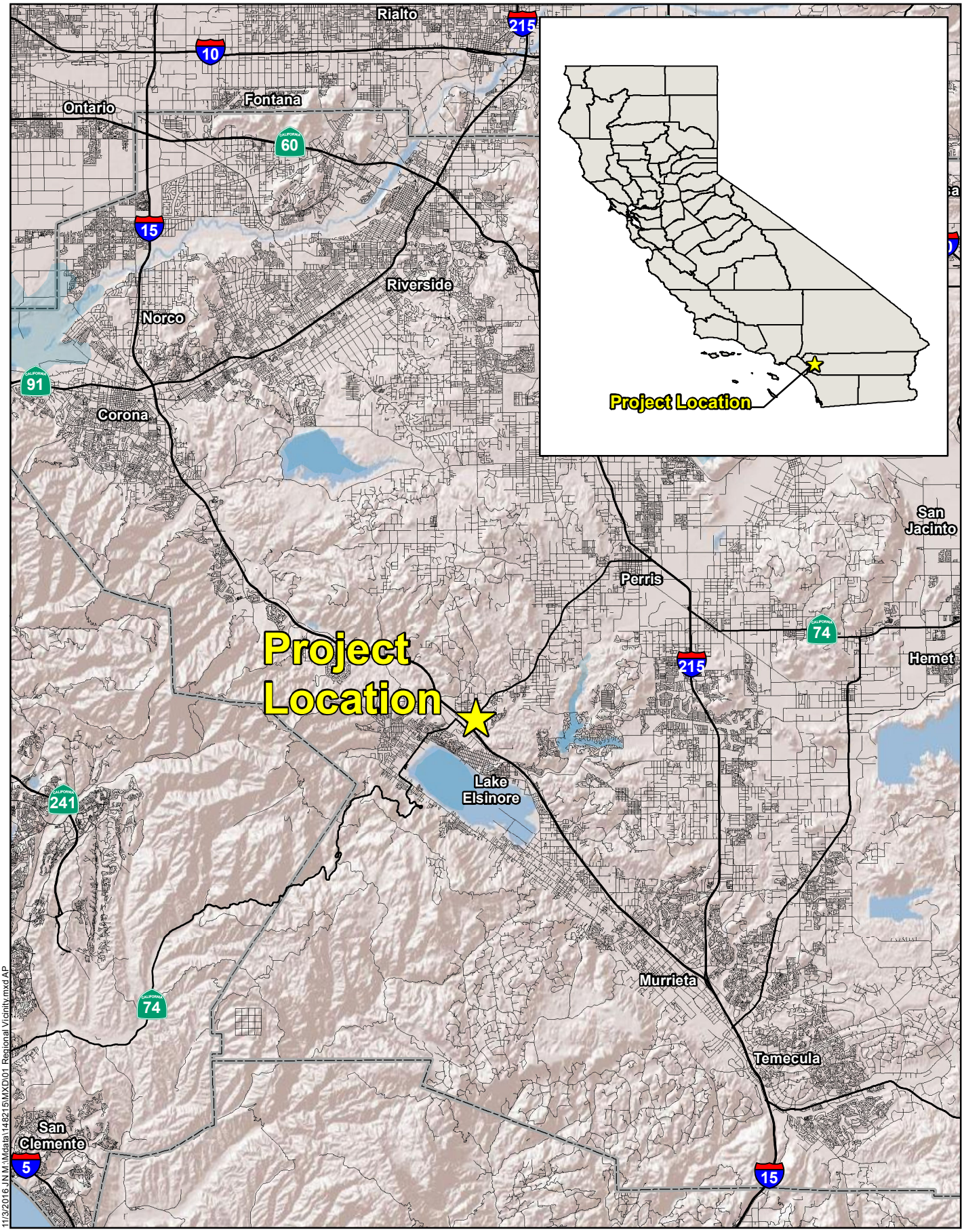
Existing flood control improvements on the southern side of Collier Avenue include an existing earthen trapezoidal channel aligned along potions of Third Street beginning on the north side of Collier Avenue. This Initial Study will analyze the potential environmental impacts associated with two phases of drainage improvements located primarily along Third Street (Phase 1 and 2 of the proposed Project) which will connect to the existing flood control improvements.[2]

Phase 1 involves the installation of underground RCB ranging between 6' height (H) x 10' width (W) to 4'6" H x 14' W along with RCP ranging between 24 to 96 inches in diameter. Phase 1 would capture flows traveling southwest from an existing natural channel through a proposed drop-inlet structure to be constructed on the northern edge of Cambern Avenue within the roadway right-of-way. The drop-inlet structure would collect and convey the flows to the proposed underground RCP that would be installed along Cambern Avenue. From here, the RCP would be extended southeast towards Third Street and connect to a proposed RCP line. At Third Street, the RCP would continue southwest towards Interstate 15 and continue under Interstate 15 within CalTrans right-of-way and constructed via jack and bore drilling, as approved by CalTrans. Once the RCP is clear of CalTrans right-of-way, it would transition to an underground RCB structure and tie-in to an existing double RCB (4'6" H x 14' W) located to the north of the Collier Avenue/Third Street Intersection (refer to Exhibit 3)

Phase 2 of the Project involves the installation of a RCP ranging between 72 to 78 inches in diameter. Phase 2 will capture flows from a proposed basin and headwall designed to accommodate 100-year storm flows. The basin and headwall will be located on adjacent vacant land at/near the end/stub of existing Welch Drive (refer to Exhibit 3). Flows will continue through the basin and headwall through approximately 100 feet of 78-inch diameter buried pipeline that will continue to Welch Drive. The existing functioning channel and headwall at the eastern end of Welch Drive, located on private property, will not be modified. The RCP storm drain would continue west along Welch Drive towards Conard Avenue, southeast along Conard Avenue toward Third Street, and southwest along Third Street towards Cambern Avenue. Phase 2 would tie into the Phase 1 RCP improvements at the Cambern Avenue/Third Street intersection.

Both Phase 1 and Phase 2 of the Project would include the installation of several lateral connection points for future land uses. Phase 1 and Phase 2 would be designed to meet Riverside County Flood Control District (RCFCD) standards.

[2] Engineering drawings consistent with Riverside County Flood Control and Water Conservation District requirements indicate the existing flood control facilities as Stage I. Stage II and Stage III of these engineering drawings are equivalent to Phase I and Phase II (respectively) of this report.



THIRD STREET STORM DRAIN PROJECT
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

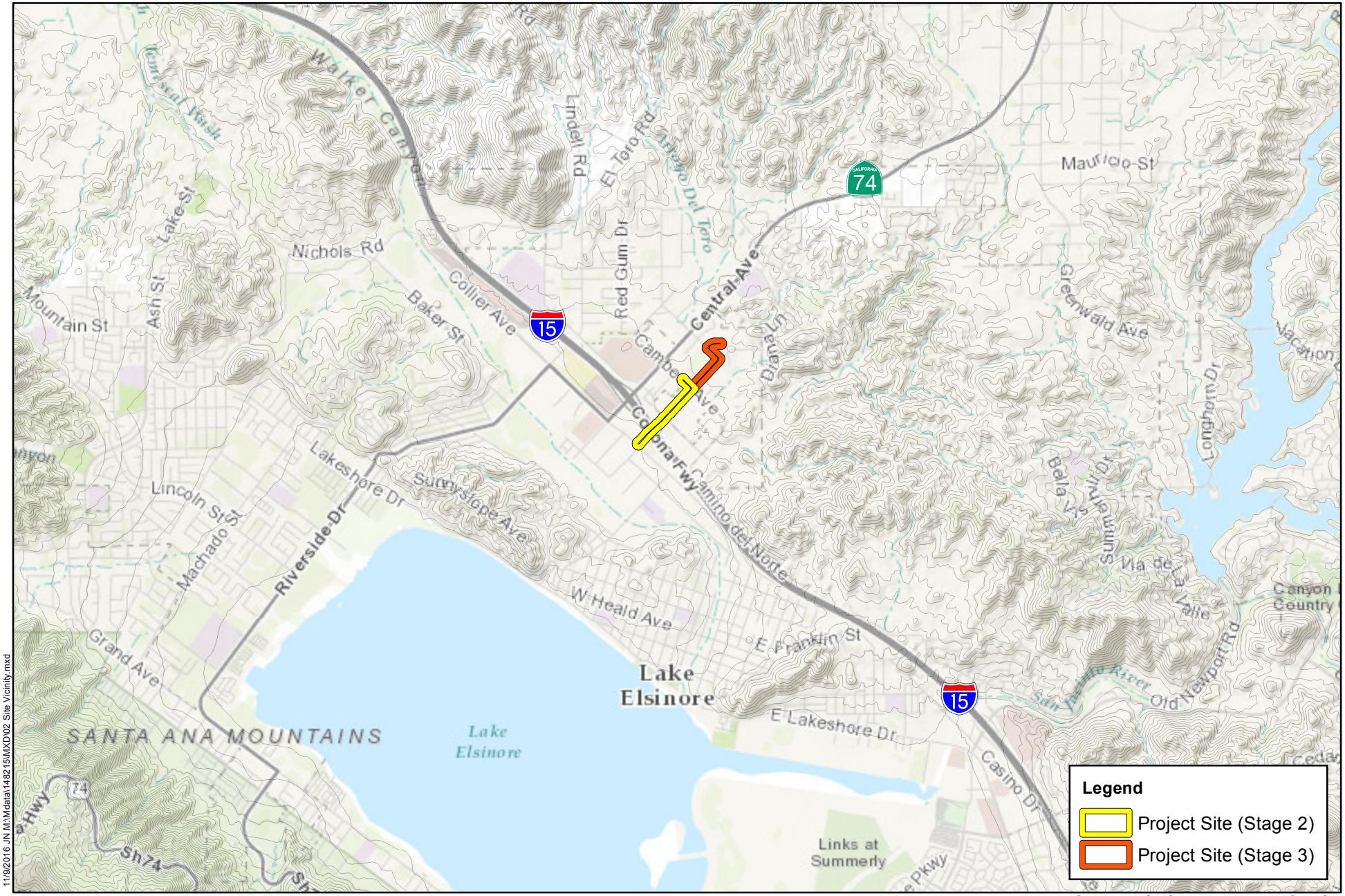
Regional Vicinity

Michael Baker INTERNATIONAL

0 2.5 5 10 Miles

Source: ESRI Relief Map, US Census Tiger/Line, National Highway Planning Network

Exhibit 1



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THIRD STREET STORM DRAIN PROJECT
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

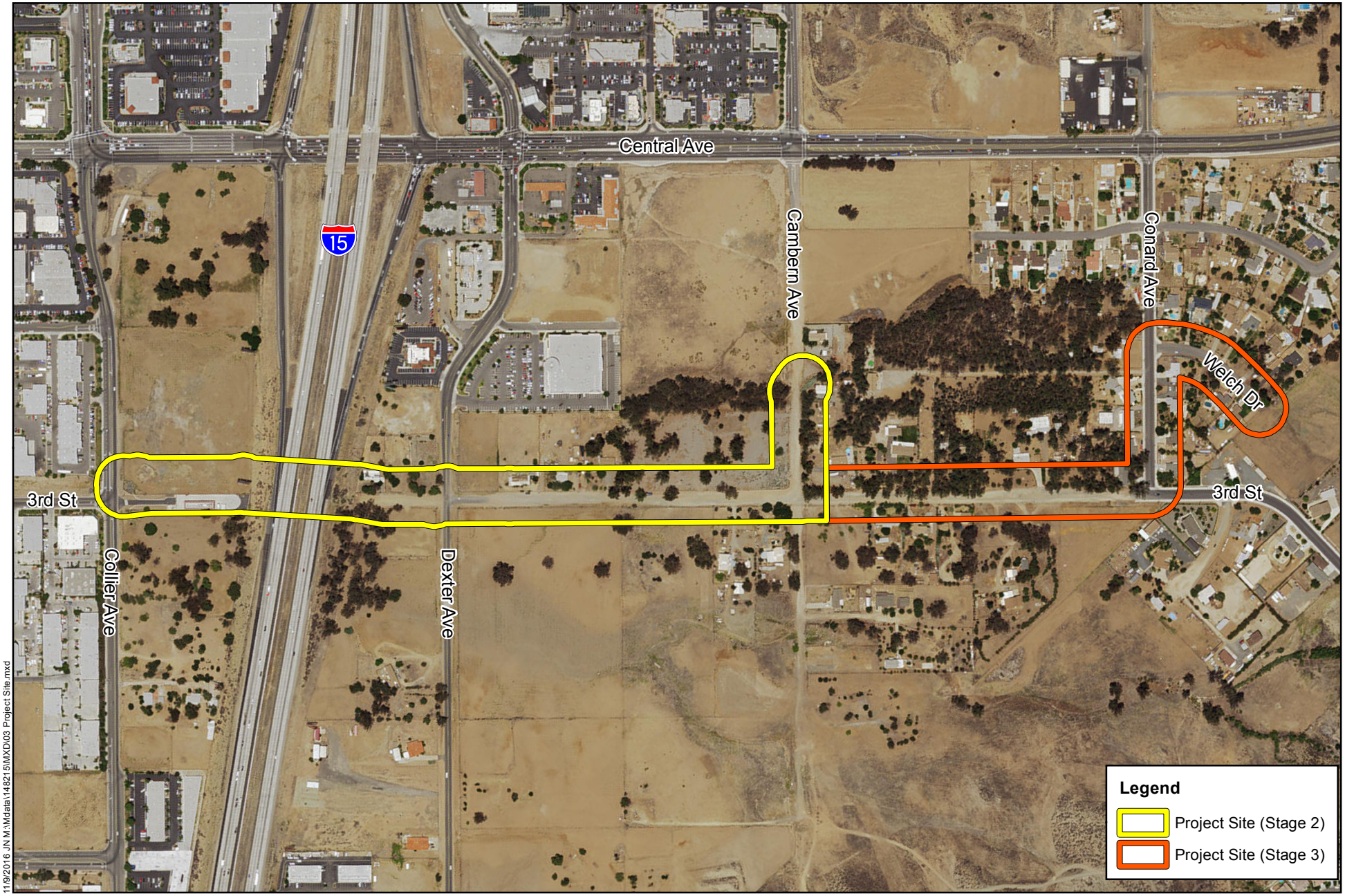
Site Vicinity

Michael Baker INTERNATIONAL

0 1 2 Miles

Source: Riverside County, ESRI World Topo

Exhibit 2



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Michael Baker INTERNATIONAL

0 250 500 1,000 Feet

Source: Riverside County, ESRI World Imagery

THIRD STREET STORM DRAIN PROJECT
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

Project Site

Exhibit 3

Section 2 Methodology

Michael Baker conducted a thorough literature review and records search to determine which special-status biological resources have the potential to occur on or within the general vicinity of the project site. In addition, a general habitat assessment and field investigation of the project site was conducted and provided information of the existing conditions on the project site and potential for special-status biological resources to occur.

2.1 MSHCP CONSISTENCY ANALYSIS

The project site is located in the City of Lake Elsinore (City) within the Elsinore Area Plan of the MSHCP. The City is a permittee under the MSHCP and, while the project is not specifically identified as a Covered Activity under Section 7.1 of the MSHCP, public and private development that is outside of Criteria Areas and Public/Quasi-Public (P/QP) Lands is permitted under the MSHCP, subject to consistency with MSHCP policies that apply to area outside of Criteria Areas. As such, to achieve coverage, the project must be consistent with the following policies of the MSHCP:

- The policies for the protection of species associated with Riparian/Riverine areas and vernal pools as set forth in Section 6.1.2 of the MSHCP;
- The policies for the protection of narrow endemic plant species as set forth in Section 6.1.3 of the MSHCP;
- Vegetation mapping requirements as set forth in Section 6.3.1 of the MSHCP;
- The requirements for conducting additional surveys as set forth in Section 6.3.2 of the MSHCP; and
- Fuels management guidelines as set forth in Section 6.4 of the MSHCP.

The project site was reviewed to determine consistency with the MSHCP. Geographic Information System (GIS) software was utilized to map the project site in relation to MSHCP areas including criteria cells (core habitat and wildlife movement corridors) and areas proposed for conservation.

2.1.1 Riparian/Riverine Areas and Vernal Pools

The MSHCP requires that an assessment be completed if impacts to riparian/riverine areas and vernal pools will occur as a result of implementation of the proposed project. According to the MSHCP, the documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to the species listed in Section 6.1.2 of the MSHCP, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*.

Aerial photography was reviewed prior to conducting the jurisdictional assessment. The aerial photographs were used to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may be considered riparian/riverine habitat and/or fall under the jurisdiction of the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to State and federal regulatory authorities.

2.1.2 Narrow Endemic Plant Species

Section 6.1.3 of the MSHCP, *Protection of Narrow Endemic Plant Species*, states that the MSHCP database does not provide sufficient detail to determine the extent of the presence/distribution of Narrow Endemic Plant Species within the MSHCP Plan Area. Additional surveys may be needed to gather information to determine the presence/absence of these species to ensure that appropriate conservation of these species occurs. Based on the Riverside County Integrated Project (RCIP) Conservation Summary Report Generator and review of the MSHCP, it was determined that the project site is not located within the designated survey area for Narrow Endemic Plant Species as depicted in Figure 6-1 within Section 6.3.2 of the MSHCP.

2.1.3 Vegetation Mapping

Section 6.3.1 of the MSHCP, *Vegetation Mapping*, requires vegetation mapping within project sites that meet certain criteria in order to assess whether conservation is required. These criteria are described in detail in the MSHCP. Vegetation mapping conducted for this project site is described further in Section 2.5 below.

2.1.4 Additional Survey Needs and Procedures

Section 6.3.2 of the MSHCP, *Additional Survey Needs and Procedures*, states that additional surveys may be needed for certain species in order to achieve coverage for these species. The RCIP Conservation Summary Report Generator identified the project site as being located within the designated survey area for burrowing owl (Appendix A).

2.1.5 Fuels Management

Section 6.4 of the MSHCP, *Fuels Management*, focuses on hazard reduction for humans and their property. It requires fuels management practices to be compatible with public safety as well as the conservation of biological resources. A project must comply with MSHCP fuels management requirements in order to be in compliance.

2.1.6 Urban/Wildlands Interface Guidelines

Section 6.1.4 of the MSHCP, *Guidelines Pertaining to Urban/Wildlands Interface,* is intended to address indirect effects associated with development in proximity to MSHCP Conservation Areas. The Urban/Wildlife Interface Guidelines are intended to ensure that indirect project-related impacts to the MSHCP Conservation Area, including drainage, toxics, lighting, noise, invasive plant species, barriers, and grading/land development, are avoided or minimized.

2.2 LITERATURE REVIEW

The first step in determining if a project is consistent with the above listed sections of the MSHCP is to conduct a literature review and records search for special-status biological resources potentially occurring on or within the vicinity of the project site. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project site were determined through a query of the CNDDB Rarefind 5, the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, and the United States Fish and Wildlife Service (USFWS) species listings, and species covered within the MSHCP and associated technical documents.

Literature detailing biological resources previously observed in the vicinity of the project site and historical land uses were reviewed to understand the extent of disturbances to the habitats on-site. Standard field guides and texts on special-status and non-special-status biological resources were reviewed for habitat requirements, as well as the following resources:

- Google Earth Pro historic aerial imagery (1994-2016);
- 2006 Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area;
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey;
- USFWS Critical Habitat designations for Threatened and Endangered Species;
- Stephens' Kangaroo Rat Habitat Conservation Plan; and
- RCIP Conservation Summary Report.

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the project site. The CNDDB database was used, in conjunction with ArcGIS software, to locate the nearest recorded occurrences of special-status species and determine the distance from the project site.

2.3 HABITAT AND JURISDICTIONAL ASSESSMENT

Michael Baker biologists Ashley M. Barton and Thomas C. Millington evaluated the extent and conditions of the plant communities found within the boundaries of the project site from Cambern Avenue to Collier Avenue on July 12, 2016. Michael Baker Biologists Ryan S. Winkleman and Thomas C. Millington conducted a second field survey on November 2, 2016 to assess the conditions within the project boundaries between Cambern Avenue and Welch Drive. Plant communities identified on aerial photographs during the literature review were verified in the field by walking meandering transects through the on-site plant communities and along boundaries between plant communities. The plant communities were evaluated for their potential to support special-status plant and wildlife species. In addition, field staff identified any jurisdictional features, riparian/riverine habitat, and any natural corridors and linkages that may support the movement of wildlife through the area.

Special attention was given to special-status habitats and/or undeveloped areas, which have higher potentials to support special-status plant and wildlife species. Areas providing suitable habitat for burrowing owl were closely surveyed for signs of presence during the habitat assessment. Methods to detect the presence of burrowing owls included direct observation, aural detection, and signs of presence including pellets, white wash, feathers, or prey remains. All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

Aerial photography was reviewed prior to conducting the jurisdictional assessment in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may be considered riparian/riverine habitat and/or fall under the jurisdiction of the Corps, Regional Board, or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction.

2.4 SOIL SERIES ASSESSMENT

On-site and adjoining soils were researched prior to the field survey using the USDA NRCS Soil Survey for Western Riverside Area, California. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes that the project site has undergone.

2.5 PLANT COMMUNITIES

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were delineated on an aerial photograph, classified in accordance with those described in the MSHCP, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community in acres.

2.6 PLANTS

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field, and recorded in a field notebook. Unusual and less familiar plants were photographed in the field and identified in the laboratory using taxonomic guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Baldwin et al. 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

2.7 WILDLIFE

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of wildlife species during the survey included The Sibley Field Guide to the Birds of Western North America (Sibley 2003), A Field Guide to Western Reptiles and Amphibians (Stebbins 2003), and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are fairly well standardized, scientific names are provided immediately following common names in this report (first reference only).

2.8 STEPHENS' KANGAROO RAT HABITAT CONSERVATION PLAN

Separate from the consistency review against the policies of the MSHCP, Riverside County established a boundary in 1996 for protecting the Stephens' kangaroo rat (*Dipodomys stephensi*), a federally endangered and state threatened species. The Stephens' kangaroo rat is protected under the Stephens' Kangaroo Rat Habitat Conservation Plan (Lake Elsinore Municipal Code, Chapter 19.04; County Ordinance No. 663.10; SKR HCP). As described in the MSHCP Implementation Agreement, a Section 10(a) Permit and California Fish and Game Code Section 2081 Management Authorization were issued to the Riverside County Habitat Conservation Agency for the Long-Term SKR HCP, which was approved by the USFWS and CDFW in August 1990 (RCHCA 1996). Relevant terms of the SKR HCP have been incorporated into the MSHCP and its Implementation Agreement. The SKR HCP will continue to be implemented as a separate HCP; however, to provide the greatest conservation for the largest number of Covered Species, the Core Reserves established by the SKR HCP are managed as part of the MSHCP Conservation Area consistent with the SKR HCP. Actions shall not be taken as part of the implementation of the SKR HCP that will significantly affect other Covered Species. Take of Stephens' kangaroo rat outside of the boundaries but within the MSHCP area is authorized under the MSHCP and the associated permits.

The project consists of the installation of an underground RCP storm drain and RCB structure but will be limited to previously disturbed areas and will involve rehabilitation/remodeling of existing structures. Therefore, the project is exempt from payment of the Mitigation Fee (Riverside County Ordinance No. 663.10).

Section 3 Existing Conditions

3.1 LOCAL CLIMATE

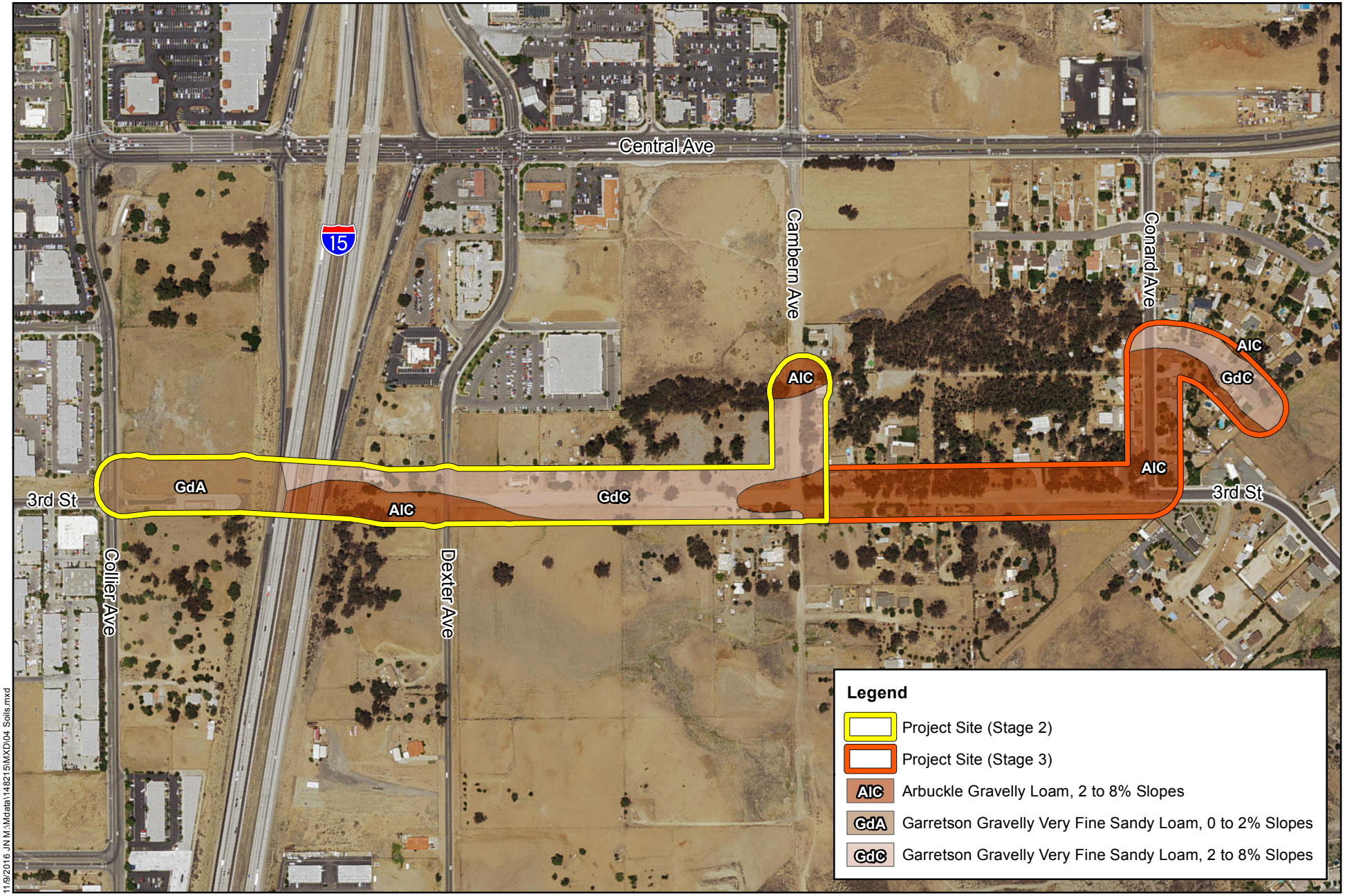
Riverside County features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to other areas in Southern California, winters are colder with frost and with chilly to cold morning temperatures common. Climatological data obtained from nearby weather stations indicates the annual precipitation averages 12.09 inches per year. Almost all of the precipitation in the form of rain occurs in the months between December and March, with hardly any occurring between the months of April and November. The wettest month is February, with a monthly average total precipitation of 2.96 inches, and the driest month is June with a monthly average total precipitation of 0.02 inches. The average maximum and minimum temperatures are 81 and 49 degrees Fahrenheit (° F) respectively with July and August (monthly average high 98° F) being the hottest months and December (monthly average low 37° F) being the coldest. The temperature during the site visit was in the high 70s° F.

3.2 TOPOGRAPHY AND SOILS

On-site surface elevation ranges from approximately 1,274 to 1,350 feet above mean sea level and gently slopes to the southwest. Based on the USDA NRCS Web Soil Survey, the project site is underlain by the following soil units: Arbuckle Gravelly Loam, 2 to 8 Percent Slopes (AlC); Garretson Gravelly Very Fine Sandy Loam, 0 to 2 Percent Slopes (GdC); and Garretson Gravelly Very Fine Sandy Loam, 2 to 8 Percent Slopes (GdA) (Exhibit 4, *Soils*). No areas of significant topographic relief occur within the boundaries of the project site.

3.3 SURROUNDING LAND USES

Land uses in the vicinity of the project site consist of rural-residential, commercial, and transportation land uses. Rural-residential properties and vacant land surround the project site to the south and east while vacant land and commercial development surround the project site to the north and west. Lake Elsinore is located approximately 1.12 miles to the southwest and Canyon Lake is located approximately 3.40 miles to the east. Interstate 15 runs through the project site in a northwest to southwest direction and State Route 74 (Central Avenue) is located immediately northwest of the project site.



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THIRD STREET STORM DRAIN PROJECT
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

Soils

Michael Baker INTERNATIONAL

0 250 500 1,000 Feet

Source: Riverside County, NRCS Soil Data Mart ca679, ESRI World Imagery

Exhibit 4

Section 4 Discussion

4.1 SITE CONDITIONS

The project site primarily consists of disturbed areas associated with existing roadways and surrounding rural-residential properties. The project footprint is entirely located within existing roadways or areas that have been previously disturbed with existing structures. These disturbances have greatly reduced, if not eliminated, the natural plant communities that once occurred on the project site and have resulted in a majority of the project site being dominated by non-native vegetation and heavily compacted soils.

4.2 VEGETATION

One (1) plant community was observed within the boundaries of the project site during the habitat assessment: ornamental (Exhibit 5, *Vegetation*). In addition, the project site contains land cover types that would be classified as disturbed and developed. These plant communities and land cover types are described in further detail below.

4.2.1 Ornamental

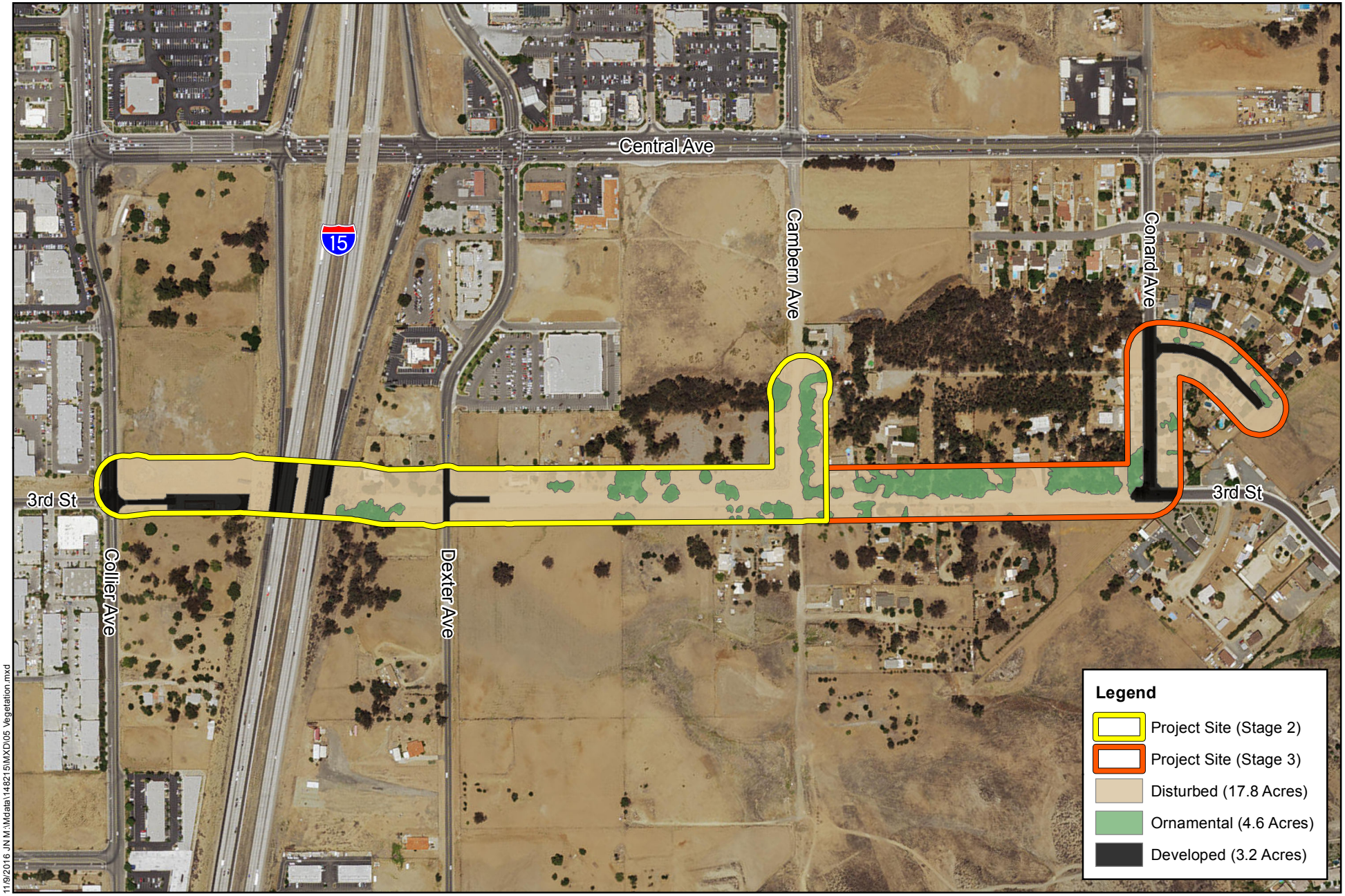
Stands of ornamental vegetation occur within surrounding residential properties and along portions of Cambern Avenue, Collier Avenue, Conard Avenue, Third Street, and Welch Drive. Plant species occurring within this plant community include eucalyptus (*Eucalyptus sp.*), oleander (*Nerium oleander*), olive (*Olea europaea*), and various other non-native plant species.

4.2.2 Disturbed

Disturbed areas within the project site include unimproved dirt access roads and vacant land associated within surrounding properties. These areas consist of highly compacted soils that no longer support a native plant community and are instead dominated by non-native plant species including red brome (*Bromus madritensis ssp. rubens*), wild oat (*Avena fatua*), short podded mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and London rocket (*Sisymbrium irio*).

4.2.3 Developed

Developed areas within the project site generally consist of paved, impervious surfaces and include private driveways and portions of Interstate 15, Dexter Avenue, Collier Avenue, Conard Avenue, Third Street, and Welch Drive.



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Michael Baker INTERNATIONAL

0 250 500 1,000 Feet

Source: Riverside County, ESRI World Imagery

THIRD STREET STORM DRAIN PROJECT
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

Vegetation

Exhibit 5

4.3 WILDLIFE

Plant communities provide foraging habitat, nesting and denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species that were observed during the habitat assessment or that are expected to occur within the project site. The discussion is to be used as a general reference and is limited by the season, time of day, and weather condition in which the field survey was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

4.3.1 Fish

The MSHCP does not identify any covered or special-status fish species as potentially occurring on the project site. Further, no fish or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the project site. Therefore, no fish are expected to occur on the project site and are presumed absent.

4.3.2 Amphibians

The MSHCP does not identify any covered or special-status amphibian species as potentially occurring on the project site. Further, no amphibians or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for amphibian species were observed on or within the vicinity of the project site. Therefore, no amphibians are expected to occur on the project site and are presumed absent.

4.3.3 Reptiles

The MSHCP does not identify any covered or special-status reptilian species as potentially occurring on the project site. Great Basin fence lizard (*Sceloporus occidentalis longipes*) and side-blotched lizard (*Uta stansburiana elegans*) were the only reptilian species observed during the habitat assessment. Other common reptilian species expected to occur include gopher snake (*Pituophis catenifer*), and southern alligator lizard (*Elgaria multicarinata*).

4.3.4 Birds

The project site provides suitable foraging and cover habitat for a variety of resident and migrant bird species. Avian species observed during the two field surveys included red-tailed hawk (*Buteo jamaicensis*), lesser goldfinch (*Spinus psaltria*), American crow (*Corvus brachyrhynchos*), turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura*), Eurasian-collared dove (*Streptopelia decaocto*), Nuttall's woodpecker (*Picoides nuttallii*), California towhee (*Melozone crissalis*), rock pigeon (*Columba livia*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), Cassin's kingbird (*Tyrannus vociferans*), Bewick's wren (*Thryomanes bewickii*), ruby-crowned kinglet (*Regulus calendula*), hermit thrush (*Catharus guttatus*), American robin (*Turdus migratorius*), nothern mockingbird (*Mimus polyglottos*), American pipit (*Anthus rubescens*), Audubon's yellow-rumped warbler

(*Setophaga coronata auduboni*), white-crowned sparrow (*Zonotrichia leucophrys*), house sparrow (*Passer domesticus*), and house finch (*Haemorhous mexicanus*).

4.3.5 Mammals

The MSHCP does not identify any covered or special-status mammalian species as potentially occurring on the project site. However, the project site and surrounding areas have the potential to support a variety of mammalian species adapted to human presence and disturbance. The only mammalian species observed during the habitat assessment were Audubon's cottontail (*Sylvilagus audubonii*) andraccoon (*Procyon lotor*). Other common mammalian species expected to occur include coyote (*Canis latrans*) and Botta's pocket gopher (*Thomomys bottae*).

4.4 NESTING BIRDS

No active avian nests or birds displaying nesting behavior were observed during the field survey. However, the plant communities within the project site provide suitable foraging and nesting habitat for a variety of year-round and seasonal avian residents, including raptors, as well as migrating songbirds that could occur in the area.

4.5 MIGRATORY CORRIDORS AND LINKAGES

Habitat linkages provide links between larger undeveloped habitat areas that are separated by development. Wildlife corridors are similar to linkages, but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

The project site is not located within any criteria cells, conservations areas, cores, or linkages identified within the MSHCP. Further, the project primarily consists of disturbed areas associated with surrounding rural-residential properties and existing roadways and does not provide a corridor that would support the movement of wildlife through the area.

4.6 STATE AND FEDERAL JURISDICTIONAL AREAS

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge and/or fill materials into "waters of the United States" pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the

CDFW regulates alterations to streambed and associated plant communities pursuant to Section 1602 of the California Fish and Game Code.

Based on a review of aerial photographs and USGS quadrangle maps, no drainage features, ponds, basins, or gravel pits occur within the boundaries of the project site. Further, no jurisdictional drainage and/or potential wetland features were identified within the project site during the habitat assessment that would be considered jurisdictional by the Corps, Regional Board, or CDFW. Part of the project design is to replace an existing headwall at the eastern end of Welch Drive that drains stormwater from surrounding undeveloped parcels and an existing concrete v-ditch that was designed to drain urban runoff from the Ridgestone Apartment Community to the north. Stormwater flows are conveyed to a 48-inch RCP underneath the residential properties along Welch Drive and Conard Avenue before eventually spreading out across residential properties and undeveloped parcels, eventually dissipating to the south of Cambern Avenue and not connecting to jurisdictional waters. The proposed RCB structure will tie-in to the existing RCB located under Collier Avenue but, as noted, will not result in the placement of dredged and/or fill material within state or federal jurisdictional areas.

4.7 SPECIAL-STATUS BIOLOGICAL RESOURCES

The CNDDB was queried for reported locations of listed and special-status plant and wildlife species as well as special-status natural plant communities in the Lake Elsinore USGS 7.5-minute quadrangle. A search of published records of these species was conducted within this quadrangle using the CNDDB Rarefind 5 online software and CNDDB Quickview Tool. The CNPS Inventory of Rare and Endangered Vascular Plants of California and MSHCP supplied information regarding the distribution and habitats of vascular plants in the vicinity of the project site. The habitat assessment evaluated the conditions of the habitat(s) within the boundaries of the project site to determine if the existing plant communities, at the time of this survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species.

The literature search identified twenty-five (25) special-status plant species, fifty-six (56) special-status wildlife species, and three (3) special-status plant communities as having potential to occur within the Lake Elsinore USGS 7.5-minute quadrangle. Special-status plant and wildlife species were evaluated for their potential to occur within the project site based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity are presented in Appendix D, *Potentially Occurring Special-Status Biological Resources*, and discussed below. Appendix D provides details about the analysis and survey results regarding the potential occurrence of special-status plant and wildlife species within the project site.

4.7.1 Special-Status Plants

Twenty-five (25) special-status plant species have been recorded in the Lake Elsinore USGS 7.5-minute quadrangle (refer to Appendix D). The project site primarily consists of disturbed areas associated with

existing roadways and surrounding rural-residential properties. These disturbances have resulted in a majority of the project site being dominated by non-native vegetation and heavily disturbed soils. No special-status plant species were observed during the habitat assessment and are presumed absent from the project site based on specific habitat requirements for special-status plant species, known distributions, and availability and quality of the on-site habitat.

4.7.2 Special-Status Wildlife

Fifty-six (56) special-status wildlife species have been recorded in the Lake Elsinore USGS 7.5-minute quadrangle (refer to Appendix D). The project site primarily consists of disturbed areas associated with existing roadways and surrounding rural-residential properties. These disturbances have resulted in a majority of the project site being dominated by non-native vegetation and heavily disturbed soils which have greatly reduced, if not eliminated, the ability of the on-site plant communities to provide suitable habitat for special-status wildlife species.

No special-status wildlife species were observed on-site during the habitat assessment. Based on existing site conditions, it was determined that the project site has a high potential to support Cooper's hawk (*Accipiter cooperii*) and sharp-shinned hawk (*Accipiter striatus*), a moderate potential to support Allen's hummingbird (*Selasphorus sasin*) and Lawrences's goldfinch (*Spinus lawrencei*), and a low potential to support California horned lark (*Eremophila alpestris actia*). All remaining special-status wildlife species are presumed absent from the project site based on specific habitat requirements for special-status wildlife species, known distributions, and availability and quality of the on-site habitat. Cooper's hawk, sharp-shinned hawk, and California horned lark are all fully covered under the MSHCP and require no further analysis. Allen's hummingbird and Lawrence's goldfinch are not covered under the MSHCP and may require an additional analysis for impacts under the California Environmental Quality Act (CEQA); however, based on the proposed project design, these two species are note expected to be directly or indirectly affected by construction.

4.7.3 Special-Status Plant Communities

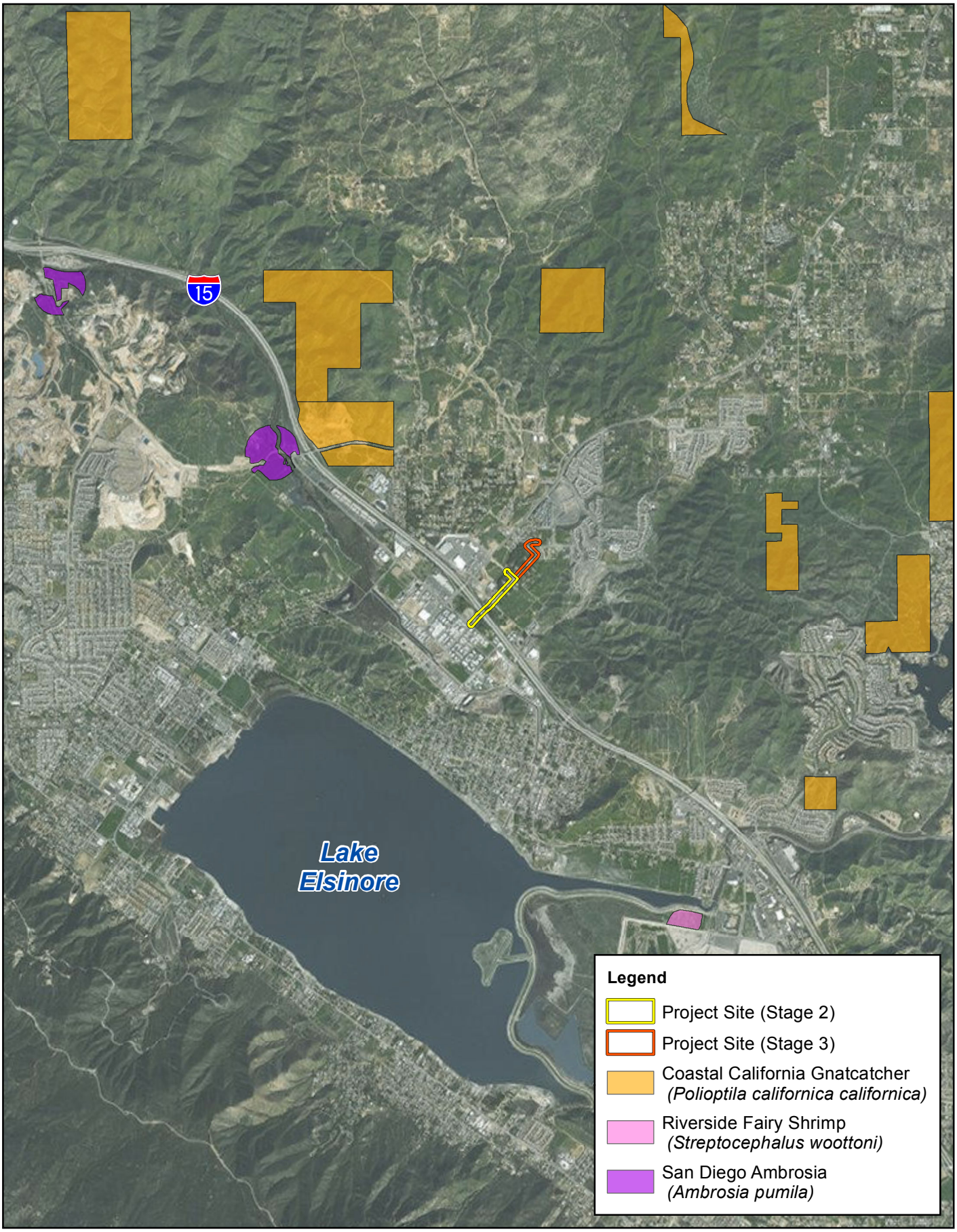
The CNDDB lists three (3) special-status plant communities as being identified within the Lake Elsinore USGS 7.5-minute quadrangle: Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, and Southern Sycamore Alder Riparian Woodland. None of these special-status plant communities occur within the boundaries of the project site and are presumed absent.

4.8 CRITICAL HABITAT

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to habitat or a specific geographic area that contains the elements and features that are essential for the survival and recovery of the species. In the event that a project may result in take or in adverse effects to a species' designated Critical Habitat, the project proponent may be required to engage in suitable mitigation. However, consultation for impacts to Critical

Habitat is only required when a project has a federal nexus (i.e. occurs on federal land, is issued federal permits [e.g. Corps Section 404 permit, or Corps Section 408 permit], or receives any other federal oversight or funding).

The project site is not located within federally designated Critical Habitat (Exhibit 6, *Critical Habitat*). Therefore, consultation with USFWS will not be required for the loss or adverse modification of Critical Habitat.



11/9/2016 JN:M:\Mdata\148215\MXD\06 Critical Habitat.mxd

THIRD STREET STORM DRAIN PROJECT
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

Critical Habitat

Michael Baker INTERNATIONAL

0 0.5 1 2 Miles

Source: USFWS Critical Habitat Portal, ESRI USA World Imagery Basemap

Exhibit 6

Section 5 MSHCP Consistency Analysis

The project site is located in the Elsinore Area Plan of the MSHCP, but is not located within any MSHCP identified criteria cells, conservations areas, cores, or linkages (Exhibit 7, *MSHCP Conservation Areas*). Based on the RCIP Conservation Summary Report Generator and review of the MSHCP, it was determined that the project site is located within the designated survey area for burrowing owl as depicted in Figure 6-4 within Sections 6.3.2 of the MSHCP. Refer to Section 5.4 for a detailed analysis of the suitability of the on-site habitat and potential for burrowing owl to occur on the project site.

5.1 RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

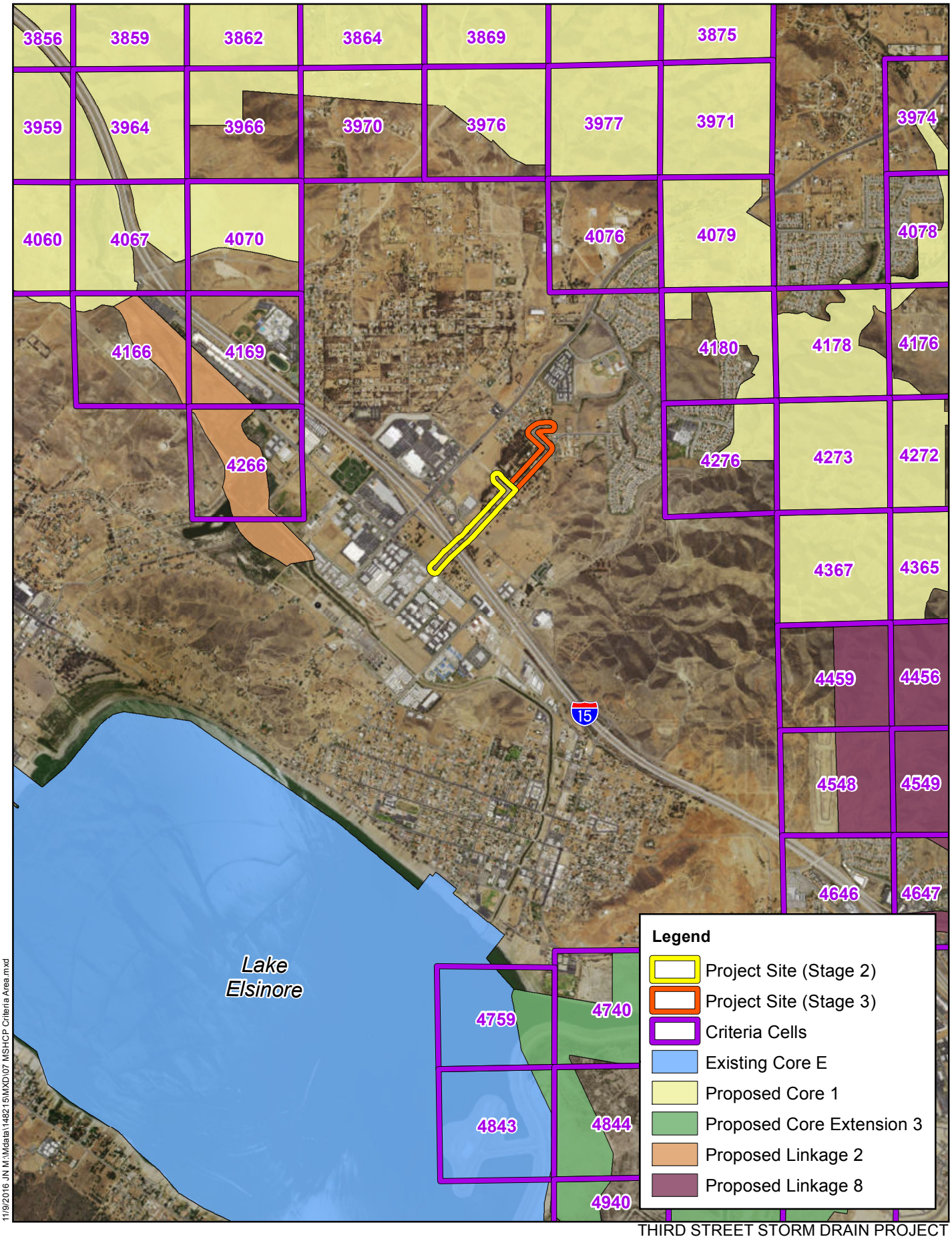
5.1.1 Riparian/Riverine Areas

As defined under Section 6.1.2 of the MSHCP, riparian/riverine areas are areas dominated by trees, shrubs, persistent emergent plants, or emergent mosses and lichens which occur close to or are dependent upon nearby freshwater, or areas with freshwater flowing during all or a portion of the year. Conservation of these areas is intended to protect habitat that is essential to a number of listed or special-status water-dependent fish, amphibian, avian, and plant species. If all impacts to riparian/riverine habitat cannot be avoided, a Determination of Biologically Equivalent or Superior Preservation must be developed to address the replacement of lost functions of habitats in regards to the listed species. This assessment is independent from considerations given to "waters of the U.S." and "waters of the State" under the CWA, the California Porter-Cologne Water Quality Control Act, and the California Fish and Game Code.

No jurisdictional drainage, ponds, basins, gravel pits, and/or potential wetland features were identified within the project site during the habitat assessment that would be considered jurisdictional by the Corps, Regional Board, or CDFW. In addition, there are no habitats within the project site that would qualify as riparian/riverine habitat as defined under Section 6.1.2 of the MSHCP.

5.1.2 Vernal Pools

Vernal pools are seasonally inundated, ponded areas that only form in regions where specialized soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions where downward percolation of water is prevented by the presence of a hard pan or clay pan layer (duripan) below the soil surface. Later in the spring when rains decrease and the weather warms, the water evaporates and the pools generally disappear by May. The shallow depressions remain relatively dry until late fall and early winter with the advent of greater precipitation and cooler temperatures. Vernal pools provide unusual "flood and drought" habitat conditions to which certain plant and wildlife species have specifically adapted as well as invertebrate species such as fairy shrimp.



11/9/2016 JN M:\Mdata\148215\MXD\07 MSHCP Criteria Area.mxd

Michael Baker INTERNATIONAL

0 0.5 1 Miles

Source: San Bernardino County, NearMap Aerial - Nov 2015

THIRD STREET STORM DRAIN PROJECT
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

MSHCP Conservation Areas

Exhibit 7

One of the factors for determining the suitability of the habitat for fairy shrimp would be demonstrable evidence of seasonal ponding in an area of topographic depression that is not subject to flowing waters. These astatic pools are typically characterized as vernal pools. More specifically, vernal pools are seasonal wetlands that occur in depression areas without a continual source of water. They have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology is made on a case-by-case basis. Such determinations should be considered the length of time the areas exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. The seasonal hydrology of vernal pools provides for a unique environment, which supports plants and invertebrates specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry.

The MSHCP lists two general classes of soils known to be associated with special-status plant species; clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status species associated with vernal pools can occur on the project site. None of these soils occur on the project site.

A review of recent (1996-2016) and predevelopment aerial photographs of the site and its immediate vicinity did not provide visual evidence of an astatic or vernal pool on or in the near vicinity of the project site. No ponding was observed on-site, further supporting the fact that the drainage patterns currently occurring on the project site do not follow the hydrologic regime needed for vernal pools. From this review of historic aerial photos and field observation, it can be concluded that there is no indication of vernal pools or suitable fairy shrimp habitat within the project site.

5.2 NARROW ENDEMIC PLANT SPECIES

Section 6.1.3 of the MSHCP, *Protection of Narrow Endemic Plant Species*, states that the MSHCP database does not provide sufficient detail to determine the extent of the presence/distribution of Narrow Endemic Plant Species within the MSHCP Plan Area. Additional surveys may be needed to gather information to determine the presence/absence of these species to ensure that appropriate conservation of these species occurs.

Based on the RCIP Resource Conservation Summary Report and a review of Figure 6-1 within Section 6.1.3 of the MSHCP, it was determined that the project site is not located within the designated survey area for Narrow Endemic Plant Species. Additionally, it was determined that the project site does not provide

suitable habitat for any of the Narrow Endemic Plant Species listed under Section 6.1.3 of the MSHCP. Therefore, no additional surveys or analysis is required.

5.3 VEGETATION MAPPING

Under Section 6.3.1 of the MSHCP, *Vegetation Mapping*, it may be necessary to map vegetation within the project site if the site meets certain criteria. Of the criteria listed within this section of the MSHCP, the project site falls under the following: "For public and private projects within the Criteria Area and subject to the Additional Survey Needs and Procedures described in Section 6.3.2 [described in Section 5.4 below], vegetation mapping may be required to assess the presence of suitable habitat for survey purposes." Vegetation mapping shall not be required if other data are sufficient to assess the presence of suitable habitat.

Based on the results of the habitat assessment, one (1) plant community occurs within the boundaries of the project site: ornamental. Remaining portions of the project site consist of land cover types that would be classified as disturbed and developed. No additional surveys or analysis is required.

5.4 ADDITIONAL SURVEY NEEDS AND PROCEDURES

In accordance with Section 6.3.2 of the MSHCP, *Additional Survey Needs and Procedures*, additional surveys may be needed for certain species in order to achieve coverage for these species. Based on the RCIP Resource Conservation Summary Report and a review of Figure 6-4 in Section 6.3.2 of the MSHCP, it was determined that the project site is located within the designated burrowing owl survey area.

5.4.1 Burrowing Owl

Burrowing owl is currently designated as a California Species of Special Concern. The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with level to gently-sloping areas characterized by open vegetation and bare ground. The western burrowing owl (*A.c. hypugaea*), which occurs throughout the western United States including California, rarely digs its own burrows and is instead dependent upon the presence of burrowing mammals (i.e., California ground squirrels [*Otospermophilus beecheyi*], coyotes [*Canis latrans*], and badgers [*Taxidea taxus*]) whose burrows are often used for roosting and nesting. The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. They also require low growth or open vegetation allowing line-of-sight observation of the surrounding habitat to forage and watch for predators. In California, the burrowing owl breeding season extends from the beginning of February through the end of August.

Under the MSHCP burrowing owl is considered an adequately conserved covered species that may still require focused surveys in certain areas as designated in Figure 6-4 of the MSHCP. The project site consists of disturbed areas and existing roadways that allow for the line-of-sight observation favored by burrowing owls. However, the project site lacks mammal burrows capable of providing suitable roosting and nesting opportunities. The only burrows observed during the habitat assessment were generally too small (less than 4 inches in diameter) to be used by burrowing owls. The habitat assessment was conducted during the breeding season (March 1 – August 31) and the second assessment was conducted during the non-breeding season. Despite a systematic search of open habitat and the small mammal burrows on the project site, no burrowing owls or burrowing owl sign (pellets, feathers, castings, or white wash) was observed. Therefore, burrowing owls are presumed absent from the project site and no additional surveys or analysis is required. A pre-construction burrowing owl clearance survey shall be conducted prior to development to ensure that burrowing owls remain absent from the project site.

5.5 FUELS MANAGEMENT

Fuels management focuses on hazard reduction for humans and their property (MSHCP Section 6.4, p. 6-72). According to the Fuels Management Guidelines, for new development that is planned adjacent to the MSHCP Conservation Area or other undeveloped areas, brush management shall be incorporated in the development boundaries and shall not encroach into the MSHCP Conservation Area (MSHCP Section 6.4, p. 6-72).

The project consists of the installation of an underground RCP storm drain and RCB structure and will not involve landscaping. Therefore, the project would not result in an increase in fuel load within the project site and is consistent with the MSHCP Fuels Management Guidelines.

5.6 URBAN/WILDLANDS INTERFACE GUIDELINES

According to the MSHCP, the Urban/Wildlands Interface Guidelines are intended to address indirect effects associated with new development in proximity to MSHCP Conservation Areas (MSHCP Section 6.1.4, p. 6-42). The proposed project is not located within or immediately adjacent to any MSHCP identified criteria cells, conservations areas, cores, or linkages. Therefore, indirect project-related impacts to drainage, toxics, lighting, noise, invasive plant species, barriers, and grading/land development will not occur and no additional analysis is required.

5.7 ADDITIONAL MSHCP CONSIDERATIONS

5.7.1 Nesting Birds

Pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code, the removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season (February 1 – August 31). The plant communities within and surrounding the project site have the potential

to provide refuge cover from predators, perching sites, and suitable nesting opportunities that could be impacted during construction activities associated with the proposed project.

If ground disturbance and/or vegetation removal activities cannot occur outside of the nesting season, a pre-construction clearance survey for nesting birds should be conducted within three days of the start of any ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For raptor species, including burrowing owl, this buffer is expanded to 500 feet. It is recommended that a biological monitor be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, normal construction activities can occur. As part of the nesting bird clearance survey, a pre-construction burrowing owl clearance survey shall be conducted to ensure that burrowing owls remain absent from the project site.

Pursuant to California Fish and Game Code Section 3503, it is unlawful to destroy any bird's nest or any bird's eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks and owls) are protected under California Fish and Game Code Section 3503.5 which makes it unlawful to take, possess, or destroy their nest or eggs. Consultation with CDFW will be required prior to the removal of any raptor nest on the project site, if found.

Section 6 Conclusion

The project site primarily consists of disturbed areas associated with existing roadways and surrounding rural-residential properties. These disturbances have greatly reduced, if not eliminated, the natural plant communities that once occurred on the project site and have resulted in a majority of the project site being dominated by non-native vegetation and heavily compacted soils.

No special-status plant species were observed during the habitat assessment and are presumed absent from the project site based on specific habitat requirements for special-status plant species, known distributions, and availability and quality of the on-site habitat. Further, no special-status plant communities occur within the boundaries of the project site.

No special-status wildlife species were observed on-site during the habitat assessment. Based on existing site conditions, it was determined that the project site has a high potential to support Cooper's hawk and sharp-shinned hawk, a moderate potential to support Allen's hummingbird and Lawrence's goldfinch, and a low potential to support California horned lark. All remaining special-status wildlife species are presumed absent from the project site based on specific habitat requirements for special-status wildlife species, known distributions, and availability and quality of the on-site habitat. Cooper's hawk, sharp-shinned hawk, and California horned lark are all fully covered under the MSHCP and require no further analysis. Allen's hummingbird and Lawrence's goldfinch are not covered under the MSHCP and may require an additional analysis for impacts under CEQA; however, based on the proposed project design, these two species are not expected to be directly or indirectly affected by construction.

No jurisdictional drainage, ponds, basins, gravel pits, and/or potential wetland features were identified within the project site during the habitat assessment that would be considered jurisdictional by the Corps, Regional Board, or CDFW. In addition, there are no habitats within the project site that would qualify as riparian/riverine habitat as defined under Section 6.1.2 of the MSHCP.

The project site is located in the Elsinore Area Plan of the MSHCP, but is not located within any MSHCP identified criteria cells, conservation areas, cores, or linkages. The project is not listed as a planned "Covered Activity" under the published MSHCP, but is still considered to be a current Covered Activity under Section 7.1 of the MSHCP. Pursuant to this section, public and private development, including the construction of buildings, structures, infrastructure and all alterations of the land, that are carried out by Permittees that are outside of Criteria Areas and P/QP Lands are permitted under the MSHCP, subject to consistency with the policies that apply outside the Criteria Area. With completion of recommendations provided in Section 5 of this report and payment of the MSHCP Local Development Mitigation Fee, the proposed project is fully consistent with the MSHCP.

Section 7 Certification

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

Date: 11/9/2016 Signed: 

Thomas J. McGill, Ph.D.

Section 8 References

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken. 2012. *The Jepson Manual: Vascular Plants of California, Second Edition*. University of California Press, Berkeley, California.

California Department of Fish and Wildlife (CDFW). 2012. Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency.

CDFW. 2016. RareFind 5, California Natural Diversity Data Base, California. Data Base report on threatened, endangered, rare or otherwise sensitive species and communities for the Lake Elsinore 7.5-minute USGS quadrangle.

California Native Plant Society (CNPS). 2016. Inventory of Rare and Endangered Plants of California. Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. CNPS. Sacramento, California. Available at: http://www.cnps.org/inventory.

Google, Inc. 2013. Google Earth Pro version 7.1.2.2041, build date 10/7/2013. Historical aerial imagery from 1994 to 2016.

Holland, R. F. 1986. Preliminary descriptions of the Terrestrial Natural Communities of California. Calif. Dept. of Fish and Game, Sacramento, CA.

Intellicast. 2016. Historical Weather Averages for Lake Elsinore, California. Available online at http://www.intellicast.com/Local/History.aspx?location=USCA1136.

Reid, F.A. 2006. A Field Guide to Mammals of North America, Fourth Edition. Houghton Mifflin Company, New York, New York.

Riverside County. 2003 (June). Final Western Riverside County Multiple Species Habitat Conservation Plan. http://www.rcip.org/.

Riverside County Habitat Conservation Agency (RCHCA). 1996. Implementation Agreement, Riverside County Long Term Habitat Conservation Plan. Available online at http://www.skrplan.org/docs/implementation_agreement.pdf.

Sibley, D.A. 2003. The Sibley Field Guide to Birds of Western North America. Alfred A. Knopf, Inc., New York, New York.

Sibley, D.A. 2014. The Sibley Guide to Birds, Second Edition. Alfred A. Knopf, Inc., New York, New York.

Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians, Third Edition. Houghton Mifflin Company, New York, New York.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2016. *Web Soil Survey*. Online at http://websoilsurvey.nrcs.usda.gov/app/.

U.S. Geological Survey (USGS). 1988. 7.5-minute topographic map for the Lake Elsinore quadrangle.

Appendix A RCIP Conservation Summary Report

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
377020014	Not A Part	Independent	4.76	Elsinore	Not a Part
377030015	Not A Part	Independent	4.83	Elsinore	Not a Part
377080025	Not A Part	Independent	2.63	Elsinore	Not a Part
377080059	Not A Part	Independent	0.47	Elsinore	Not a Part
377080060	Not A Part	Independent	0.45	Elsinore	Not a Part
377080061	Not A Part	Independent	0.96	Elsinore	Not a Part
377080062	Not A Part	Independent	0.94	Elsinore	Not a Part
377080063	Not A Part	Independent	0.36	Elsinore	Not a Part
377080078	Not A Part	Independent	0.51	Elsinore	Not a Part
377080079	Not A Part	Independent	3.49	Elsinore	Not a Part
377080080	Not A Part	Independent	0.15	Elsinore	Not a Part
377080085	Not A Part	Independent	0.44	Elsinore	Not a Part
377090001	Not A Part	Independent	1.95	Elsinore	Not a Part
377090003	Not A Part	Independent	2.07	Elsinore	Not a Part
377090008	Not A Part	Independent	6.35	Elsinore	Not a Part
377090009	Not A Part	Independent	4.62	Elsinore	Not a Part
377090029	Not A Part	Independent	1.08	Elsinore	Not a Part
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377090031	Not A Part	Independent	1.06	Elsinore	Not a Part
377090032	Not A Part	Independent	1.13	Elsinore	Not a Part
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377380003	Not A Valid Parcel Number				
377380017	Not A Valid Parcel Number				
377410048	Not A Valid Parcel Number				
377430004	Not A Valid Parcel Number				

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
377080025	NO	**YES**	NO	NO	NO	NO
377080079	NO	**YES**	NO	NO	NO	NO
377080080	NO	**YES**	NO	NO	NO	NO
377080085	NO	**YES**	NO	NO	NO	NO
377090001	NO	**YES**	NO	NO	NO	NO
377090003	NO	**YES**	NO	NO	NO	NO
377090008	NO	**YES**	NO	NO	NO	NO

Burrowing Owl

Burrowing owl.

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700
Fax: 951-955-8873

www.wrc-rca.org

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Appendix B Site Photographs

Photograph 1: Looking southeast at Cambern Avenue.

Photograph 2: Looking northwest at ornamental vegetation and eucalyptus stands along Cambern Avenue.

Photograph 3: Looking north towards an existing drainage feature across Cambern Avenue. This feature currently conveys residential nuisance flows across Cambern Avenue, which would instead be dropped into a new underground pipeline.

Photograph 4: Looking northwest at the Cambern Avenue/Third Street intersection.

Photograph 5: Looking west at rural-residential properties along Third Street.

Photograph 6: Looking southwest at disturbed areas adjacent to Third Street with Interstate 15 in the background.

Photograph 7: Looking northeast at the location of the RCB tie-in located to the north of the Collier Avenue/Third Street intersection.

Photograph 8: Looking southwest at an existing earthen channel along Third Street, outside of the project site.

Photograph 9: The headwall on the left conveys nuisance flows from the v-ditch on the right into a 48-inch underground pipeline. The headwall would be replaced as part of this project.

Photograph 10: Water that hits the headwall in Photograph 9 flows down into this 48-inch pipe, which connects to the drainage feature shown in Photograph 3.

Photograph 11: Looking west down Welch Drive.

Photograph 12: Looking southeast down Conard Avenue.

Appendix C Flora and Fauna Compendium

Table C – 1: Plant Species

Scientific Name	**Common Name**
*Ailanthus altissima**	tree of heaven
Amcmispon americanus	Spanish lotus
Amsinckia intermedia	common fiddleneck
Artemisia californica	California sagebrush
*Avena fatua**	wild oat
*Bromus madritensis ssp. rubens**	red brome
*Centaurea melitensis**	tocalote
Croton setiger	doveweed
Datura wrightii	jimsonweed
Erigeron canadensis	horseweed
Eriogonum fasciculatum	California buckwheat
Eucalyptus sp.	eucalyptus
Euphorbia albomarginata	rattlesnake spurge
Helianthus annuus	common sunflower
Heterotheca grandiflora	telegraph weed
*Hirschfeldia incana**	short-pod mustard
*Marrubium vulgare**	horehound
*Nerium oleander**	oleander
*Nicotiana glauca**	tree tobacco
*Olea europaea**	olive
*Oncosiphon piluliferum**	stinknet
*Salsola tragus**	Russian thistle
*Sisymbrium irio**	London rocket

*Non-native/invasive

Table C – 2: Wildlife Species

Scientific Name	**Common Name**
Aves	**Birds**
Anthus rubescens	American pipit
Buteo jamaicensis	red-tailed hawk
Calypte anna	Anna's hummingbird
Cathartes aura	turkey vulture
Catharus guttatus	hermit thrush
*Columba livia**	rock pigeon
Corvus brachyrhynchos	American crow
Haemorhous mexicanus	house finch
Melozone crissalis	California towhee
Mimus polyglottos	northern mockingbird
*Passer domesticus**	house sparrow
Picoides nuttallii	Nuttal's woodpecker
Regulus calendula	ruby-crowned kinglet
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Setophaga coronata auduboni	Audubon's yellow-rumped warbler
Spinus psaltria	lesser goldfinch
*Streptopelia decaocto**	Eurasian collared dove
Thryomanes bewickii	Bewick's wren
Turdus migratorius	American robin
Tyrannus vociferans	Cassin's kingbird
Zenaida macroura	mourning dove
Zonotrichia leucophrys gambelii	Gambel's white-crowned sparrow
Reptilia	**Reptiles**
Sceloporus occidentalis longipes	Great Basin fence lizard
Uta stansburiana elegans	Western side-blotched lizard
Mammalia	**Mammals**
Sylvilagus audubonii	Aududon's cottontail rabbit

*Non-native/invasive

Appendix D Potentially Occurring Special-Status Biological Resources

Table D-1: Potentially Occurring Special-Status Biological Resources

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
SPECIAL-STATUS WILDLIFE SPECIES					
Accipiter cooperii Cooper's hawk	Fed: None CA: WL	Generally found in forested areas up to 3,000 feet in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests, but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	Yes	No	**High** The project site and the surrounding area provide suitable foraging and nesting habitat.
Accipiter striatus sharp-shinned hawk	Fed: None CA: WL	Found in pine, fir and aspen forests. They can be found hunting in forest interior and edges from sea level to near alpine areas. Can also be found in rural, suburban and agricultural areas, where they often hunt at bird feeders. Typically found in southern California in the winter months.	Yes	No	**High** The project site and the surrounding area provide suitable foraging habitat. This species is only found in this area during the winter months and is unlikely to nest on-site.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	Fed: None CA: WL	Typically found between 3,000 and 6,000 feet in elevation. Breed in sparsely vegetated scrubland on hillsides and canyons. Prefers coastal sage scrub dominated by California sagebrush (*Artemisia californica*), but they can also be found breeding in coastal bluff scrub, low-growing serpentine chaparral, and along the edges of tall chaparral habitats.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Anaxyrus californicus arroyo toad	Fed: **END** CA: SSC	Typically found in sandy and/or gravelly washes and creeks with moderate in-stream vegetation dominated by willows (*Salix* sp.) and mulefat (*Baccharis salicifolia*). Will forage along the bases of in-stream vegetation or at the bases of trees, including California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), or oaks (*Quercus* spp.). Typically breeds in waters that are still or slowly moving, generally around six to eight inches in depth. Burrows along sandy terraces but may in some cases burrow directly in streambeds.	Yes (c)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Aquila chrysaetos golden eagle	Fed: None CA: FP, WL	Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Ardea alba great egret	Fed: None CA: None	Yearlong resident throughout California, except for the high mountains and deserts. Feeds and rests in fresh, and saline emergent wetlands, along the margins of estuaries, lakes, and slow-moving streams, on mudflats and salt ponds, and in irrigated croplands and pastures.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Artemisiospiza belli belli Bell's sage sparrow	Fed: None CA: WL	Resident on the coastal side of Southern California Mountains. Breeds in coastal sage scrub and chaparral habitats from February to August. They require semi-open habitats with evenly spaced shrubs 1-2 meters high. Occurs in chaparral dominated by fairly dense stands of chamise.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Aspidoscelis hyperythra orangethroat whiptail	Fed: None CA: SSC	Semi-arid brushy areas typically with loose soil and rocks, including washes, stream sides, rocky hillsides, and coastal chaparral. They are typically found in hot, dry, flat open spaces. Typically, they are seen on the ground running in open spots from bush to bush, but rarely climbing on rocks or vegetation.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Aspidoscelis tigris stejnegeri coastal whiptail	Fed: None CA: None	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Athene cunicularia burrowing owl	Fed: None CA: SSC	Primarily a grassland species, but it persists and even thrives in some landscapes highly altered by human activity. Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. The overriding characteristics of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation with only sparse shrubs and taller vegetation.	Yes (c)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Bombus crotchii Crotch bumble bee	Fed: None CA: None	Exclusive to coastal California east towards the Sierra-Cascade Crest; less common in western Nevada.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Botaurus lentiginosus American bittern	Fed: None CA: None	Breed in freshwater marshes with tall vegetation. Can be found in shallow wetlands containing less vegetation compared to other wetlands. In the winter, they are found in areas where water bodies do not freeze.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Calypte costae Costa's hummingbird	Fed: None CA: None	Desert and semi-desert, arid brushy foothills and chaparral. A desert hummingbird that breeds in the Sonoran and Mojave Deserts. Departs desert heat moving into chaparral, scrub, and woodland habitats.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	Fed: None CA: SSC	Habitat consists of coastal sage scrub at elevations below 1,500 feet in which cacti are prominent. Suitable conditions are found on south-facing slopes at the bases of hillsides or in dry washes.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site and the project is outside of this subspecies' range.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Chaetodipus fallax fallax northwestern San Diego pocket mouse	Fed: None CA: SSC	Found terrestrially in a wide variety of temperate habitats ranging from chaparral and grasslands to scrub forests and deserts. Open habitat on the Pacific slope from southwestern San Bernardino County to northwestern Baja California. Major habitat requirement is the presence of low growing vegetation or rocky outcroppings, as well as sandy soil to dig burrows.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Charadrius alexandrinus nivosus western snowy plover	Fed: **THR** CA: SSC	The Pacific coast population of western snowy plovers breeds on coastal beaches from southern Washington to southern Baja California, Mexico. Breeding occurs above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Charadrius montanus mountain plover	Fed: None CA: SSC	Population declining and very local; occasionally fairly common. Winter resident from September through March. Found on short grasslands and plowed fields of the Central Valley from Sutter and Yuba cos. southward. Also fund in foothill valleys west of San Joaquin Valley, Imperial Valley, plowed fields of Los Angeles and western San Bernardino counties, and along the central Colorado river valley.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Charina trivirgata rosy boa	Fed: None CA: None	Ranges from southern California and western Arizona in the United states, southward to Baja California and western Sonora in Mexico. Species often inhabits rocky areas in coastal sage scrub, chaparral, and desert environments.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Chlidonias niger black tern	Fed: None CA: SSC	Black terns are found in fresh marshes and lakes. During migration they can be found in coastal waters. Prefers fresh waters with extensive marsh vegetation and open water when nesting. Winters in tropical coastal regions, mostly just offshore or around salt lagoons and estuaries.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Cicindela senilis frosti senile tiger beetle	Fed: None CA: None	Found in marine shoreline, from central California coast south to salt marshes of San Diego, also found at Lake Elsinore. Inhabits dark-colored mud in the lower zone and dried salt pans in the upper zone.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Circus cyaneus northern harrier	Fed: None CA: SSC	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Mostly found in flat, or hummocky, open areas of tall, dense grasses moist or dry shrubs, and edges for nesting, cover, and feeding.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Cistothorus palustris clarkae Clark's marsh wren	Fed: None CA: SSC	Restricted to freshwater and brackish marshes dominated by bulrushes (*Scirpus* spp.) or cattails (*Typha* spp.).	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Coleonyx variegatus abbotti San Diego banded gecko	Fed: None CA: SSC	Found in southwestern California just inland from the Pacific coast, from Ventura County south into northwestern and central Baja California. Prefers granite or rocky outcrops in coastal scrub and chaparral habitats.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Crotalus ruber red-diamond rattlesnake	Fed: None CA: SSC	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake; however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Dipodomys merriami parvus San Bernardino kangaroo rat	Fed: **END** CA: SSC	Primarily found in Riversidian alluvial fan sage scrub and sandy loam soils, alluvial fans and flood plains, and along washes with nearby sage scrub. May occur at lower densities in Riversidian upland sage scrub, chaparral and grassland in uplands and tributaries in proximity to Riversidian alluvial fan sage scrub habitats. Tend to avoid rocky substrates and prefer sandy loam substrates for digging of shallow burrows.	Yes (c)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Dipodomys stephensi Stephens' kangaroo rat	Fed: **END** CA: **THR**	Occur in arid and semi-arid habitats with some grass or brush. Prefer open habitats with less than 50% protective cover. Require soft, well-drained substrate for building burrows and are typically found in areas with sandy soil.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Egretta thula snowy egret	Fed: None CA: None	Widespread in California along shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches, and wet fields. In southern California, common yearlong in the Imperial Valley and along the Colorado River.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Elanus leucurus white-tailed kite	Fed: None CA: FP	Occurs in low elevation, open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Uses trees with dense canopies for cover. Important prey item is the California vole.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Empidonax traillii extimus southwestern willow flycatcher	Fed: **END** CA: **END**	A rare to locally uncommon, summer resident in wet meadow and montane riparian habiats (2,000 to 8,000 ft) in the Sierra Nevada and Cascade Range. Most often occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows.	Yes (a)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Emys marmorata western pond turtle	Fed: None CA: SSC	Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater. Found at elevations from sea level to over 5,900 feet (1,800 m).	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Eremophila alpestris actia California horned lark	Fed: None CA: WL	Occurs in meadows, grasslands, open fields, prairie, and alkali flats. This subspecies is typically found in coastal regions.	Yes	No	**Low** There is suitable foraging habitat within the project site.
Euphydryas editha quino quino checkerspot butterfly	Fed: **END** CA: None	Can be found in meadows and upland sage scrub/chaparral habitat. The larvae may either feed on dwarf plantain or exserted Indian paintbrush.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Falco columbarius merlin	Fed: None CA: WL	Nest in forested openings, edges, and along rivers across northern North America. Found in open forests, grasslands, and especially coastal areas with flocks of small songbirds or shorebirds.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Falco mexicanus prairie falcon	Fed: None CA: WL	Prairie falcons commonly occur in arid and semiarid shrubland and grassland community types. They are also occasionally found in open parklands within coniferous forests. Occupy open treeless terrain including prairies, deserts, riverine escarpments, canyons, foothills, and mountains in relatively arid western regions.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Hydroprogne caspia Caspian tern	Fed: None CA: None	Found in a variety of coastal and inland habitats including coastal lagoons, salt marshes, estuaries, coastal inshore waters, continental shelf waters, bogs and marshes, freshwater lakes, inland seas. Rarely found over open water.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Icteria virens yellow-breasted chat	Fed: None CA: SSC	Primarily found in tall, dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Breeding habitat must be dense to provide shade and concealment. It winters south the Central America.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Lanius ludovicianus loggerhead shrike	Fed: None CA: SSC	Prefers open habitats with bare ground, scattered shrubs, and areas with low or sparse herbaceous cover including open-canopied valley foothill hardwood, riparian, pinyon-juniper desert riparian, creosote bush scrub, and Joshua tree woodland. Requires suitable perches including trees, posts, fences, utility lines, or other perches.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Lepus californicus bennettii San Diego black-tailed jackrabbit	Fed: None CA: SSC	Occupies many diverse habitats, but primarily is found in arid regions supporting short-grass habitats, agricultural fields, or sparse coastal scrub.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Nycticorax nycticorax black-crowned night heron	Fed: None CA: None	Fairly common, yearlong resident in lowlands and foothills throughout most of California, including the Salton Sea and Colorado River areas, and very common locally in large nesting colonies. Feeds along the margins of lacustrine, large riverine, and fresh and saline emergent habitats and rarely, on kelp beds in marine sub tidal habitats. Nests and roosts in dense-foliaged trees and dense emergent wetlands.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Pandion haliaetus osprey	Fed: None CA: WL	Associated strictly with large, fish-bearing waters, primarily in ponderosa pine through mixed conifer habitats. Uses large trees, snags, and dead-topped trees in open forest habitats for cover and nesting. Requires open, clear waters for foraging and uses rivers, lakes, reservoirs, bays, estuaries, and surf zones.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Perognathus longimembris brevinasus Los Angeles pocket mouse	Fed: None CA: SSC	Occurs in lower elevation grasslands and coastal sage scrub communities in and around the Los Angeles Basin. Prefers open ground with fine sandy soils. May not dig extensive burrows, but instead will seek refuge under weeds and dead leaves instead.	Yes (c)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Phalacrocorax auritus double-crested cormorant	Fed: None CA: WL	Prefers water less than 30 feet deep with rocky or gravel bottom. Rests in daytime and roosts overnight beside water on offshore rocks, islands, cliffs, dead branches of trees, wharfs, jetties, or even transmission lines.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Phrynosoma blainvillii coast horned lizard	Fed: None CA: SSC	Found in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Plegadis chihi white-faced ibis	Fed: None CA: WL	Prefers to feed in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded partures and croplands. Nests in dense, fresh emergent wetland.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Polioptila californica californica coastal California gnatcatcher	Fed: **THR** CA: SSC	Obligate resident of sage scrub habitats that are dominated by California sagebrush (*Artemisia californica*). This species generally occurs below 750 feet elevation in coastal regions and below 1,500 feet inland. Ranges from the Ventura County, south to San Diego County and northern Baja California and it is less common in sage scrub with a high percentage of tall shrubs. Prefers habitat with more low-growing vegetation.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Pooecetes gramineus affinis Oregon vesper sparrow	Fed: None CA: SSC	Obligate grassland species that feeds on invertebrates and seeds. When wintering in California, habitat consists of open ground with little vegetation or grown to short grass and low annuals, including stubble fields, meadows, and road edges.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Salvadora hexalepis virgultea coast patch-nosed snake	Fed: None CA: SSC	Occurs in brushy vegetation including coastal scrub and chaparral from the coast to the mountains. Takes refuge in existing small mammal burrows.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Selasphorus sasin Allen's hummingbird	Fed: None CA: None	Breeders are most common in coastal scrub, valley foothill hardwood, and valley foothill riparian habitats, but also are common in closed-cone pine cypress, urban, and redwood habitats. Occurs in a variety of woodland and scrub habitats as a migrant.	No	No	**Moderate** There is suitable habitat throughout the project site.
Setophaga petechia yellow warbler	Fed: None CA: SSC	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes and the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral. May also use oaks, conifers, and urban areas near stream courses.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Spea hammondii western spadefoot	Fed: None CA: SSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washed, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rainpools which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Spinus lawrencei Lawrence's goldfinch	Fed: None CA: None	Nests in open oak or other arid woodlands, as well as chaparral, near water sources. Feeds on nearby herbaceous vegetation, especially weedy vegetation (mustard, etc.).	No	No	**Moderate** There is suitable foraging habitat in the open field east of Welch Drive.
Sterna forsteri Forster's tern	Fed: None CA: None	Breeds in marshes, generally with open water and large stands of island like vegetation. Winters in marshes, coastal beaches, lakes, and rivers.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Streptocephalus woottoni Riverside fairy shrimp	Fed: **END** CA: None	Occurs in vernal pools filled by winter and spring rains and hatches late in the season as the water warms. Endemic to western Riverside, Orange, and San Diego Counties in tectonic swales/earth slump basins in grassland and coastal sage scrub.	Yes (a)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Thamnophis hammondii two-striped garter snake	Fed: None CA: SSC	Occurs in or near permanent fresh water, often along streams with rocky beds and riparian growth up to 7,000 feet in elevation.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Vireo bellii pusillus least Bell's vireo	Fed: **END** CA: **END**	Primarily occupy Riverine riparian habitat that typically feature dense cover within 1 -2 meters of the ground and a dense, stratified canopy. Typically it is associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodlands, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, 2,000 feet elevation in the interior.	Yes (a)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
SPECIAL-STATUS PLANT SPECIES					
Allium munzii Munz's onion	Fed: **END** CA: **THR** CNPS: 1B.1	Found in mesic and clay soils within chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley/foothill grassland habitats. Found at elevations ranging from 974 to 3,511 feet. Blooming period is from March to May.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Ambrosia pumila San Diego ambrosia	Fed: **END** CA: None CNPS: 1B.1	Prefers chaparral, coastal scrub, and valley/foothill grassland habitats. Occurs in sandy loam or clay soil. In valleys, it persists where disturbance has been superficial. Can sometimes be found on margins or near vernal pools. Grows in elevation from 98 to 2,001 feet. Blooming period is from April to October.	Yes (b)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Atriplex coronata* var. *notatior San Jacinto Valley crownscale	Fed: **END** CA: None CNPS: 1B.1	Grows in alkaline soils within playas, vernal pools, and valley/foothill grasslands. Grows in elevation ranging from 456 to 1,640 feet. Blooming period is from April to August.	Yes (c)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Brodiaea filifolia thread-leaved brodiaea	Fed: **THR** CA: **END** CNPS: 1B.1	Grows in clay soils within chaparral, cismontane woodland, coastal scrub, playas, vernal pools, and valley/foothill grassland habitats. Grows in elevation ranging from 82 to 3,675 feet. Blooming period is from March to June.	Yes (c)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
California macrophylla round-leaved filaree	Fed: None CA: None CNPS: 1B.2	Grows in clay soils within cismontane woodland, and valley/foothill grassland. Grows in elevation ranging from 49 to 3,937 feet. Blooming period is from March to May.	Yes (c)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Carex buxbaumii Buxbaum's sedge	Fed: None CA: None CNPS: 4.2	Habitat includes bogs and fens, marshes and swamps, meadows and seeps. Grows in elevation ranging from 10 to 10,827 feet. Blooming period is from March to August.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Caulanthus simulans Payson's jewelflower	Fed: None CA: None CNPS: 4.2	Grows in chaparral and coastal scrub habitats. Is commonly found in burned areas or in disturbed sites such as streambeds. Also found on rocky, steep slopes. Prefers sandy, granitic soils. Grows in elevation from 623 to 7,185 feet. Blooming period is from March to May.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Centromadia pungens* ssp. *laevis smooth tarplant	Fed: None CA: None CNPS: 1B.1	Occurs in alkaline soils within chenopod scrub, meadows and seeps, playas, riparian woodland, and valley/foothill grassland habitats. Grows in elevation from 0 to 2,100 feet. Blooming period is from April to September.	Yes (d)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Chorizanthe leptotheca peninsular spineflower	Fed: None CA: None CNPS: 4.2	Found in alluvial fan and granitic areas within chaparral, coastal scrub, and lower montane coniferous forest. Found at elevations ranging from 984 to 6,234 feet. Blooming period is from May to August.	Yes (e)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Chorizanthe parryi* var. *parryi Parry's spineflower	Fed: None CA: None CNPS: 1B.1	Occurs on sandy and/or rocky soils in chaparral, coastal sage scrub, and sandy openings within alluvial washes and margins. Found at elevations ranging from 951 to 3,773 feet. Blooming period is from April to June.	Yes (e)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Chorizanthe polygonoides* var. *longispina long-spined spineflower	Fed: None CA: None CNPS: 1B.2	Typically found on clay lenses which are largely devoid of shrubs. Can be found on the periphery of vernal pool habitat and even on the periphery of montane meadows near vernal seeps. Grows in elevation from 98 to 5,020 feet. Blooming period is from April to July.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Convolvulus simulans small-flowered morning-glory	Fed: None CA: None CNPS: 4.2	Found in clay and serpentinite seeps within chaparral (openings), coastal scrub, and valley/foothill grassland. Found at elevations ranging from 98 to 2,297 feet. Blooming period is from March to July.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Deinandra paniculata paniculate tarplant	Fed: None CA: None CNPS: 4.2	Occurs in coastal scrub, vernal pools, and valley/foothill grassland habitats. Found at elevations ranging from 82 to 3,084 feet. Blooming period is from April to November.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Dodecahema leptoceras slender-horned spineflower	Fed: **END** CA: **END** CNPS: 1B.1	Chaparral, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes. Found at elevations ranging from 1,181 to 2,690 feet. Blooming period is from April to June.	Yes (b)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Dudleya multicaulis many-stemmed dudleya	Fed: None CA: None CNPS: 1B.2	Grows in clay soils within chaparral, coastal scrub, and valley/foothill grassland habitats. Grows in elevation ranging from 49 to 2,592 feet. Blooming period is from April to July.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Harpagonella palmeri Palmer's grapplinghook	Fed: None CA: None CNPS: 4.2	Occurs on clay soils in chaparral, coastal scrub, and valley/foothill grasslands habitats. Grows in elevation from 66 to 3,133 feet. Blooming period is from March to May.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Hordeum intercedens vernal barley	Fed: None CA: None CNPS: 3.2	Habitat includes coastal dunes, coastal scrub, vernal pools, and valley/foothill grassland. Grows in elevations ranging from 16 to 3,281 feet. Blooming period is from March to June.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Juglans californica southern California black walnut	Fed: None CA: None CNPS: 4.2	Found in chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats. Found at elevations ranging from 164 to 2,953 feet. Blooming period is from March to August.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Lasthenia glabrata* ssp. *coulteri Coulter's goldfields	Fed: None CA: None CNPS: 1B.1	Prefers playas, vernal pools, and coastal salt marshes and swamps. Found at elevations ranging from 3 to 4,003 feet. Blooming period is from February to June.	Yes (d)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Lepechinia cardiophylla heart-leaved pitcher sage	Fed: None CA: None CNPS: 1B.2	Occurs in closed-cone coniferous forest, chaparral, and cismontane woodland. From 1,706 to 4,495 feet in elevation. Blooming period is from April to July.	Yes (d)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Myosurus minimus* ssp. *apus little mousetail	Fed: None CA: None CNPS: 3.1	Prefers vernal pools and valley/foothill grassland habitats. Found at elevations ranging from 66 to 2,100 feet in elevation. Blooming period is from March to June.	Yes (c)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Orcuttia californica California Orcutt grass	Fed: **END** CA: **END** CNPS: 1B.1	Grows in vernal pool habitats at elevations ranging from 49 to 2,165 feet. Blooming period is from April to August.	Yes	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Romneya coulteri Coulter's matilija poppy	Fed: None CA: None CNPS: 4.2	Found often in burn areas within chaparral and coastal scrub habitats. Found at elevations ranging from 65 to 3,937 feet. Blooming period is from March to July.	Yes (e)	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Tortula californica California screw-moss	Fed: None CA: None CNPS: 1B.2	Occurs in sandy soils within chenopod scrub and valley/foothill grassland habitats. Found at elevations ranging from 33 to 4,790 feet.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Viguiera laciniata San Diego County viguiera	Fed: None CA: None CNPS: 4.2	Habitats include chaparral and coastal scrub habitats. Found at elevations ranging from 197 to 2,461 feet. Blooming period is from February to August.	No	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
SPECIAL-STATUS HABITATS					
Southern Coast Live Oak Riparian Forest	CDFW Sensitive Habitat	Open to locally dense evergreen riparian woodlands dominated by coast live oak (*Quercus agrifolia*). This type appears to be richer in herbs and poorer in understory shrubs than other riparian communities. Bottomlands and outer floodplains along larger streams, on fine-grained, rich alluvium. Canyons and valleys of coastal southern California.	NA	No	**Absent**
Southern Cottonwood Willow Riparian Forest	CDFW Sensitive Habitat	Dominated by cottonwood (*Populus fremontii*.) and willow (*Salix* sp.) trees and shrubs. Considered to be an early successional stage as both species are known to germinate almost exclusively on recently deposited or exposed alluvial soils.	NA	No	**Absent**

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Southern Sycamore Alder Riparian Woodland	CDFW Sensitive Habitat	Below 2,000 meters in elevation, sycamore and alder often occur along seasonally-flooded banks; cottonwoods and willows also are often present. Poison-oak, mugwort, elderberry and wild raspberry may be present in the understory.	NA	No	**Absent**

U.S. Fish and Wildlife Service (USFWS) – Federal

END – Federally Endangered
THR – Federally Threatened

California Department of Fish and Wildlife (CDFW) - California

END – California Endangered
THR – California Threatened
FP – Fully Protected
CSC – California Species of Special Concern
WL – Watch List

California Native Plant Society (CNPS) – California Rare Plant Rank

1B – Plants Rare, Threatened, or Endangered in California and Elsewhere
3 – Plants About Which More Information is Needed – A Review List
4 – Plants of Limited Distribution – A Watch List
  0.1 – Seriously threatened in California
  0.2 – Moderately threatened in California
  0.3 – Not very threatened in California

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

Yes – Fully Covered
No – Not Covered
Yes (a) – May require surveys under Section 6.1.2
Yes (b) – May require surveys under Section 6.1.3
Yes (c) – May require surveys under Section 6.3.2
Yes (d) – May require surveys under Section 6.3.2
Yes (e) – Conditionally covered pending the achievement of species-specific conservation measures
Yes (f) – Will be considered to be a Covered Species Adequately Conserved when a Memorandum of Understanding is executed with the Forest Service for Forest Service Lands.

WASSON WEST

BIOLOGICAL TECHNICAL REPORT

January 22, 2007

Prepared for:

WASSON WEST, LP
8951 Research Drive
Irvine, California 92618

Prepared by:

HELIX ENVIRONMENTAL PLANNING, INC.
7578 El Cajon Boulevard, Suite 200
La Mesa, California 91941

INFORMATION SUMMARY

A. Report Date:	Prepared January 22, 2007
B. Report Title:	Biological Technical Report for Wasson West
C. Case and APN(s):	347330001, -02, -22, -23, -65 through -75, 347360001, -02, 347530001 through -06, 347531001, 347540001, -02, 377100006, -09, and –10
D. Project Location:	Located north of the intersection of Cambern Avenue and Wasson Canyon Road. Also located north of Lake Elsinore, south of State Route 74 along the west side of Wasson Canyon, and southwest of Ramsgate Drive in Section 32, Township 5 South, Range 4 West on the U.S. Geological Survey 7.5-minute Lake Elsinore quadrangle map.
E. Applicant:	Wasson West, LP 8951 Research Dr. Irvine, CA 92618 (949) 417-9940
F. MOU Principal:	HELIX Environmental Planning, Inc. 7578 El Cajon Blvd., Ste. 200 La Mesa, CA 91941 (619) 462-1515
G. Preparers:	Sarichia Cacciatore, Project Manager Barry L. Jones, Senior Consulting Biologist
H. Survey Date:	1/29/2004 through 8/9/2006
I. Summary:	Several biological surveys were completed and vegetation mapped in accordance with the MSHCP. One sensitive plant species was observed on site: paniculate tarplant (*Deinandra paniculata*). Eight sensitive animal species were observed/detected on site: coastal California gnatcatcher (*Polioptila californica californica*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), loggerhead shrike (*Lanius ludovicianus*), California horned lark (*Eremophila alpestris actia*), Vaux's swift (*Chaetura vauxi*), sharp-shinned hawk (*Accipiter striatus*), American white pelican (*Pelecanus erythrorhynchos*), and turkey vulture (*Cathartes aura*). Protocol surveys for Quino checkerspot butterfly (*Euphydryas editha quino*) were negative. The property contains a few burrows with potential to support burrowing owls (*Athene cunicularia*). No burrowing owls or burrows with sign of owl occupation were observed on site during protocol surveys. Wet season surveys for sensitive fairy shrimp (San Diego fairy shrimp [*Branchinecta sandiegonensis*], Riverside fairy shrimp [*Streptocephalus woottoni*], and vernal pool fairy shrimp

(*Branchinecta lynchi*]), were negative. Corps and CDFG jurisdictional areas are present on site. Riparian/Riverine areas do not occur on site, however, vernal pools (e.g., seasonal ponds) occur on site. The project site is within the Elsinore Plan Area of the MSHCP but is not in a Criteria Cell. The MSHCP did not require focused surveys for NEPSSA or CASSA species. The project site is adjacent to Proposed Core 1 area and will incorporate Urban/Wildlands Interface guidelines. Following implementation of mitigation measures, all impacts to biological resources will be mitigated to below a level of significance.

Wasson West
Biological Technical Report

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EXECUTIVE SUMMARY

The approximately 74.6-acre Wasson West project proposes development of 274 single-family residential units in Lake Elsinore, Riverside County, California. The project site is located south of State Route 74, north of Lake Elsinore, along the west side of Wasson Canyon, and southwest of Ramsgate Drive.

Seven vegetation communities occur on site: disturbed wetland, seasonal ponds, Riversidean sage scrub, non-native grassland, non-native vegetation, disturbed habitat, and developed land.

The project site occurs outside of any areas identified by the Multiple Species Habitat Conservation Plan (MSHCP) as requiring Narrow Endemic Plant Species Survey Area (NEPSSA) and Criteria Area Species Survey Area (CASSA) focused species surveys, and none were observed during focused surveys. No threatened or endangered plant species were observed on site; however, one sensitive plant species was observed: paniculate tarplant (*Deinandra paniculata*).

Eight sensitive animal species were observed/detected on site: coastal California gnatcatcher (*Polioptila californica californica*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), loggerhead shrike (*Lanius ludovicianus*), California horned lark (*Eremophila alpestris actia*), Vaux's swift (*Chaetura vauxi*), sharp-shinned hawk (*Accipiter striatus*), American white pelican (*Pelecanus erythrorhynchos*), and turkey vulture (*Cathartes aura*). Protocol surveys for Quino checkerspot butterfly (*Euphydryas editha quino*) were negative. The property contains a few burrows with potential to support burrowing owls (*Athene cunicularia*). No burrowing owls or burrows with sign of owl occupation were observed on site during protocol surveys. Wet season surveys for sensitive fairy shrimp were negative.

Impacts to the following sensitive vegetation communities would be considered significant: 0.30 acre of disturbed wetland, 0.09 acre of seasonal ponds, 18.6 acres of Riversidean sage scrub, and 20.0 acres of non-native grassland. Impacts to non-native vegetation, disturbed habitat, and developed land are not considered significant.

Impacts to U.S. Army Corps of Engineers (Corps) and California Department of Fish and Game (CDFG) jurisdictional areas would be considered significant under CEQA. A total of 0.35 acre of Corps and 0.54 acre of CDFG jurisdictional areas would be impacted on site. These impacts would require a Corps (Individual) permit under Section 404 of the Clean Water Act, certification from the Santa Ana Regional Water Quality Control Board under Section 401 of the Clean Water Act, and a Streambed Alteration Agreement from CDFG.

Impacts to paniculate tarplant would not be considered significant because the project site is not within NEPSSA or CASSA and the sensitivity listing for this species is low (CNPS List 4.2).

Eight sensitive animal species were observed/detected on site: coastal California gnatcatcher, southern California rufous-crowned sparrow, loggerhead shrike, California horned lark, Vaux's swift, sharp-shinned hawk, American white pelican, and turkey vulture. Impacts to coastal California gnatcatcher, southern California rufous-crowned sparrow, loggerhead shrike, California horned lark, sharp-shinned hawk, and turkey vulture would be considered significant. Impacts to American white pelican and Vaux's swift would not be significant because only nesting areas are protected and these species do not nest in southern California.

Implementation of the proposed project would directly impact raptor foraging habitat and could directly or indirectly impact raptor nests.

Indirect impacts consist of secondary effects of a project, including noise, water quality, fugitive dust, colonization of non-native plant species, and lighting.

The project applicant shall pay MSHCP Local Development Mitigation fees as determined by the City of Lake Elsinore, which are currently estimated at $937 to $1,801 per unit. Impacts to disturbed wetland, seasonal ponds, Riversidean sage scrub, non-native grassland, coastal California gnatcatcher, southern California rufous-crowned sparrow, loggerhead shrike, California horned lark, Vaux's swift, sharp-shinned hawk, American white pelican, and turkey vulture would be mitigated to below a level of significance through payment of the MSHCP fee. Impacts to Corps and CDFG jurisdictional habitats shall be mitigated at a 1:1 ratio.

The project site is located within the Riverside County Habitat Conservation Plan Fee Area for the Stephens' kangaroo rat (*Dipodomys stephensi*; SKR) that requires a $500 per acre fee to be paid prior to initiating development, on top of the above-mentioned MSHCP development fee. No habitat assessment or focused survey is required for this species.

1.0 INTRODUCTION

This biological technical report was prepared to provide the City of Lake Elsinore (City; California Environmental Quality Act [CEQA] lead agency), resource agencies, and the public with current biological data to satisfy review of the proposed Wasson West project under CEQA and other federal, state, and local regulations. The report describes sensitive biological resources (including vegetation communities, plants, and animals detected on the project site) and potential direct and indirect project impacts, and proposes mitigation measures to offset those impacts.

1.1 PROJECT LOCATION AND DESCRIPTION

The approximately 75.8-acre project site (Assessor's Parcel Numbers 347330001, -02, -22, -23, -65 through -75, 347360001, -02, 347530001 through -06, 347531001, 347540001, -02, 377100006, -09, and –10) is located in Lake Elsinore, Riverside County, California (Figure 1). The project site is located north of the intersection of Cambern Avenue and Wasson Canyon Road and contains a mix of rural residential and undeveloped areas north of Lake Elsinore, south of State Route 74, along the west side of Wasson Canyon, and southwest of Ramsgate Drive. The project site is located in Sections 31 and 32, Township 5 South, Range 4 West on the U.S. Geological Survey 7.5-minute Lake Elsinore quadrangle map (Figure 2). The project site is located in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) area (Dudek and Associates 2003).

The proposed project includes 274 single-family residential units with associated infrastructure.

1.2 PHYSICAL DESCRIPTION AND LAND USE

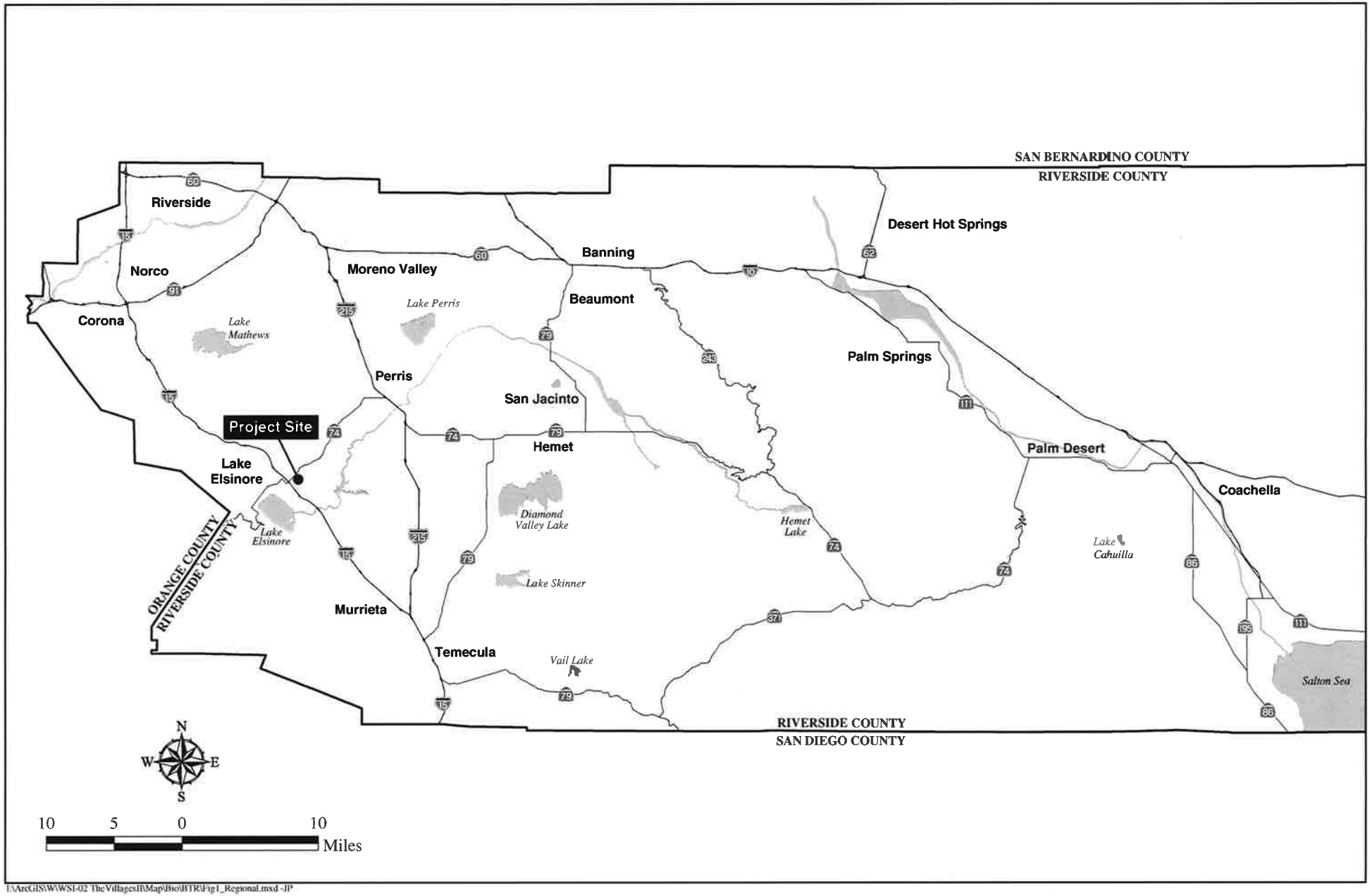
The project site consists of flat areas with several moderately rolling hills. Elevations on site range from 1,297 to 1,424 feet above mean sea level (amsl). Five soil types occur on site: Arbuckle gravely loam (AlC; 2 to 8 percent slopes), Garretson gravelly very fine sandy loam (GaC; 2 to 8 percent slopes), Lodo rocky loam (LpE2; 8 to 25 percent), Lodo rocky loam (LpF2; 25 to 50 percent slopes), and Vallecitos loam (VaE3; 8 to 25 percent slopes; Knecht 1971).

The project site is largely undeveloped, but does contain two single-family homes, a mobile home and associated areas. Properties to the north and northeast are currently under construction while those to the west and southwest contain existing rural residential development. The property to the southeast is undeveloped and contains moderate to steep hills.

2.0 METHODS

The following surveys were conducted on site: vegetation mapping, rare plant (PCR Services Corporation [PCR] 2004a), Quino checkerspot butterfly (*Euphydryas editha quino*; PCR 2004b), coastal California gnatcatcher (*Polioptila californica californica*; PCR 2004c and 2005a), fairy shrimp (PCR 2005b), burrowing owl (*Athene cunicularia*; HELIX Environmental Planning, Inc [HELIX] 2006a), and jurisdictional delineation fieldwork (HELIX 2006b). Information for these surveys is provided in Table 1.

Table 1 SURVEY INFORMATION	
Date	**Survey Type**
1/29/2004	Quino checkerspot butterfly habitat assessment, rare plant survey
3/9/2004	Quino checkerspot butterfly survey
3/15/2004	Quino checkerspot butterfly and coastal California gnatcatcher surveys
3/22/2004	Coastal California gnatcatcher survey
3/23/2004	Quino checkerspot butterfly survey
3/29/2004	Quino checkerspot butterfly and coastal California gnatcatcher surveys
3/30/2004	Rare plant survey
4/5/2004	Coastal California gnatcatcher survey
4/6/2004	Quino checkerspot butterfly survey
4/12/2004	Coastal California gnatcatcher survey
4/13/2004	Quino checkerspot butterfly survey
4/20/2004	Rare plant and Coastal California gnatcatcher surveys
6/16/2004	Rare plant survey
8/19/2004	Coastal California gnatcatcher survey
9/2/2004	Coastal California gnatcatcher survey
9/15/2004	Coastal California gnatcatcher survey
10/4/2004	Coastal California gnatcatcher survey
11/2/2004	Coastal California gnatcatcher survey
11/4/2004	Fairy shrimp survey
11/17/2004	Coastal California gnatcatcher survey
11/19/2004	Fairy shrimp survey
12/2/2004	Fairy shrimp survey
12/15/2004	Coastal California gnatcatcher survey
12/16/2004	Fairy shrimp survey
1/4/2005	Fairy shrimp survey
1/13/2005	Fairy shrimp survey
1/14/2005	Coastal California gnatcatcher survey
2/1/2005	Coastal California gnatcatcher survey
2/10/2005	Fairy shrimp survey
2/24/2005	Fairy shrimp survey
3/10/2005	Fairy shrimp survey
3/24/2005	Fairy shrimp survey
3/31/2005	Fairy shrimp survey
4/7/2005	Fairy shrimp survey
4/21/2005	Fairy shrimp survey
10/10/2005	Burrowing owl survey and jurisdictional delineation
4/25/2006	Burrowing owl survey
6/13/2006	Burrowing owl survey
7/3/2006	Burrowing owl survey
8/9/2006	Burrowing owl survey



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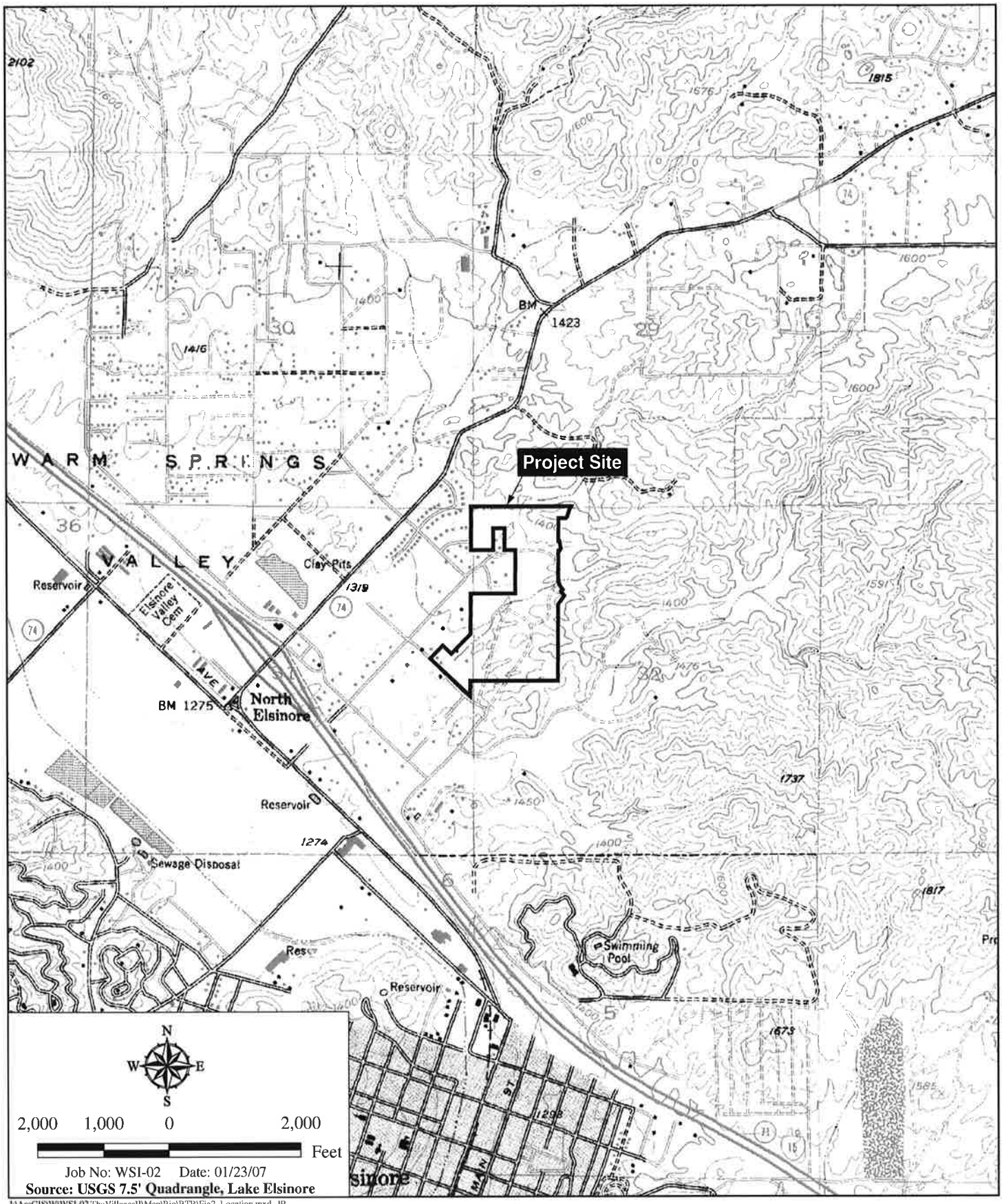
Regional Location Map

WASSON WEST

HELIX

Figure 1



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Project Location Map

WASSON WEST

HELIX

Figure 2

In addition to conducting biological field surveys, HELIX performed a search of the California Department of Fish and Game's (CDFG's) California Natural Diversity Data Base (CNDDB 2006a) and California Native Plant Society's (CNPS's) online database (2006) for information regarding sensitive species known to occur in the project vicinity.

A review of the MSHCP was made to determine the location of the proposed project site in relation to MSHCP Criteria Cells and survey criteria as well as to determine listed or sensitive species that have potential to occur within the site.

2.1 GENERAL BIOLOGICAL SURVEY

A general biological survey was conducted on October 10, 2005 by HELIX biologist W. Larry Sward. Vegetation within the property and 100 feet beyond the project limits was mapped in the field on a 1"=200' scale topographic map of the site with the aid of a 2004 aerial photograph at the same scale. The entire site was surveyed on foot with the aid of binoculars and all detected plant and animal species were recorded. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or feces. All plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. General biological data, including vegetation mapping and species inventories, have been updated opportunistically based on results of subsequent surveys.

2.2 RARE PLANT SURVEY

In 2004, PCR conducted a rare plant survey on the northern half of the site consisting of approximately 26.2 acres. It should be noted that the entire project site is not within an MSHCP Narrow Endemic Plant Species Survey Area (NEPSSA) under MSHCP Section 6.1.3 or Criteria Area Species Survey Area (CASSA) under MSHCP Section 6.3.2.

2.3 QUINO CHECKERSPOT BUTTERFLY SURVEYS

In 2004, PCR conducted a Quino checkerspot butterfly habitat assessment on the northern half of the site consisting of approximately 26.2 acres. The habitat assessment determined that approximately 3.0 acres of the northern half of the site supported habitat suitable for Quino checkerspot butterfly. As such, focused surveys for this species were conducted according to Year 2002 Survey Protocol (U.S. Fish and Wildlife Service [USFWS] 2002) for Quino checkerspot butterfly. Nectaring resources such as fiddleneck (*Amsinckia menziesii*), popcorn flower (*Cryptantha* spp.), and California buckwheat (*Eriogonum fasciculatum*) were noted on site.

2.4 COASTAL CALIFORNIA GNATCATCHER SURVEYS

In 2004, six coastal California gnatcatcher surveys were conducted by PCR (2004c) on approximately 2.0 acre of Riversidean sage scrub in the northern half of the project site and in 2005, nine coastal California gnatcatcher surveys were conducted by PCR (2005a) on approximately 17.3 acres of Riversidean sage scrub in the southern portion of the site. The focused surveys followed protocol (USFWS 1997) for presence/absence of this species. During each survey, permitted biologists slowly walked over the areas, stopping at appropriate intervals, uttering pishing sounds. Taped vocalizations were played for several seconds at each interval, followed by a brief pause to listen for a response.

2.5 FAIRY SHRIMP SURVEYS

USFWS protocol wet season surveys for the federally listed endangered San Diego and Riverside fairy shrimp (*Branchinecta sandiegonensis* and *Streptocephalus woottoni*, respectively), the federally listed threatened vernal pool fairy shrimp (*Branchinecta lynchi*), and the non-listed versatile fairy shrimp (*Branchinecta lindahli*) were conducted by PCR (2005b). Each water-holding basin was inspected for level of inundation, surface areas of pool, air and water temperature, and level of disturbance. A total of 13 sampling visits were conducted between November 2004 and April 2005 (Table 1). Mesh dip nets were used to survey the basins.

2.6 BURROWING OWL SURVEYS

The project site is within the burrowing owl survey area pursuant to the MSHCP. As such, in 2006 HELIX conducted surveys on approximately 65 acres of the 75.8-acre project site for burrowing owl (HELIX 2006a). Surveys were conducted in accordance with the burrowing owl survey instructions published by the County of Riverside (County) Environmental Programs Department (County 2006).

Except for developed areas fenced on site, the entire property was walked via transects approximately 30 yards apart. A 500-foot buffer zone was visually surveyed from the edge of the subject property where owl habitat bordered the property. Fenced developed areas were also visually surveyed. Biologists walked slowly and methodically, closely checking areas that met basic owl habitat requirements such as open expanses of sparsely vegetated areas (less than 30 percent canopy cover for trees and shrubs), gently rolling or level terrain, an abundance of small mammal burrows (especially those of California ground squirrel [*Spermophilus beecheyi*]), and fence posts, rock, or other low perching locations. All potential owl burrows were checked for signs of recent owl occupation, which include: pellets/casting (regurgitated fur, bones, and insect parts); white wash (excrement); and feathers.

2.7 JURISDICTIONAL DELINEATION

On October 10, 2005, HELIX conducted a jurisdictional delineation of the site. Prior to beginning fieldwork, a recent aerial photograph and topographic (1"=200' scale) and USGS topographical maps were reviewed to determine the location of potential jurisdictional areas that may be affected by the project. All areas with depressions, drainage channels, or wetlands vegetation were evaluated for the presence of Waters of the U.S., including jurisdictional wetlands. Areas were mapped as wetland, non-wetland Waters of the U.S., or uplands according to U.S. Army Corps of Engineers (Corps) policies and procedures. The potential for MSHCP Riparian/Riverine and Vernal Pool areas were also assessed.

Each area was delineated according to three criteria: vegetation, hydrology, and soils. Wetland affiliations of plant species follow the U.S. Fish and Wildlife Service (USFWS; 1996). Wetland hydrology was evaluated by the presence of surface water, general drainage patterns, watermarks, drift lines, debris, soil texture, sediment deposits, and a positive FAC neutral test. To be considered a Corps jurisdictional wetland, an area must meet all three wetland criteria. Corps jurisdictional non-wetland Waters of the U.S. were mapped in areas exhibiting hydrologic indicators but lacking hydrophytic vegetation and/or hydric soils indicators.

CDFG jurisdictional wetlands boundaries were delineated based on the presence of riparian vegetation and/or regular surface flow, and CDFG streambeds were delineated based on the definition of

streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports riparian vegetation" (CCR Title 14, Section 1.72).

The Riparian/Riverine and Vernal Pool assessment was conducted according to the following MSHCP definitions:

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

- Vernal pools are seasonal wetlands that occur in depression areas that have wetland indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative 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. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology must be made on a case-by-case basis. Such determinations should consider the length of time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, drainage characteristics, uses to which it has been subjected, and weather and hydrologic records.

2.8 NOMENCLATURE

Nomenclature used in this report comes from Holland (1986) for vegetation communities; and Hickman, ed. (1993) or Roberts et al. (2004) for plants. Sensitive plant status follows the CNPS (2006). Animal nomenclature is taken from Crother (2001) for amphibians and reptiles, American Ornithologists' Union (2006) for birds, Baker et al. (2003) for mammals, and Brock and Kaufman (2003) for butterflies. Sensitive animal status follows the CNDDB (2006b).

2.9 SURVEY LIMITATIONS

All field surveys were conducted during the daytime, which significantly reduces the likelihood of detecting nocturnal mammals such as rodents, bobcats, and some nocturnal reptiles. No small mammal trapping or focused reptile surveys were conducted as these species tend to be under sampled.

3.0 RESULTS

3.1 VEGETATION COMMUNITIES

Seven vegetation communities occur on site: disturbed wetland, seasonal ponds, Riversidean sage scrub, non-native grassland, non-native vegetation, disturbed habitat, and developed land (Figure 3; Table 2).

Table 2 EXISTING VEGETATION COMMUNITIES	
VEGETATION COMMUNITY	**ACRE(S)**
Disturbed wetland	0.30
Seasonal ponds	0.09
Riversidean sage scrub	18.6
Non-native grassland	20.0
Non-native vegetation	1.3
Disturbed habitat	26.9
Developed land	7.4
TOTAL	**74.6**

3.1.1 Disturbed Wetland

Disturbed wetland is dominated by exotic wetland species that have invaded sites previously disturbed or undergone periodic disturbances such that these invasive non-natives have displaced the native wetland flora. Due to regular disturbance and invasive species such as tamarisk (*Tamarix* sp.), this vegetation community remains in a disturbed state containing primarily herbaceous species. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. Other species observed in this vegetation community on site include tamarisk, willow (*Salix* spp.), annual sunflower (*Helianthus annuus*), rabbitsfoot grass (*Polypogon* sp.), curly dock (*Rumex crispus*), and yellow-star thistle (*Centaurea solstitialis*).

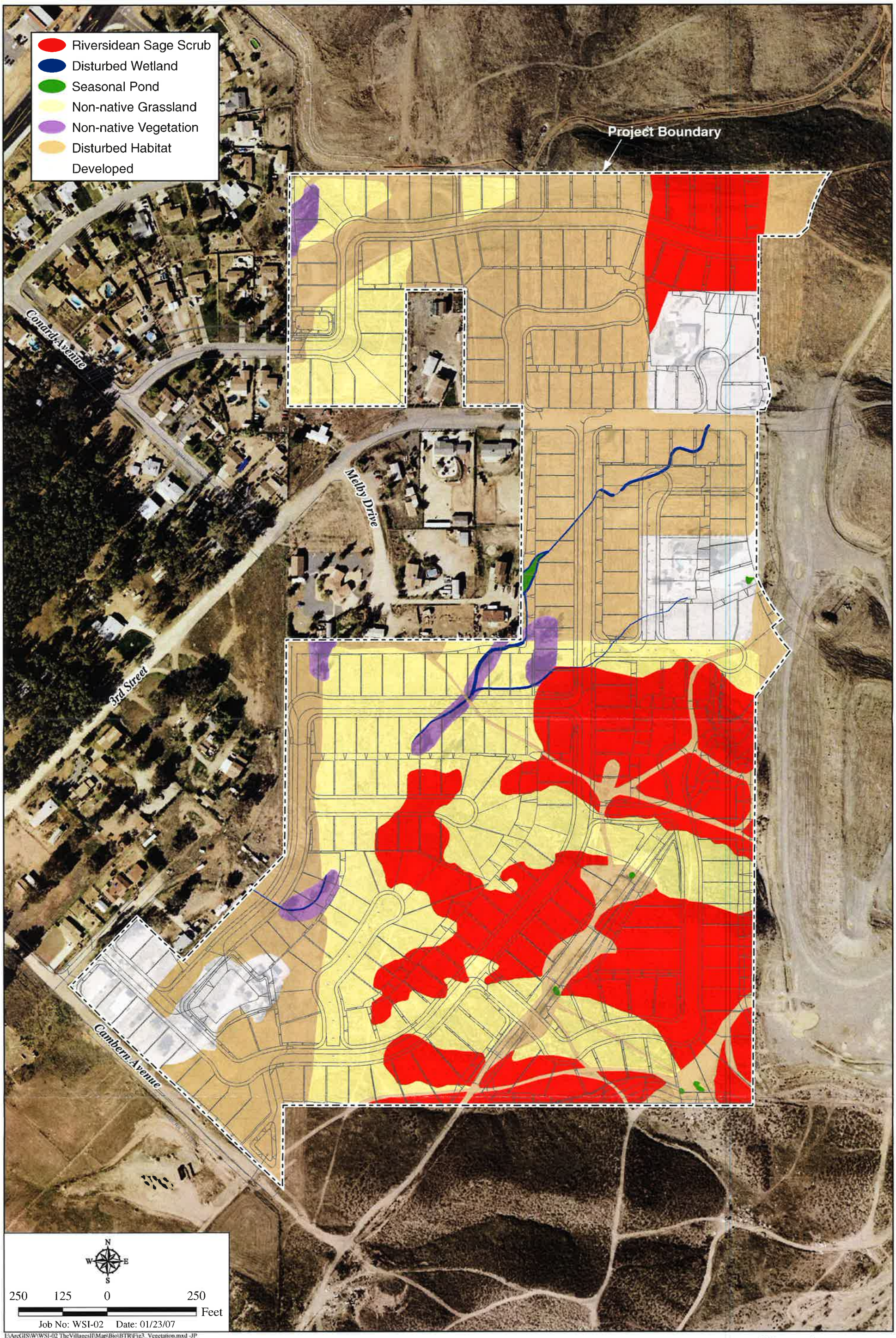
3.1.2 Seasonal Ponds

Seasonal ponds are small depressions often along drainages that retain ponded water while the water is no longer present in the drainage, or along dirt roadways where soil has been compacted allowing for ponding to occur. Plant species observed on site in seasonal ponds include curly dock, rabbitsfoot grass, annual sunflower, and monkey flower (*Mimulus* sp.).

3.1.3 Riversidean Sage Scrub

Riversidean sage scrub is a subtype of coastal sage scrub, a dominant shrub community of California. The vegetation community occurs on very dry sites and is typically comprised of drought-tolerant plant species with many drought-deciduous plants. Disturbed areas of Riversidean sage scrub, having a large quantity of non-native grasses and forbs, occur in a mosaic with Riversidean sage scrub areas.

On site, Riversidean sage scrub is dominated by low-growing shrubs, including: California buckwheat, deerweed (*Lotus scoparius*), California sagebrush (*Artemisia californica*), and bush penstemon (*Keckiella antirrhinoides*). Other species present in Riversidean sage scrub on site include cane cholla (*Opuntia parryi*), red-stem filaree (*Erodium cicutarium*), and bromes (*Bromus* spp.).



Vegetation Map/Impacts

WASSON WEST

HELIX

Figure 3

3.1.4 Non-native Grassland

Non-native grassland contains annual grasses of varying cover often associated with showy-flowered native annual forbs. Non-native grassland occurs in the northwest corner and in a mosaic with sage scrub on the southern half of the property. Species observed on site include oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut grass (*B. diandrus*), mustard (*Hirschfeldia incana*), dove weed (*Croton setigerus*), wild lettuce (*Lactuca seriola*), yellow-star thistle, and Russian thistle (*Salsola tragus*).

3.1.5 Non-native Vegetation

Non-native vegetation consists of cultivated plants that have naturalized into otherwise native habitat areas or are remnants of previous cultivated land uses. Exotic vegetation on site is limited to a few small patches and mainly comprised of areas of eucalyptus (*Eucalyptus* spp.) and Peruvian pepper (*Schinus molle*) trees.

3.1.6 Disturbed Habitat

Disturbed areas include bare dirt or are occupied by a predominance of weedy species such that they are not considered non-native grassland. Disturbed land on site is comprised of roads and areas that have been disced regularly. Species observed in this habitat on site include Russian thistle, bromes, tarweed (*Hemizonia* spp.), and mustard.

3.1.7 Developed Land

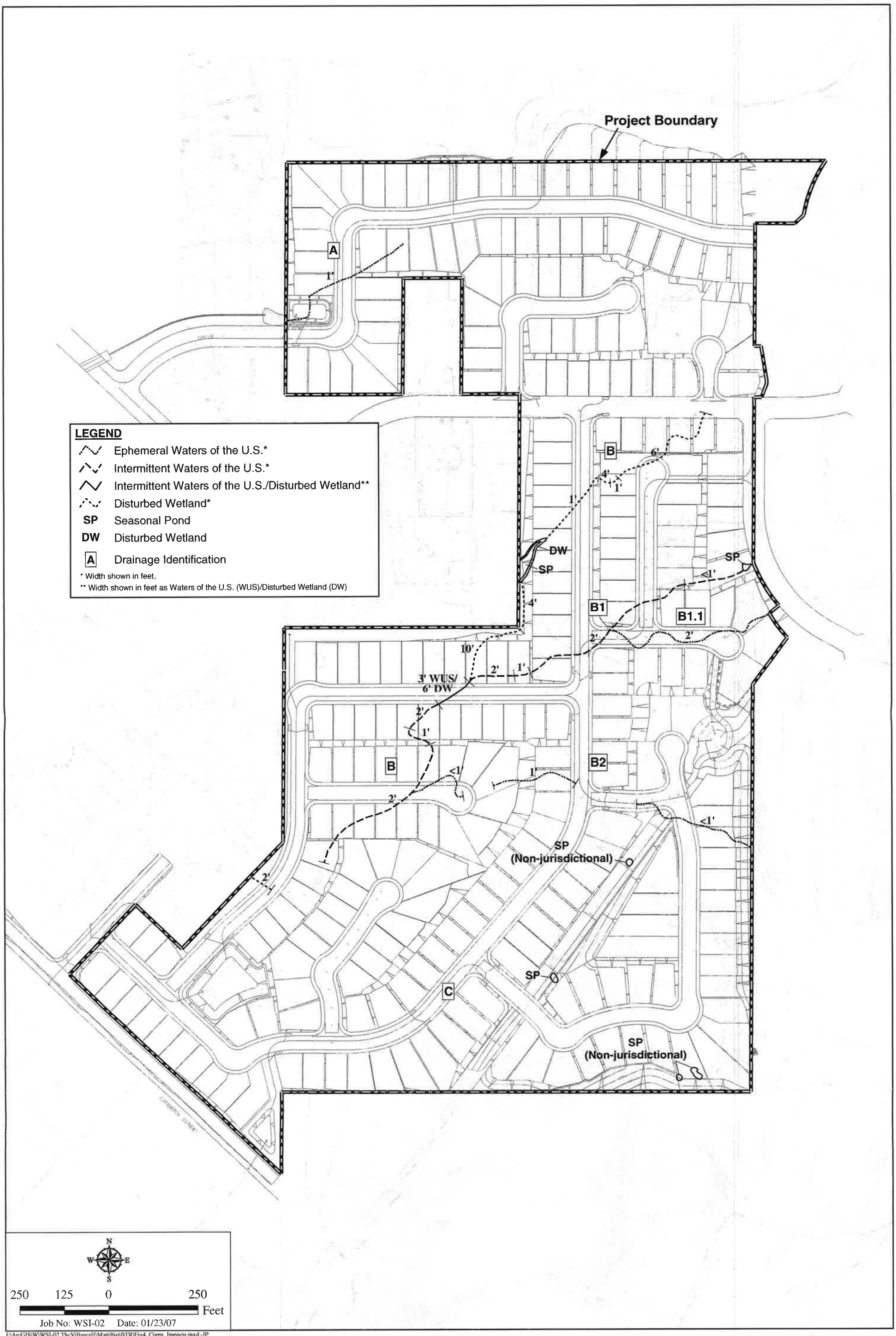
Developed land includes areas that have been paved or contain buildings or other man-made structures. Developed areas on site contain the single residential unit and associated infrastructure.

3.2 JURISDICTIONAL AREAS

Areas under Corps jurisdiction comprise 0.35 acre (Figure 4; Table 3). Jurisdictional features include disturbed wetland, seasonal ponds, and ephemeral and intermittent drainages.

Table 3
EXISTING CORPS AND CDFG JURISDICTIONAL AREAS

HABITAT	CORPS	CDFG
Wetland		
Disturbed wetland	0.17	0.29
Subtotal	**0.17**	**0.29**
Non-wetland		
Seasonal ponds	0.06	0.06
Ephemeral drainage	0.05	--
Intermittent drainage/streambed	0.07	0.19
Subtotal	**0.18**	**0.25**
TOTAL	**0.35**	**0.54**

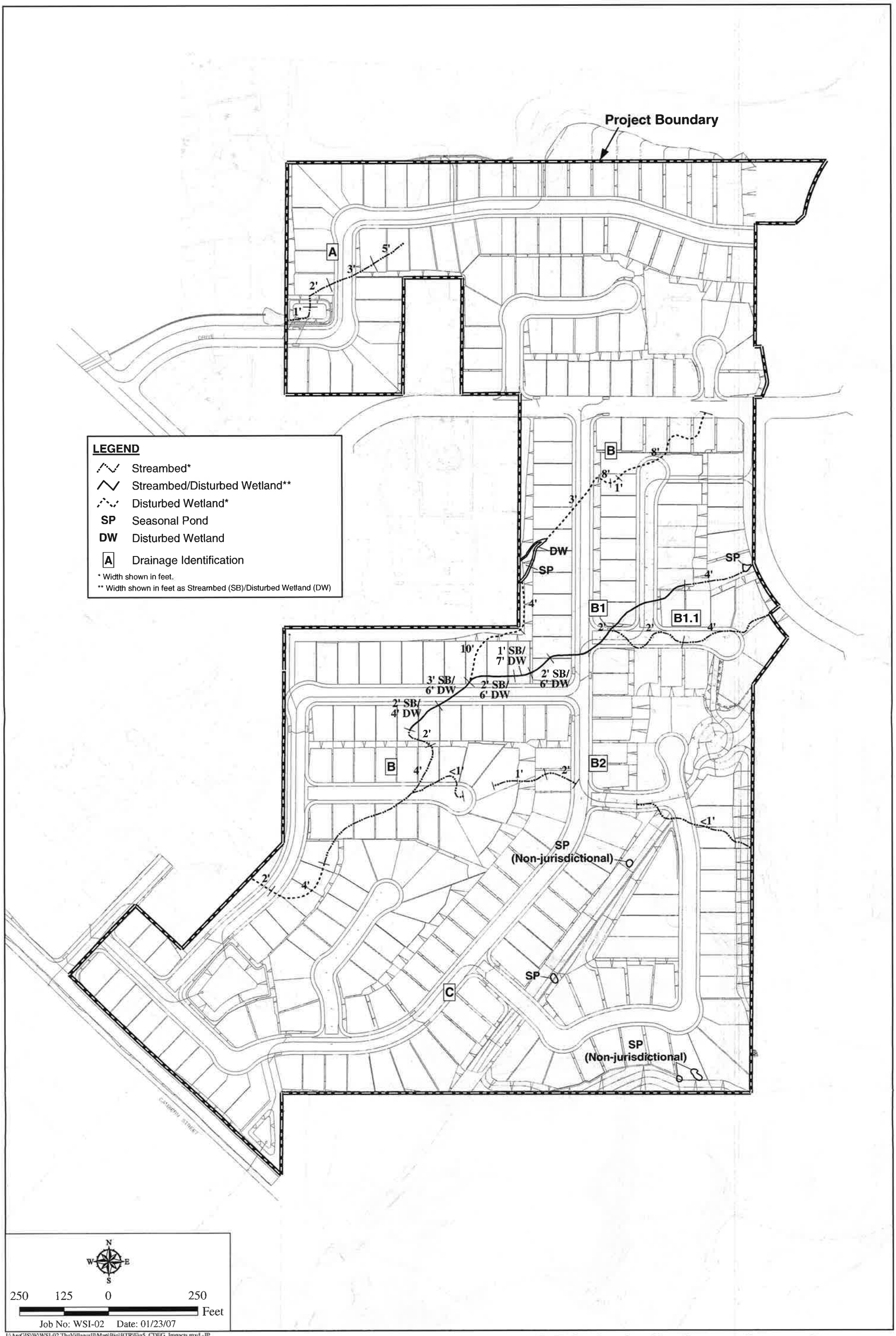


Corps Jurisdictional Areas/Impacts

WASSON WEST

Figure 4

HELIX



CDFG Jurisdictional Areas/Impacts

WASSON WEST

HELIX

Figure 5

4.3 SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

A list of sensitive plant species with potential to occur on site is provided in Table 4.

Table 4
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES NAME	STATUS*	POTENTIAL TO OCCUR
Slender-horned spineflower (*Dodecahema leptoceras*)	FE/SE CNPS List 1B.1 CA Endemic MSHCP Covered	No potential. Appropriate habitat (chaparral, cismontane woodland, or coastal scrub) does not occur on site.
California orcutt grass (*Orcuttia californica*)	FE/SE CNPS List 1B.1 MSHCP Covered	Very low. Habitat (vernal pools) not observed on site.
Munz's onion (*Allium munzii*)	FE/ST CNPS List 1B.1 CA Endemic MSHCP Covered	Very low. Appropriate clay soils are not present on site.
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CNPS List 1B.1 MSHCP Covered	Moderate. Habitat (non-native grassland and disturbed habitat) exists on site. Garretson gravelly very fine sandy loam soil present on site.
San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*)	FE/-- CNPS List 1B.1 CA Endemic MSHCP Covered	No potential. Habitat (alkali sink scrub, alkali playa, vernal pool, and annual alkali grassland habitats) does not exist on site. Required alkaline soils are not present.
Thread-leaved brodiaea (*Brodiaea filifolia*)	FT/SE CNPS List 1B.1 CA Endemic MSHCP Covered	Very low. Associated with clay soils in annual grassland and vernal pool habitats. Suitable soils and habitat do not occur on site.
Spreading navarretia (*Navarritia fossalis*)	FT/-- CNPS List 1B.1 MSHCP Covered	Very low. Associated with vernal pools dominated by annual alkali grassland or alkali playa, which are not present on site.
Chaparral sand-verbena (*Abronia villosa* var. *aurita*)	--/-- CNPS List 1B.1	Moderate to high. Occurs in floodplains or sandy areas of sage scrub or open chaparral. Required sandy soil exists on site. Site is within elevation range (80-1,600 meters amsl) for species.
Smooth tarplant (*Centromadia pungens* ssp. *laevis*)	--/-- CNPS List 1B.1 CA Endemic MSHCP Covered	No potential. Habitat (alkali playas, vernal pools, and riparian woodland) does not exist on site. Required alkaline soils are not present.
Mesa horkelia (*Horkelia cuneata* ssp. *puberula*)	--/-- CNPS List 1B.1 CA Endemic	Moderate. Found in sandy or gravelly areas of sage scrub or chaparral.

Table 4 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES NAME	STATUS*	POTENTIAL TO OCCUR
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	--/-- CNPS List 1B.1 MSHCP Covered	No potential. Habitat (alkaline soils in playas, vernal pools, sinks, and grasslands) does not occur on site.
Davidson's saltscale (*Atriplex serenana* var. *davidsonii*)	--/-- CNPS List 1B.2 MSHCP Covered	No potential. Habitat (alkaline soils in scrub habitats and vernal pools) does not occur on site.
Plummer's mariposa lily (*Calochortus plummerae*)	--/-- CNPS List 1B.2 MSHCP Covered	Moderate. Habitat (coastal sage scrub, valley and foothill grassland) exists on site within elevation range 100-1,700 meters amsl.
Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)	--/-- CNPS List 1B.2 MSHCP Covered	Very low. Typically found on clay lenses that are largely devoid of shrubs and occasionally on the periphery of vernal pools and seeps. No vernal pools or appropriate soils occur on site.
Many-stemmed dudleya (*Dudleya multicaulis*)	--/-- CNPS List 1B.2 CA Endemic MSHCP Covered	No potential. Prefers clay soils within rocky openings of sage scrub and chaparral habitats. Required clay soils are not present on site.
Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)	--/-- CNPS List 1B.2	Low. Occurs in sandy soils of chaparral and oak woodland, which are not present on site.
San Miguel savory (*Satureja chandleri*)	--/-- CNPS List 1B.2 MSHCP Covered	No potential. Prefers rocky, gabbroic, or metavolcanic soils in chaparral and oak woodland.
Round-leaved filaree (*Erodium macrophyllum*)	--/-- CNPS List 2.1 MSHCP Covered	No potential. Prefers clay soils within woodland and native grassland habitat. No appropriate soils on site.
Rayless ragwart (*Senecio aphanactis*)	--/-- CNPS List 2.2	No potential. Occurs in alkaline soils within chaparral, sage scrub, and cismontane woodland. No appropriate soils on site.
Little mousetail (*Myosurus minimus* ssp. *apus*)	--/-- CNPS List 3.1 CA Endemic MSHCP Covered	No potential. Habitat (alkali playas, vernal pools) does not exist on site. Required alkaline soils are not present.
Parry's spineflower (*Chorizanthe parryi* var. *parryi*)	--/-- CNPS List 3.2 CA Endemic MSHCP Covered	Moderate to high. Occurs in dry, sandy soils within chaparral and coastal sage scrub. Habitat exists on site and site is within elevation range (40-1,705 meters amsl) for species.

*Refer to Appendix C for a listing and explanation of status and sensitivity codes

4.4 SENSITIVE ANIMAL SPECIES

Eight sensitive animal species were observed/detected on site: coastal California gnatcatcher, southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), loggerhead shrike (*Lanius ludovicianus*), California horned lark (*Eremophila alpestris actia*), Vaux's swift (*Chaetura vauxi*), sharp-shinned hawk (*Accipiter striatus*), American white pelican (*Pelecanus erythrorhynchos*), and turkey vulture (*Cathartes aura*). Protocol surveys for Quino checkerspot butterfly were negative (PCR 2004b). The project site contains a few burrows with potential to support burrowing owls. No burrowing owls or burrows with sign of owl occupation were observed on site during protocol surveys (HELIX 2006a). Wet season surveys for sensitive fairy shrimp were negative (PCR 2005b).

Coastal California gnatcatcher (*Polioptila californica californica*)
Listing: FT/SC; MSHCP Covered
Distribution: Southern Los Angeles, Orange, western Riverside, and San Diego counties south into Baja California, Mexico, as well as coastal southern California and northwestern Baja California, Mexico, from Los Angeles County south to El Rosario at about 30 degrees north latitude
Habitat: Coastal sage scrub
Status on site: One individual coastal California gnatcatcher was observed on the southern portion of the site briefly prior to flying off site to the southwest. This individual, therefore, is likely a juvenile and assumed to be dispersing (PCR 2005a).

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)
Listing: -- /CSC; MSHCP Covered
Distribution: Ventura County southeast through Los Angeles, Orange, Riverside and San Diego counties to northwestern Baja California, Mexico
Habitat: Coastal sage scrub where it occurs on rocky hillsides and in canyons but also may be found in open sage scrub/grassy areas of successional growth (e.g., after a fire)
Status on site: Observed on site by PCR (2004c and 2005a)

Loggerhead shrike (*Lanius ludovicianus*)
Status: BCC/CSC (nesting); MSHCP Covered
Distribution: It occurs throughout areas of suitable habitat as a yearlong resident, breeding and wintering, in western Riverside County
Habitat(s): Grassland, open sage scrub, chaparral, and desert scrub
Status on site: Observed on site by PCR (2005a)

California horned lark (*Eremophila alpestris actia*)
Status: --/CSC; MSHCP Covered
Distribution: Ranges from the Arctic south to central Asia and Mexico with outlying populations in Morocco and Colombia. The species occurs throughout much of western Riverside County in suitable habitat.
Habitat(s): Coastal strand, arid grasslands, and sandy desert floors
Status on site: Observed on site by PCR (2004c)

Vaux's swift (*Chaetura vauxi*)
Status: --/CSC (nesting)
Distribution: This species has not been recorded within general literature for occurring in the western Riverside County area as a breeding or wintering resident, but may occur in the region as a migrating species (Zeiner et al. 1990). It breeds fairly commonly in the Coast Ranges from northern Sonoma County, and very locally south to Santa Cruz County; it is present in the Sierra Nevada; and possibly in the Cascade Range.
Habitat(s): Forages over most terrains and habitats, but prefers foraging over rivers and lakes. Roosts in hollow trees and snags, and occasionally in chimneys and buildings.
Status on site: Observed on site by PCR (2004c)

Sharp-shinned hawk (*Accipiter striatus*)
Status: --/CSC (nesting); MSHCP Covered
Distribution: Repeatedly recorded in the San Jacinto Mountains during summer months and fairly common migrant and wintering species in western Riverside County. There are no known breeding populations in western Riverside County.
Habitat(s): Usually observed in areas with tall trees or other vegetative cover but can be observed in a variety of habitats
Status on site: Observed on site by HELIX (2006a)

American white pelican (*Pelecanus erythrorhynchos*)
Status: --/CSC (nesting colony)
Distribution: The winter range includes central and southern California. Breeds in Canada and the northern states of the U.S.
Habitat(s): Shallow, coastal wetlands and inland lakes
Status on site: Observed on site by PCR (2005a)

Turkey vulture (*Cathartes aura*)
Status: --/--; MSHCP Covered
Distribution: This species is considered a year round resident throughout western Riverside county.
Habitat(s): Foraging habitat includes most open habitats with breeding occurring in crevices among boulders
Status on site: Observed on site by HELIX (2006a)

4.5 SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

A list of sensitive animal species with potential to occur within the study area is provided in Table 5. Species are grouped into invertebrates and vertebrates (amphibians, reptiles, birds, and mammals), listed by status, and alphabetized (by scientific name) where status is the same.

Table 5
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
INVERTEBRATES		
Quino checkerspot butterfly (*Euphydryas editha quino*)	FE/-- MSHCP Covered	Very low. Minimal suitable habitat for this species occurs on site. Focused surveys were negative.
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE/-- MSHCP Covered	Very low. Minimal suitable habitat (vernal pools or ephemeral ponding areas) for this species occurs on site. Focused surveys were negative.
VERTEBRATES		
Amphibian		
Western spadefoot (*Spea hammondii*)	--/CSC MSHCP Covered	Low to moderate. Prefers sandy and gravelly soils in chaparral and grassland. Breeding habitat (vernal pools) absent on site.
Reptiles		
Orange-throated whiptail (*Aspidoscelis hyperythra*)	--/CSC MSHCP Covered	Moderate. Prefers coastal sage scrub, chaparral, edges of riparian woodlands, and washes, often in weedy disturbed areas adjacent to these habitats. Habitat requirements include open, sunny, shaded areas and abundant insect prey base.
Western pond turtle (*Clemmys marmorata pallida*)	--/CSC MSHCP Covered	Very low. Almost entirely aquatic; occurs in freshwater marshes, creeks, ponds, rivers and streams, particularly where basking sites, deep water retreats, and egg laying areas are readily available. Ponds and surrounding habitat on site are of minimal quality.
Red-diamond rattlesnake (*Crotalus exsul*)	--/CSC MSHCP Covered	Low to moderate. Prefers chaparral and coastal sage scrub along creek banks, particularly among rock outcrops or debris piles with a supply of burrowing rodents for prey.
San Diego horned lizard (*Phrynosoma coronatum blainvillei*)	--/CSC MSHCP Covered	Low to moderate. Prefers open sage scrub habitat, which is present on site. Primary food source (harvester ants) not observed on site.
Coast patch-nosed snake (*Salvadora hexalepis virgultea*)	--/CSC	Moderate. Preferred brushy coastal sage scrub habitat, which occurs on site.

Table 5 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Birds		
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/SE MSHCP Covered	No potential. Requires mature riparian forest with a well-developed understory for breeding, which does not occur on site.
Least Bell's vireo (*Vireo bellii pusillus*)	FE/SE MSHCP Covered	No potential. Prefers riparian woodland and riparian scrub habitat. The riparian scrub habitat on site is of minimal quality.
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	FC/SE MSHCP Covered	No potential. Occurs in riparian forests in association with larger streams and rivers. Suitable habitat does not occur on site.
White-tailed kite (*Elanus leucurus*)	--/Fully Protected MSHCP Covered	Moderate. Nests in riparian woodlands and forages in grasslands. May use the site for foraging but the no suitable nesting habitat exist on site.
Cooper's hawk (*Accipiter cooperii*)	--/CSC MSHCP Covered	Low to moderate. Nests in oak groves, riparian woodlands, and eucalyptus stands. May use the site for foraging but the no suitable nesting habitat exists on site.
Tricolored blackbird (*Ageliaus tricolor*)	--/CSC MSHCP Covered	Low. Nests in riparian areas and requires open water. Habitat on site is not considered appropriate.
Bell's sage sparrow (*Amphispiza belli belli*)	--/CSC MSHCP Covered	Low to moderate. Species prefers chaparral and sage scrub with modest leaf-litter on the ground (e.g., after a fire or in gabbro-based soil areas).
Burrowing owl (*Athene cunicularia*)	--/CSC MSHCP Covered	Low. Suitable habitat exists on site. Focused surveys were negative. CNDDB records exist for species in vicinity.
American bittern (*Botaurus lentiginosus*)	--/-- MHSCP Covered	No potential. Suitable habitat (marshes) does not exist on site.
Mountain plover (*Charadrius montanus*)	--/CSC MSHCP Covered	Low. Species prefers open grasslands and plowed fields of bare dirt.
Northern harrier (*Circus cyaneus*)	--/CSC MSHCP Covered	Moderate to high. Species nests and forages in grasslands and prairies, which occur on site.
Yellow warbler (*Dendroica petechia brewsteri*)	--/CSC MSHCP Covered	No potential. Nests in riparian scrub and forest communities. Riparian scrub on site is not suitable.
Black-crowned night heron (*Nycticorax nycticorax*)	--/-- MHSCP Covered	No potential. Species nests in riparian forest. May forage in ponds on site, but habitat is not suitable.

Table 5 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Birds (cont.)		
Osprey (*Pandion haliaetus*)	--/CSC MHSCP Covered	Very low. This species prefers the coastline and can occur in inland lakes. No suitable habitat exists on site.
Double-crested cormorant (*Phalacrocorax auritus*)	--/CSC MHSCP Covered	Low. Species occurs in fresh and salt water habitats and roost in nearby trees and rocks. Minimal suitable habitat exists on site and species would have likely been observed if present.
White-faced ibis (*Plegadis chihi*)	--/CSC MSHCP Covered	Low. Nests in shallow freshwater marsh with open areas for foraging. The ponds on site are too small and isolated to support nesting activities.
Mammals		
Stephens' kangaroo rat (*Dipodomys stephensi*)	FE/ST MSHCP Covered	Moderate to high. The site does contain the typical habitats (grassland and sage scrub) associated with this species.
Dulzura pocket mouse (*Chaetopdipus californicus femoralis*)	--/CSC	Moderate to high. Occurs in coastal sage scrub, chaparral, grasslands, and woodland habitats up to 7,900 feet.
Northwestern San Diego pocket mouse (*Chaetopdipus fallax fallax*)	--/CSC MSHCP Covered	Moderate to high. The site does contain typical habitat (sandy areas within sage scrub and chaparral) associated with this species.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	--/CSC MSHCP Covered	High. Occurs primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present. CNDDB records exist for this species in the near vicinity.
Bobcat *Lynx rufus*)	--/-- MSHCP Covered	Very low. Prefers brushy areas in mountains and canyons. No suitable habitat exists on site.

*Refer to Appendix C for a listing and explanation of status and sensitivity codes

5.0 REGIONAL AND REGULATORY CONTEXT

5.1 MULTIPLE SPECIES HABITAT CONSERVATION PLAN

The project site is included in the MSHCP, which is a comprehensive multi-jurisdictional effort comprising Riverside County and 14 cities, including the City of Lake Elsinore (City). Rather than addressing sensitive species on an individual basis, the MSHCP focuses on conservation of 146 species, including those listed at federal and state levels and those that could become listed in the future. The MSHCP is assembling a Reserve system of approximately 500,000 acres, of which 347,000 acres are currently within public ownership and 153,000 acres will need to be acquired from lands currently in private ownership. The MSHCP allows the County and other permitees (including the City) to issue take permits for listed species so that applicants need not seek endangered species incidental take authorization from the USFWS and CDFG.

On June 17, 2003, the County Board of Supervisors adopted the MSHCP, certified its Environmental Impact Report/Environmental Impact Statement, and authorized the Chairman to sign the Implementing Agreement. The Incidental Take Permit was issued by wildlife agencies on June 22, 2004. The City is a Permittee under the MSHCP.

5.1.1 Reserve Configuration Objectives

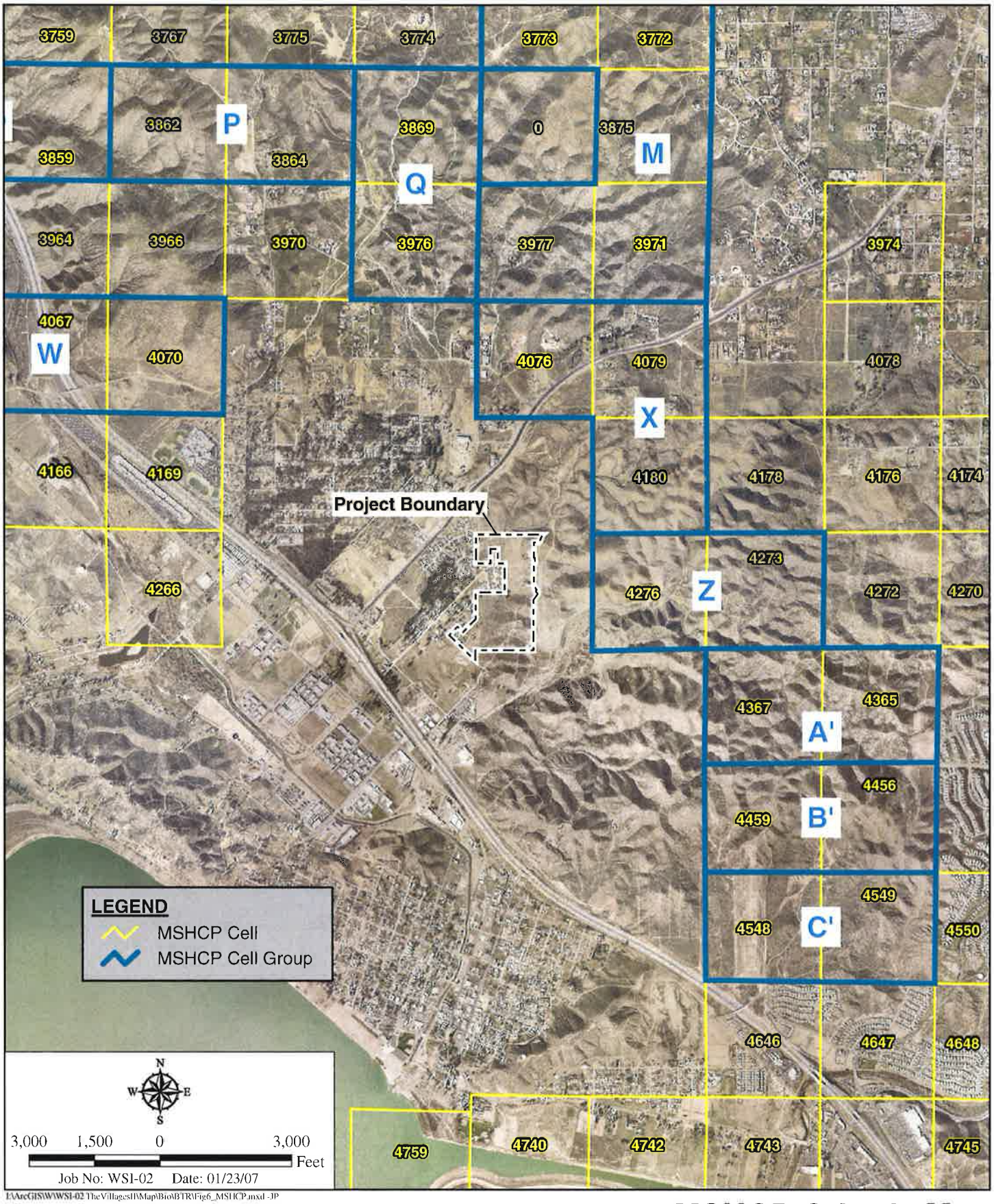
Regions of the MSHCP have been organized into Area Plans that mostly coincide with logical political boundaries, including city limits or long-standing unincorporated communities. The project site is located within the Elsinore Area Plan, which encompasses the cities of Lake Elsinore and Canyon Lake and surrounding unincorporated communities. The Elsinore Area Plan has a target conservation acreage of 66,500 to 73,315 acres, of which 4,830 to 7,870 acres are intended to be within the city limits of Lake Elsinore.

Planning Species for the Elsinore Area Plan include American bittern (*Botaurus lentiginosus*), Bell's sage sparrow (*Amphispiza belli belli*), black-crowned night heron (*Nycticorax nycticorax*), double-crested cormorant (*Phalacrocorax auritus*), least Bell's vireo (*Vireo bellii pusillus*), loggerhead shrike, mountain plover (*Charadrius montanus*), northern harrier (*Circus cyaneus*), osprey (*Pandion haliaetus*), southwestern willow flycatcher (*Empidonax traillii extimus*), white-faced ibis (*Plegadis chihi*), white-tailed kite (*Elanus leucurus*), Quino checkerspot butterfly, Riverside fairy shrimp, bobcat (*Lynx rufus*), western pond turtle (*Clemmys marmorata pallida*), Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), and smooth tarplant (*Centromadia pungens* ssp. *laevis*).

The MSHCP will assemble currently private lands into the Reserve system through application of conservation criteria that are assigned to Criteria Cells. The project is not part of a Criteria Cell (Figure 6); therefore, it does not need to meet any Criteria Cell conservation goals.

5.1.2 Covered Species Survey and Conservation Requirements

For certain MSHCP covered species, adequate information was not available at the time the plan was prepared to ensure that appropriate conservation would occur. As a result, surveys are required for these plant and animal species. For applicable species, the MSHCP requires that site-specific focused surveys be conducted on projects within designated survey areas where appropriate habitat is present.



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MSHCP Criteria Map

WASSON WEST

HELIX

Figure 6

Survey results must be documented in mapped and text form and presented for review. Where survey results are positive, proposals with potential to affect species are subject to avoidance, minimization, and mitigation strategies.

The project site is not within any designated survey area for any plant, mammal, or amphibian species. It is, however, within the survey area for burrowing owl. Since some habitat for this species does exist within the study area, focused surveys were conducted with negative results (HELIX 2006a). Although no burrowing owls were observed during these surveys, presence/absence surveys are required within 30 days prior to disturbance in the survey area where suitable habitat is present. Take of active nests must be avoided; passive relocation must be conducted when owls are present outside the nesting season.

For species that primarily inhabit Riparian/Riverine areas and vernal pools, conservation is dependent on ensuring that biological habitat function and value are maintained. If mapping identifies suitable habitat for certain species (least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo [*Coccyzus americanus occidentalis*], Riverside fairy shrimp, Santa Rosa Plateau fairy shrimp [*Linderiella santarosae*], and vernal pool fairy shrimp) and these habitats will be affected, then focused surveys for these species are required. No suitable habitat for any of the above-listed species except the fairy shrimp exists on site. Because the disturbed wetland is dominated by emergent wetland species, however, these areas are considered Riparian/Riverine habitat. As a result, a Determination of Biologically Equivalent or Superior Preservation (DBESP) will be required. USFWS focused protocol surveys for sensitive fairy shrimp were conducted by PCR during the 2004/2005 wet season to determine the presence/absence of San Diego fairy shrimp, Riverside fairy shrimp, and vernal pool fairy shrimp. Results of these focused surveys were negative (PCR (2005b). No additional surveys for riparian and vernal pool species are required.

Although not an MSHCP requirement, protocol surveys were conducted for the federally listed threatened coastal California gnatcatcher in 2004 and 2005 (PCR 2004c and 2005a). One individual coastal California gnatcatcher was observed on the southern portion of the site briefly prior to flying off site to the southwest. This individual, therefore, is likely a juvenile and assumed to be dispersing (PCR 2005a).

Although not an MSHCP requirement, surveys were conducted for the federally listed endangered Quino checkerspot butterfly with negative results.

Since no NEPSSA or CASSA plant species were present and none would be affected by the proposed project, a DBESP analysis is not required for these species.

5.1.3 MSHCP Fees

The project applicant shall pay MSHCP Local Development Mitigation fees as determined by the City. The current fee is $1,801 per development unit (du) for residential uses with a density of less than 8.0 du per acre, $1,153 per du for residential uses with a density between 8.1 and 14.0 du per acre, $937 per du for residential uses with a density of greater than 14.1 du per acre, and $6,131 per acre for commercial uses. When mixed uses are proposed within the same project, the commercial fee is applied to the whole project based on the underlying classification of the property at the time of issuance of a building permit. However, fees may be offset through on- or off-site conservation.

5.2 FEDERAL GOVERNMENT

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being threatened with extinction or endangered. Section 10(a) of this Act regulates actions that could jeopardize threatened or endangered species and allows issuance of permits for "incidental" take of such species. The term "incidental" applies if the taking of a listed species is incidental to an otherwise lawful activity. The MSHCP has been issued under this Section and provides incidental take authorization for all covered species.

Nesting raptors (such as red-shouldered hawks and burrowing owls) and other migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA), which is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the USFWS places restrictions on disturbances allowed near active migratory bird nests.

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and Clean Water Act. The Rivers and Harbors Act deals primarily with discharges into navigable waters while the purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all Waters of the U.S. Permitting for projects filling Waters of the U.S. (including wetlands and vernal pools) is overseen by the Corps under Section 404 of the Clean Water Act. Projects may be permitted on an individual basis or covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc., while Nationwide Permits are pre-approved if a project meets appropriate conditions.

5.3 STATE OF CALIFORNIA

The California ESA is similar to the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. Sections 2080 and 2081 of the California ESA authorizes the CDFG to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes. The MSHCP has also been issued under this Section.

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates the collection, transport, and commerce in plants that are listed. The California ESA follows the NPPA and covers both plants and animals determined to be threatened with extinction or endangered. Plants listed as rare under the NPPA are designated as threatened under the California ESA. No plants listed under the California ESA occur on site.

The California Fish and Game Code (Sections 1600 through 1616) requires an agreement between the project applicant and CDFG for projects affecting riparian and wetland habitats through issuance of a Streambed Alteration Agreement (SAA).

5.4 CITY OF LAKE ELSINORE LOCAL ORDINANCES

The City has in place a palm tree preservation program. The City recognizes the value of significant palm trees within the City of Lake Elsinore as natural aesthetic resources that help define its history and character. Canary Island date palm (*Phoenix canariensis*), California fan palm (*Washingtonia filifera*), windmill palm (*Trachycarpus* spp.), Mediterranean fan palm (*Chamaerops* spp.), Senegal date palm (*P. reclinata*), pindo palm (*Butia capitata*), and pygmy palm (*P. roebelinii*) that exceed 5 feet in height or

Mexican fan palm (*W. robusta*) that exceeds 25 feet in height (measured from the ground at the trunk base to the crown base) cannot be removed or relocated without a palm tree removal permit from the City, in accordance with City Ordinance 1044 (City 2000).

5.5 ADDITIONAL REGULATORY CONSIDERATIONS

The project site lies within the Stephens' kangaroo rat (*Dipodomys stephensi*; SKR) fee area outlined in the Riverside County SKR Habitat Conservation Plan (HCP; County 1996). Some habitat occurs within the study area, especially within the more open portions of Riversidean sage scrub and interfaces between Riversidean sage scrub and non-native grassland. The SKR fee is established at $500 per acre.

6.0 IMPACTS

This section describes potential direct and indirect impacts associated with the proposed project. Direct impacts immediately alter the affected biological resources such that those resources are eliminated temporarily or permanently. Indirect impacts consist of secondary effects of a project, including noise, decreased water quality (e.g., through sedimentation, urban contaminants, or fuel release), fugitive dust, colonization of non-native plant species, animal behavioral changes, and night lighting. The magnitude of an indirect impact can be the same as a direct impact; however, the effect usually takes a longer time to become apparent.

6.1 DIRECT IMPACTS

6.1.1 Vegetation Communities/Habitats

The entire project site would be affected upon implementation of the proposed project. As such, impacts to the following sensitive vegetation communities would occur: disturbed wetland, seasonal ponds, Riversidean sage scrub, and non-native grassland (Figure 3; Table 6). These impacts would be considered significant. Impacts to non-native vegetation, disturbed habitat, and developed land are not considered significant.

Table 6
VEGETATION COMMUNITY IMPACTS

VEGETATION COMMUNITY	ACRE(S)
Disturbed wetland	0.30
Seasonal ponds	0.09
Riversidean sage scrub	18.6
Non-native grassland	20.0
Non-native vegetation	1.3
Disturbed habitat	28.1
Developed land	7.4
TOTAL	75.8

6.1.2 Areas Subject to Corps and CDFG Jurisdiction

Impacts to wetland Waters of the U.S. are regulated by the Corps under Section 404 of the Clean Water Act (33 U.S.C. 401 et seq.; 33 U.S.C. 1344; U.S.C. 1413; and Department of Defense, Department of the Army, Corps of Engineers 33 CFR Part 323). A federal Clean Water Act Section 404 Permit would be required for the project to place fill in Corps jurisdictional areas.

Impacts to less than 0.50 acre and less than 300 linear feet of Corps jurisdictional areas would be processed with a Nationwide Permit, while impacts equal to or greater than 0.50 acre or 300 linear feet would require an Individual Permit. As effects to jurisdictional areas total 0.35 acre (Table 7) but are greater than 300 linear feet (HELIX 2006b), the project would require an Individual Permit from the Corps.

Table 7
IMPACTS TO CORPS AND CDFG JURISDICTIONAL AREAS

HABITAT	CORPS	CDFG
Wetland		
Disturbed wetland	0.17	0.29
Subtotal	**0.17**	**0.29**
Non-wetland		
Seasonal ponds	0.06	0.06
Ephemeral drainage	0.05	--
Intermittent drainage/streambed	0.07	0.19
Subtotal	**0.18**	**0.25**
TOTAL	**0.35**	**0.54**

In addition, impacts to Corps jurisdictional areas require a Water Quality Certification from the SWRCB under Section 401 of the Clean Water Act. The Water Quality Certification must be issued prior to the Individual Permit.

Impacts to disturbed wetland, seasonal ponds, and streambed are also subject to CDFG regulation under California Fish and Game Code Sections 1600 to 1616. A 1602 SAA request for project effects to 0.54 acre of CDFG jurisdictional areas (Table 7) would be required.

6.1.3 Sensitive Plant Species

One sensitive plant species, paniculate tarplant, occurs on site. Impacts to this sensitive plant species would not be considered significant because the project site is not within NEPSSA or CASSA and the sensitivity listing for this species is low (CNPS List 4.2). No palm trees covered under City Ordinance 1044 (City 2000) occur on site.

6.1.4 Sensitive Animal Species

Eight sensitive animal species were observed/detected on site: coastal California gnatcatcher, southern California rufous-crowned sparrow, loggerhead shrike, California horned lark, Vaux's swift, sharp-

shinned hawk, American white pelican, and turkey vulture. Impacts to coastal California gnatcatcher, southern California rufous-crowned sparrow, loggerhead shrike, California horned lark, sharp-shinned hawk, and turkey vulture are considered significant. Impacts to American white pelican and Vaux's swift would not be significant because only nesting areas are protected and these species do not nest in southern California.

Implementation of the proposed project would directly impact raptor foraging habitat. Sharp-shinned hawk, red-tailed hawk (*Buteo regalis*), and red-shouldered hawk (*B. lineatus*) were observed flying overhead during surveys. The proposed project could directly or indirectly impact raptor nests. These impacts are considered significant.

6.1.5 MSHCP Consistency

As described in Section 5.1.1, the project site is not within any Criteria Cell, Core Area, or Linkage, therefore, no conservation on site is required. The proposed project will be processed through an MSHCP Consistency Determination. Additionally, one of the goals of Cell Group Z, which lies to the east of the site, is to contribute to assembly of Proposed Core 1. Conservation within this Cell Group will focus on riparian scrub, woodland and forest habitat and adjacent coastal sage scrub and grassland habitat. Areas conserved within this Cell Group will be connected to coastal sage scrub habitat proposed for conservation in Cell #4178 to the north and in Cell #4272 to the east, to coastal sage scrub, riparian scrub, woodland and forest habitat proposed for conservation in Cell Group X also to the north, and to coastal sage scrub and chaparral habitat proposed for conservation in Cell Group A' to the south. The project lies outside of Cell Group Z, and no wildlife corridors or linkages were identified as occurring on site in the MSHCP. No significant impacts to regional wildlife movement are expected.

Riparian/Riverine/Vernal Pool Species (MSHCP Section 6.1.2)

MSHCP Section 6.1.2 focuses on protection of Riparian/Riverine areas and vernal pool habitat types. The disturbed wetland is considered Riparian/Riverine on site, although none of the Riparian/Riverine covered species have any potential to occur on site. Seasonal ponds do occur on site, some of which possess indicators of all three wetland parameters (soils, vegetation, and hydrology). Wet season surveys for sensitive fairy shrimp were negative (PCR 2005b). A Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis report will be required for impacts to disturbed wetland, which must describe why avoidance of seasonal disturbed wetlands are not feasible or preferable, quantify unavoidable impacts, describe features and measures to reduce indirect effects, and make findings that demonstrate that the project would be biologically equivalent or superior to an avoidance alternative.

Because the disturbed wetland on site is of low quality, preservation of the disturbed wetland is not considered feasible or desirable. In order to avoid the disturbed wetland on site, a minimum of 10 percent of the housing units would need to be eliminated. The resulting preservation would leave small, isolated disturbed wetland areas surrounded by housing development that drain into existing residential development areas. This alternative is not considered feasible because a viable reserve cannot be reasonably implemented at this location, and superior mitigation options are available off site that would provide for better long-term conservation of the resources being impacted on site.

Mitigation for impacts will include acquisition of 0.54 credits from the Riverside-Corona Resource Conservation District (RCRCD) Mitigation Program. The RCRCD Program provides significant enhancement to riparian habitat along the Santa Ana River through removal of giant reed. A number of the riparian species targeted for conservation through consistency with Section 6.1.2 occur within RCRCD Program boundaries, and is within MSHCP Conservation Area boundaries. The riparian habitat restored within the RCRCD Program will be of a much higher quality than the disturbed wetland habitat being impacted and will contribute to long-term MSHCP conservation goals. The off-site acquisition meets the definition of a Biologically Equivalent Preservation Alternative consistent with Section 6.1.2.

Narrow Endemic Species (MSHCP Section 6.1.3)

The project is not within a NEPSSA area; therefore, the project is consistent with MSHCP Section 6.1.3.

Guidelines for Urban/Wildlands Interface (MSHCP Section 6.1.4)

MSHCP Section 6.1.4 addresses potential indirect impacts to MSHCP preserve lands. The project is not located adjacent to Proposed Core 1 and an assessment of indirect impacts associated with the Urban/Wildlands Interface is not required.

Additional Surveys (MSHCP Section 6.3.2)

The project site is outside of any CASSA for plants, amphibians, and mammals, and no CASSA plant species were observed during site surveys. The project site occurs within the burrowing owl survey area. No owls were observed during surveys on site (HELIX 2006a); therefore, the project is consistent with MSHCP Section 6.3.2.

6.2 INDIRECT IMPACTS

As noted, the site does not lie adjacent to any areas proposed for conservation under the MSHCP. Indirect impacts discussed below are limited to potential impacts associated with on site resources.

6.2.1 Noise

Noise from such sources as grubbing, earthwork, and construction would be a temporary impact to local wildlife. Noise-related impacts would be considered significant if raptors were displaced and failed to breed. Raptors nesting within any area impacted by construction noise exceeding 60 dB L_{eq} may be significantly impacted. Given that the project site is not adjacent to Proposed Core 1, impacts resulting from noise to other species would not be significant.

6.2.2 Water Quality

Water quality in jurisdictional areas can be adversely affected by potential surface runoff and sedimentation during construction. The use of petroleum products (e.g., fuels, oils, and lubricants) and erosion of cleared land during construction could potentially contaminate surface water. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources. During project construction, however, project design features would be

implemented to control erosion, sedimentation, and pollution that could impact water resources on and off site. Prior to the commencement of grading, a Notice of Intent would be filed with the RWQCB for a National Pollutant Discharge Elimination System General Construction Storm Water Permit. Specific permit requirements include implementation of an approved Storm Water Pollution Prevention Plan, which requires best management practices for erosion and sediment control related to construction activities. Standard measures that could apply to the proposed project include:

- Use of positive grading techniques and appropriate drainage facilities (e.g., swales or brow ditches) to direct surface flows away from unstable areas such as manufactured slopes and material stockpiles, and into existing drainage outlet points.
- Seasonal grading restrictions during the rainy season (October 1 to April 30) for applicable locations and conditions.
- Preparation and implementation of a weather-triggered action plan for grading/excavation activities conducted during the rainy season to provide enhanced erosion and sediment control measures within 24 hours of (prior to) predicted storm events (i.e., 40 percent or greater chance of rain).
- Use of erosion control/stabilizing measures such as geotextiles, mats, fiber rolls, soil binders, or temporary hydroseeding (or other plantings) established prior to October 1, in appropriate locations including cleared areas and graded slopes.
- Use of sediment controls to protect the site perimeter and prevent off-site sediment transport. Specific measures for sediment control may include efforts/devices such as the use of temporary inlet filters, silt fences, fiber rolls, gravel bags, temporary sediment basins, check dams, street sweeping, energy dissipators, stabilized construction access points and soil stockpiles, and use of properly fitted covers for material (e.g., soil or aggregate) transport vehicles.
- Use of solid waste management efforts, such as proper containment and disposal of construction debris.
- Compliance with local dust control requirements through measures such as regular watering and/or use of chemical palliatives.
- Installation of permanent landscaping, with emphasis on native and/or drought-tolerant varieties, as soon as feasible during or after project grading.

In addition, water quality project design features are intended to control post-development runoff, erosion potential, and contaminant generation by mimicking the natural hydrologic regime to the maximum extent practicable. Proposed detention basins would provide runoff control and also would reduce contaminant loading through removal of particulates and associated contaminants that accumulate in the basins. Energy dissipaters would reduce the velocity and downstream erosion potential of runoff leaving the site and would help maintain pre-development velocity rates for site runoff. All water quality project design features would reduce long-term urban contaminant generation by minimizing runoff volumes and velocities, removing accumulated contaminants, reducing irrigation requirements, retaining permeable areas, increasing infiltration, and minimizing chemical applications.

Given the aforementioned project design features, no significant impacts to water quality are anticipated during construction.

6.2.3 Fugitive Dust

Fugitive dust produced by construction has the potential to disperse onto preserved vegetation, which may reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and

increasing their susceptibility to pests or disease. This in turn could affect animals dependent on these plants (e.g., raptors or seed-eating rodents). Dust dispersal during project construction would be substantially controlled by standard measures such as multiple applications of water during grading between dozer/scraper passes. Because active construction areas and unpaved surfaces would be watered pursuant to grading permit requirements to minimize dust generation, impacts on biological resources from fugitive dust would be less than significant.

6.2.4 Non-native Plant Species

Non-native plants could colonize areas disturbed by construction and development and could potentially spread into adjacent native habitats. Many non-native plants are highly invasive and can displace native vegetation (reducing native species diversity), potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native wildlife dependent on native plant species. To prevent potentially significant impacts, exotic/invasive plant species included in the California Invasive Plant Inventory prepared by Cal-IPC (2006) would not be installed adjacent to undeveloped areas to the south. No significant impacts relating to the introduction of non-native plant species are anticipated.

6.2.5 Lighting

Lighting on native habitats can prevent nocturnal wildlife from using an area. Lighting could cause an increased loss in native wildlife that could be potentially significant unless mitigated. Lighting on native habitats can provide nocturnal predators with an unnatural advantage over their prey. Because the project does not abut any MSHCP Conservation Areas, no significant impacts from lighting are anticipated.

7.0 MITIGATION MEASURES

The following mitigation measures would reduce each impact to less than significant.

7.1 MITIGATION FOR DIRECT IMPACTS

7.1.1 Vegetation Communities/Habitat

The project applicant shall pay MSHCP Local Development Mitigation fees as determined by the City. The current fee is $1,801 per du for residential uses with a density of less than 8.0 du per acre, $1,153 per du for residential uses with a density between 8.1 and 14.0 du per acre, and $937 per du for residential uses with a density of greater than 14.1 du per acre.

7.1.2 Corps and CDFG Jurisdictional Areas

Mitigation for impacts to 0.35 acre of Corps jurisdictional areas and 0.54 acre of CDFG jurisdictional areas shall occur at a 1:1 ratio. Mitigation for impacts will include acquisition of 0.54 credits from the Riverside-Corona Resource Conservation District (RCRCD) Mitigation Program or other mitigation acceptable to the resource agencies as part of the wetland permitting process. The RCRCD Program provides significant enhancement to riparian habitat along the Santa Ana River through removal of

giant reed. A number of the riparian species targeted for conservation through consistency with Section 6.1.2 occur within RCRCD Program boundaries, and is within MSHCP Conservation Area boundaries. The riparian habitat restored within the RCRCD Program will be of a much higher quality than the disturbed wetland habitat being impacted and will contribute to long-term MSHCP conservation goals.

7.1.3 Animal Species

Impacts to coastal California gnatcatcher, southern California rufous-crowned sparrow, loggerhead shrike, California horned lark, sharp-shinned hawk, turkey vulture and raptor foraging habitat will be mitigated through payment of the MSHCP Local Development Mitigation fees.

A qualified biologist shall conduct a pre-construction raptor nest survey to determine if any active raptor nests occur within the project limits of disturbance prior to commencement of construction activities. The pre-construction survey is to take place within seven days prior to disturbance of the site. If a nest occurs in a tree to be affected, the tree shall not be removed while the nest is active (January 15 through July 15).

A qualified biologist shall conduct pre-construction burrowing owl surveys on site. The pre-construction survey is to take place within 30 days prior to disturbance of the site. If burrowing owl is present, CDFG shall be consulted and a passive relocation effort shall be undertaken outside the nesting season. Burrowing owls shall be relocated passively to an area outside the impact zone and existing burrows shall be destroyed once they are vacated. No disturbance of active nests shall occur.

As previously stated, the study area is located within the SKR fee area. County Ordinance 663.10 establishes the Riverside County SKR HCP Fee Assessment Area and sets mitigation fees. As such, a fee (paid to the County) of $500 per impact acre is required.

7.2 MITIGATION FOR INDIRECT IMPACTS

No clearing, grubbing, grading, or other construction activities shall occur within 500 feet of occupied tree-nesting raptor habitat during the raptor breeding season (January 15 through July 15, or until all nesting is complete). If clearing or grading is to occur during the raptor breeding season, a pre-construction survey shall be conducted to determine if breeding or nesting raptors species occur within impact area. If there are no raptors nesting (includes nest building or other breeding/nesting behavior) within this area, clearing or grading shall be allowed to proceed. However, if any of these birds are observed nesting or displaying breeding/nesting behavior within the area, clearing or grading shall be postponed until all nesting (or breeding/nesting behavior) has ceased.

7.3 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed project would significantly impact four sensitive vegetation communities within the project: disturbed wetland, seasonal ponds, Riversidean sage scrub, and non-native grassland. Impacts to paniculate tarplant would not be considered significant. Impacts to sensitive animal species including the coastal California gnatcatcher, southern California rufous-crowned sparrow, loggerhead shrike, California horned lark, sharp-shinned hawk, and turkey vulture are considered significant. Implementation of the proposed project would directly impact raptor foraging habitat and could directly or indirectly impact raptor nests. Significant impacts to Corps and CDFG jurisdictional areas would occur as well.

Impacts to disturbed wetland, seasonal ponds, Riversidean sage scrub, and non-native grassland would be mitigated to below a level of significance through payment of the MSHCP fee. Impacts to Corps and CDFG jurisdictional habitats would be mitigated to below a level of significance by mitigation at a 1:1 ratio. A qualified biologist shall conduct a pre-construction raptor nest survey and burrowing owl survey to determine if any active raptor nests or burrowing owl burrows occur within the project limits of disturbance prior to commencement of construction activities. Following implementation of these mitigation measures, all impacts to biological resources will be mitigated to below a level of significance.

The project applicant shall pay MSHCP Local Development Mitigation fees as determined by the City of Lake Elsinore, which are currently estimated at $934 to $1,801 per unit. The project applicant shall pay a $500 per acre fee pursuant to the Riverside County HCP Fee Area for SKR on top of the above-mentioned MSHCP development fee.

8.0 CERTIFICATION

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

DATE: 1/22/07

SIGNED: _____
Barry L. Jones
Senior Consulting Biologist, HELIX

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9.0 REFERENCES

American Ornithologists' Union. 2006. List of the 2,041 Bird Species (with Scientific and English Names) Known from the AOU Check-list Area. URL: http://www.aou.org/checklist/birdlist47.pdf.

Baker, R.J., L.C. Bradley, R.D. Bradley, J.W. Dragoo, M.D. Engstrom, R.S. Hoffmann, C.A. Jones, F. Reid, D.W. Rice, and C. Jones. 2003. Revised checklist of North American mammals north of Mexico. Occasional Papers of the Museum, Texas Tech University No. 223.

Brock, J. P. and K. Kaufman. 2003. Butterflies of North America.

California Department of Fish and Game (CDFG). 2006a. California Natural Diversity Data Base (CNDDB). RareFind Version 3.1.0. October 3.

2006b. Special Animals. State of California, The Resources Agency, Department of Fish and Game Biogeographic Data Branch. CNDDB. URL: http://www.dfg.ca.gov/whdab/pdfs/spanimals.pdf. February.

California Native Plant Society (CNPS). 2006. Inventory of Rare and Endangered Plants. Internet searchable database Version 7-06d. URL: http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi. Updated quarterly. October 3.

City of Lake Elsinore (City). 2000. Significant Palm Trees. Lake Elsinore Municipal Code Chapter 5.78. November.

County of Riverside (County) Board of Directors. 1996. Ordinance 663.10 Amending Ordinance 633 Establishing the Riverside County Stephens' Kangaroo Rat Habitat Conservation Plan Fee Assessment Area and Setting Mitigation Fees.

2006. Burrowing Owl Survey Instructions For the Western Riverside Multiple Species Habitat Conservation Plan Area. Environmental Programs Department. March 29.

Crother, B.I. 2001. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, With Comments Regarding Confidence in Our Understanding. Society for the Study of Amphibians and Reptiles 29. 84 pp.

Dudek and Associates. 2003. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Final MSHCP, Volume I. Prepared for the County of Riverside Transportation and Land Management Agency. Approved June 17.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. 100 pp. with Appendices.

HELIX Environmental Planning, Inc. (HELIX). 2006a. Results of Burrowing Owl Survey for the Wasson Canyon II Property. August 17.

HELIX Environmental Planning, Inc. (HELIX; cont.)
2006b. Jurisdictional Delineation Report for Villages at Wasson Canyon II. April 11.

Hickman, J.C., ed. 1993. The Jepson Manual: Higher Plants of California. University of California Press, Berkeley. 1400 pp.

Holland R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, State of California, Department of Fish and Game, Sacramento. 156 pp.

Knecht, A.A. 1971. Soil Survey of Western Riverside Area, California. USDA, Soil Conservation Service, USDI, and Bureau of Indian Affairs in cooperation with UC Agriculture Experiment Station, Washington D.C. 158 pp. plus appendices and maps.

PCR Services Corporation. 2005a. Results of Focused Coastal California Gnatcatcher Surveys for The Villages II at Wasson Canyon Amendment (Tentative Tract 32537, Riverside County, California. May 25.

2005b. Results of Focused Wet Season Vernal Pool Branchiopod Surveys for The Villages II at Wasson Canyon (TT #32537) Project Site, Riverside County, California. June 20.

2005c. Investigation of Jurisdictional Wetlands and Waters of the U.S. February 7.

2004a. Results of Spring 2004 Sensitive Plant Surveys for The Villages at Wasson Canyon Phase II, Riverside County, California. August 27.

2004b. Survey Report for the Quino Checkerspot Butterfly on the Villages at Wasson Canyon – Phase II Project Site. August 17.

2004c. Results of Focused Coastal California Gnatcatcher Surveys for The Villages II at Wasson Canyon, Tentative Tract 32537, Study Area, Riverside County, California. November 2004.

Roberts, F.M., S.D. White, A.C. Sanders, D.E. Bramlet, and S. Boyd. 2004. The Vascular Plants of Western Riverside County, California, An Annotated Checklist. F.M Roberts Publications, San Luis Rey, CA. 191 pp.

Studt, J.F. 1991. Memorandum: Questions and Answers on 1987 Manual. U.S. Army Corps of Engineers. October 7.

Williams, A.E. 1992. Memorandum: Clarification and Interpretation of the 1987 Manual. U.S. Army Corps of Engineers. March 6.

U.S. Department of Agriculture (USDA) Soil Conservation Service. 1992. Hydric Soil Lists. Field Office Official List of Hydric Soils Map Units for San Diego Area, California. Section II Field Office Technical Guide. Davis, CA.

U.S. Fish and Wildlife Service (USFWS) Branch of Habitat Assessment. 1996. National List of Plant Species that Occur in Wetlands. URL: http://www.nwi.fws.gov/bha/ (in downloadable .pdf format).

2002. Quino Checkerspot Butterfly (*Euphydryas editha quino*) 2002 Survey Protocol Information.

Zeiner, D.C., W. F. Laudenslayer, K. E. Mayer and M. White eds. 1990. California's Wildlife: Volume II - Birds. California Department of Fish and Game. Sacramento, California. 732pp.

APPENDIX A

PLANT SPECIES OBSERVED

Appendix A
PLANT SPECIES OBSERVED –WASSON WEST

FAMILY	SCIENTIFIC NAME	COMMON NAME
DICOTYLEDONES		
Amaranthaceae	*Amaranthus* sp.	pigweed
Anacardiaceae	*Schinus molle*	Peruvian pepper
Asteraceae	*Artemisia californica*	California sagebrush
	Aster subulatus	slender aster
	Baccharis salicifolia	mule fat
	Bebbia juncea var. *aspera*	sweetbush
	Centaurea melitensis	Tocalote
	Centaurea solstitialis	yellow-star thistle
	Deinandra fasciculata	fascicled tarplant
	Deinandra paniculata†	paniculate tarplant
	Encelia farinosa	brittlebush
	Ericameria pinifolia	pinebush
	Filago arizonica	herba impia
	Helianthus annuus	annual sunflower
	Gnaphalium palustre	lowland cudweed
	Isocoma menziesii	coastal goldenbush
	Lactuca seriola	wild lettuce
	Lepidospartum squamatum	scale-broom
	Lessingia filaginfolia	California aster
	Porophyllym gracile	odora
	Psilocarphus brevissimus	wooly marbles
Scrophulariaceae	*Keckiella antirrhinoides*	bush penstemon
	Mimulus guttatus	seep monkey flower
	Uropappus lindleyi	silver puffs
Boraginaceae	*Amsinckia menziesii*	common fiddleneck
	Heliotropium curassavicum	salt heliotrope
	Pectocarya linearis ssp. *ferocula*	slender pectocarya
	Plagiobothryus sp.	popcorn flower
Brassicaceae	*Brassica nigra*	black mustard
	Hirschfeldia incana	short-podded mustard
Cactaceae	*Opuntia parryi*	cane cholla
	Opuntia proliferia	coastal cholla
Caryophyllaceae	*Spergularia* sp.	sand-spurry
Chenopodiaceae	*Salsola tragus*	Russian thistle
Convolvuaceae	*Calystegia macrotegia*	morning glory
Cucurbitaceae	*Cucurbita foetidissima*	calabazilla
Cuscutaceae	*Cuscuta californica*	California dodder

Appendix A (cont.)
PLANT SPECIES OBSERVED –WASSON WEST

FAMILY	SCIENTIFIC NAME	COMMON NAME
DICOTYLEDONES (cont.)		
Euphorbiaceae	*Chamaesyce albomarginata*	rattlesnake weed
	Eremocarpus setigerus	dove weed
Fabaceae	*Lotus scoparius*	deer weed
	Lotus strigosus	strigose lotus
	Medicago polymorpha	bur-clover
Geraniaceae	*Erodium cicutarium*	red-stem filaree
	Erodium moschatum	green-stem filaree
Lamiaceae	*Salvia columbariae*	chia
	Trichostema lanceolatum	vinegar weed
Myrtaceae	*Eucalyptus* sp.	eucalyptus
Nyctaginaceae	*Mirabilis californica*	wishbone brush
Onagraceae	*Clarkia purpurea*	winecup clarkia
Papaveraceae	*Eschscholzia californica*	California poppy
Polygonaceae	*Eriogonum davidsonii*	Davidson's buckwheat
	Eriogonum elongatum var. *elongatum*	long-stemmed buckwheat
	Eriogonum fasciculatum	California buckwheat
	Rumex crispus	curly dock
Ranunculaceae	*Delphinium parryi*	Parry's larkspur
Rubiaceae	*Galium angustifolium*	bedstraw
Tamaricaceae	*Tamarix* sp.	tamarisk
MONOCOTYLEDONES		
Juncaceae	*Juncus bufonius*	toad rush
Liliaceae	*Bloomeria crocea*	golden star
	Calochortus splendens	lilac mariposa lily
	Chlorogalum pomeridianum	soap plant
	Dichelostemma capitatum	blue dicks
Poaceae	*Avena* spp.	oat
	Bromus diandrus	ripgut grass
	Bromus hordeaceus	soft chess
	Hordeum murinum	mouse barley
	Poa secunda	Malpais bluegrass
	Polypogon monspeliensis	annual beard grass
PTERIDOPHYTE		
Selaginellaceae	*Selaginella bigelovii*	Bigelow's mossfern

†Listed or sensitive species

APPENDIX B

ANIMAL SPECIES OBSERVED OR DETECTED

Appendix B
ANIMAL SPECIES OBSERVED OR DETECTED – WASSON WEST

FAMILY	SCIENTIFIC NAME	COMMON NAME
INVERTEBRATES		
Lepidoptera	*Anthocharis sara*	Sara orangetip
	Apodemia mormo virgulti	Behr's metalmark
	Brephidium exilis	western pygmy blue butterfly
	Cupido amyntula	western tailed blue
	Danaus plexippus	monarch
	Erynnis funeralis	funereal dusky-wing
	Junonia coenia	buckeye
	Leptotes marina	marine blue
	Nymphalis antiopa	mourning cloak
	Papilio rutulus	western tiger swallowtail
	Papilio zelicaon	anise swallowtail
	Pieris rapae	cabbage white
	Plebejus acmon	acmon blue
	Pontia protodice	common white
	Pyrgus albescens	western checkered skipper
	Vanessa cardui	painted lady
	Vanessa atalanta	red admiral
VERTEBRATES		
Reptiles		
Colubridae	*Pituophis catenifer*	gopher snake
Phrynosomatidae	*Uta stansburiana*	common side-blotched lizard
Birds		
Accipitridae	*Accipiter striatus*†	sharp-shinned hawk
	Buteo jamaicensis	red-tailed hawk
	Buteo lineatus	red-shouldered hawk
Alaudidae	*Eremophila alpestris actia*†	California horned lark
Apodidae	*Chaetura vauxi vauxi*†	Vaux's swift
Cathartidae	*Cathartes aura*†	turkey vulture
Charadriidae	*Charadrius vociferous*	killdeer
Columbidae	*Columba livia*	rock dove
	Zenaida macroura	mourning dove
Corvidae	*Corvus brachyrhynchos*	American crow
	Corvus corax	common raven
Emberizidae	*Aimophila ruficeps canescens*†	Southern California rufous-crowned sparrow
	Chondestes grammacus	lark sparrow

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED – WASSON WEST

FAMILY	SCIENTIFIC NAME	COMMON NAME
VERTEBRATES (cont.)		
Birds (cont.)		
Emberizidae (cont.)	*Junco hyemalis*	dark-eyed junco
	Passerculus sandwichensis	Savannah sparrow
	Pipilo crissalis	California towhee
	Pipilo maculatus	spotted towhee
	Zonotrichia leucophrys	white-crowned sparrow
Falconidae	*Falco sparverius*	American kestrel
Fringillidae	*Carduelis psaltria*	lesser goldfinch
	Carpodacus mexicanus	house finch
Hirundinidae	*Petrochelidon pyrrhonota*	cliff swallow
	Hirundo rustica	barn swallow
Icteridae	*Sturnella neglecta*	western meadowlark
Laniidae	*Lanius ludovicianus*†	loggerhead shrike
Mimidae	*Mimus polyglottos*	northern mockingbird
Muscicapidae	*Sialia mexicana*	western bluebird
Parulidae	*Dendroica coronata*	yellow-rumped warbler
Passeridae	*Passer domesiticus*	house sparrow
Pelecanidae	*Pelecanus erythrorhynchos*†	American white pelican
Picidae	*Picoides nuttallii*	Nuttall's woodpecker
Podicipedidae	*Podilymbus podiceps*	pied-billed grebe
Sturnidae	*Sturnus vulgaris*	European starling
Sylviidae	*Polioptila californica californica*†	coastal California gnatcatcher
Timaliidae	*Chamaea fasciata*	wrentit
Trochilidae	*Calypte anna*	Anna's hummingbird
	Calypte costae	Costa's hummingbird
Troglodytidae	*Salpincutes obsoletus*	rock wren
	Thryomanes bewickii	Bewick's wren
Tyrannidae	*Sayornis nigricans*	black phoebe
	Sayornis saya	Say's phoebe
	Tyrannus verticalis	western kingbird
	Tyrannus vociferans	Cassin's kingbird
Mammals		
Canidae	*Canis latrans*	coyote
Geomyidae	*Thomomys bottae*	Botta's pocket gopher
Leporidae	*Sylvilagus audubonii*	desert cottontail
Sciuridae	*Spermophilus beecheyi*	California ground squirrel

†Sensitive or listed species

APPENDIX C

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

Appendix C
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

U.S. Fish and Wildlife Service (USFWS)

FE Federally listed endangered
FT Federally listed threatened

California Department of Fish and Game (CDFG)

SE State listed endangered
ST State listed threatened
CSC California species of special concern

Multiple Species Habitat Conservation Plan (MSHCP) Covered

MSHCP Covered indicates that the species is part of a proposed list of species (146 total) considered at this time to be adequately conserved by the Western Riverside MSHCP, provided that participants meet all conditions listed in the Final MSHCP.

California Native Plant Society (CNPS) Codes

Lists

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

Threat Code Extensions

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

.2 - Fairly endangered in California (20-80% occurrences threatened)

.3 - Not very endangered in California (<20% of occurrences threatened or no current threats known)

CA Endemic: CNPS-displayed for those taxa that only occur in California

APPENDIX D

REQUIRED COUNTY OF RIVERSIDE FORMS

BIOLOGICAL REPORT SUMMARY SHEET

(Submit two copies to the County)

Applicant Name: Wasson West, LP

Assessor's Parcel Number (APN) 347330001, -02, -22, -23, -65 through -75, 347360001, -02,

APN cont. : 347530001 through -06, 347531001, 347540001, -02, 377100006, -09, and –10

Site Location: **Section:** 32 **Township** 5 South **Range:** 4 West

Located north of the intersection of Cambern Avenue and Wasson

Site Address Canyon Road

Related Case Number(s) _____ **PDB Number:** _____

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
	Arroyo Southwestern Toad	(Yes)	(No)	(N/A)
	Blueline Stream(s)	(Yes)	No	N/A
	Coachella Valley Fringe-Toed Lizard	Yes	No	(N/A)
	Coastal California Gnatcatcher	(Yes)	No	N/A
	Coastal Sage Scrub	Yes	(No)	N/A
	Delhi Sands Flower-Loving Fly	Yes	No	(N/A)
	Desert Pupfish	Yes	No	(N/A)
	Desert Slender Salamander	Yes	No	(N/A)
	Desert Tortoise	Yes	No	(N/A)
	Flat-Tailed Horned Lizard	Yes	No	(N/A)
	Least Bell's Vireo	Yes	No	(N/A)
	Oak Woodlands	Yes	(No)	N/A

	Quino Checkerspot Butterfly	Yes	(No)	N/A
	Riverside Fairy Shrimp	Yes	(No)	N/A
	Santa Ana River Woolystar	Yes	No	(N/A)
	San Bernardino Kangaroo Rat	Yes	No	(N/A)
	Slender Horned Spineflower	Yes	No	(N/A)
	Stephen's Kangaroo Rat	Yes	No	(N/A)
	Vernal Pools/Seasonal Pond	(Yes)	No	N/A
	Wetlands	(Yes)	No	N/A

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A

Species of concern shall be any unique, rare, endangered, or threatened species. It shall include species used to delineate wetlands and riparian corridors. It shall also include any hosts, perching, or food plants used by any animals listed as rare, endangered, threatened or candidate species by either State, or Federal regulations, or for Riverside County as listed by the California Department of Fish and Game Natural Diversity Data Base (NDDB).

I declare under penalty of perjury that the information provided on this summary sheet is in accordance with the information provided in the biological report.

HELIX Environmental Planning, Inc.	January 22, 2007
Signature and Company Name	Report Date
TE778195	USFWS Permit Renewal Pending
10(a) Permit Number (if applicable)	Permit Expiration Date

County Use Only

Received by:_____ **Date:**_____

PD-B#_____

LEVEL OF SIGNIFICANCE CHECKLIST
For Biological Resources

Case Number: Wasson West **Lot/Parcel No.:** 347330001, -02, -22, -23, -65 through -75, 347360001, -02, 347530001 through -06, 347531001, 347540001, -02, 377100006, -09, and –10 **EA Number**__N/A____

Wildlife & Vegetation

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

(Check the level of impact the applies to the following questions)

a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?

☐ ■ ☐ ☐

b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?

☐ ■ ☐ ☐

c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Wildlife Service?

☐ ■ ☐ ☐

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?

☐ ☐ ☐ ■

e) Have a substantial or adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?

☐ ■ ☐ ☐

f) 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, filing, hydrological interruption, or other means?

☐ ■ ☐ ☐

g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

☐ ☐ ■ ☐

Source: CGP Fig. VI.36-VI.40

Findings of Fact:

The project site is largely undeveloped, but does contain two single-family homes, a mobile home and associated areas. Four sensitive vegetation communities are present on site: disturbed wetland, seasonal ponds, Riversidean sage scrub, and non-native grassland. Corps and CDFG-jurisdictional habitats occur on site and would be impacted by the proposed project. The entire property would be impacted by the proposed project.

The property is located within the MSHCP's Elsinore Area Plan but is not within a Criteria Cell. Therefore, it does not need to meet any conservation goals.