Appendix T Western Riverside County Multiple Species Habitat Conservation Plan Consistency Determination

This appendix contains the following:

- Mid County Parkway MSHCP Consistency Determination Including Determination of Biologically Equivalent or Superior Preservation Analysis (September 2014)
- United States Fish and Wildlife Service response to S. Standerfer regarding clarification of documents that are requested to be sent to the RCA and Wildlife Agencies for review prior to acquisition of mitigation property (October 22, 2014)
- Regional Conservation Authority Joint Project Review (October 6, 2014)
- Wildlife Agencies comments on the Western Riverside County Multiple Species Habitat Conservation Plan Determination of Biologically Equivalent or Superior Protection (DBESP) for the Mid County Parkway Project, Riverside County, California (October 20, 2014)
- Wildlife Agency Informal Discussion Items on JPR and Draft Responses (September 17, 2014)
- Addendum to the MSHCP Consistency Determination and Determination of Biologically Equivalent or Superior Preservation Analysis (Mid County Parkway); from RCTC to the Wildlife Agencies (October 24, 2014)
- Wildlife Agencies concurrence letter on the MCP project's consistency with the Western Riverside County Multiple Species Habitat Conservation Plan (November 14, 2014)

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MID COUNTY PARKWAY MSHCP CONSISTENCY DETERMINATION INCLUDING DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PRESERVATION ANALYSIS (FEBRUARY 2014, REVISED SEPTEMBER 2014)

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MID COUNTY PARKWAY
MSHCP Consistency Determination Including Determination of Biologically Equivalent or Superior Preservation Analysis

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FEBRUARY 2014
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TABLE OF CONTENTS

Section **Page No.**

1 INTRODUCTION 1

2 PROJECT DESCRIPTION 3
- 2.1 Project Location 3
- 2.2 Proposed Project 3
- 2.3 Vegetation Communities 7

3 MSHCP CONSISTENCY ANALYSIS 9
- 3.1 Reserve Assembly 9
- 3.2 Relationship to Reserve Assembly/Criteria Area 10
  - 3.2.1 Existing Constrained Linkage C 10
  - 3.2.2 Proposed Extension of Existing Core 4 11
  - 3.2.3 Proposed Constrained Linkage 20 14
  - 3.2.4 Proposed Noncontiguous Habitat Block 5 15
  - 3.2.5 Proposed Core 3 17
- 3.3 Impacts to PQP Lands 18
- 3.4 Avoidance of Impacts 20

4 COMPLIANCE WITH MSHCP SURVEY REQUIREMENTS 23
- 4.1 Section 6.1.2 Compliance – Riparian, Riverine, Fairy Shrimp, and Vernal Pool Resources 23
  - 4.1.1 Impacts to Functions and Values of Riparian and Riverine Features 25
  - 4.1.2 Riparian Birds (Least Bell's Vireo, Southwestern Willow Flycatcher, and Western Yellow-Billed Cuckoo) 38
  - 4.1.3 Vernal Pools and Fairy Shrimp 38
  - 4.1.4 DBESP for Riparian/Riverine Impacts 39
- 4.2 Section 6.1.3 Compliance – Narrow Endemic Plant Species Survey Area (NEPSSA) 49
  - 4.2.1 DBESP for NEPSSA Species 51
- 4.3 Section 6.3.2 Compliance 57
  - 4.3.1 Criteria Area Species Survey Area (CASSA) Plants 57
  - 4.3.2 DBESP for CASSA species 60
- 4.4 San Bernardino Kangaroo Rat 69
  - 4.4.1 DBESP for San Bernardino Kangaroo Rat 70

TABLE OF CONTENTS (CONTINUED)

Section **Page No.**

4.5 Los Angeles Pocket Mouse 71
4.5.1 DBESP for Los Angeles Pocket Mouse 72
4.6 Burrowing Owl 74
4.6.1 DBESP for Burrowing Owl 75
4.7 Section 6.1.4 Compliance – Urban – Wildlands Interface Guidelines 85
4.8 Section 7.5.1 and 7.5.2 Compliance 86
4.8.1 Section 7.5.1 – Guidelines for the Siting and Design of Planned Roads within the Criteria Area and PQP Lands 87
4.8.2 Section 7.5.2 – Guidelines for Construction of Wildlife Crossings 88
4.9 Section 7.5.3 and Appendix C of MSHCP Compliance 92
4.9.1 Section 7.5.3 Provisions 92
4.9.2 Appendix C Provisions 93

5 REPORTS REFERENCED 97

APPENDICES

A MCP MSHCP Summary Mitigation Matrix
B Supplement to the Natural Environment Study

TABLES

1 Land Cover within the Project BSA, Project Alignment, and Criteria Area 7
2 MSHCP Cores and Linkages within the MCP Project (acres) 10
3 Project Impacts to MSHCP Riparian and Riverine Areas 24
4 Riparian and Riverine Impacts by Vegetation Community 24
5 Riparian and Riverine Mitigation 42
6 Impacts to CASSA Plant Habitats Suitable for Long-Term Conservation 60
7 MSHCP Section 7.5.1 Consistency for MCP Project 87

TABLE OF CONTENTS (CONTINUED)

Page No.

FIGURES

1 Project Location 103
2 Proposed Project and MSHCP Areas 105
3 Vegetation Communities 107
4 Soils Map 109
5 PQP Impacts 111
6a Revised Impacts to Original Footprint 113
6b Revised Impacts to Original Footprint 115
7 Overall MSHCP Riparian Riverine Areas 117
8 Overall Permanent vs. Temporary Riparian/Riverine Impacts 119
9 Permanent Impacts to Riparian/Riverine Areas 121
10 Permanent Impacts to Riparian/Riverine Areas 123
11 Temporary Impacts to Riparian/Riverine Areas 125
12a Permanent Impacts to Riparian/Riverine Areas 127
12b Permanent Impacts to Riparian/Riverine Areas 129
13a Temporary Impacts to Riparian/Riverine Areas 131
13b Temporary Impacts to Riparian/Riverine Areas 133
14 Least Bell's Vireo Locations 135
15a Riparian and Riverine (Unvegetated) Potential Mitigation Areas 137
15b Riverine/Alkali Communities Potential Mitigation Areas 139
16 Impacts to NEPSSA and CASSA Plant Areas of Long-Term Conservation Value 141
17a NEPSSA and CASSA Potential Mitigation Areas - Plan A 143
17b NEPSSA and CASSA Potential Mitigation Areas - Plan B 145
18 San Bernardino Kangaroo Rat Impacts 147
19 LAPM and SBKR Potential Mitigation Areas 149
20a Los Angeles Pocket Mouse Impacts 151
20b Los Angeles Pocket Mouse Impacts 153
21 Burrowing Owl Location 155
22 Wildlife Crossings 157
23a Fencing Plans 159
23b Fencing Plans 161

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Mid County Parkway MSHCP Consistency Determination Including Determination of Biologically Equivalent or Superior Preservation Analysis

1 INTRODUCTION

Riverside County Transportation Commission (RCTC) is a Permittee to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) that was adopted by the County of Riverside in June 2003. As a Permittee, RCTC has the responsibility to implement and adhere to the provisions of the MSHCP as well as the MSHCP Implementing Agreement. The MSHCP is a comprehensive, multijurisdictional habitat conservation plan and Natural Communities Conservation Plan (NCCP) for the conservation of species and their associated habitats in western Riverside County. The MSHCP provides take of listed plant and animal species to Permittees for otherwise lawful activities consistent with MSHCP requirements and terms and conditions. . Take of threatened, endangered, and rare species is authorized by the Wildlife Agencies (USFWS and CDFW). The Wildlife Agencies provided incidental take authorization through the MSHCP for otherwise lawful actions (e.g., public and private projects) in exchange for compliance with provisions of the MSHCP including the assembly and management of a coordinated Conservation Area/Reserve.

The MSHCP plan area encompasses approximately 1.26 million acres and includes all unincorporated land in Riverside County west of the crest of the San Jacinto Mountains to the Orange County line, as well as the jurisdictional areas of the Cities of Eastvale, Jurupa Valley, Wildomar, Menifee, San Jacinto, Hemet, Perris, Calimesa, Beaumont, Banning, Moreno Valley, Riverside, Corona, Norco, Canyon Lake, Lake Elsinore, Murrieta and Temecula. The Conservation Area, or Reserve, will be assembled from the area referred to as the Criteria Area, which consists of one-quarter-section cells of approximately 160 acres, each with specific descriptions, or criteria, identifying the conservation requirements. Figure 1 depicts the location of the Mid County Parkway (MCP) alignment for Alternative 9 (Alt 9) San Jacinto River Bridge Design Variation (SJRB DV) along with the MSHCP Criteria Cells.

The Conservation Area will total 500,000 acres when complete, which is projected to occur by 2028. Of those 500,000 acres, 347,000 acres within the plan area were already being managed such that they provided conservation when time the MSHCP conservation strategy was developed in 2003. These 347,000 acres are referred to as Public/Quasi-Public (PQP) Lands as they are "in public/private ownership and expected to be managed for open space value and/or in a manner that contributes to Conservation of Covered Species." The cities and the County of Riverside, as the Local Permittees, have the responsibility to build out the remaining acreage of the Reserve, which equates to 153,000 acres by 2028. The State/Federal share of conservation is 56,000 of the 153,000 acres. Conservation will be accomplished through private property purchase and dedication through the development and entitlement process.

Since RCTC is an MSHCP Permittee, they have a responsibility to comply with and uphold the goals and objectives of the MSHCP for every project they undertake in western Riverside County. For RCTC, complying with the MSHCP includes contributing funds toward acquisitions of Conservation Land and for complying with the following sections of the MSHCP for every project they undertake:

1. Compliance with the policies for the protection of species associated with riparian/riverine areas and vernal pools in Section 6.1.2 of the MSHCP
2. Compliance with the policies for the protection of Narrow Endemic Plant Species Survey Areas (NEPSSA) in Section 6.1.3 of the MSHCP
3. Compliance with additional survey needs and procedures in Section 6.3.2 of the MSHCP
4. Compliance with the urban–wildlands interface guidelines in Section 6.1.4 of the MSHCP
5. Compliance with the siting and design criteria set forth in Sections 7.5.1 and 7.5.2 of the MSHCP as well as the best management practices (BMPs) in Section 7.5.3 and Appendix C of the MSHCP (Section 13.7 (A) of the MSHCP Implementing Agreement).

This document provides the analysis and compliance with the MSHCP for RCTC's MCP project. Based on the information already provided in the Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS), the project will result in several impacts to species and habitats that will require the preparation of determination of biologically equivalent or superior preservation (DBESP) plans to mitigate for those impacts.

This document also provides an analysis in support of a DBESP for the MCP project (proposed project) with regard to the requirements related to Sections 6.1.2, 6.1.3, and 6.3.2 of the MSHCP.

2 PROJECT DESCRIPTION

2.1 Project Location

The Mid County Parkway project (MCP project; proposed project) generally runs in an east–west direction, located between Interstate 215 (I-215) in the City of Perris, California, and State Route 79 (SR 79) in the City of San Jacinto, near the Ramona Expressway, in northwestern Riverside County, California (Figure 1, Project Location) for approximately 16 miles. The MCP project extends through the City of Perris, the City of San Jacinto and the areas of Lakeview and Nuevo in unincorporated Riverside County.

2.2 Proposed Project

RCTC, in cooperation with the Federal Highway Administration (as the lead agency under the National Environmental Policy Act) and the California Department of Transportation (Caltrans) District 8, proposes to construct the MCP project (proposed project),1 a new highway project in Riverside County, California. The proposed project would provide a major east–west connection for regional movement to western Riverside County, Los Angeles County, and Orange County. In addition, the proposed project would provide a transportation facility that would effectively and efficiently accommodate regional east–west movement of people and goods between and through San Jacinto, Perris, and Corona, California. A natural environment study (NES) was prepared in 2008 by LSA Associates Inc. (LSA) that studied the proposed 32-mile highway project. The proposed project has since been modified down to 16 miles and a supplemental NES (SNES) was prepared by LSA in 2011.

The MCP project is proposed to be an approximately 16-mile-long, six-lane controlled-access freeway. The right of way width for the facility ranges typically from 200 feet to 350 feet. At locations of basins, in large cut or fill, and system interchange connector's right of way width ranges typically from 400 feet to 700 feet. At interchange locations the width varies from 350 feet to approximately 1700 feet width for on and off ramps. The width varies due to the terrain and required roadway features. The facility would generally have three lanes in each direction with a wide (62-foot) median per Caltrans Highway Design Manual standard 305.1. It would generally follow a southerly alignment through the City of Perris along Placentia Avenue to the Ramona Expressway and terminate in the City of San Jacinto at SR 79 (see Figure 2, Proposed Project and MSHCP Areas). System interchanges are proposed at I-215 and SR 79 and service interchanges are also proposed at the following locations: Placentia Avenue, Redlands Avenue,

[1] Alternative 9 San Jacinto River Bridge Design Variation has been assumed to be selected as the preferred alternative and is therefore considered the MCP project for purposes of this document.

Evans Road, Ramona Expressway/Antelope Road, Bernasconi Road, Reservoir Avenue, Town Center Boulevard, Park Center Boulevard, Warren Road, and SR 79. Accommodations will also be made for existing local circulation to remain in place, where possible, such as at Martin Street in the Lakeview Area. Construction of the MCP project is estimated to take approximately 48 months. The MCP project is planned to be constructed as a single phase, although the RDEIR/SDEIS did identify three potential phases in response to comments to the RDEIR/RDEIS. The MCP project would also include the construction of bridges in the Lakeview Nuevo area crossing the San Jacinto River. This analysis includes the SJRB DV Bridge, which is shorter than the base-case bridge presented in the original RDEIR/SDEIS. Analyzing the shorter SJRB DV Bridge represents a worst-case scenario for MSHCP Consistency. For most MSHCP-related resources evaluated in this report, there are no differences between the impacts between the base-case alignment (i.e., a longer bridge over the San Jacinto River in the Lakeview area as described in the SDEIR/SDEIS), and the SJRB DV. The one place where the SJRB DV has more impacts is to the alkali communities along the San Jacinto River floodplain; the SJRB DV results in 6-acres more impacts (e.g., grading and other roadway improvements) than does the base-case bridge. The SJRB DV consists of two bridges for westbound lanes and two bridges for eastbound lanes. There would be in each direction: a 531-foot bridge spanning Martin Street and a portion of the San Jacinto River, followed by a fill section 323 feet in length, followed by a 1,941-foot bridge spanning another portion of the San Jacinto River, followed by a fill section 1,526 feet in length. All four of the bridges would be 60 feet in width with parallel west and east bound lanes separated by a 38-foot open section. Figure 3.9.5 in the February 2013 RDEIR/SDEIS provides a plan view of bridge configuration. The existing Ramona Expressway, including the bridge will remain in place and become part of a frontage road. The existing bridge is located north (upstream) approximately 14 feet from the proposed bridges. The proposed MCP Bridge over the San Jacinto River is within the Western Riverside County MSHCP Criteria Area and would accommodate wildlife movement within the San Jacinto River floodplain. The SJRB DV has a total of 36 columns on the San Jacinto River. Each column has a diameter of 7 feet. Each column has an area of 38.4845 square feet. The total area of all the columns for the SJRB DV would be 1,385 square feet.

Additionally, bridges are proposed for all major river/stream crossings, including Perris Drain (a.k.a. Perris Valley Storm Drain) and the San Jacinto River at the SR-79. Bridges will be constructed to Caltrans design standards. The proposed 800-foot bridge over Perris Drain would range between 17 feet to 41 feet in height. The bridge crossing of the Perris Drain would accommodate all proposed future improvements to the Perris Drain with minimal effect on the channel. All abutments are located outside the channel and jurisdictional federal and state areas; however, some bridge columns will be placed in these jurisdictional areas.

All bridges, including the bridges over the San Jacinto River at Lakeview, will require ongoing regular maintenance and inspection. The type of maintenance and inspection activities associated with the bridges would include visual inspections for seismic and other safety concerns such as scour and debris build up. The visual inspections will be conducted on foot, and vehicle staging areas can be accommodated along the MCP facility right of way, or from existing roadways. No additional permanent impacts associated with the maintenance activities for the MCP bridges are expected above those permanent impacts already analyzed herein.

The MCP also includes improvements to Interstate 215 (I215) freeway, improvements to existing interchanges and the addition of an interchange at I-215/MCP and interchange at I-215/Placentia Avenue. A freeway to freeway interchange is proposed for I-215/MCP. The I-215/MCP interchange connects MCP to I-215 approximately 150 feet south of Placentia Avenue Overcrossing. The freeway to freeway interchange is proposed as a three-level interchange, and the proposed design will not preclude possible future connectors to the west. At its highest point, the interchange would be approximately 75 to 100 feet above ground level. The existing railroad tracks west of I-215 are proposed to remain in place.

Other improvements to I 215 include: the addition of one auxiliary lane between the I-215/MCP systems interchange and the adjacent service interchange to the north, Cajalco Road/Ramona Expressway, and south, Nuevo Road to facilitate movement between the MCP and I-215; the addition of an operational/mixed-flow lane from MCP to the Van Buren Boulevard Interchange to accommodate additional traffic on I-215 as a result of the MCP; the addition of an operational/mixed-flow lane from Nuevo Road to Cajalco Road/Ramona Expressway to facilitate weaving on I-215; the addition of a new interchange at Placentia Avenue; and modification of the existing interchange at Cajalco Road/Ramona Expressway and restriping at the existing Nuevo Road interchange. At the Cajalco Road/Ramona Expressway, the existing ramps are widened and or relocated. The existing Cajalco Road/Ramona Expressway road between Harvill Avenue and Webster Avenue is widened where required for future volumes per the Federal Highway Administration. The FHWA requires sufficient number of lanes from intersection to intersection to prevent any overflow of traffic on to the ramps and interstate system.

Other MCP project features include installation of retaining walls, sound walls, fencing and median barriers, drought-tolerant plant species and landscaping, drainage culverts, and transverse railroad crossing improvements. Construction and maintenance agreements between RCTC and Burlington Northern Santa Fe will be required for the railroad improvement.

The existing Ramona Expressway crosses the San Jacinto River in the MCP study area. With implementation of the Mid County Parkway the existing Ramona Expressway crossing over the

San Jacinto River is accommodated. The existing roadway and bridge will remain in place and will not be modified or impacted by the Mid County Parkway.

The Ramona Expressway currently is a 2 to 6 lane facility from I-215 in the City of Perris proceeding east around the south portion of Lake Perris and continuing east until it joins Sanderson Road/SR-79 in City of San Jacinto. Between I-215 and Sanderson/SR-79 portions of the Ramona Expressway remain in place, while other portions are completely removed and replaced by the Mid County Parkway. There are three areas where the Ramona Expressway remains in place: 1) from I-215 to Antelope Road, almost directly south of Lake Perris; 2) from Martin Street to approximately 1 mile east of the center of San Jacinto River connecting to Reservoir Road; 3) from Warren Road to Sanderson Road/SR-79 Ramona Expressway.

In the area of Ramona Expressway to remain and cross the San Jacinto River, the existing roadway joins Martin Street on the west and joins an extended Ramona Expressway roadway to be constructed as part of the Mid County Parkway that terminates at Reservoir Ave on the east.

After the release of the SDEIR/SDEIS, and as part of the Section 4(f) process under the Department of Transportation Act, RCTC evaluated alignment shifts in order to avoid impacting a parcel of land currently owned by the California Department of Fish and Wildlife. This 3.4 acre of land is considered a part of the San Jacinto Wildlife Area, although it is a stand-along parcel not contiguous with the rest of the San Jacinto Wildlife Area. The San Jacinto Wildlife Area and therefore lands owned by California Department of Fish and Wildlife area considered Public/Quasi Public Lands under the MSHCP. The impacts to the 3.4 acres not only need to be addressed per Section 4(f), but also through the PQP replacement process under the MSHCP (discussed further in Section 3.3 of this document). The MCP project consists of an approximately 1.5 mile long segment between Bernasconi Road and Antelope Road that would have impacted a portion of the 3.4-acre parcel. The MCP has been realigned slightly to the south of the MCP Alt 9 SJRB DV alignment addressed in the RDEIR/SDEIS. The intent of this proposed realignment is to avoid the permanent impact of 3.4 acres of land from the San Jacinto Wildlife Area, which is a PQP land and is protected under the requirements of Section 4(f) of the Department of Transportation Act (now codified at 49 USC 303). This document analyzes the impacts associated with this alignment shift of MCP Alt 9 SJRB DV associated with the 1.5 mile segment between Bernasconi Road and Antelope Road.

This consistency analysis is based on Alt 9 SJRB DV as the MCP Project. Should another alternative be selected in the future, replacing Alt 9 SJRB DV as the preferred alignment, as well as the agreed upon Least Environmentally Damaging Project Alternative (LEDPA) by the

Federal Agencies, then RCTC will need to amend this document and coordinate accordingly with the Regional Conservation Authority (RCA) and the Wildlife Agencies.

2.3 Vegetation Communities

Land cover within the biological study area (BSA) for the project includes cropland, dairy, lake/pond, developed/ruderal, Riversidean upland sage scrub, non-native grassland, alkali grassland, marsh, riparian forest, and riparian scrub. Table 1 breaks down the land cover within the BSA and project study area. See Section 3.17.2.2 of the RDEIR/SDEIS for a detailed discussion of these land covers. Figure 3, Vegetation Communities, depicts the various land covers along the project biological study area and project alignment.

Table 1
Land Cover within the Project BSA, Project Alignment, and Criteria Area

MCP Land Cover Category	Acres within the BSA	Acres within Alt 9 SJRB DV	Acres within Criteria Area
Cropland	2,149.0	512.3	99.6
Dairy	266.2	23.9	8.3
Lake/pond	7.1	1.4	0
Developed/ruderal	1,361.9	484.7	64.1
Riversidean upland sage scrub	203.8	86.3	3.4
Non-native grassland	169.6	38.4	1.6
Alkali grassland	266.3	69.6	19.2
Marsh	2.6	0.2	0.2
Riparian forest	13.2	3.2	2.9
Riparian scrub	35.4	1.5	1.3
Total	**4,475.1**	**1,221.5**	**217.8**

Source: LSA 2014
BSA = biological study area; Alt = Alternative; SJRB DV = San Jacinto River Bridge Design Variation

Table 1
Land Cover within the Project BSA, Project Alignment, and Criteria Area

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Cropland	2,149.0	512.3	99.6
Dairy	266.2	23.9	8.3
Lake/pond	7.1	1.4	0
Developed/ruderal	1,361.9	484.7	64.1
Riversidean upland sage scrub	203.8	86.3	3.4
Non-native grassland	169.6	38.4	1.6

Table 1
Land Cover within the Project BSA, Project Alignment, and Criteria Area

MCP Land Cover Category	Acres within the BSA	Acres within Alt 9 SJRB DV	Acres within Criteria Area
Alkali grassland	266.3	69.6	19.2
Marsh	2.6	0.2	0.2
Riparian forest	13.2	3.2	2.9
Riparian scrub	35.4	1.5	1.3
Total	**4,475.1**	**1,221.5**	**217.8**

Source: LSA 2014
BSA = biological study area; Alt = Alternative; SJRB DV = San Jacinto River Bridge Design Variation

Soils

Soils within the project study area are shown on Figure 4, Soils Map.

3 MSHCP CONSISTENCY ANALYSIS

As discussed previously, RCTC is an MSHCP Permittee and is therefore required to ensure consistency with the MSHCP for any project it undertakes. The MSHCP planning analysis included evaluations of planned roadways with respect to conservation of biological resources and in the context of the MSHCP Conservation Area. The MCP project is part of the east–west Community and Environmental Transportation Acceptability Process (CETAP) Corridor for the Hemet to Corona/Lake Elsinore Corridor. Impacts resulting from this CETAP Corridor to the Criteria Area and PQP Lands were taken into account during the preparation of the MSHCP. Sections 7.2.2 and 7.3.5 of the MSHCP outline guidelines for planned roadways to ensure that those roadways are consistent with the MSHCP conservation objectives. The project as evaluated herein is consistent with the Covered Activities/Planned Roads in Sections 7.2.2 and 7.3.5 of the MSHCP, and the MCP project is, therefore considered a Covered Activity.

The set aside of land through the development/entitlement process is one of the ways the conservation of the 153,000 acres of Additional Reserve Lands (ARL) will occur. Because the MCP project is an MSHCP Covered Activity, and as described above, the project was expected to be located within the MSHCP plan area and to go through the Criteria Area. In other words, the impacts of the MCP project were already considered when the MSHCP was adopted in 2003; therefore, the impacts to covered species from the MCP were included in the take analysis conducted for the MSHCP and no mitigation other than what is described below in the DBESP portions of this report is needed for impacts to covered species as a result of the MCP project.

As an MSHCP Covered Activity (Sections 7.1, 7.2.2, and 7.3.5 of the MSHCP and Figure 7-1) the project needs to demonstrate compliance with Sections 6.1.2, 6.1.3, 6.1.4, 6.3.2, 7.5.1, 7.5.2 and 7.5.3 of the MSHCP. Because the MCP is a transportation project, complete avoidance of impacts to the biological resources protected by the policies in the MHSCP sections above; however, impacts on these resources have been minimized to the extent practicable (See Section 4.6 through 4.8 below).

3.1 Reserve Assembly

The MCP alignment crosses through four MSHCP Reserve Features. As a transportation Covered Activity, the MCP project is not required to set aside land to contribute to Conservation of these Reserve Features; instead, the MCP project is to ensure that its design and features keep these Reserve Features in mind so that impacts are minimized and reduced as much as possible to ensure the viability of the features. The MCP project is required, however, to consider its

relationship to the Reserve. Table 2 shows the range of direct impacts to the MSHCP Cores and Linkages in the project BSA.

Table 2
MSHCP Cores and Linkages within the MCP Project (acres)

MSHCP Cores and Linkages	Impacts (acres)
Proposed Constrained Linkage 20	12–13
Existing Constrained Linkage C	2–3
Proposed Extension of Existing Core 4	43–44
Proposed Noncontiguous Habitat Block 5	8–9

Source: LSA 2014

3.2 Relationship to Reserve Assembly/Criteria Area

The MCP project (Alt 9 SJRB DV) would traverse Existing Constrained Linkage C, Proposed Extension of Existing Core 4, Proposed Constrained Linkage 20, Proposed Noncontiguous Habitat Block 5, and Proposed Core 3 of the MSHCP Conservation Area (see Figure 2) and would traverse Cells 2442, 2347, 2348, 2251, 2252, 2253, 2349, 2258, 2259, 2355, 2357, 2261, 2358, 2266, 2363, 2267, and 2364 (see Figure 2, Proposed Project and MSHCP Areas).

3.2.1 Existing Constrained Linkage C

As stated in Section 3.2.3 of the MSHCP, "Existing Constrained Linkage C consists of the middle segment of the San Jacinto River, located in the northeast region of the plan area. This Public/Quasi-Public Linkage connects Proposed Core 5 in the east (upper San Jacinto River area) with Proposed Constrained Linkage 20 to the west. It is also connected to Proposed Core 3 (Badlands/Potrero area) via Proposed Constrained Linkage 21. Like Existing Constrained Linkage B (Salt Creek), Existing Constrained Linkage C is constrained on all sides by existing Development, has large amounts of area potentially affected by edge (approximately 240 acres of the total 245 acres), and possesses a high P/A ratio (230 feet per acre). However, unlike Salt Creek, Existing Constrained Linkage C is largely surrounded by an open space/conservation planned land use. Thus Edge Effects may not affect the Linkage to such a strong degree. In areas of the Linkage bordering a planned land use designated city, however, treatment and management of edge conditions along the Linkage will still be necessary to ensure that it provides Habitat and movement functions for species using the Linkage. Furthermore, maintenance of existing floodplain processes along the San Jacinto River is important for a number of sensitive species including arroyo toad, LAPM [Los Angeles pocket mouse],

mountain plover, white-faced ibis, San Jacinto Valley crownscale, Parish's brittlescale, Davidson's saltscale, thread-leaved brodiaea, Coulter's goldfields, and spreading navarretia."

Lands within Existing Constrained Linkage C are a PQP Linkage. PQP Lands replacement, discussed later in the report (Section 3.3.1), would be required for project- related impacts (see Table 2). Implementation of the MCP project, including the proposed mitigation, would not substantially impact the Conservation goals or function of Existing Constrained Linkage C.

3.2.2 Proposed Extension of Existing Core 4

As stated in Section 3.2.3 of the MSHCP, "Proposed Extension of Existing Core 4 is comprised of the middle reach of the San Jacinto River and is contiguous with Core Area in Lake Perris Recreation Area. It provides Habitat for a number of Narrow Endemic Plant Species and movement for species connecting to Lake Perris and areas downstream of the San Jacinto in Canyon Lake. Planning Species for which Habitat is provided for within this Proposed Extension of Existing Core 4 include San Jacinto Valley crownscale, thread-leaved brodiaea, arroyo toad and Los Angeles pocket mouse. Maintenance of floodplain processes along the San Jacinto River, as well as maintenance of habitat quality of vernal pool complexes and the Traver-Willow-Domino soils supporting plant species including San Jacinto Valley crownscale, Davidson's saltscale, thread-leaved brodiaea, Coulter's goldfields, Wright's trichocoronis, and spreading navarretia, are important for these species. Areas not affected by edge total approximately 2,890 acres of the total 3,330 acres occupied by this Extension of Existing Core. Since Proposed Extension of Existing Core 4 may be affected by edge, treatment and management of edge conditions will be necessary to ensure that it provides Habitat and movement functions for species using this Core. Flood control activities associated with the Community Development land use designation and major Covered Activities may adversely affect Planning Species known to occur within the San Jacinto River."

The MCP project alignment traverses the Criteria Cells 2442, 2347, 2251, 2252, and 2253. Conservation in these cells is to contribute to the assembly of Proposed Extension of Existing Core 4. Each cell is discussed below.

3.2.2.1 Cell 2442

Cell 2442 is part of Cell Group G. Section 3.3.8 of the MSHCP states: "Conservation within Cell Group G will contribute to assembly of Proposed Extension of Existing Core 4. Conservation within Cell Group G will focus on playas/vernal pool habitat adjacent to the San Jacinto River. Areas conserved within Cell Group G will be connected to playas/vernal pool habitat proposed

for conservation in Cell Groups F to the south, I to the north and H to the east. Conservation within Cell Group G will range from 50% to 60% of the Cell Group focusing in the eastern portion of the Cell Group."

A portion of the MCP project area is located in the northwestern portion of Cell Group G, not the eastern portion of the Cell Group described for Conservation. Therefore, this portion of the MCP project would not preclude the Reserve Assembly goals of the MSHCP.

3.2.2.2 Cell 2347

Cell 2347 is part of Cell Group I. Section 3.3.8 of the MSHCP states: "Conservation within Cell Group I will focus on playas/vernal pool and grassland habitat adjacent to the San Jacinto River. Areas conserved within Cell Group I will be connected to grassland and playas/vernal pool habitat proposed for conservation in Cell 2251 to the north and to playas/vernal pool habitat proposed for conservation in Cell Groups G and H to the south and in Cell 2349 to the east. Conservation within Cell Group I will range from 60% to 70% of the Cell Group focusing in the eastern portion of the Cell Group."

A portion of the MCP project area is located in the north-central and northeastern portion of Cell Group I. Only partial acquisition would occur within this portion of the project area. The MCP project is depicted on Figure 7-1 of the MSHCP and is therefore considered a Covered Activity, since the footprint of the circulation element roads and CETAP corridors were accounted for in the MSHCP analysis. The project will provide mitigation for impacts to the alkali communities impacted in this area, as described under Section 6.1.2 Compliance in this document. By providing for additional lands that support alkali communities, which are sought in this Criteria Cell, the project will further the goals of the MSHCP. Additionally, construction of the MCP project in this area will not prevent or preclude the ability of lands to be Conserved in this area.

3.2.2.3 Cell 2251

Part of the MCP alignment is located within Cell 2251. As stated in Section 3.3.8 of the MSHCP, "Conservation within Cell 2251 will contribute to assembly of Proposed Extension of Existing Core 4. Conservation within Cell 2251 will focus on playas/vernal pool and grassland habitat adjacent to the San Jacinto River. Areas conserved within Cell 2251 will be connected to playas/vernal pool habitat proposed for conservation in Cell Group I to the south and in Cell 2252 to the east and 2349 to the southeast. Conservation within Cell 2251 will range from 35% to 45% of the Cell focusing in the southern portion of the Cell."

A portion of the MCP project area is located in the northern, western, southern, and central portion of Cell 2251. The MCP project is depicted on Figure 7-1 of the MSHCP and is therefore considered a Covered Activity. The project will provide mitigation for impacts to the alkali communities impacted in this area, as described under Section 6.1.2 Compliance in this document. By providing for additional lands that support alkali communities, which are sought in this Criteria Cell, the project will further the goals of the MSHCP. Additionally, since the MCP project has considered its impacts on wildlife movement, planning species, ecotones, and habitats, it will not adversely affect the Reserve Assembly goals of the MSHCP. Construction of the MCP project in this area will not prevent or preclude the ability of lands to be Conserved in this area.

3.2.2.4 Cell 2252

Part of the MCP alignment is within Cell 2252. As stated in Section 3.3.8 of the MSHCP, "Conservation within Cell 2252 will contribute to assembly of Proposed Extension of Existing Core 4. Conservation within Cell 2252 will focus on playas/vernal pool habitat and agricultural land adjacent to the San Jacinto River. Areas conserved within Cell 2252 will be connected to playas/vernal pool habitat proposed for conservation in Cell Group I to the southwest and in Cell 2251 to the west and 2349 to the south and to agricultural land proposed for conservation in Cell 2253 to the east. Conservation within Cell 2252 will range from 40% to 50% of the Cell focusing in the southern portion of the Cell."

A portion of the MCP project area is located in the southern half of Cell 2252. The MCP project is depicted on Figure 7-1 of the MSHCP and is therefore considered a Covered Activity. The project will provide mitigation for impacts to the alkali communities impacted in this area, as described under Section 6.1.2 Compliance in this document. By providing for additional lands that support alkali communities, which are sought in this Criteria Cell, the project will further the goals of the MSHCP. Additionally, since the MCP project has considered its impacts on wildlife movement, planning species, ecotones, and habitats, it will not adversely affect the Reserve Assembly goals of the MSHCP. Construction of the MCP project in this area will not prevent or preclude the ability of lands to be Conserved in this area.

3.2.2.5 Cell 2253

Part of the MCP alignment is within Cell 2253. As stated in Section 3.3.8 of the MSHCP, "Conservation within Cell 2253 will contribute to assembly of Proposed Extension of Existing Core 4. Conservation within Cell 2253 will focus on agricultural land adjacent to the San Jacinto River. Areas conserved within Cell 2253 will be connected to agricultural land proposed for

conservation in Cell 2252 to the west and 2349 to the southwest. Conservation within Cell 2253 will range from 10% to 20% of the Cell focusing in the southwestern portion of the Cell."

A portion of the MCP project area is located in the southern half of Cell 2253. The MCP project is depicted on Figure 7-1 of the MSHCP and is therefore a Covered Activity. The project will provide mitigation for impacts to the alkali communities impacted in this area, as described under Section 6.1.2 Compliance in this document. By providing for additional lands that support alkali communities, which are sought in this Criteria Cell, the project will further the goals of the MSHCP. Additionally, since the MCP project has considered its impacts on wildlife movement, planning species, ecotones, and habitats, it will not adversely affect the Reserve Assembly goals of the MSHCP. Construction of the MCP project in this area will not prevent or preclude the ability of lands to be Conserved in this area.

3.2.3 Proposed Constrained Linkage 20

As stated in Section 3.2.3 of the MSHCP, "Proposed Constrained Linkage 20 is located approximately in the north-central region of the plan area. Proposed Constrained Linkage 20 connects Existing Core H (Lake Perris) in the north with Proposed Noncontiguous Habitat Block 5 (Lakeview Mountains) in the south. Maintenance of this connection is important to reduce the likelihood of species extirpation as a result of population isolation for species occurring in the Lakeview Mountains. Existing agricultural use currently constrains this Linkage since it has converted natural vegetation to agricultural, and the proposed General Plan land use designation surrounding the Linkage is currently agriculture. The extension/widening of Bridge Street and the proposed alignment of the Hemet to Corona/Lake Elsinore CETAP Corridor may also compromise the integrity of Proposed Constrained Linkage 20 by adding to Edge Effects contributed by surrounding land use practices. Counteracting these potentially strong Edge Effects, however, are the dimensions of this Linkage. Proposed Constrained Linkage 20 has one of the lowest P/A ratios (60 feet per acre) of all MSHCP Cores and Linkages and a high proportion of its area represented as interior (approximately 270 of the total 360 acres). Thus the Linkage can be expected to provide Live-In and movement Habitat for species..... Nevertheless, treatment and management of edge conditions along Proposed Constrained Linkage 20 will be necessary to ensure that it provides Habitat and movement functions for species using the Linkage. Maintenance of wetland functions and values is important for Narrow Endemic Plant Species known to occur in the Mystic Lake area."

The following Criteria Cells are traversed by the MCP project alignment and contribute to Proposed Constrained Linkage 20:

3.2.3.1 Cell Group L

Part of the MCP alignment is located within Cells 2258 and 2259, and slightly within Cells 2355 and 2357, all of which are part of Cell Group L. As stated in Section 3.3.8 of the MSHCP, "Conservation within Cell Group L will contribute to assembly of Proposed Constrained Linkage 20 and Proposed Noncontiguous Habitat Block 5. Conservation within Cell Group L will focus on a mosaic of habitat types including chaparral, coastal sage scrub, grassland, riparian scrub, woodland and forest habitat. Areas conserved within Cell Group L will be connected to chaparral and coastal sage scrub habitat proposed for conservation in Cell 2555, 2767 and Cell Groups N, O, P all to the west and in Cell Groups N and B' in the San Jacinto Valley Area Plan to the east, to riparian scrub, woodland and forest habitat and agricultural land proposed for conservation in Cell Group K to the north and to chaparral habitat proposed for conservation in Cell Group A', Cell 2663 and 2768 in the San Jacinto Valley Area Plan to the east and in Cell 3187 in the San Jacinto Valley Area Plan to the south. Conservation within Cell Group L will range from 65% to 75% of the Cell Group."

A portion of the MCP project area is located in the northern portion of Cell Group L, specifically in Cells 2258 and 2259. Since the MCP project is depicted on Figure 7-1 of the MSHCP, it is considered a Covered Activity as long as it is designed in a way to be compatible with Reserve Features. As discussed below in more detail, the MCP project planning has taken Proposed Constrained Linkage 20 into consideration and designed a large underground culvert (12 feet high by 20 feet wide by 210 feet long) to allow for Conservation Areas proposed to the south of the MCP project to be connected with areas to be Conserved in the future on the north side of the MCP alignment (see Figure 22 and further discussion in Section 4.8.2 of this document). Additionally, since the MCP project has accounted for its impacts on wildlife movement, planning species, ecotones, and habitats, it will not adversely affect the Reserve Assembly goals of the MSHCP (see discussion below in Section 4.7.2 below). Construction of the MCP project in this area will not prevent or preclude the ability of lands to be Conserved in this area.

3.2.4 Proposed Noncontiguous Habitat Block 5

As stated in Section 3.2.3 of the MSHCP, "Proposed Noncontiguous Habitat Block 5 consists of the Lakeview Mountains, located approximately in the center of the plan area. This habitat block is connected to other MSHCP conserved lands via Proposed Constrained Linkage 20. The Lakeview Mountains are located 1.2 miles from the nearest connected Core (Existing Core H,

Lake Perris/Mystic Lake). Private lands comprise the vast majority of lands in the habitat block, but a few small parcels of Public/Quasi-Public Lands are also present. The Lakeview Mountains represent a large block of Habitat, which has a low perimeter to area (P/A) ratio and contains only 900 of the total approximately 7,150 acres as edge area. As such, this Noncontiguous Habitat Block supports planning species including Bell's sage sparrow, burrowing owl, bobcat, and LAPM [Los Angeles pocket mouse]. Since surrounding land uses include a substantial amount of city and agriculture, and one alternative for the Highway 79 Realignment Corridor would impact the habitat block, treatment and management of edge conditions in these affected areas will be necessary to ensure that it maintains high quality sage scrub Habitat, particularly for the Bell's sage sparrow."

The following Criteria Cells are traversed by the MCP project alignment, and contribute to Proposed Noncontiguous Habitat Block 5:

3.2.4.1 Cell Group L

Part of the MCP alignment is located within Cells 2258, 2259, and slightly within Cells 2355 and 2357, which are part of Cell Group L. As stated in Section 3.3.8 of the MSHCP, "Conservation within Cell Group L will contribute to assembly of Proposed Constrained Linkage 20 and Proposed Noncontiguous Habitat Block 5. Conservation within Cell Group L will focus on a mosaic of habitat types including chaparral, coastal sage scrub, grassland, riparian scrub, woodland and forest habitat. Areas conserved within Cell Group L will be connected to chaparral and coastal sage scrub habitat proposed for conservation in Cell 2555, 2767 and Cell Groups N, O, P all to the west and in Cell Groups N and B' in the San Jacinto Valley Area Plan to the east, to riparian scrub, woodland and forest habitat and agricultural land proposed for conservation in Cell Group K to the north and to chaparral habitat proposed for conservation in Cell Group A', Cell 2663 and 2768 in the San Jacinto Valley Area Plan to the east and in Cell 3187 in the San Jacinto Valley Area Plan to the south. Conservation within Cell Group L will range from 65% to 75% of the Cell Group."

A portion of the MCP project area is located in the northern portion of Cell Group L, specifically in Cells 2258 and 2259. Since the MCP project is depicted on Figure 7-1 of the MSHCP, it is considered a Covered Activity as long as it is designed in a way to be compatible with Reserve features. As discussed below in more detail, the MCP project planning has taken Proposed Constrained Linkage 20 into consideration and designed a large underground culvert (12 feet high by 20 feet wide by 210 feet long) to allow Conservation Areas proposed to the south of the MCP alignment to connect with areas to be Conserved in the future on the north side of the MCP project (see Figure 22). Since the MCP project has considered its impacts on wildlife movement,

planning species, ecotones, and habitats, and has provided a crossing for wildlife under the MCP project that contributes to Proposed Constrained Linkage 20, it will not adversely affect the Reserve Assembly goals of the MSHCP (see Section 4.7.2 below for more information). The MCP in this area will also not preclude the ability of lands to be conserved in accordance with the Criteria for this Cell Group.

3.2.4.2 Cell Group N

Part of the MCP alignment is located within Cells 2261 and 2358, which is part of Cell Group N. As stated in Section 3.3.13 of the MSHCP, "Conservation within Cell Group N will contribute to assembly of Proposed Noncontiguous Habitat Block 5. Conservation within Cell Group N will focus on chaparral, coastal sage scrub, and grassland habitat. Areas conserved within Cell Group N will be connected to chaparral and coastal sage scrub habitat proposed for conservation in Cell Group U to the east, to chaparral habitat proposed for conservation in Cell 2663 to the south, and to chaparral, coastal sage scrub, and grassland habitat proposed for conservation in Cell Group L in the Lakeview/Nuevo Area Plan to the west. Conservation within Cell Group N will range from 25% to 35% of the Cell Group focusing in the southern portion of the Cell Group."

A portion of the MCP project area is located in the central portion of Cell Group N, not the southern portion of the Cell Group described for Conservation. As discussed below in more detail, the MCP project planning has taken Proposed Constrained Linkage 20 into consideration and designed a large underground culvert (12 feet high by 20 feet wide by 210 feet long) to allow Conservation Areas proposed to the south of the MCP project to connect with areas to be Conserved in the future on the north side of the MCP alignment (see Figure 22). Construction of the MCP project in this area will not preclude the ability of lands to be conserved in accordance with the Criteria for this Cell Group.

3.2.5 Proposed Core 3

As stated in Section 3.2.3 of the MSHCP, "Proposed Core 3 (Badlands/Potrero) is located in the northeast region of the plan area. Proposed Core 3 consists mainly of private lands but also contains a few Public/Quasi-Public parcels including De Anza Cycle Park. Proposed Core 3 is connected to Proposed Linkage 12 (north San Timoteo Creek), Proposed Linkage 4 (Reche Canyon), Proposed Constrained Linkage 22 (east San Timoteo Creek), Existing Core H (Lake Perris), Existing Core K (San Jacinto Mountains), Proposed Linkage 11 (Soboba/Gilman Springs), and Proposed Constrained Linkage 21. Proposed Core 3 also functions as a Linkage, connecting the San Bernardino National Forest to the southwest with San Bernardino County and other conserved areas to the north of the Core. With a total acreage of approximately 24,920

acres, Proposed Core 3 is one of the largest MSHCP Core Areas. In addition, Proposed Core 3 is contiguous with Existing Core H (Lake Perris/Mystic Lake) and Existing Core K (San Jacinto Mountains), thus greatly enlarging the functional area of the Core. The Core has both a large proportion of its area unaffected by edge (approximately 23,420 acres of the total 24,940 acres) and is only partially constrained by existing agricultural use. Within Proposed Core 3, important Live-In and movement Habitat is provided for Bell's sage sparrow, loggerhead shrike, cactus wren, Stephens' kangaroo rat, Southern California rufous-crowned sparrow, and mountain lion, which have key populations in the Badlands. Management of edge conditions will be necessary in the Badlands to maintain high quality Habitat for these species in areas which may be affected by covered facilities including Lambs Canyon Road, San Timoteo Canyon Road, and Gilman Springs Road."

The following Criteria Cells are traversed by the MCP project alignment, and contribute to Proposed Core 3:

3.2.5.1 Cell Group M

Part of the MCP alignment is located within Cells 2267 and 2364, which are part of Cell Group M. As stated in Section 3.3.13 of the MSHCP, "Conservation within Cell Group M will contribute to assembly of Proposed Core 3. Conservation within Cell Group M will focus on chaparral and coastal sage scrub habitat. Areas conserved within Cell Group M will be connected to chaparral and coastal sage scrub habitat proposed for conservation in Cell Groups L to the west, F to the north, O to the east, and in Cell Group B in the Pass Area Plan also to the east. Conservation within Cell Group M will range from 35% to 45% of the Cell Group focusing in the northern portion of the Cell Group."

A portion of the MCP project is located in the southern portion of Cell Group M, not the northern portion of the Cell Group. Since the MCP project is depicted on Figure 7-1 of the MSHCP, it is considered a Covered Activity as long as it is designed in a way to be compatible with Reserve Features. As discussed below in more detail, the MCP project planning has taken Proposed Core 3 into consideration and the proposed bridge over the San Jacinto River will minimize impacts to Cell Group M. Construction of the MCP project in this area will not prevent or preclude the ability of lands to be Conserved in this area.

3.3 Impacts to PQP Lands

The goal of the MSHCP is to assemble a 500,000-acre Conservation Area in Western Riverside County. The Conservation Area will be made up of lands with existing Conservation values

(PQP lands) and additional Conservation lands that have been or will be acquired or dedicated for Conservation through the project development process during MSHCP implementation. PQP Lands are lands that are in public/private ownership and expected to be managed for open space value and/or in a manner that contributes to Conservation of Covered Species. PQP Lands comprise 347,000 acres of the 500,000-acre Conservation Area. Because these lands are crucial to the overall function and configuration of the Conservation Area, the MSHCP includes a PQP Lands replacement process for Covered Activities that cannot avoid impacts to PQP Lands (MSHCP Section 3.2.1).

For any PQP Land that is proposed for a use that would remove the Conservation value of the land, or use it in a way that "alters the land use such that it would not contribute to Reserve Assembly," replacement land shall be acquired or other encumbered at a minimum 1:1 ratio. In order to make the 1:1 replacement, the replacement land must take into account direct and indirect effects to PQP Lands in both locations.

As an MSHCP Permittee, and consistent with MSHCP Section 3.2.1, RCTC will replace PQP Land removed from the Conservation Area by the MCP alignment with lands that are biologically equivalent or superior to the existing property. The equivalency analysis and subsequent finding shall address the following information:

1. Effects on Habitat
2. Effects on Covered Species
3. Effects on Core Areas
4. Effects on Linkages and Constrained Linkages
5. Effects on MSHCP Conservation Area Configuration and Management
6. Effects on Ecotones.

The lands that are purchased or dedicated to the MSHCP Conservation Area through the PQP Lands replacement process shall be in addition to the ARL (or lands that were already described for conservation) and not be existing PQP Lands and not described for future conservation.

Therefore, for any lands that the MCP project will impact in a way that will alter their ability to be biologically viable for Conservation, RCTC would need to prepare a PQP Lands replacement analysis as outlined above. The replacement of the land should be done is such a way that the MSHCP will be made whole, and that there will be no net loss to the Conservation Area, nor arguably would there be a net loss to the entity that owns the land that is being impacted. The

MCP Project would result in a total of 1.46 acres of temporary impact to PQP Lands (see Figure 5). As discussed in Section 2.2 of this document, RCTC has realigned a 1.6 mile portion of Alt 9 SJRB DV to avoid impacts to a parcel owned by California Department of Fish and Wildlife and therefore considered PQP Lands under the MSHCP. Because this parcel will not be impacted as described in the SDEIR/SDEIS, there will be no permanent impacts to PQP Lands by MCP. Proposed Mitigation for PQP Impacts

Per Section 3.2.1 of the MSHCP, Permittees are required to replace impacts to PQP Lands that result in loss of conservation value at a ratio of not less than 1:1.

The MCP project will have 1.46 acres of temporary impacts to PQP Lands (see Figure 5), The temporary impacts will be to PQP Lands owned by Riverside County Flood Control and Water Conservation District (Flood Control) associated with the MCP crossing over the Perris Valley Storm Drain (see Figure 5). The MCP project will be constructing a bridge over the Perris Valley Storm Drain itself, so there will be no physical transformation of the storm drain or the function of those PQP Lands as a storm drain. Therefore, temporary impacts (expected to take less than 6 months) associated with the bridge construction over the PQP Lands at the Perris Valley Storm Drain will not affect the conservation value of these PQP Lands. No equivalency analysis for PQP loss is required for the project because there will be no permanent loss of conservation value to PQP Lands.

3.4 Avoidance of Impacts

Over the years, RCTC has developed several alternatives to analyze various alignments and potential impacts to habitats and species addressed by Sections 6.1.2, 6.1.3, and 6.3.2 of the MSHCP. RCTC has determined that complete avoidance of MSHCP riparian/riverine areas and impacts to NEPSSA and Criteria Area Species Survey Area (CASSA) species, Los Angeles pocket mouse, San Bernardino kangaroo rat, and burrowing owl habitat is not feasible. The MCP is identified as a Circulation Element Road in the County's General Plan and as the Hemet to Corona/Lake Elsinore Alternative on MSHCP Figure 7-1. Construction of the MCP project is necessary to provide a major east–west connection to western Riverside County, Los Angeles County, and Orange County.

Since the release of the RDEIR/SDEIS, as part of the production of Geometric Approval Drawings, RCTC has continued to refine engineering details and look for opportunities to further reduce impacts. As a result of that investigation, RCTC has reduced impacts to both Los Angeles pocket mouse and San Bernardino kangaroo rat occupied/suitable habitat. Impacts to occupied Los Angeles Pocket Mouse have been reduced by 23.20 acres from the original impact acreage

from the 2011 SNES. Impacts to occupied San Bernardino Kangaroo Rat habitat was reduced by 2.54 acres from the 2011 SNES. Impacts to riparian habitat as well as PQP Lands (per alignment shift as discussed in Section 2.2 and 3.3 above) were also reduced from the original footprint. Figure 6 (Sheet 1 and 2), (show the areas of revised impacts.

The RDEIR/SDEIS, described cut and fill within the MCP Project right-of-way adjacent to the San Jacinto Wildlife Area. RCTC will provide retaining walls in certain areas in order to reduce the area of grading required and the acreages of habitat disturbance reported in the RDEIR/SDEIS. Additionally, the MCP project has shifted the alignment for an approximate 1.65 mile long segment between Bernasconi Road and Antelope Road to avoid impacts to San Jacinto Wildlife Area, which also reduces impacts to Los Angeles pocket mouse occupied/suitable habitat. As discussed further under Section 7.5.2 compliance, there will be culverts proposed in the areas where the retaining wall will be near the Bernasconi Hills so that wildlife can move safely from one side of the wall to the other.

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4 COMPLIANCE WITH MSHCP SURVEY REQUIREMENTS

4.1 Section 6.1.2 Compliance – Riparian, Riverine, Fairy Shrimp, and Vernal Pool Resources

Volume I, Section 6.1.2 of the MSHCP describes the process through which the protection of riparian/riverine areas and vernal pools is intended to occur within the MSHCP plan area. The purpose of this process is to ensure that the biological functions and values of riparian/riverine areas and vernal pools throughout the MSHCP plan area are maintained such that habitat values for animal and plant species inside the MSHCP Conservation Area are also maintained. The MSHCP defines riparian/riverine areas as "lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year."

Total riparian and riverine impacts (including permanent and temporary as well as shading impacts directly beneath and in between bridges) for MCP project would be 41.59 acres. The project would result in 4.99 acres of impacts to riparian vegetation and associated features (including permanent grading and temporary disturbance as well as all shading impacts directly beneath bridges). The MCP project would also result in 36.61 acres of permanent and temporary impacts to riverine areas, including impacts to unvegetated drainages as well as to non-riparian alkali communities along the San Jacinto River floodplain in Lakeview (see Figure 7). Of the 41.59 acres of total impacts, 35.54 acres would be permanent impacts (which include grading and other associated roadway improvements as well as shading in between and underneath bridges) to both riparian and riverine resources and 6.05 acres would be temporary impacts (see Figure 8). Figures 9 through 13 depict specific areas of impacts and the breakdown of permanent as opposed to temporary impacts for the riparian and riverine features.

There would be 36.61 acres of riverine resources affected by the project, of which 29.39 acres would be in the San Jacinto River floodplain in Lakeview. The balance of 7.22 acres of impacts would be to unvegetated drainages (see Figure 7).

Of the 29.39 acres of impacts to the non-riparian alkali floodplain communities, 20.80 acres would be permanent impacts from grading and other roadway improvements, 6.36 acres would be from shading underneath the bridges and 2.23 acres are from temporary impacts. Of the 7.22 acres of unvegetated drainage impacts, 4.25 acres would be permanent impacts from grading and other roadway improvements, 1.41 acres would be permanent from shading beneath and in between the bridges and 1.55 acres are temporary impacts.

Table 3 lists the temporary and permanent riparian and riverine impacts, and Table 4 presents the impacts to riparian and riverine habitat broken down by vegetation community.

Table 3
Project Impacts to MSHCP Riparian and Riverine Areas

	Permanent Impacts[1] (acres)			Temporary Impacts[1] (acres)	Total Impacts[1] (acres)
	Permanent Shade	*Permanent Grading and Other Roadway Improvements*	*Total Permanent*		
Riparian vegetation[2]					
Outside SJR floodplain	1.27	0.96	2.24	2.20	4.44
Within SJR floodplain	0.48	0.00	0.48	0.07	0.54
Riparian vegetation Subtotal	*1.75*	*0.96*	*2.71*	*2.27*	*4*
Riverine vegetation[3]					
Outside SJR floodplain	1.41	4.25	5.67	1.55	7.22
Within SJR floodplain[4]	6.36	20.80	27.16	2.23	29.39
Riverine vegetation Subtotal	*7.77*	*25.06*	*32.83*	*3.78*	*36.61*
Total Riparian and Riverine	**9.53**	**26.02**	**35.54**	**6.05**	**41.59**

Source: LSA 2014.
SJR = San Jacinto River
1 Totals may not appear to sum correctly due to rounding.
2 Riparian vegetation consists of marsh, riparian forest and riparian scrub throughout the entire footprint
3 Riverine vegetation consists of all remaining land cover categories (cropland, dairy, developed/ruderal, lake/pond, Riversidean upland sage scrub, non-native grassland and alkali grassland) within non-riparian CDFW jurisdictional areas
4 In addition to the above vegetation types, all cropland and alkali grassland within the SJR 100 year floodplain at Lakeview are included in riverine areas within the SJR floodplain. Acreage totals differ from Table 1 in some cases (e.g., not all alkali grassland is riverine; only alkaline grassland within the SJR floodplain is considered riverine).

Table 4
Riparian and Riverine Impacts by Vegetation Community

Vegetation	Permanent Impacts[1] (acres)			Temporary Impacts[1] (acres)	Grand Total Impacts[1] (acres)
	Permanent Shade	*Permanent Grading and Other Roadway Improvements*	*Total Permanent*		
Cropland	0.41	12.07	12.49	0.15	12.64
Dairy	0.00	0.03	0.03	0.00	0.03
Lake/pond	0.07	0.00	0.07	0.48	0.55
Developed/ruderal	1.16	2.72	3.87	0.99	4.86
Riversidean upland sage scrub	0.00	0.28	0.28	0.00	0.28
Non-native grassland	0.00	0.39	0.39	0.00	0.39
Alkali grassland	6.13	9.57	15.70	2.16	17.86
Marsh	0.17	0.00	0.17	0.03	0.20
Riparian forest	1.14	0.29	1.43	1.80	3.24

Table 4
Riparian and Riverine Impacts by Vegetation Community

Vegetation	Permanent Impacts[1] (acres)			Temporary Impacts[1] (acres)	Grand Total Impacts[1] (acres)
	Permanent Shade	*Permanent Grading and Other Roadway Improvements*	*Total Permanent*		
Riparian scrub	0.44	0.67	1.11	0.44	1.55
Total	**9.53**	**26.02**	**35.54**	**6.05**	**41.59**

Source: LSA 2014.
1 Total may not appear to sum correctly due to rounding.
2 **Bold:** Vegetation types that are considered Riparian. All other vegetation non-bolded is considered Riverine.

Vegetation communities listed in Table 4 identified as riparian under the MSHCP are marsh, riparian forest, and riparian scrub. The remaining vegetation communities are considered riverine. San Jacinto River alkali communities include cropland and alkali grassland within the San Jacinto River 100 year floodplain at Lakeview.

4.1.1 Impacts to Functions and Values of Riparian and Riverine Features

4.1.1.1 Riparian Resources

The MCP project would impact 4.99 acres of riparian vegetation of which, 0.96 acre are permanent impacts (due to grading and other roadway improvements), 1.75 acres of shading impacts (considered permanent as a worst-case scenario), and 2.27 acres of temporary impacts (see Table 4 and Figures 8 through 13). The permanent riparian impacts would occur from vegetation removal to widen the bridge at the San Jacinto River crossing at Sanderson Avenue where it has a connection with the SR 79 project in the City of San Jacinto. The additional bridge lanes at SR-79 needed for the MCP Project would result in the removal of riparian vegetation. There are also small areas of riparian vegetation associated with the bridge crossings at Lakeview that would be removed for construction. Figures 10 through 13 show these areas. The impacts beneath the bridged areas are also considered permanent shade impacts.

The following is a discussion of the functions and values outlined in Section 6.1.2 for the San Jacinto River riparian habitat communities.

Hydrologic Regime

Hydrologic regime is the distribution over time of water in a watershed, among precipitation, evaporation, soil moisture, groundwater storage, surface storage, and runoff.

Part of a hydrologic regime is the ability of a wetland or stream to absorb and store water belowground. This is dependent on soil composition and the timing of flood events. For example, clay soils have smaller pore size than sandy soils and therefore less water can be stored in the smaller pore space between the clay particles. This slows the rate at which water is absorbed and released; therefore, clay soil has a lower storage capacity in terms of volume, but can retain water for a longer period of time than sandy soil. On the other hand sandy soil has a greater storage capacity but water can percolate or drain through it quickly, unless this drainage is blocked by layers of clay. The storage of ground water is maximized when porous, sandy soils are underlain by low permeability clays. The storage of water belowground allows for the fluctuation between anaerobic and aerobic conditions that provide the environmental conditions necessary for microbial cycling.

The riparian habitat in the vicinity of the San Jacinto River at SR 79 receives flows from the San Jacinto River, Potrero Creek through Massacre Canyon, and surrounding uplands, as well as runoff from agricultural land uses. The earthen bottom channel (consisting predominantly of sandy soils in the vicinity of the riparian habitat at the SR 79 bridge over the San Jacinto River), combined with apparent underlying confining clayey lenses create a hydrologic regime that allows water to percolate for belowground storage of water at a depth that is accessible by the riparian vegetation. This in turn helps to reduce velocities and retain flows that can also infiltrate, producing a highly functional system. The riparian habitat in the San Jacinto River at Lakeview is located within a combination of soils that reduce the infiltration and/or storage of water within the root zones, thereby reducing the amount of vegetation that can have a positive effect on water retention.

The hydrologic regime for the riparian habitat will not be substantially affected by the MCP because the soils surrounding the riparian habitat will continue to allow percolation into groundwater and there will only be minor impacts (1,385 square feet for all 36 bridge columns) due to placement of bridge piers.

Flood Storage and Flood Flow Modification

This function is the ability of a wetland or stream to take in surface water and attenuate peak flow during major storm events and peak domestic flows and thereby prevent or reduce flooding. This is dependent on the size of the wetland or stream, the amount of water it can hold, and the location in the watershed. For instance, larger wetlands or streams that have a greater capacity to receive waters have a greater ability to reduce flooding. In addition, areas high in the watershed may have more ability to reduce flooding in downstream areas, but areas lower in the watershed may have greater benefits to a specific area. Vegetation, shape, and the configuration of the wetland or stream may also affect flood storage by dissipating the energy of flows during flood events.

Much of the riparian habitat that will be impacted by MCP is within or along the active San Jacinto River channel in relatively low areas that would take on surface water and attenuate peak flow during major storm events. These areas would therefore function at a low level for flood storage and flood flow modification in the sparsely vegetated areas and would function at moderate level in more dense riparian vegetation in portions of the San Jacinto River at SR 79.

There will be minimal permanent changes in flood storage and flood flow modification. MCP has been designed to span riparian areas at both San Jacinto River crossings with bridges, which minimizes riparian habitat that will be permanently impacted by fill. MCP impacts that are only temporary will have little to no long-term effects on this function. Flood storage and flood flow modification will be reduced by MCP construction in riparian areas that will be permanently impacted by fill. Shade impacts will only result in a small reduction of these functions because some shade-tolerant vegetation may recolonize the area and the streambed will continue to be permeable.

Sediment Trapping and Transport

Sediment removal from flowing water keeps sediments from migrating downstream. This is accomplished through the natural process of sediment retention and entrapment. This function is dependent on the sediment load being delivered by runoff into the watershed. The vegetation, shape, and the configuration of a wetland or stream affect sediment retention if water is detained for long durations, as would be the case with dense vegetation, a bowl-shaped watershed, or slow-moving water. This function is demonstrated when the turbidity of the incoming water is greater than that of the outgoing water.

The dense riparian habitat within the San Jacinto River in the vicinity of SR 79 reduces the water velocity and allows for suspended sediment to settle, providing a high level of function. The riparian habitat within the San Jacinto River in the Lakeview area consists of sparsely vegetated mulefat scrub and marsh, which have minimal impact on water velocity; while, the low channel grade (averaging less than 0.1%) does allow for suspended sediments to settle, most of the settlement occurs in more dense vegetation upstream of this vegetation. The riparian habitat in the Lakeview area likely contributes to localized retention and functions at a moderate level for sediment trapping.

Sediment trapping in riparian areas will be reduced by MCP construction due to the removal of riparian vegetation, primarily near SR-79. However, more than half of the impacts (Table 5) at the SR 79 bridge are temporary impacts and the function for sediment trapping in these areas will be restored on site.

Nutrient Retention and Transformation

Nutrient cycling consists of two variables: 1) uptake of nutrients by plants and 2) detritus turnover, in which nutrients are released for uptake by plants downstream. Wetland systems in general are much more productive in nutrient cycling than upland habitats. The regular availability of water associated with the wetland or stream may cause growth of plants (nutrient uptake) and associated detritivores, and generates nutrients that can be used by a variety of aquatic and terrestrial wildlife downstream.

Riparian habitat in the areas of the San Jacinto River near SR-79 consists primarily of riparian scrub and riparian forest. Throughout the San Jacinto River, although there is little or no surface water during most of the growing season, there is a moderate potential for nutrient removal and transformation (particularly of fertilizers that may be present in runoff from agricultural areas) due to the moderate cover of riparian habitat and intermittently standing water and the assumed presence of microorganisms. The riparian habitat parallel to SR-79, immediately south of the San Jacinto River levee, is located within mapped wetlands and functions at a high level for nutrient retention and transformation.

Nutrient retention and transformation in riparian areas will be reduced by MCP construction due to removal of vegetation, primarily in wetland areas along SR-79. However, more than 90% of the wetland impacts with riparian habitat at the SR 79 bridge are temporary impacts and the function for nutrient retention and transformation in these areas will be restored on-site.

Toxicant Trapping

The major processes by which wetlands and streams remove nutrients and toxicants are as follows: (1) by trapping sediments rich in nutrients and toxicants, (2) by absorption to soils high in clay content or organic matter, and (3) through nitrification and denitrification in alternating oxic and anoxic conditions. Removal of nutrients and toxicants is closely tied to the processes that provide for sediment removal.

Because of the factors discussed above that promote sediment trapping, the riparian habitat within the wetlands in the vicinity of SR 79 and the silty-clay soils in the Lakeview area function at a moderate to high level for toxicant trapping. The riparian habitat in the sandy soils in non-wetlands within and north of the San Jacinto River in the vicinity of SR 79 function at a low to moderate level for toxicant trapping.

Toxicant trapping in riparian areas will be reduced by MCP construction due primarily to removal of vegetation in wetland areas along SR-79, however, more than 90% of the wetland impacts with

riparian habitat at the SR 79 bridge are temporary impacts and the function for sediment trapping in these areas will be restored on-site. Toxicant trapping in riparian areas in the silty-clay soils in the Lakeview area will be temporarily reduced by MCP construction due primarily to removal of vegetation, however there will be no permanent fill placed in this riparian habitat due to bridge spanning the riparian habitat.

Public Use

This is a measure of the probability that a wetland or stream will be used by the public because of its natural features, economic value, official status, and/or location. This includes it being utilized by the public for recreational uses, such as boating, fishing, birding, walking, and other passive recreational activities. In addition, a wetland or stream that is utilized as an outdoor classroom, is a location for scientific study, or is near a nature center would have a higher social significance and standing.

The riparian habitat along SR-79 provides little if any recreational use such as birding and walking due to lack of public access to the riparian areas or adjacent river levees. The riparian habitat in the Lakeview area also lacks public access and is too small to provide birding or other recreational opportunities.

The riparian areas that will be impacted by MCP do not provide substantial opportunities for public use; therefore public use will not be diminished by MCP construction in these areas.

Wildlife Habitat

General habitat suitability is the ability of a wetland or stream to provide habitat for a wide range of wildlife. Vegetation is a large component of wildlife habitat. As diversity of plant communities increases along with connectivity with other habitats, so does potential wildlife diversity (Tews et al. 2004). In addition, a variety of open water, intermittent ponding, and perennial ponding is also an important habitat element for wildlife.

The riparian habitat of the San Jacinto River provides habitat for resident wildlife species as well as species using riparian areas for movement. The headwaters of the San Jacinto River are in the San Jacinto Mountains to the east of the project. The river receives flows from mountain waters in the wet season and discharges from agricultural ditches in the dry season. The riparian habitat in the vicinity of SR 79 has been documented as used by the least Bell's vireo (*Vireo bellii pusillus*), San Bernardino kangaroo rat (*Dipodomys merriami parvus*), and Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) and non-listed amphibian species. Riparian habitat is of high habitat value to wildlife.

Wildlife habitat value in riparian areas will be reduced by MCP construction, particularly for birds (including least Bell's vireo) due to removal of trees and shrubs used by birds for foraging and nesting, but also for San Bernardino kangaroo rat and Los Angeles pocket mouse as well as more common wildlife species.

Aquatic Habitat

The ability of a wetland or stream to support aquatic species requires that there be ample food supply, pool and riffle complexes, and sufficient soil substrate. Food supply is typically in the form of aquatic invertebrates and detrital matter from nearby vegetation. Pool and riffle complexes provide a variety of habitats for species diversity as well as habitat for breeding and rearing activities. Species diversity is directly related to the complexity of the habitat structure.

The riparian habitat associated with the San Jacinto River at the SR-79 crossing has areas of unvegetated ponding and intermittently flowing water but lacks perennial waters. The aquatic habitat within the unvegetated and intermittent washes, drainages, and ponds are not used by rare fairy shrimp species but may provide habitat for various other small crustacean and insect species, and reproductive habitat for amphibians, including, potentially, western spadefoot (*Spea hammondii*), a California Species of Special Concern. The aquatic habitat also provides habitat for facultatively hydrophytic plants.

Aquatic habitat in riparian areas will be reduced by MCP construction primarily due to impacts to wetland areas along SR-79, although there are no perennial waters in the impact areas. However, more than 90% of the impacts to wetlands consisting of riparian habitat at the SR 79 bridge are temporary and the aquatic habitat function in these areas will be restored on-site.

4.1.1.2 Riverine Resources

The MCP project impacts two types of riverine resources (totaling 36.61 acres): (1) the San Jacinto River alkali communities at Lakeview (29.39 acres) and (2) unvegetated drainages (7.22 acres) (see Figure 7).

San Jacinto River Alkali Communities

In the vicinity of the MCP (about 3,500 lineal feet north of MCP into the San Jacinto Wildlife Area to about 18,000 lineal feet south of MCP), there is about 1,744 acres of alkali communities within the San Jacinto River floodplain. Overall, in the San Jacinto River Floodplain (includes the upper reaches of the San Jacinto River) there is approximately 9,462 acres of alkali communities within the floodplain. The 29.39 acres of San Jacinto River alkali communities that

will be impacted by the proposed project include alkali grassland and cropland within the San Jacinto River 100-year floodplain in the Lakeview area (see Figures 8 through 13). Of the 29.39 acres of impacts, 20.80 acres are permanent impacts (due to grading and other roadway improvements), 6.36 acres are shading impacts (considered permanent as a worst-case scenario), and 2.23 acres are temporary impacts. The marsh and riparian scrub within this floodplain are included in the riparian habitat calculations and descriptions in Section 4.1.1.1, Riparian Resources. The alkali grassland mapped for MCP corresponds in part to MSHCP mapping of alkali ephemeral wetland, but also includes non-wetland areas that would more likely correspond to MSHCP mapping of California annual grassland or cropland. Even though the label *San Jacinto River alkali communities* has been applied to most of the impact areas within the Lakeview area floodplain because they have once been alkaline, about half of the area is mapped as non-alkaline silty clay and dominated by non-native weedy species. Most of the remaining area consists of a combination of saline-alkali and strongly saline-alkali silty clays. Most of the area of saline-alkali and strongly saline-alkali soil is active cropland. Prior to conversion to cropland, these areas may have supported an alkali playa community dominated by saltbush (*Atriplex* sp.) and related shrubby plants such as bush seepweed (*Suaeda nigra*), with a sparse herbaceous understory. This community is very rare in the MSHCP Plan area and does not currently exist on the project site. Areas of lesser alkalinity likely consisted of alkali grassland dominated by native perennial grasses such as saltgrass (*Distichlis spicata*) and native annual forbs. Currently, the San Jacinto River floodplain in the Lakeview area is dominated by agricultural crops, and non-native grasses and forbs. Plant species more typical of alkaline soils are largely restricted to ditches, artificial depressions, and other disturbed areas such as road ruts where ponding water tends to favor native species over non-native competitors. Agriculture is very common in this floodplain and has altered the soil conditions over time, contributing to the dominance of non-native, weedy species. Tillage, irrigation, addition of fertilizers, pesticide use, and other farming practices result in various changes to soil structure, biota, and nutrient availability, which in turn affect aeration and water infiltration and retention (Sullivan 2004). Changes away from native soil conditions would tend to favor a different set of plant species (other than those native to the site).

The following discussion outlines the functions and values described in Section 6.1.2 for the San Jacinto River floodplain riverine communities.

Hydrologic Regime

The riverine resources associated with the San Jacinto River receive flows from surrounding uplands and runoff from agricultural land uses. The soils are predominantly silty clay (Willows silty clay soils), which are poorly drained. The silty clay soils have a lower capacity for

underground water storage due to the small pore size and slow rate at which the water is absorbed and released. Therefore, there is less fluctuation between anaerobic and aerobic conditions that benefit environmental conditions necessary for microbial cycling.

Due to the predominance of silty clay soils in the San Jacinto River alkali communities, effects on the hydrologic regime of these areas by MCP construction will be minimal (1.7% of the localized floodplain area) since the overall area affected by the MCP is small (29.39 acres) compared to the larger floodplain area (9,462 acres) as well as in the more localized area (1,744 acre) which will not be affected by the MCP.

Flood Storage and Flood Flow Modification

The predominantly low-growing, herbaceous vegetation in the alkali communities is not effective at hindering the velocity of flows during periods of flooding. Because of the large, depressed area they cover, however, the alkali communities do provide moderate to high flood-storage capacity within the 4,300-foot-wide (100 year) floodplain.

Flood storage capacity of San Jacinto River alkali communities will be only slightly reduced by MCP due to placement of fill within areas with this function. The temporary flood storage provided in the low lying alkali community areas of the floodplain are the result of localized sumps that do not effectively convey flowing water due to the adverse slopes on the downstream side of the sump. The only localized sump areas that will be permanently affected by the MCP project are those that will be filled in during grading for the roadway(s). Relative to the quantity of low lying sump areas in the localized area of the floodplain near the project (1,744 acres) that contain alkali soil/vegetation communities; the quantity that will be filled in by proposed roadway grading activities is small (29.39 acres). Therefore, the MCP will have negligible effects on the floodplain's flood storage and flood flow functions.

Sediment Trapping and Transport

The generally dense herbaceous vegetation in the alkali communities promotes sediment trapping, as does the low channel grade (averaging less than 0.1%), which allows water to move slowly and suspended sediment to settle. Sediment trapping in San Jacinto River alkali communities will be slightly reduced by MCP due to placement of fill and removal of vegetation in areas with this function. The sediment trapping provided in the low lying alkali community areas of the floodplain are the result of localized sumps that do not effectively convey flowing water due to the lack of slopes on the downstream side of the sump. The only localized sump areas that will be permanently affected by the MCP project are those that will be filled in during

grading for the roadway(s). Relative to the quantity of low lying sump areas (1,744 acres) in the localized area near MCP which contain alkali soil/vegetation communities, the quantity that will be filled in by proposed roadway grading activities is small (29.39 acres), representing 1.7% of the localized area. Therefore, the MCP will have negligible effects on the floodplain's sediment trapping and transport functions.

Nutrient Retention and Transformation

Although vegetation within the alkaline communities is primarily composed of upland herbaceous species and there is little or no surface water during most of the growing season, due to their generally dense vegetative cover, intermittently standing water, and fine-grained soils, along with the assumed presence of microorganisms, the alkali communities provide a moderate potential for nutrient removal and transformation, particularly of fertilizers that may be present in runoff from agricultural areas.

Nutrient retention and transformation in San Jacinto River alkali communities will be slightly reduced by MCP due to placement of fill and removal of vegetation in areas with this function. The nutrient retention and transformation provided by the alkali community areas of the floodplain are a beneficial result of the trapping of nutrients in the localized sumps and the nutrient uptake from the vegetation within the localized sump areas. The only localized sump areas that will be permanently affected by the MCP project are those that will be filled in during grading for the roadway(s). Relative to the quantity of low lying sump areas in the localized MCP area (1,744 acres) that contain alkali soil/vegetation communities, the quantity that will be filled in by proposed roadway grading activities is small (29.39 acres). Therefore, the MCP will have a negligible effect on nutrient retention and transformation.

Toxicant Trapping

Because of the factors discussed above that promote sediment trapping, as well as the generally silty-clay soils, the alkali communities have a moderate potential for toxicant trapping. Toxicant trapping in San Jacinto River alkali communities will be slightly reduced by MCP due to placement of fill and removal of vegetation in areas with this function. The toxicant trapping provided by the alkali community areas of the floodplain are a beneficial result of the trapping of toxicants in the localized sump areas. The only localized sump areas that will be permanently affected by the MCP project are those that will be filled in during grading for the roadway(s). Relative to the quantity of low lying sump areas in the localized MCP area (1,744 acres) that contain alkali soil/vegetation communities, the quantity that will be filled in by proposed

roadway grading activities is small (29.39 acres). Therefore, the MCP will have negligible effects to toxicant trapping.

Public Use

The alkali communities provide little if any recreational opportunities or other public use. The majority of the alkali communities are cropland on private property. The publicly owned levees have limited access due to lack of suitable public parking. Additionally, although the San Jacinto Wildlife Area is a publicly owned property north of the Ramona Expressway, there are no suitable roads or trails accessing the alkali communities within the MCP footprint from the San Jacinto Wildlife Area.

The San Jacinto River alkali communities that will be impacted by MCP do not provide substantial opportunities for public use since there are no official trails or trailheads emanating from the project impact areas within the floodplain; therefore public use will not be substantially diminished by MCP construction in this area.

Wildlife Habitat

The alkaline communities of the San Jacinto River floodplain provide habitat for resident wildlife species as well as species using riparian areas for movement. They have areas of intermittent ponding and flowing water, and small wetland areas. There is also connectivity with the SJWA to the north. However, due to agricultural use and the resulting dominance of non-native weedy species and lack of shrub cover, they would be expected to have lower wildlife diversity than is typical of alkali communities in the region that have not been subject to such intensive disturbance. The ponding features in the alkali communities are not used by rare fairy shrimp species but may provide habitat for various other small crustacean and insect species, and reproductive habitat for amphibians, including, potentially, western spadefoot, a California Species of Special Concern. During winter, mountain plover (*Charadrius montanus*), a California Species of Concern, may utilize the area, especially cropland portions after plowing. Because of the dense, weedy, primarily herbaceous vegetation, the habitat is not suitable for least Bell's vireo or southwestern willow flycatcher, which prefer riparian scrub or woodland. These communities overall provide moderate habitat value for wildlife.

Wildlife habitat value in San Jacinto River alkali communities will be reduced by MCP construction due to impacts to temporary ponding features, reduction in cropland, and removal of vegetation of low to moderate habitat value.

Aquatic Habitat

The alkaline communities have areas of ephemeral ponding and intermittently flowing water but lack perennial waters. Ephemeral pools on the site are not used by rare fairy shrimp species but may provide habitat for various other small crustacean and insect species, and reproductive habitat for amphibians. They also provide habitat for plants of ephemeral wetlands, such as spreading navarretia.

Aquatic habitat in San Jacinto River alkali communities will be reduced by MCP construction due to impacts to temporary ponding features.

Unvegetated Riverine Habitat

The MCP project would also result in 7.22 acres of permanent and temporary impacts to unvegetated drainages along the alignment (See Figures 7 and 8). Of the 7.22 acres of impacts, 4.25 acres are permanent impacts (due to grading and other roadway improvements), 1.41 acres are shading impacts (also considered permanent as a worst-case scenario), and 1.55 acres are temporary impacts. These unvegetated drainages are mostly drainages that funnel water across the existing Ramona Expressway (which the MCP Project follows for approximately 9 miles of its 16 miles) as well as other roads and connections that the MCP project will impact. These drainages serve to move water across the road and the majority of these features are not located within the Criteria Area (see Figure 8). The San Jacinto watershed has flat topography and the majority of flows along unvegetated drainages likely evaporate or percolate into ground water. During larger storms, these drainages may convey flows into stormwater sewer systems which eventually lead to the San Jacinto River and the Perris Valley Storm Drain. The following discussion outlines the functions and values discussed in Section 6.1.2 for the unvegetated riverine communities.

Hydrologic Regime

The riverine resources associated with the unvegetated riverine areas receive flows from surrounding uplands and runoff from agricultural and other developed land uses. The unvegetated riverine areas consist of both concrete lined drainage features and earthen-lined drainage features lacking riparian vegetation. The concrete lined features do not allow for the absorption or storage of water belowground. The soils of the earthen unvegetated channels are such that the water either runs off quickly or it percolates rapidly to depths below the root zones of vegetation that is usually associated with riparian areas. Consequently there is very little vegetation and very little effect of vegetation on the hydrologic regime.

Hydrologic regime in unvegetated riverine habitat will be reduced by MCP construction due to the replacement of some portions of earthen channels with culverts.

Flood Storage and Flood Flow Modification

The predominantly low-growing, herbaceous vegetation throughout the unvegetated riverine areas in the project area is not effective at hindering the velocity of flows during periods of flooding. Most of the roadside drainages range in width from 1 to 4 feet and there are some ponded areas in the east. These areas provide a low level of flood storage and flood flow modification. The Perris Valley Storm Drain is 275 feet wide and was engineered to provide high flood storage capacity.

Flood storage and flood flow modification in unvegetated riverine areas will be minimally affected by MCP construction because flows will continue to be transported in concrete or earthen channels with little vegetation, and because impact areas currently provide only a low level of flood storage and flow modification capacity. The Perris Valley Storm drain will be completely spanned by the MCP; hence its flood storage capacity will not be reduced.

Sediment Trapping and Transport

The generally open herbaceous vegetation throughout the unvegetated riverine areas in the project area does not promote sediment trapping; however, the relatively flat topography throughout the San Jacinto River watershed in the study area allows water to move slowly and suspended sediment to settle. Therefore, sediment trapping and transport have a low- to moderate-level function in the unvegetated drainages.

Sediment trapping in unvegetated riverine habitat will be reduced by MCP construction due to the replacement of some portions of earthen channels with culverts; however, this reduction will be relatively small due to the already low to moderate-level sediment trapping capacity of the unvegetated drainages.

Nutrient Retention and Transformation

Vegetation within the unvegetated riverine areas is primarily composed of upland herbaceous species, with little or no surface water during most of the growing season, which provides low potential for nutrient removal and transformation. Due to the low potential for nutrient retention and transformation in the unvegetated riverine areas, effects on this function from MCP construction in these areas will be relatively small.

Toxicant Trapping

Vegetation within the unvegetated riverine areas in the project area is primarily composed of upland herbaceous species, with little or no surface water during most of the growing season, which provides low potential for toxicant trapping. Due to the low potential for nutrient retention and transformation in the unvegetated riverine areas, effects on this function from MCP construction in these areas will be relatively small.

Public Use

The unvegetated riverine areas in the project area provide little if any recreational opportunities or other public use, other than the moderately high-level function of the Perris Valley Storm Drain levee, which is used by the public as a trail. The areas of unvegetated riverine habitat that will be impacted by MCP do not provide substantial opportunities for public use; therefore public use will not be diminished by MCP construction in these areas.

Wildlife Habitat

The unvegetated riverine areas in the project area provide low to moderate quality habitat for upland wildlife species. The Perris Valley Storm Drain provides habitat for resident wildlife species as well as species using riparian areas for movement. They have areas of intermittent ponding and flowing water, and potential wetland areas upstream and downstream of the proposed project. The unvegetated riverine areas within the MCP project footprint are not suitable for or used by the least Bell's vireo or southwestern willow flycatcher. These unvegetated riverine areas are thus of low to moderate habitat value to riparian birds.

Wildlife habitat value in unvegetated riverine areas will be reduced by MCP construction primarily for non-riparian species, due to loss of habitat of low to moderate value. The Perris Valley Storm Drain will be spanned by the project and will continue to provide for wildlife movement.

Aquatic Habitat

The unvegetated riverine areas include ephemeral ponding and intermittently flowing water but lack perennial waters. These ephemeral ponding features are not used by rare fairy shrimp species, and because they are within channels subject to scouring flows that wash away eggs, seeds, and individuals, these features are less important to amphibians, invertebrates, and facultatively hydrophytic plants than are isolated ephemeral ponds in upland areas.

Due to the relatively low level of use of unvegetated riverine areas by aquatic species, effects on this function from MCP construction in these areas will be minor.

4.1.2 Riparian Birds (Least Bell's Vireo, Southwestern Willow Flycatcher, and Western Yellow-Billed Cuckoo)

Presence/absence surveys for least Bell's vireo and southwestern willow flycatcher were conducted for the MCP Project on May 10, 11, 13, 19, and 23, 2005; June 1, 3, 13, 14, 23, and 24, 2005; July 5, 6, 14, 15, 25, and 26, 2005 (LSA 2008, 2012). No least Bell's vireo or southwestern willow flycatcher were identified in the 16-mile alignment of the MCP Project within suitable habitat areas during the MCP surveys. Areas added to the project study area in 2010 and 2011 were also assessed for riparian bird suitability. Based on the updated studies for the new project areas added in 2010 and 2011, no riparian bird habitat occurred within the survey area. No least Bell's vireo or southwestern willow flycatcher were observed within the footprint of the modified alternatives; however, the Western Riverside County Regional Conservation Authority Biological Monitoring Program (BMP) provided a 2008 record of a pair of least Bell's vireo located in the San Jacinto River, west of Sanderson Avenue found for another project (Figure 14). This pair is included as part of the impact calculations for this project. No southwestern willow flycatchers were observed within the project study area and no impacts to breeding habitat would result from implementation of the project.

Focused surveys for western yellow-billed cuckoo were not conducted because there was no suitable habitat for this species within the project study area.

Of the approximately 4.99 acres of riparian habitat which will be impacted by the proposed project, 3.66 acres are least Bell's vireo habitat located at the San Jacinto River and Sanderson Road (see Figure 14). Of the 3.66 acres of impacts, 1.28 acres are from permanent shading from the areas beneath the bridges, 0.38 acres are permanent impacts from grading and 2.00 acres are temporary impacts. Given the 2008 BMP record in the vicinity of the San Jacinto River Bridge and Sanderson, even though MCP surveys were negative for least Bell's vireo in this area, the project will assume that all 3.66 acres is occupied least Bell's vireo habitat. All of this suitable habitat has long-term conservation for least Bell's vireo and is therefore subject to mitigation in a DBESP, outlined below.

4.1.3 Vernal Pools and Fairy Shrimp

Per Section 6.1.2 of the MSHCP, vernal pools include seasonal wetlands (having indicators of hydric soil, hydrophytic vegetation, and wetland hydrology) in natural depressions or in artificial

depressions created to provide wetland habitat. Artificially created features (e.g., borrow pits, grading scrapes) do not meet the definition of a vernal pool feature in the MSHCP.

LSA surveyed the project alignment for vernal pools. All areas determined to be wetlands by LSA were evaluated for vernal pools, but none of these wetland areas met the definition of an MSHCP vernal pool. One feature at the south edge of Ramona Expressway about 300 feet west of the San Jacinto River Channel in Lakeview was evaluated as a vernal pool since it supported over 100,000 individual spreading navarretia (*Navarretia fossalis*) plants (shown on Figure 16), which are frequently associated with vernal pools. This depression lacked wetland soils and the depression appears to be a result of a borrow pit for the construction of a roadbed or levee at the feature's southern edge, as well as for the construction of the Ramona Expressway, which is on its northern edge. Although this feature fails to meet the definition of a vernal pool based on its artificial origin, impacts to this feature will be mitigated with the impacts to spreading navarretia discussed below, as well as with the mitigation to alkaline communities discussed under Riverine Resources.

Wet season presence/absence surveys for Riverside fairy shrimp (*Streptocephalus woottonii*), vernal pool fairy shrimp (*Branchinecta lynchi*), and San Diego fairy shrimp (*B. sandiegonensis*) were conducted between October 2005 and June 2006. Surveys were conducted within a linear study area based on potential alignments for the proposed project.

No listed fairy shrimp were identified during the 2005/2006 surveys. Only versatile fairy shrimp (*Branchinecta lindhali*) were identified in some of the basins surveyed.

A second year wet season presence/absence survey for fairy shrimp was conducted between January 2007 and May 2007. Additionally, a dry sampling survey was conducted in July 2007 and August 2007. No listed fairy shrimp were identified in the project footprint during the 2007 wet season and dry season surveys. Areas added to the project study area in 2010 and 2011 were surveyed for potential fairy shrimp habitat in December of 2010 and February, March, April, and September of 2011. No additional potentially suitable sensitive fairy shrimp species habitat was found in these areas.

4.1.4 DBESP for Riparian/Riverine Impacts

As outlined above in Section 2.2, the evaluation of impacts is related to the SJRB DV which includes a bridge with 6-acres more grading and other roadway improvements than the base-case bridge. For unavoidable impacts to riparian/riverine areas, the MSHCP requires that a project mitigate to a level that would be "biologically equivalent or superior" to complete avoidance of

existing habitat. As outlined in Table 3, the MCP Project would result in total impacts to 4.98 acres of riparian habitat and 37.85 acres of riverine areas (see Figure 7). The riverine resources can be broken into two subgroups: unvegetated drainages (7.22 acres of impacts) and alkali communities within the San Jacinto River floodplain in the Lakeview area (29.39 acres). Within the 30.46 acres of riverine habitat impacted by the SJRB DV, there is an increase of 6 acres of permanent impacts associated with the grading and other roadway improvements needed for the bridge over the San Jacinto River in Lakeview compared to the base-case bridge. All impacts will be mitigated based on equivalency, as described below.

It is important to differentiate between the two types of riverine resources, as appropriate mitigation options are different for each of these types of habitats. Because the alkali floodplain is unique to the San Jacinto River, in order to demonstrate equivalency, it is important that the mitigation proposed includes similar alkali habitat resources. As previously discussed, the alkali communities that would be impacted by the MCP Project in the San Jacinto River floodplain support sensitive plants on unique, alkaline soils. The hydrologic regime of the San Jacinto River leads to the persistence of these plants within these soil types. Without the project, the hydrologic, flood storage, sediment trapping, nutrient retention and toxicant trapping functions of the floodplain are realized through numerous localized sumps throughout the floodplain area. With the project, the MCP will affect approximately 0.3% (29.39 acres out of 9,462 acres for the overall larger San Jacinto River floodplain) of alkali communities in the overall larger floodplain area of the San Jacinto River and 1.7% (29.39 acres out of 1,744 acres in the localized floodplain area). With the MCP, the floodplain and its functions and values will be affected by less than 2% in the localized area and less than 1% in the larger floodplain system. The impacts of the project will be off-set by the acquisition of alkali communities within the San Jacinto River floodplain, or within the Hemet Vernal Pool complex located in Noncontiguous Habitat Block 7 or the San Jacinto River floodplain (see Figure 17a and 15 Sheet 2of 2). Both areas have alkali soils and known sensitive plant locations, and both mitigation areas are known to also have the same condition as the San Jacinto River floodplain in Lakeview with local sumps which provide localized functions such as flood storage, nutrient trapping, toxicant trapping and sediment trapping.

As stated previously, the SJRB DV results in 6 acres of permanent impacts related to the fill needed for the new bridges spanning over the San Jacinto River floodplain. The 6 acres of impacts occur on primarily alkali soils associated with the floodplain ecosystem. The project will provide for the salvage of the alkali soils within the 6 acre fill area in the form of excavating and stockpiling the upper approximately 1-foot layer of the soils. The salvaged soils will be stockpiled by RCTC and used for on-site or off-site habitat restoration activities.

Of the 29.39 acres of riverine (non-riparian alkali communities) impacts, 27.16 acres would be permanent and 2.23 would be temporary. Of the 27.16 acres of permanent impacts, 6.36acres if impacts are attributable to the shading underneath and in between the bridges and 20.80 acres is from the grading needed to construct the bridge of the San Jacinto River along with other improvements within the right-of-way. Given the sensitivity of the soils within this habitat type, the permanent and temporary impacts will be mitigated together using an off-site mitigation site (areas depicted on Figures 17a and 15 Sheet 2of 2).

The 7.22 acres of impacts to the unvegetated drainages include 5.67 acres of permanent impacts and 1.55 acres of temporary impacts. Of the 5.67 acres of total permanent impacts, 1.41 acres is attributable to the shade impacts underneath and in between the bridges and 4.25 acres is from grading and other improvements within the right-of-way. Since the primary function of the 7.22 acres of drainages being affected is to convey water from one location to another, their replacement with higher-functioning drainages off site, as well as restoration of the temporarily impacted areas, will be the mitigation plan for these resources.

The riparian habitats impacted by the MCP Project are mainly associated with the San Jacinto River crossing at Sanderson Avenue in the City of San Jacinto at the eastern end of the project, as shown on Figure 12 Sheet 1 and 2. As discussed above, the functions and values of the riparian habitat at the SR-79 bridge crossing will mainly result in temporary impacts, and after construction, will retain their pre-project functions. There are also smaller, remnant riparian areas that would be affected by the project, which are not considered least Bell's vireo habitat. Of the 4.99 acres of riparian habitat that would be affected (see Figure 7), 3.66 acres is considered occupied by least Bell's vireo (see Figure 14 and Table 5). The riparian habitats depicted on Figure 12, Sheet 1 and 2 are not all considered suitable for least Bell's vireo and are therefore not included in the least Bell's vireo impact acreages.

Mitigation lands for the riparian vegetation and least Bell's vireo impacts will be determined through site-specific evaluation of selected land parcels where mitigation opportunities have been identified. Mitigation opportunities may include enhancement where invasive, exotic vegetation and disturbed land adjacent to existing waterways degrade existing riparian values. Site conditions will determine the type of mitigation opportunity, such as establishment, restoration, or enhancement.

Table 5 provides the proposed mitigation options and acreages for the MCP project impacts to riparian and riverine resources per the MSHCP. All temporary impacts are proposed to be included in the mitigation acreage since there may be extended periods when the area will be temporarily impacted by construction. For instance, during bridge construction, there will be

temporary impacts over an estimated 30-month construction period. In order to address this temporary loss of habitats, despite the fact that once the project is completed the areas would not be permanently impacted, the acres of temporary impacts have been considered and included in the proposed mitigation acreages outlined in Table 5.

Table 5
Riparian and Riverine Mitigation

	Permanent Impacts (acres)			Temporary Impacts (acres)	Total Impacts (acres)	Proposed Mitigation (acres)	Mitigation Ratio	Type of Mitigation Proposed
	Permanent Shade	*Permanent Grading and Other Roadway Improvements*	*Permanent Total*					
Riparian habitat	1.75	0.96	2.71	2.27	4.99	11.00*	2.2:1	Off-site preservation and establishment, reestablishment, and/or enhancement On-site restoration for temporary impacts to reach a total of 11 acres of riparian habitat
Least Bell's vireo habitat	1.28	0.38	1.66	2.00	3.66	11.00*	3:1	Same off-site mitigation can be used for riparian as long as the acreage is all suitable or occupied by LBV; otherwise a total of an additional 11acres for LBV will be acquired.
Alkali riverine areas	6.36	20.80	27.16	2.23	29.39	9.54 Shade 62.4 Grading 2.23 Temp Total: 74.17	1.5:1 Shade 3:1 Grading 1:1 Temp	Off-site preservation and/or restoration/enhancement

Table 5
Riparian and Riverine Mitigation

	Permanent Impacts (acres)			Temporary Impacts (acres)	Total Impacts (acres)	Proposed Mitigation (acres)	Mitigation Ratio	Type of Mitigation Proposed
	Permanent Shade	*Permanent Grading and Other Roadway Improvements*	*Permanent Total*					
Riverine Unvegetated drainages	1.41	4.25	5.67	1.55	7.22	11.00	1.5:1	Off-site preservation, restoration and/or enhancement. Different from riparian mitigation.

* The same acreage will be used for riparian and least Bell's vireo impacts.

No properties or lands have been acquired to date that will serve as the mitigation for these impacts. However, there are areas that have been evaluated on a cursory level that will be the focus of mitigation efforts. The areas envisioned for off-site riparian/riverine (drainages) mitigation are depicted on Figure 15a. Tributaries to the San Jacinto River that based on wind-shield surveys appear to support riparian vegetation that could also support least Bell's vireo will be the focus of mitigation for the project's riparian, least Bell's vireo, and riverine (unvegetated) drainage impacts. The area on Figure 15 (Sheet 1 of 2) was selected as the focus of mitigation for the project's riparian habitat, LBV and riverine (unvegetated) drainage impacts because the area depicted is tributary to the main branch of the San Jacinto River in which all the project impacts occur. The same or better function and values of the riparian and riverine (unvegetated) areas are expected to occur within the mitigation lands since the intent will be to conserve and/or restore, enhance or create habitats that are connected to other conservation areas, or in less-disturbed areas which will have greater biological value. Conserving and providing mitigation as described below would provide an improved hydrologic regime to the overall San Jacinto River system by providing sediment trapping, nutrient retention and toxicant trapping to the overall watershed as well. Based on aerial and vegetation mapping analysis, the tributary areas on Figure 15 were identified as having suitable LBV habitat which would also add wildlife habitat values.

The final acreage of mitigation proposed in Table 5 may change depending on the characteristics of the actual mitigation property once it has been identified. Final mitigation site selection and a Habitat Management and Monitoring Plan (HMMP) and updated DBESP shall be submitted to the RCA and Wildlife Agencies prior to acquisition of the mitigation property.

These locations have been identified as providing equivalent preservation to the project impacts because of their ability to provide better hydrologic regime conditions through conservation of parcels that may not be as heavily disturbed as the areas within the project footprint or have more resources on them currently than the project footprint area. Additionally, areas in Noncontiguous Habitat Block 7 or in the San Jacinto River floodplain provide flood storage and with the existing plant resources which are more robust than at the project footprint, provide sediment trapping, nutrient retention and toxicant trapping. Although off-site preservation of riparian and alkali habitats is preferred, it's also noted that some level of restoration may be needed for these off-site preservation/mitigation areas. The proposed MCP project will offset impacts to riparian and riverine areas through a combination of off-site preservation augmented with establishment/reestablishment and/or enhancement, as needed. Acquiring and then performing restoration activities on the mitigation lands acquired by the project will provide a superior preservation option to the no-project condition. The loss of the floodplain functions (less than 2% in the localized area) from the project will be offset by the preservation of lands that will provide the same hydrologic processes within the floodplain watershed as well as provide for conservation lands contributing to other conservation efforts. The following is a guideline for what would be employed on a particular mitigation area and will be determined as the final mitigation areas are known.

RCTC shall notify the RCA and Wildlife Agencies if mitigation lands identified on Figures 15 and 17a are not able to be acquired by RCTC. Any mitigation lands acquired for the project's MSHCP compliance shall be conveyed to the RCA.

4.1.4.1 Establishment

Formerly known as creation, establishment is the manipulation of the physical, chemical, or biological characteristics to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a net gain in aquatic resource area (acreage) and functions. Establishment always includes the removal of soil through grading to lower the elevation of an upland area to match the elevation of an adjacent water course. Grading creates the appropriate wetlands hydrology that is necessary to support new riparian areas. Special considerations that could be important, depending on the characteristics of the mitigation property, include the following:

- Location in the watershed and the flow of runoff generated through 2-, 5-, 10- and 25-year storm events (this data is developed through hydrology and hydraulics modeling and analysis)
- Characteristics of flow in terms of scour and sedimentation

- Geology and soils characteristics (physical and chemical) at the anticipated depth of grading
- Channel geomorphology (single channel vs. braided channels, channel gradient, etc.).

Following grading, establishment mitigation sites are typically irrigated if there is a dependable water source. The irrigation provides a backstop when natural rainfall is not sufficient to maintain planted vegetation that has not yet established root systems that allow self-sustaining vegetation to survive without supplemental water. Therefore, irrigation would be applied to supplement natural rainfall to promote survival and not to promote growth. This approach protects against artificially propping up planted vegetation that ultimately cannot survive without irrigation.

A plant palette would be developed that is suitable for the site conditions anticipated after grading.

Mitigation areas will be evaluated for their potential to support least Bell's vireo habitat. Least Bell's vireo habitat is typically composed of riparian vegetation consisting of willow scrub and mulefat scrub. Typically, least Bell's vireo-preferred vegetation includes dense vegetation 1–2 meters (3 to 6 feet) above ground level. The species diversity and vegetation structure are key components of least Bell's vireo habitat. If this type of habitat is not already present on the site, and hydrological conditions are favorable then establishment could be employed to promote least Bell's vireo habitat on the site.

4.1.4.2 Reestablishment/Restoration

Reestablishment is the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Reestablishment may occur where a berm was built to protect adjacent farmland from encroachment of a river or stream onto the agricultural land. In such cases, the removal of the berm allows the river or stream to inundate or flood the former floodplain. Reestablishment could be a good mitigation option in the San Jacinto River watershed, given the historical agricultural uses.

Generally, reestablishment involves the removal of an impediment to floodwater, such as a berm. Grading is often less intensive because the existing mitigation site elevations located behind a berm are usually at the floodplain elevation, requiring little to no modification.

Following the reestablishment of hydrology, a reestablishment site is treated like an establishment site, with plant and seed installation and irrigation.

4.1.4.3 Enhancement

Within the properties being considered for mitigation (see Figures 15a and 15b), enhancement would involve the removal of exotic, invasive vegetation such as tamarisk (*Tamarix* sp.) and replacement with appropriate native vegetation. Within the area depicted on Figures 15a and 15b, there are enhancement opportunities that can be used to mitigate project impacts. Enhancement activities employed by the project would include initial weed removal, follow-up weed treatment, and plant installation.

Passive revegetation is also an option that could be used by the project where there is existing native riparian vegetation adjacent to exotic weed removal areas. However, this requires site-specific judgment of native seed production as a source of new vegetation and analysis of whether site conditions are sufficient to promote passive recruitment through seed germination without interim support such as irrigation or rooted containerized plant material.

4.1.4.4 Mitigation Implementation Measures

The following measures will be applied to the future riparian mitigation site as applicable to the mitigation approaches as defined above.

Grading Design

Grading will be designed in a manner that is consistent with existing conditions within the drainage and watershed of the mitigation site. The graded channel geomorphology will be consistent with a reference stream reach that is considered to be in dynamic equilibrium with site hydrology. Grading will permit the formation of natural fluvial features including new secondary channels, terraces, cut and slip faces, sandbars, hummocks, and depressions. Grading will avoid conditions that can lead to channel bed instability such as head cutting. Grading design will avoid topographic alterations and/or flow characteristics that would cause adjacent private property to flood or erode.

Weed Removal

Initial weed removal will focus on biomass removal and disposal off site. Cut stumps will be treated with appropriate chemicals to kill the entire plant. If weed seed is present, seeds will be captured in a manner that does not cause dispersal. Follow-up weed control will occur at a frequency that will effectively treat resprouts and new seedlings. The weed-control activities will be focused on interrupting weed seed production while native vegetation is growing and

establishing and timing of weeding activities and frequency will be determined based on actual site characteristics.

Erosion Control and Best Management Practices (BMPs)

Measures to avoid increased erosion and/or sedimentation will be employed on the mitigation site as appropriate and practicable. BMPs may include one or more of the following techniques: fiber rolls, silt fence and sand bag/gravel bags, hydroseed mixes containing "nurse crop" species, and biotechnical materials such as wattled plant materials and natural organic material such as coir blankets.

Recommended Plant Palette for Mitigation Areas

In consideration of the target goals to create biological resources that are suitable for least Bell's vireo and to replace lost riparian and riverine (drainage) functions and values that are associated with riparian vegetation, plant palettes will focus on site-appropriate species for the habitat type that is being mitigated for. The key components of least Bell's vireo habitat include willows (*Salix* spp.) and mulefat (*Baccharis salicifolia* ssp. *salicifolia*) for instance. Plant palettes will be tailored to provide site-appropriate vegetation composition, structure, and density that is consistent with site hydrology (flow regime), groundwater, soils and least Bell's vireo habitat requirements. Specified plant materials may include live cuttings and nursery container plants of various sizes, including deep pots. Native seed mixes will be used to increase species diversity and erosion control.

Plant Installation/Seed Application

Plant installation methods will be appropriate to the type of material. Container plants will be installed in an excavated plant pit. Water will be added at the time of planting to charge the soil below the planting location with water that can be accessed by the root system. Fertilizers are not anticipated to be used during installation; however, other beneficial soil amendments may be used to counteract chemical imbalances found in the soil that could have a negative effect on plant survival and natural recruitment. Seed mixes may be installed using appropriate methods such as hydroseeding, imprinting, and direct hand broadcasting. Plants and seed will be installed at the optimum time of year to maximize plant survival, generally in late fall or winter when ambient daily temperatures are low and rainfall is present.

Irrigation System Installation

Using irrigation should be avoided to the extent possible, relying on seasonal precipitation at best. If irrigation is required, a variety of irrigation system configurations and an alternative irrigation method may be used to support plant survival and seedling recruitment if seasonality of plantings requires irrigation. Irrigation systems, if used, may incorporate spray or drip irrigation equipment depending upon site conditions. In the absence of well water or potable water supply, plants may be installed with dry water to provide some additional soil moisture during plant establishment.

Maintenance

Maintenance activities would be performed for 5 years after installation or until success criteria are met. Maintenance activities would include the following:

- Weed control
- Trash removal
- Site access control and signage
- Irrigation operation, repair, and maintenance
- Remedial actions, if any.

Monitoring and Reporting

Monitoring would be conducted by a qualified habitat restoration specialist during all mitigation project phases, including construction/installation, the 120-day plant establishment period, and the 5-year interim monitoring period prior to site transition to long-term management. Monitoring fulfills unique purposes at each project phase. Common to all monitoring phases is the adaptive management of the project. During construction, monitoring promotes installation that is consistent with the construction plans and specifications. Adaptive measures may be introduced when changed field conditions are discovered and introduce new variables that the original design did not anticipate. During the 5-year interim monitoring, the habitat specialist monitors for appropriate maintenance and vegetation establishment. If a negative trend or condition emerges, adaptive measures would be employed to correct project deficiencies to promote attainment of established and approved performance standards. Such remedial measures may include reseeding and/or replanting underperforming areas of the mitigation project.

Monitoring methods would be appropriate for the target vegetation community. These methods include qualitative and quantitative approaches to determine the site response to mitigation

treatments. Both types of data collection would be used to determine the project trajectory and to inform decisions regarding maintenance regime and remedial actions.

Performance standards and success criteria will be developed using reference sites, if available. Performance standards would be function-based and based on an approved functional assessment method such as the Hydrogeomorphic Methodology (HGM). Measured functions may include, but not be limited to, vegetation cover, exotics cover, microtopographic variations, biochemical functions, wildlife usage, hydrology (flood frequency).

Annual monitoring reports will be prepared to document the previous year's maintenance activities and current observations and data analysis to clearly describe site conditions. Adaptive recommendations for changes to maintenance regime and/or remedial actions would be drawn from, and supported by, the data presentation. Reports would include applicable data to facilitate comparisons to interim and final performance standards. Once the standards are attained, the final annual report could be used as the basis for resource agency notification followed by resource agency confirmation as deemed necessary.

Final mitigation site selection and a Habitat Management and Monitoring Plan (HMMP) and updated DBESP shall be submitted to the RCA and Wildlife Agencies prior to acquisition of the mitigation property. Therefore, with the above provisions incorporated, the project will provide equivalent and superior mitigation to the riparian and riverine resources that would be impacted by the project.

4.2 Section 6.1.3 Compliance – Narrow Endemic Plant Species Survey Area (NEPSSA)

The project study area is located within the NEPSSA for Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), many-stemmed dudleya (*Dudleya multicaulis*), spreading navarretia, California Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*). As explained in Section 2.2.4 of the NES (LSA 2008), areas considered potentially suitable for each species, as determined by mapped soils and land cover categories, and by field evaluations, were surveyed during 2005 or 2006. Each area of potentially suitable habitat was surveyed at least twice: once in March or April, and once in May, June, or July. Plant surveys were conducted between March 22 and April 15, 2005; April 13 and 27, 2006; May 4 and July 19, 2005; and May 17 and June 29, 2006.

Munz's onion, San Diego ambrosia, many-stemmed dudleya, California Orcutt grass, and Wright's trichocoronis were not observed in the MCP Project footprint during the focused

surveys and there were no previous records of these plants that are known to be from within the project footprint. Only the spreading navarretia was detected in the project footprint.

Spreading navarretia is an annual herbaceous plant that occurs in vernal pool and alkali playa habitat. It is known to occur in western Riverside County, California, as well as in Baja, California (USFWS 2009a). It is dependent on the unvegetated inundation cycle found in vernal pool habitat and playas, but can also occur in man-made depressions and ditches that have the same hydrological dynamics (USFWS 2009a). The annual variation in precipitation and inundation/drying time of vernal pools and playas causes substantial variation in the individual quantities and spatial extent of the species (USFWS 2009a).

Spreading navarretia is considered an obligate wetland species (ACOE 2012), but is more tolerant of the wetting and drying cycles found in vernal wetlands than most obligate wetland species. Spreading navarretia can only persist in the wettest areas of the San Jacinto River floodplain and the vernal pools at Hemet (Dudek 2003). Habitats that support spreading navarretia include seasonally flooded alkali vernal plain habitat, including alkali playa, alkali scrub, alkali vernal pool, and alkali annual grassland. Associated species in these habitats are the same as those described for San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*). Spreading navarretia is often associated with little mousetail (*Myosurus minimus* ssp. *apus*), bobtail barley or vernal barley (*Hordeum intercedens*), and smooth tarplant (*Centromadia pungens* ssp. *laevis*) (Dudek 2003).

Spreading navarretia is primarily found in habitat with silty clay soils in the Willows and Traver series (Dudek 2003). These soils are usually saline–alkaline in nature and reliably pond water for long durations (Dudek 2003). Seasonally flooded habitats that support spreading navarretia cannot exist in isolation and require enough of the surrounding matrix habitat to support the processes that promote inundation and allow for natural population dynamics (Dudek 2003).

Figure 16 depicts the locations of spreading navarretia identified within the project footprint. The project will impact 1.09 acres of occupied spreading navarretia habitat within the San Jacinto River floodplain in Lakeview. The 1.09 acres includes 0.03 acre of permanent impacts from grading, 0.82 acre of permanent shade impacts from between and underneath the bridges, and 0.24 acre of temporary impacts. The 1.09 acres includes the areas identified for long-term conservation value within the project study area. As noted in Section 4.1.1.3 of the SNES, the 1.09 acre includes not only all of the occupied areas found within the project footprint, but also adjacent areas that may support ponding of sufficient duration to provide habitat suitable for this species.

4.2.1 DBESP for NEPSSA Species

Section 6.1.3 of the MSHCP requires a DBESP when a project cannot conserve/avoid 90% of the area determined to have long-term Conservation value. The DBESP shall provide equivalent or superior mitigation to the resources being impacted by the project, as compared to the impacts.

The only NEPSSA species that will be impacted, as discussed above, is the spreading navarretia. Areas of long-term conservation value (LTCV) were determined for this species within the project impact area. The area of LTCV included all locations where the species had been encountered during plant surveys as well as that portion of the watershed contributing substantial surface flows to the occupied habitat, as estimated from site topography. Adjacent areas were unsuitable due to lack of topography that ponded water for sufficient duration (at least 2 weeks of saturation) and to generally dense, weedy vegetation; thus, the seed bank of this species would also be expected to be contained within the designated LTCV areas.

There was a 1.09-acre area identified within the project footprint that would have long-term conservation value for the spreading navarretia. The impacts to this species are a result of the proposed bridge over the San Jacinto River as well as from a proposed interchange in that vicinity. The project did consider shifting the MCP project alignment north to avoid the spreading navarretia populations; however, in the area where these plants are located, shifting to the north would have impacted the SJWA and shifting to the south would have impacted more Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) and more San Jacinto Valley crownscale. Therefore, the impacts to this NEPSSA species are unavoidable given the location of the plants and of the roadway improvements.

Because individual plants will be impacted, as well as some of their habitat, the project proposes to find replacement land that contains suitable habitat for spreading navarretia. For the 1.09 acres of impacts to navarretia, the project will provide replacement acreage of 3.3 acres of lands with suitable or occupied habitat for spreading navarretia. There are two areas in which RCTC will focus mitigation efforts for the spreading navarretia (see Figures 17a and 17b).

The first area of priority for mitigation for spreading navarretia is the Hemet Vernal Pool complex area within Noncontiguous Habitat Block No. 7 (see Figure 17a). The soils and alkaline/vernal pool conditions in this area are known to support spreading navarretia. Additional Conservation provided by the MCP project will add to existing Conservation Areas within the Hemet Vernal Pool complex area.

The second area of mitigation priority, should acquisitions in the Hemet Vernal Pool complex area prove unsuccessful, are parcels within the San Jacinto River floodplain area, which are also part of the larger floodplain ecosystem known to support spreading navarretia (see Figure 17b). The two areas considered for mitigation for navarretia are shown on Figures 17a and 17b.

Conservation efforts in Noncontiguous Habitat Block No. 7 are underway and considered a priority for the MSHCP, per the RCA, who oversees the MSHCP implementation. The project's contribution to conservation efforts in this area will help provide dedicated conservation for not only known populations of spreading navarretia, but also to the larger complex of alkali and vernal pool conditions, which are rare. Additionally, if the project mitigates within the San Jacinto River floodplain, those areas are also considered suitable and known to support spreading navarretia. Therefore, by conserving 3acres of land occupied by spreading navarretia (could be achieved by reestablishment or enhancement) in either the Hemet Vernal Pool complex or the San Jacinto River floodplain, as shown on Figures 17a and 17b, the project will provide superior preservation over the existing population being impacted by the project.

Should parcels acquired in the future by RCTC either in the Hemet Vernal Pool area or in the San Jacinto River floodplain, as identified before, have been subject to disturbance, such as farming, restoration or enhancement may be necessary. The following describes factors that support the feasibility of restoration and/or enhancement of disturbed, degraded, or actively farmed sites to habitat for the spreading navarretia. Although the spreading navarretia has its own set of microhabitat conditions essential for its survival, this species is known to occur in alkali habitats that are seasonally inundated and both the Hemet Vernal Pool complex area and the San Jacinto River floodplain are known to contain these types of habitats. Thus, it is possible that the spreading navarretia could be restored at a single site by restoring the physical conditions that will lead to seasonally inundated alkaline habitat conditions. Specific factors related to restoration and/or enhancement feasibility are described below.

1. Vernal pools that are impacted by disking or dry land farming activities may require several years without disturbance before reforming after flooding events or a wet winter (Dudek 2003). This statement implies that in the absence of repeated disturbance from farming activities, seasonal flooding events may help to reform vernal pool and vernal plain habitat where it once existed.
2. The primary habitat types this species is associated with are vernal pools and depressions and ditches in areas that once supported vernal pools (Day 1993 as cited in Dudek 2003; Reiser 1996 as cited in Dudek 2003; Tierra Madre Consultants 1992 as cited in Dudek 2003). This statement indicates that spreading navarretia occurs in man-made ditches in

areas that were formerly vernal pools. This implies that the appropriate physical conditions could be reestablished in locations that once supported vernal pools, potentially facilitating reestablishment of spreading navarretia.

3. In western Riverside County, spreading navarretia has been found in relatively undisturbed and moderately disturbed vernal pools, within a larger vernal floodplains dominated by annual alkali grassland or alkali playa (Bramlet 1993 as cited in Dudek 2003). This statement implies that spreading navarretia has been able to persist in the presence of moderate disturbance and therefore may be restorable at sites with the appropriate physical conditions (e.g., soils and hydrology).
4. Nearly half of the known populations of spreading navarretia occur within the same habitat occupied by San Jacinto Valley crownscale, although the distribution of spreading navarretia is more restricted than that of San Jacinto Valley crownscale (Dudek 2003). Since these species are known to occur in the same types of habitat, restoration and/or enhancement of San Jacinto Valley crownscale habitat may also benefit restoration efforts for spreading navarretia (and vice versa).

As stated above, two general regions are being considered for mitigation sites, the land surrounding the Hemet Vernal Pool Complex and the San Jacinto River floodplain at Lakeview. In general, both of these areas contain the physical characteristics (soil type and hydrology) necessary for these species. Individual sites under consideration for use in preservation, restoration, and/or enhancement should be evaluated relative to the specific physical, chemical, and biological properties of sites that are known to support spreading navarretia. While this species tends to occur in the same types of general habitat, it has its own microhabitat preferences, or localized site conditions that support its growth, reproduction, and continued persistence. The following describes criteria specific to the spreading navarretia.

The USFWS has developed primary constituent elements (PCE) for spreading navarretia (USFWS 2009b). The PCEs include the following:

PCE 1 Unvegetated wetland habitat. Vernal pools (up to 10 acres) and seasonally flooded alkali vernal plains that become inundated by the winter rains and hold water or have saturated soils for 2 weeks to 6 months during a year with average rainfall. This period of inundation is long enough to promote germination, flowering, and seed production for spreading navarretia (*N. fossalis*) and other native species typical of vernal pool and seasonally flooded alkali vernal plain habitat, but not so long that true wetland species inhabit the areas.

PCE 2 Intermixed wetland and upland habitats that act as the local watershed. Areas characterized by mounds, swales, and depressions within a matrix of upland habitat that results in intermittently flowing surface and subsurface water in swales, drainages, and pools that support the habitat described in PCE 1, and provide the water that allows for the inundation described in PCE 1.

PCE 3 Soils that support ponding during winter and spring. Soils found in areas characterized in PCE 2 that allow for ponding of water because they have a clay component or other property that creates an impermeable surface or subsurface layer. The properties of these soils contribute to reduced percolation and minimal runoff of water, all of which lead to supporting the habitat and period of inundation described in PCE 1. These soil types are known to include, but are not limited to, Cieneba-Pismo-Caperton soils in Los Angeles County; Domino, Traver, and Willows soils in Riverside County; and Huerhuero, Placentia, Olivenhain, Stockpen, and Redding soils in San Diego County (USFWS 2009b).

Utilizing these habitat requirements, the following site selection criteria are proposed to guide future acquisitions of mitigation lands for spreading navarretia:

1. The soil type should be of the Domino, Traver, or Willows soil series.
2. The hydrologic regime should allow for flooding and moist soil conditions during the winter and spring months, and alkali soils that drain slowly following winter and spring rains.
3. The macrotopography should be relatively flat to promote seasonal ponding or flooding.
4. There should be a constricting layer (hardpan or clay component) in the soil to support a perched water table and seasonal ponding.
5. Vernal pools or vernal plains that are restored and/or enhanced for spreading navarretia should have soil and hydrologic conditions to maintain saturated soils for 2 weeks to 6 months during a year with average rainfall.
6. Selected sites should be large enough to support intermixed wetlands and upland habitats as mounds, swales, and depressions that act as the local watershed, or be connected to sites that support these features.

Once a site or sites are selected as mitigation, actions promoting the successful reintroduction or enhancement of the target species or its habitat will be implemented. Upon selection of a site or sites for mitigation, a site-specific restoration and/or enhancement program will be developed that provides sufficient detail to restore or enhance the site to support the target species and their

habitat. The restoration and/or enhancement program may include site manipulations to develop the conditions appropriate for spreading navarretia, which could include the following:

1. Site disturbances (i.e., agricultural operations) that led to the degradation of the site should be eliminated or diminished to support the restoration and/or enhancement program.
2. The site should be hydrologically connected to an active floodplain or water source that will contribute seasonal hydrology to the site (i.e., seasonal ponding).
3. The site topography could be manipulated to promote microhabitats where there are mounds, depressions, vernal pools, swales, and/or flats to support seasonally flooded habitats.
4. Unnatural hydrologic flow impediments or modifications (berms, ditches, flood walls, etc.) could be removed or modified to support natural inundation and drying processes.
5. If applicable, the site could undergo a period of passive restoration upon discontinuation of farming or other land disturbance activities to allow for the natural regeneration of seasonally flooded alkali habitat and associated target species.
6. Non-native species that diminish the habitat value for the target species could be controlled during the passive restoration period and during the establishment period of active restoration, if necessary.
7. If the appropriate plant species and habitats do not regenerate after 1 to 2 years of passive restoration, the site should be planted with common alkaline–saline habitat associates to promote the establishment of alkali playa, alkali scrub, or alkali grassland.
8. If the target species are not present or do not regenerate after 1 to 2 years of passive restoration, the site should be seeded with the target species. Seed from the target species should be collected from the impact sites prior to project disturbance and stored until they can be dispersed at the restoration site.

A maintenance program will be developed to support the restoration and/or enhancement goals. The maintenance program will continue for a minimum of 5 years to address the early establishment maintenance issues (e.g., weed control, habitat development) associated with a recently manipulated site. The maintenance program will include the following elements:

1. Specific weed control guidelines and requirements
2. Fencing and signage guidelines
3. Access control guidelines
4. Erosion and sediment control guidelines

5. Supplemental seeding or planting guidelines
6. Trash and debris collection guidelines
7. Irrigation or supplemental watering guidelines.

A monitoring program will be developed that provides meaningful data to determine the level of success of the implemented program and to support management decisions for maintenance or manipulation of the site to facilitate a successful result. Biological monitoring will include the collection of qualitative and quantitative data. Monitoring will occur when the target species are actively growing and in bloom/seed to document plant establishment and reproduction success. Additional monitoring at the site will occur periodically throughout the year to determine the need for maintenance measures related to protecting the plant populations from weed invasion or other disturbances. The spreading navarretia is an annual that is subject to highly variable weather conditions from year to year, and thus requires multiple seasons of monitoring to determine establishment success. Thus, the monitoring program is expected/will continue for a minimum of 5 years to document the achievement of project goals. The monitoring program will include the following elements:

1. Clearly defined goals and success criteria shall be established. The goal of the restoration and/or enhancement program is to successfully compensate for the impacts to the target species through replacing the function and values that were present at the impact site at an alternate site.
2. Hydrologic monitoring shall be implemented. Because the target species is dependent on seasonal flooding to establish appropriate habitat, the monitoring program shall incorporate an element to monitor hydrology at the site. The hydrologic monitoring shall evaluate the seasonal inundation and ponding at the site in terms of surface area, depth, and duration.
3. Qualitative assessments shall be conducted on a regular basis to assess overall site conditions and maintenance activities. The purpose of the monitoring visits will be to document weed problems; document stages of growth, flowering, and seed production of the target species; document herbivory problems; monitor soil stability; and monitor the general condition of the preserve area.
4. The monitoring program shall include quantitative data collection to document target species survival, growth, and reproduction success. The quantitative data collection methods should include a sampling design and should incorporate reference areas for comparative analysis. Quantitative data shall also be used to monitor the development of the associated habitat through the collection of species cover and species richness data.

5. The monitoring program shall include photo-documentation and reporting to summarize site conditions relative to project goals.

Should RCTC not find suitable mitigation options within the areas identified on Figures 17a and 17b, RCTC shall notify the RCA and Wildlife Agencies; revisions to this DBESP may be necessary. Any mitigation lands acquired for the project's MSHCP compliance shall be conveyed to the RCA. The final monitoring program will be supplied to the RCA and Wildlife Agencies ahead of groundbreaking activities so that any modifications that may be needed can be incorporated. Therefore, with the above provisions incorporated, the project will provide equivalent and superior mitigation to the NEPSSA resources being impacted by the project.

4.3 Section 6.3.2 Compliance

4.3.1 Criteria Area Species Survey Area (CASSA) Plants

The project study area is located within the CASSA for San Jacinto Valley crownscale, Parish's brittlescale (*Atriplex parishii*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), smooth tarplant, round-leaved filaree (*Erodium macrophyllum*), Coulter's goldfields, little mousetail, and mud nama (*Nama stenocarpum*). Suitable habitat was identified within the MCP Project footprint. As explained in Section 2.2.4 of the NES (LSA 2008), areas considered potentially suitable for each species, as determined by mapped soils and land cover categories, and by field evaluations, were surveyed during 2005 or 2006. Each area of potentially suitable habitat was surveyed at least twice: once in March or April, and once in May, June, or July. Plant surveys were conducted between March 22 and April 15, 2005; April 13 and 27, 2006; May 4 and July 19, 2005; and May 17 and June 29, 2006.

Parish's brittlescale, Davidson's saltscale, thread-leaved brodiaea, round-leaved filaree, little mousetail, and mud nama either did not have suitable habitat within the project footprint or not were not detected during the focused surveys. San Jacinto Valley crownscale, smooth tarplant, and Coulter's goldfields were recorded within the project footprint (see Figure 16).

San Jacinto Valley crownscale is an annual herbaceous plant associated with alkaline–saline soils. It is known to occur in western Riverside County within the San Jacinto River, Upper Salt Creek, and Alberhill Creek watersheds (USFWS 2012). It is dependent on a hydrologic regime that allows for flooding and moist soil conditions during the winter and spring months, and alkali soils that drain slowly following winter and spring rains (USFWS 2012). The frequency, duration, and extent of seasonal ponding or flooding are critical components to the development and maintenance of suitable alkali habitat for this species, and suppression of species that may be

competitive with this species. The fluctuating seasonal flooding resulting from variable weather patterns forms a dynamic matrix that allows populations of San Jacinto Valley crownscale to expand into favorable sites and retreat from less favorable sites depending on weather conditions (Dudek 2003).

San Jacinto Valley crownscale is primarily found in the Willows soil series (USFWS 1998) and, to a lesser extent, the Domino, Traver, Waukena, and Chino soil series (Knecht 1971 and Bramlet 1993 as cited in USFWS 2012). These alkaline–saline soils exhibit low permeability and low nutrient availability and are most typically associated with floodplains or areas of seasonal ponding (USFWS 2012).

Habitats that support San Jacinto Valley Crownscale include alkali playa, alkali scrub, and alkali grassland. The species tends to occur on the upper margin or on mounds within these seasonally flooded habitats (Bramlet 2004 as cited in USFWS 2012). Associated species in these habitats include seablite (*Suaeda moquinii*), silverscale (*Atriplex argentea*), bobtail barley, Coulter's goldfields, Great Valley phacelia (*Phacelia ciliata*), dwarf peppergrass (*Lepidium latipes*), alkali peppergrass (*Lepidium dictyotum*), thread-leaved brodiaea, alkali weed (*Cressa truxillensis*), Parish's pickleweed (*Arthrocnemum subterminalis*), alkali heath (*Frankenia salina*), Mojave silverscale (*Atriplex argentea* var. *expansa*), and saltmarsh sand-spurry (*Spergularia marina*) (Glen Lukos Associates 2000 as cited in USFWS 2012; Klein and Evans 2005 as cited in USFWS 2012; RECON 1995 as cited in USFWS 2012; OEESC 1996 as cited in USFWS 2012; and CNDDB 2012 as cited in USFWS 2012).

Coulter's goldfield is an annual herbaceous plant that occurs in seasonally inundated alkali playa habitat. It is distributed from coastal San Luis Obispo County south through coastal Santa Barbara County, Ventura County, Los Angeles to San Diego County, and northwestern Baja California from sea level to about 1,000 meters (Ornduff 1966 as cited in Dudek 2003; Munz 1974 as cited in Dudek 2003; Ornduff 1993 as cited in Dudek 2003; Reiser 1996 as cited in Dudek 2003).

Coulter's goldfields require irregular seasonal inundation or flooding for seed dispersal, germination, and habitat maintenance. This plant is restricted to wetter areas within the alkali habitat, particularly lake margins, playa borders, and vernal pools (Dudek 2003). The floodplains where this species occurs are often dominated by alkali scrub, alkali playas, vernal pools, and alkali grasslands (Bramlet 1993 as cited in Dudek 2003; CNDDB 2000 as cited in Dudek 2003). These habitats form mosaics that are largely dependent on salinity and micro-elevational differences (Dudek 2003).

In Riverside County, Coulter's goldfields is associated with seablite, alkali weed, wire-stem popcorn flower (*Plagiobothrys leptocladus*), sand spurry, California goldfields (*Lasthenia californica*), Mojave silverscale, bracted saltbush (*A. serenana*), five-hook bassia (*Bassia hyssopifolia*), sharp-tooth peppergrass, dwarf peppergrass, alkali heath, and toad rush (*Juncus bufonius*) (Bramlet 1993a, 1993b as cited in Dudek 2003; CNDDB 2000 as cited in Dudek 2003). Coulter's goldfields is frequently associated with other rare species, including San Jacinto Valley crownscale, Davidson's saltscale, vernal barley, smooth tarplant, and thread-leaved brodiaea (Bramlet 1993b as cited in Dudek 2003).

In Riverside County, Coulter's goldfields occurs primarily in highly alkaline, silty-clay soils in association with the Traver, Domino, and Willows soils. Most Riverside County populations are associated with the Willows soil series.

Smooth tarplant is an annual herbaceous plant that occurs in a variety of habitats including alkali scrub, alkali playas, riparian woodland, watercourses, and grasslands with alkaline affinities. The majority of the populations in western Riverside County are associated with alkali vernal plains.

Unlike many other rare plant species, smooth tarplant is tolerant of disturbance. Smooth tarplant individuals observed along the north edge of Ramona Expressway were growing through cracks in asphalt of an old road. Several occurrences were found along road edges and in other highly disturbed areas within the project area.

Smooth tarplant is found in southwestern California and northwestern Baja California, Mexico. It occurs in San Bernardino, Riverside, and San Diego Counties (Keil 1993 as cited in Dudek 2003). Western Riverside County accounts for over 60% of the reported populations. Smooth tarplant is frequently associated with other rare plant species that occur in alkaline environments, including San Jacinto Valley crownscale, Davidson's saltscale, Parish's brittlescale, vernal barley, Coulter's goldfields, and thread-leaved brodiaea. Common plant species associates are similar to those described for Coulter's goldfields and San Jacinto Valley crownscale.

In Riverside County, smooth tarplant occurs primarily in highly alkaline, silty-clay soils in association with the Traver, Domino, and Willows soils.

Figure 16 depicts the locations of the three CASSA species identified within the project footprint. The majority of the CASSA impacts are associated with the San Jacinto River floodplain in Lakeview. There are a few smooth tarplant populations that will be impacted outside the floodplain area associated with developed/disturbed habitat near the east end of the MCP. This population was not identified as having long-term conservation value, given its

isolated location in a developed/disturbed area. As shown in Figure 4.3d of the Supplemental NES, the approximately 70 plants observed were in a dairy and in a maintained area sandwiched between the paved Ramona expressway and the dairy. Because the MSHCP requires analysis of impacts only to areas having long-term conservation value, the acreage of this isolated population is not included in Table 6.

Table 6 lists the both permanent and temporary impacts to the suitable habitat areas of the three CASSA plants determined to be of long-term conservation value as discussed below in Section 4.3.2.

Table 6
Impacts to CASSA Plant Habitats Suitable for Long-Term Conservation

CASSA Plant Species	Permanent Impacts (Grading and Other Associated Roadway Improvements) (acres)	Permanent Shade Impacts (acres)*	Temporary Impacts (acres)	Total Impacts (acres)
Smooth tarplant	2.65	0.06	0.01	2.72
Coulter's goldfields	1.74	0.29	0.22	2.25
San Jacinto Valley crownscale	0.26	0.10	0.00	0.36

* includes shading underneath and between the bridges at the San Jacinto River crossing at Lakeview

Based on the 2011 SNES by LSA (Figure 16), all of the areas determined to have long-term conservation value for the CASSA species were identified as being impacted; therefore, a DBESP for those impacts is provided below.

4.3.2 DBESP for CASSA species

Section 6.3.2 of the MSHCP requires a DBESP when a project cannot conserve/avoid 90% of the area determined to have long-term conservation value. The DBESP shall provide equivalent or superior mitigation to the resources being impacted by the project, as compared to the impacts.

The only CASSA species that will be impacted, as discussed above, are San Jacinto Valley crownscale, smooth tarplant, and Coulter's goldfields. Areas of long-term conservation value (LTCV) were determined for these species within the project impact area.

The areas of LTCV for San Jacinto Valley Crownscale and Coulter's goldfields included all locations where these species had been encountered during plant surveys as well as a four-meter buffer in all directions around those occurrences. Adjacent areas were generally unsuitable due to lack of topography that permitted accumulation of water for extended soil saturation, and to

generally dense, weedy vegetation. Although scattered individuals of these species may possibly occur outside the designated LTCV areas in some years due to year-to-year differences in precipitation, such occurrences would be expected to be few due to the marginal suitability of the habitat. For the same reason, areas outside the designated LTCV areas are not expected to have substantial seed bank or to be suitable for long-term conservation.

For subpopulations in or partially within the San Jacinto River floodplain, the areas of LTCV for smooth tarplant were determined in the same manner as for San Jacinto Valley crownscale and for Coulter's goldfields. There were approximately 70 individuals of this species within the project impact area near the east end of the project, as described in Section 4.3.1. This area was not considered to have long-term conservation value because of its isolation, its location within developed and maintained areas, and because of the small size of the subpopulation of plants. This size of the subpopulation is extremely small for an annual. Extremely small subpopulations are prone to extirpation from stochastic influences and are thus unlikely to persist over the long term.

San Jacinto Valley crownscale, Coulter's goldfields, and smooth tarplant will be impacted by more than 10% of the area determined to be of long-term conservation value. The impacts to these species are a result of the proposed bridge over the San Jacinto River in the Lakeview area as well as from a proposed interchange in that vicinity. The project did consider shifting the MCP alignment north to avoid the San Jacinto Valley crownscale populations; however, in the area where these plants are located, shifting to the north would have impacted the San Jacinto Wildlife Area and shifting to the south would have impacted more Coulter's goldfields and more San Jacinto Valley crownscale. Therefore, the impacts to these three CASSA species are unavoidable given the location of the plants and of the roadway improvements.

Because individual plants will be impacted, as well as their habitat, the project proposes to find replacement land that contains suitable habitat for all three of these plant species. For the 0.36 acre of impacts to San Jacinto Valley crownscale (constitutes as 16.5:1 ratio), the 2.25 acres of impacts to Coulter's goldfields (constitutes as 2.6:1 ratio), and the 2.73 acres of impacts to smooth tarplant (constitutes a 2:1 ratio), the project will provide replacement of 6 acres total with either occupied or suitable habitats for all three CASSA plants.

There are two areas in which RCTC will focus mitigation efforts for the San Jacinto Valley crownscale, Coulter's goldfields, and smooth tarplant. The first area of priority is the Hemet Vernal Pool complex area within Noncontiguous Habitat Block No. 7 (see Figure 17a). The soils and alkaline/vernal pool conditions in this area are known to support these three CASSA species. Additional Conservation provided by the MCP project will add to existing Conservation Areas

within the Hemet Vernal Pool complex area. The second area of priority, should acquisitions in the Hemet Vernal Pool complex area prove unsuccessful, will be the areas shown on Figure 17b, which are parcels within the San Jacinto River floodplain area that are also part of the larger floodplain ecosystem known also to support San Jacinto Valley crownscale, Coulter's goldfields, and smooth tarplant. The two areas considered for mitigation for these three CASSA species are shown on Figures 17a and 17b.

Conservation efforts in Noncontiguous Habitat Block No. 7 are underway and considered a priority for the MSHCP, per the RCA, who oversees the MSHCP implementation. The project's contribution to conservation efforts in this area will help provide dedicated conservation for not only known populations of these three CASSA species, but also to the larger complex of alkali and vernal pool conditions, which are rare. Additionally, if the project mitigates within the San Jacinto River floodplain, those areas are also considered suitable and known to support the three CASSA species. Therefore, by Conserving 6 acres of land in either the Hemet Vernal Pool complex or the San Jacinto River floodplain, as shown on Figures 17a and 17b, and conducting the mitigation efforts described below for each plant which will provide a biologic "lift" from the existing conditions, the project will provide equivalent or superior preservation over the existing population being impacted by the project.

Should the 6-acres acquired in the future by RCTC either in the Hemet Vernal Pool area or in the San Jacinto River floodplain, as identified above, have been subject to disturbance, such as farming, restoration or enhancement may be necessary. The following describes factors that support the feasibility of restoration and/or enhancement of disturbed, degraded, or actively farmed sites to habitat for the three target species. Although each of the three species has its own set of microhabitat conditions essential for its survival, each of these species are known to occur in alkali habitats that are seasonally inundated. Thus, it is possible that all three CASSA species could be restored at a single site by restoring the physical conditions that will lead to seasonally inundated alkaline habitat conditions. Specific factors related to restoration and/or enhancement feasibility are described below.

4.3.2.1 San Jacinto Valley Crownscale

The following factors related to the habitat requirements and population dynamics of San Jacinto Valley crownscale provide information to support the feasibility of implementing a restoration and/or enhancement program for this species.

1. Viable but unexpressed seed bank may exist in the soil at a site for several years even if plants are removed or fail to germinate for a season (Bramlet 2004 and OEESC 1993 as

cited in USFWS 2012). Seed viability is believed to be at least 5 years and possibly several decades (Bramlet 2004 and Roberts 2012 as cited in USFWS 2012). These statements support the concept that this species may be successfully restored at sites where it previously was known to occur and where a viable seedbank may still be present.

2. Approximately 69% of the known individual San Jacinto Valley crownscale plants were located within farmland or otherwise altered areas impacted by regular disking or, in some areas, by soil amendments (USFWS 2012). This statement supports the concept that this species is resilient to repetitive disturbance and is likely still present in some areas being actively farmed that could become suitable enhancement sites with discontinuation of farming or other disturbances.
3. Areas subject to farming activities that still contain native habitat, particularly underlying alkaline soils and seasonal flooding, can still support San Jacinto Valley crownscale (Glen Lukos Associates Inc. 2000 as cited in USFWS 2012). This statement supports the concept that this species may be successfully reintroduced as part of a restoration program to sites subject to prior site disturbances if farming activities or other disturbances are discontinued.
4. San Jacinto Valley crownscale is described as one of a few alkaline–saline soil associated plants that can be found in areas in which almost all of the native habitat components have been removed (Glen Lukos Associates Inc. 2000 as cited in USFWS 2012). This statement supports the concept that this species is resilient to former site disturbances and may be able to persist in the absence of native plant associates where an enhancement program may implemented to improve species habitat.

4.3.2.2 Coulter's Goldfields

1. Although currently suppressed by disking and dryland farming, the middle segment of the San Jacinto River represents a Core Area (Dudek 2003). This statement implies that site disturbances such as disking and dryland farming suppress Coulter's goldfields, from which it could be inferred that in the absence of such disturbances, habitat for this species could be restored and/or enhanced.
2. Coulter's goldfields are frequently associated with other rare species, including San Jacinto Valley crownscale, Davidson's saltscale, vernal barley, smooth tarplant, and thread-leaved brodiaea (Bramlet 1993 as cited in Dudek 2003). Since these species are known to occur in the same types of habitat, restoration and/or enhancement of San Jacinto Valley crownscale habitat may also benefit restoration efforts for Coulter's goldfields (and vice versa).

4.3.2.3 Smooth Tarplant

1. Smooth tarplant was found along road edges and in other highly disturbed areas from Perris to the east end of the project, both inside and outside of its MSHCP-designated survey area (LSA 2011). This statement suggests that smooth tarplant tolerates disturbance and thus may be present at actively disturbed sites that could be designated for restoration and/or enhancement of its habitat.
2. Smooth tarplant is frequently associated with San Jacinto Valley crownscale and Coulter's goldfields (Dudek 2003). Since these species are known to occur in the same types of habitat, restoration and/or enhancement of San Jacinto Valley crownscale habitat or Coulter's goldfields habitat may also benefit restoration efforts for smooth tarplant.
3. A large occurrence of smooth tarplant was observed in a relatively undisturbed area of alkali grassland outside of the composite project footprint, which is considered to be a more natural and enduring habitat for smooth tarplant (LSA 2011).This finding suggests that once established in appropriate habitat, smooth tarplant may persist without requiring periodic and repeated disturbance (i.e., the species is tolerant of disturbance, but does not require disturbance to persist).

As stated above, two general regions are being considered for mitigation sites for impacts to San Jacinto Valley crownscale, Coulter's goldfields, and smooth tarplant: the land surrounding the Hemet Vernal Pool complex and the San Jacinto River floodplain in Lakeview. In general, both of these areas contain the physical characteristics (soil type and hydrology) necessary for these species. Individual sites under consideration for use as preservation, restoration, and/or enhancement should be evaluated relative to the specific physical, chemical, and biologic properties of sites that are known to support the target species. While these three species tend to occur in the same types of general habitat, they each have their own microhabitat preferences or localized site conditions that support their growth, reproduction, and continued persistence. The following describes these criteria specific to each species.

4.3.2.4 San Jacinto Valley Crownscale

The USFWS has developed the primary habitat requirements (physical and biologic features) for San Jacinto Valley crownscale (also termed PCEs) (USFWS 2013). The PCEs include the following:

PCE 1 Seasonal wetland habitats, such as floodplain and vernal pools, and the natural hydrological processes that maintain these habitats

PCE 2 Vegetation communities, including alkali playa/scrub/grassland habitats, and lands that may have been or are being used for agriculture but that are located where these vegetation communities historically occurred

PCE 3 Slow-draining alkali soils with seasonal ponding, including the Willows, Domino, Traver, and Chino soil series (USFWS 2013).

In addition to these primary habitat requirements, the University of California, Riverside's Center for Conservation Biology determined that occupied locations of San Jacinto Valley crownscale were typically at elevations below 500 meters (1,641 feet) where the average minimum January temperature was 38°F, and the percent silt in the soil was 14–18% (CCB 2005). Utilizing these habitat requirements, the following site selection criteria will be used:

1. The soil type will be of the Willows soil series. The Domino, Traver, Waukena, and Chino soil series may also be suitable.
2. The hydrologic regime will allow for flooding and moist soil conditions during the winter and spring months, and alkali soils that drain slowly following winter and spring rains.
3. The macrotopography shall be relatively flat to promote seasonal ponding or flooding.
4. There shall be a constricting layer (hardpan or clay component) in the soil to support a perched water table and seasonal ponding.
5. Elevations shall be below 500 meters.
6. The percent silt in the soil shall be approximately 14–18%.

4.3.2.5 Coulter's Goldfields

Coulter's goldfields occurs in the same general types of habitat as San Jacinto Valley crownscale and spreading navarretia. Therefore, the habitat requirements are presumed to be similar, including the presence of seasonal flooding, alkali playa/scrub/grassland habitats, and slow-draining alkali soils. Based on these habitat requirements, the following site selection criteria will be:

1. The soil type shall be of the Domino, Traver, or Willows soil series.
2. The hydrologic regime shall allow for flooding and moist soil conditions during the winter and spring months, and alkali soils that drain slowly following winter and spring rains.
3. The macrotopography shall be relatively flat to promote seasonal ponding or flooding.

4. There shall be a constricting layer (hardpan or clay component) in the soil to support a perched water table and seasonal ponding.
5. Elevations shall be below 500 meters.
6. The percent silt in the soil shall be approximately 14–18%.

4.3.2.6 Smooth Tarplant

Smooth tarplant occurs in the same types of habitat as San Jacinto Valley crownscale, Coulter's goldfields, and spreading navarretia. Therefore, the habitat requirements are presumed to be similar, including the presence of seasonal flooding, alkali playa/scrub/grassland habitats, and slow-draining alkali soils. Like these species, smooth tarplant occurs primarily in highly alkaline, silty-clay soils in association with the Traver, Domino, and Willows soils (Dudek 2003). In the study by the University of California, Riverside's Center for Conservation Biology (2005), vernal pool and alkali habitats showed up as an important variable in the smooth tarplant model. Similar to the findings for San Jacinto Valley crownscale, occupied points for smooth tarplant were typically at elevations below 500 meters where the average minimum January temperature was 39°F. Based on these habitat requirements, the following selection criteria will be:

1. The soil type shall be of the Domino, Traver, or Willows soil series.
2. The hydrologic regime shall allow for flooding and moist soil conditions during the winter and spring months, and alkali soils that drain slowly following winter and spring rains.
3. The macrotopography shall be relatively flat to promote seasonal ponding or flooding.
4. Elevations shall be below 500 meters.

Once a site or sites are selected as mitigation, actions promoting the successful reintroduction or enhancement of the target species or its habitat will be implemented. Upon selection of a site or sites for mitigation, a site-specific restoration and/or enhancement program will be developed that provides sufficient detail to restore or enhance the site to support the target species and their habitat. The restoration and/or enhancement program may include site manipulations to develop the conditions appropriate for the three target CASSA species that will include the following:

1. Site disturbances that led to the degradation of the site shall be eliminated or diminished to support the restoration and/or enhancement program.
2. The site shall be hydrologically connected to an active floodplain or water source that will contribute seasonal hydrology to the site.

3. The site topography shall be manipulated to promote microhabitats where there are mounds, depressions, vernal pools, swales, and/or flats to support seasonally flooded habitats.
4. Unnatural hydrologic flow impediments or modifications (berms, ditches, flood walls, etc.) shall be removed or modified to support natural inundation and drying processes.
5. If applicable, the site shall undergo a period of passive restoration upon discontinuation of farming or other land disturbance activities to allow for the natural regeneration of seasonally flooded alkali habitat and associated target species.
6. Non-native species that diminish the habitat value for the target species shall be controlled during the passive restoration period and during the establishment period of active restoration, if necessary.
7. If the appropriate plant species and habitats do not regenerate after 1 to 2 years of passive restoration, the site shall be planted with common alkaline–saline habitat associates to promote the establishment of alkali playa, alkali scrub, or alkali grassland.
8. If the target species are not present or do not regenerate after 1 to 2 years of passive restoration, the site shall be seeded with the target species. Seed from the target species should be collected from the impact sites prior to project disturbance and stored until they can be dispersed at the restoration site.

A maintenance program shall be developed to support the restoration and/or enhancement goals. The maintenance program shall continue for a minimum of 5 years to address the early establishment maintenance issues (e.g., weed control, habitat development) associated with a recently manipulated site. The maintenance program shall include the following elements:

1. Specific weed control guidelines and requirements
2. Fencing and signage guidelines
3. Access control guidelines
4. Erosion and sediment control guidelines
5. Supplemental seeding or planting guidelines
6. Trash and debris collection guidelines
7. Irrigation or supplemental watering guidelines.

A monitoring program shall be developed that provides meaningful data to determine the level of success of the implemented program and to support management decisions for maintenance or manipulation of the site to facilitate a successful result. Biological monitoring will include the

collection of qualitative and quantitative data. Monitoring will occur when the target species are actively growing and in bloom/seed to document plant establishment and reproduction success. Additional monitoring at the site will occur periodically throughout the year to determine the need for maintenance measures related to protecting the plant populations from weed invasion or other disturbances. All three target species are annuals, which are subject to potentially highly variable weather conditions from year to year and thus require multiple seasons of monitoring to determine establishment success. Thus, the monitoring program shall continue for a minimum of 5 years to document the achievement of project goals. The monitoring program shall include the following elements:

1. Clearly defined goals and success criteria shall be established. The goal of the restoration and/or enhancement program is to successfully compensate for the impacts to the target species through replacing the function and values that were present at the impact site at an alternate site.
2. Hydrologic monitoring shall be implemented. Because the target species are dependent on seasonal flooding to establish appropriate habitat, the monitoring program shall incorporate an element to monitor hydrology at the site. The hydrologic monitoring shall evaluate the seasonal inundation and ponding at the site in terms of surface area, depth, and duration.
3. Qualitative assessments shall be conducted on a regular basis to assess overall site conditions and maintenance activities. The purpose of the monitoring visits will be to document weed problems; document stages of growth, flowering, and seed production of the target species; document herbivory problems; monitor soil stability; and monitor general condition of the preserve area.
4. The monitoring program shall include quantitative data collection to document target species survival, growth and reproduction success. The quantitative data collection methods should include a sampling design and should incorporate reference areas for comparative analysis. Quantitative data shall also be used to monitor the development of the associated habitat through the collection of species cover and species richness data.
5. The monitoring program shall include photo-documentation and reporting to summarize site conditions relative to project goals.

Should RCTC not find suitable mitigation options within the areas identified on Figures 17a and 17b, RCTC shall notify the RCA and Wildlife Agencies; revisions to this DBESP may be required. Any mitigation lands acquired for the project's MSHCP compliance shall be conveyed to the RCA. Final mitigation site selection and a Habitat Management and Monitoring Plan (HMMP) and updated DBESP shall be submitted to the RCA and Wildlife Agencies prior to

acquisition of the mitigation property. Therefore, with the above provisions incorporated, the project will provide equivalent and superior mitigation to the CASSA resources being impacted by the project.

4.4 San Bernardino Kangaroo Rat

The MCP Project crosses through a small portion of the MSHCP San Bernardino kangaroo rat survey area. Pursuant to Section 6.3.2 of the MSHCP, suitability surveys are to be conducted in the San Bernardino kangaroo rat survey area. If suitable habitat is identified, then focused surveys to determine presence/absence of the species are to be conducted. Vegetation within the study area consists of alluvial fan sage scrub and non-native grasses. Typical habitat for San Bernardino kangaroo rat includes alluvial fans and floodplains, and sandy, loamy soils are very important for suitable habitat. Preferred vegetation communities are alluvial scrub.

For the MCP project, LSA determined there are 36.23 acres of suitable San Bernardino kangaroo rat habitat in the BSA (the BSA is much larger than impact area, see Figure 18 for the areas of suitable habitat within the impact area and survey area). LSA conducted 5 nights of small mammal trapping in July 2005 at the Sanderson Avenue crossing of the San Jacinto River at the eastern end of the MCP alignment. No San Bernardino kangaroo rats were trapped during the survey efforts. The project-trapping conducted for SBKR was negative. However, RCTC was made aware of other projects in the vicinity of the San Jacinto River at the SR 79 crossing that did find SBKR. Therefore, the MCP Project assumed occupancy for SBKR even though no SBKR was trapped during MCP surveys.

The proposed project would impact approximately 1.29 acres the 36.23 acres of suitable San Bernardino kangaroo habitat identified within the biological study area and the MSHCP Survey Area. Given the suitable conditions in the project area and the known San Bernardino kangaroo rat presence in this area from other trapping events, RCTC decided to consider the entire suitable San Bernardino kangaroo rat habitat as being occupied. Of the 1.29 acres of impact, 0.83 acre would be permanent and 0.46 acres would be temporary (see Figure 18).

It should be noted that the 2011 SNES reported that the project would have 3.83 acres of impacts to San Bernardino kangaroo rat habitat (LSA 2011). As discussed earlier, engineering refinements have enabled retaining walls to be used where cut and fill was previously proposed. Using walls instead of cut slopes would reduce the acreages of habitat disturbance by 2.8 acres (see Figure 6, Sheets 1 and 2). The temporary impacts will occur from the construction of a bridge across the San Jacinto River. Given the potential for this construction

to take a few years, temporary loss of habitat from the temporary impacts are being included within the total acreage being mitigated for, as discussed below.

4.4.1 DBESP for San Bernardino Kangaroo Rat

Section 6.3.2 of the MSHCP requires a DBESP when a project cannot conserve/avoid 90% of the area determined to have long-term conservation value. The DBESP shall identify equivalent or superior mitigation to avoidance of the resources being impacted by the project. As stated above, the MCP Project will impact 1.29 acres of occupied San Bernardino kangaroo rat habitat. The area that is being impacted by the MCP project not only serves as habitat for burrows, but also serves as foraging and refugia. In order to provide equivalent and superior mitigation for the project's 1.29 acres of impacts, RCTC will acquire and Conserve 4 acres (represents a 3.1:1 ratio) of off-site mitigation lands. Given the length of time between when this project will be approved and when construction will actually begin, specific properties to be used for the off-site mitigation have not yet been identified. However, RCTC will use the following criteria when finding the 4 acres needed for San Bernardino kangaroo rat mitigation:

1. Lands shall be located within the San Bernardino kangaroo rat survey area or otherwise approved by the Wildlife Agencies.
2. Lands shall contain highly suitable soils and vegetation for San Bernardino kangaroo rat.
3. Lands shall be adjacent to or near PQP Lands or existing Conservation Lands known to support San Bernardino kangaroo rat.

Following the above criteria, RCTC has identified several areas where San Bernardino kangaroo rat mitigation lands could be acquired in the future. Figure 19 depicts the general areas that have been identified with the above criteria that would provide similar or better habitat and connectivity than what is being impacted by the project. These areas have been identified to give RCTC the flexibility to acquire the most advantageous mitigation parcel but were selected based on knowledge of previous SBKR observances in the past. If RCTC is unable to reach agreement with any property owner in the areas identified on Figure 19, or is unable to acquire the full 4 acres needed, then RCTC shall consult with the RCA and the wildlife agencies on additional areas or properties to be acquired and provide an amended DBESP documenting as much.

Should RCTC not find suitable mitigation options within the areas identified on Figure 19, RCTC shall notify the RCA and Wildlife Agencies; revisions to this DBESP may be necessary. Any mitigation lands acquired for the project's MSHCP compliance shall be conveyed to the RCA. Final mitigation site selection and an updated DBESP shall be submitted to the RCA and

Wildlife Agencies prior to acquisition of the mitigation property. Therefore, with the above provisions incorporated, the project will provide equivalent and superior mitigation to the San Bernardino kangaroo rats being impacted by the project.

4.5 Los Angeles Pocket Mouse

The MCP project traverses the MSHCP Los Angeles pocket mouse survey area. Pursuant to Section 6.3.2 of the MSHCP, suitability surveys are to be conducted in the Los Angeles pocket mouse survey area. If suitable habitat is identified, then focused surveys to determine presence/absence of the species are to be conducted. LSA identified 256.84 acres of suitable Los Angeles pocket mouse habitat in the BSA (the BSA is much larger than impact area). LSA conducted small mammal live-trapping sessions between July and August 2005 within two distinct study areas of the project alignment that were located within the Los Angeles pocket mouse survey area. The two areas surveyed for Los Angeles pocket mouse were (1) near the San Jacinto River crossing at the existing Ramona Expressway in Lakeview and (2) near the SR-79 bridge at the San Jacinto River in the San Jacinto (see Figure 20a and 20b). Land cover within these two study areas consists of Riversidean sage scrub, non-native grassland, and riparian scrub (also considered alluvial fan sage scrub). Northeast of the SR-79 bridge over San Jacinto River, 34 Los Angeles pocket mice were captured (out of a total of five trap sessions, totaling 1,070 trap nights) and in the Lakeview area, 16 Los Angeles pocket mice were captured (out of a total of three trap sessions to address three separate sections of the Lakeview study area, totaling 945 trap nights). Typical Los Angeles pocket mouse habitat includes grasslands, alluvial sage scrub, and coastal sage scrub. Los Angeles pocket mice prefer sandy or gravely soils that are loose so that they can dig burrows. Their main food sources are forb and grass seeds.

In the Lakeview area, three trapping sessions were conducted and traplines were placed in the most suitable areas within Riversidean upland sage scrub, ruderal areas, and non-native grassland. (Note that the alignment shift mentioned in Section 2.2 of this document was included within the trapping sessions conducted for the MCP and the area within the alignment shift. No LAPM were captured in the traplines that represent the area of the alignment shift). Three trapping sessions addressed three separate sections of the study area. All but one of the captures in the Lakeview area occurred within 300 feet of Riversidean upland sage scrub. Traplines located within marginal habitat, consisting of more densely vegetated non-native grassland and ruderal areas in the easternmost Lakeview area and south of Ramona Expressway and areas 1,900 feet or more from suitable Riversidean upland sage scrub, resulted in only one individual LAPM captured in non-native grassland. Since the non-native grassland habitat is denser than typically occupied by this species and only one individual LAPM was captured over the five nights during the third session, it is believed that this individual is not

indicative of the species occupying this area. The single LAPM at this location (more than 1/3 mile away from more suitable Riversidean upland sage scrub) was likely to have been a juvenile captured in the process of dispersing in search of more suitable habitat. For these reasons, the non-native grassland and other marginal habitats not adjacent to Riversidean upland sage scrub within the survey area is not considered to be suitable for long-term conservation for the species. The eastern boundary of habitat suitable for long-term conservation value was demarcated at the boundary of the Riversidean upland sage scrub and non-native grassland. No LAPM were captured in ruderal areas, which are highly fragmented and surrounded by regularly disked agricultural fields and roadways. All of the Riversidean upland sage scrub within the survey area and adjacent non-native grasslands are considered occupied by the LAPM and suitable for long-term conservation value (Figure 20).

The second LAPM survey area in the vicinity of SR-79 also resulted in LAPM captures. Los Angeles pocket mouse was also captured in sparsely vegetated riparian scrub (also referenced as alluvial fan sage scrub in the trap results letter report) northeast of the SR-79 bridge over San Jacinto River. No LAPM were trapped within the sandy soils of the San Jacinto River. However, the riverbed and all land cover mapped as riparian scrub (based on mapping in the SNES) in the vicinity of the SR79 trapping efforts were considered to be suitable for long-term conservation for the Los Angeles pocket mouse based on other occurrences of LAPM within the San Jacinto River.

The proposed project would impact approximately 20.85 acres of occupied Los Angeles pocket mouse habitat suitable for long-term conservation within the MSHCP Survey Area. Of the 20.85 acres, 20.16 acres would be permanently impacted (all within the right-of-way) and 0.69 acres would be temporarily affected. It should be noted that the 2011 SNES reported that the project would have 44 acres of impact to Los Angeles pocket mouse habitat (LSA 2011). As discussed earlier, engineering refinements have enabled retaining walls to be used where cut and fill was previously proposed, as well as avoiding the parcel owned by California Department Fish and Wildlife, which resulted in reduced impacts to LAPM habitat than previously analyzed.

4.5.1 DBESP for Los Angeles Pocket Mouse

Section 6.3.2 of the MSHCP requires a DBESP when a project cannot conserve/avoid 90% of the area determined to have long-term conservation value. The DBESP shall identify mitigation that is equivalent or superior to avoiding the resources being impacted by the project. As stated above, the MCP Project will result in 20.16acres of permanent impacts and 0.69 acres of temporary impacts (see Figures 20 Sheet 1 of 2 and Sheet 2 of 2) for a total of 20.85 acres. The

temporary impacts will occur from construction of the proposed wall and bridge. Construction activities are expected to take multiple years, therefore temporary loss of habitat from the construction activities are being included within the area to be mitigated for, as discussed below. The permanent impacts result from construction of the roadway and interchanges.

The area that is being impacted by the MCP project not only provides substrate for burrows, but also serves as foraging and refuge from disturbance such as farming or flooding for Los Angeles pocket mouse. In order to mitigate for the project's 20.85acres of impacts and to provide equivalent and superior mitigation, RCTC will acquire and conserve 42 acres (represents a 2:1 ratio) of off-site mitigation lands (see Figure 19) that support habitat that is known to support LAPM in the past and is located near other already conserved lands with LAPM populations.

The areas depicted on Figure 19 are known to provide suitable habitat for LAPM based on surveys and data acquired for other projects. The areas on Figure 19 are associated with the alluvial sage scrub habitats known to support LAPM and include areas already conserved. Because there may be delay between project approval and the start of construction, specific properties to be used for the off-site mitigation have not yet been identified. However, RCTC will use the following criteria when securing the 42 acres needed for Los Angeles pocket mouse mitigation:

1. Lands shall be located within the Los Angeles pocket mouse survey area.
2. Lands shall contain highly suitable soils and vegetation for Los Angeles pocket mouse.
3. Lands shall be adjacent to or near PQP Lands or existing Conservation Lands known to support Los Angeles pocket mouse.

Following the above criteria, RCTC has identified several areas where Los Angeles pocket mouse mitigation lands could be acquired in the future. Figure 19 depicts the general areas that have been identified with the above criteria that would provide similar or better habitat and connectivity than what is being impacted by the project. These areas have been identified to give RCTC the flexibility to acquire the most advantageous mitigation parcel. If RCTC is unable to reach agreement with any property owner in the areas identified on Figure 19, or is unable to acquire the full 42 acres needed, then RCTC shall consult with the RCA and the wildlife agencies on additional areas or properties to be acquired and provide an amended DBESP documenting as much.

In order to also further minimize impacts to Los Angeles pocket mouse during construction, RCTC will conduct exclusionary trapping in the construction areas depicted on Figure 20 (Sheets

1 and 2) and relocate any trapped animals outside of the impact areas. This action will further provide minimize impacts to the Los Angeles pocket mouse resulting from the project.

Should RCTC not find suitable mitigation options within the areas identified on Figure 19, RCTC shall notify the RCA and Wildlife Agencies. Any mitigation lands acquired for the project's MSHCP compliance shall be conveyed to the RCA. Final mitigation site selection and an updated DBESP shall be submitted to the RCA and Wildlife Agencies prior to acquisition of the mitigation property. Therefore, with the above provisions incorporated, and the fact that the areas to be conserved for the LAPM have more intact quality alluvial sage scrub habitats which are better for the LAPM than the disturbed the project will provide equivalent and superior mitigation to the Los Angeles pocket mouse being impacted by the project.

4.6 Burrowing Owl

The project occurs within the Additional Survey Needs and Procedures survey area for burrowing owl (Section 6.3.2 of the MSHCP). The project contains large areas of suitable burrowing owl habitat, including land cover types such as cropland, dairy, developed/ruderal, Riversidean upland sage scrub, and non-native grassland (LSA 2008, Appendix N: Burrowing Owl Habitat Suitability Areas). Specifically, areas of the BSA that were identified as potentially suitable burrowing owl habitat include low-density cover with adequate ground visibility in nonnative grassland, sparsely vegetated non-native grassland, sage scrub, fallow crop fields, edges of crop fields and dairies, pastures, rock outcrops, open pipes, debris piles, earth berms adjacent to open space, unmaintained portions of residential development if adjacent to open space areas, and areas containing ground squirrel burrows or adequately sized small mammal burrows for burrowing owl use. Chaparral, riparian forest, riparian scrub, oak woodland, marsh, lake/pond, and densely vegetated and disturbed areas, including recently disked and mowed crop fields, sod farms, dairy farms, commercial development, active portions of residential development, and areas with dense shrub and tree cover were excluded from surveys.

Consistent with MSHCP burrowing owl Species Objective 5 and Section 6.3.2 focused burrowing owl surveys were conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside County MSHCP Area (March 29, 2006). Burrowing owl habitat assessments and focused surveys were conducted within the unmodified original project design BSA as described in the 2008 NES (LSA 2008) between May 11 and June 8, 2005; June 28 and August 26, 2005; April 11 and July 12, 2006; and June 22 and July 10, 2006, and on March 29, 2007. Within the unmodified original 32- mile project design BSA, burrowing owls were observed at three separate sites (LSA 2008, Figure 4.7 a, Figure 4.7b) during the July 6, 2006, focused survey. No burrowing owls were found within the current 15- mile of MCP

Project footprint during the 2005/2006 focused survey efforts. However, the description of burrowing owl habitat assessment and surveys as described in the approved NES (LSA 2008) is applicable to the modified project design. Areas added to the project survey area in 2010 and 2011, as outlined in the 2011 SNES, were also assessed for burrowing owl suitability. Habitat assessments were conducted within the newly added parcels on November 23, 2010, and on February 10, April 1 and 4, July 15, and September 30, 2011. Burrow surveys were conducted on the same day as the habitat assessment if suitable habitat was found present. According to the 2011 SNES, one burrowing owl was observed within the BSA in 2011 within the common alignment for all modified build alternatives and their design variations, and thus occurs within the MCP Project alignment analyzed in this document (LSA 2011) (see Figure 21). Burrowing owl observations were not within the MSHCP Criteria Area. (Note that the alignment shift discussed in Section 2.2 was included within the burrowing owl assessments and survey areas conducted for the project.)

4.6.1 DBESP for Burrowing Owl

Burrowing owls were found during the 2010 and 2011 survey efforts within the Alt 9 SJRB DV alignment. Burrowing owls located as a result of survey efforts are to be conserved as described in Section 6.3.2 of the MSHCP. Burrowing owl Species Objective 5 requires, for sites outside of the Criteria Area that support three or more pairs of burrowing owls, support greater than 35 acres of suitable habitat, and are noncontiguous with MSHCP Conservation Area lands, that at least 90% of the area with long-term conservation value and burrowing owl pairs will be conserved on site. A DBESP is required for impacts to burrowing owls when it is not feasible to avoid and conserve 90% of the portions of the project area that provide long-term conservation value for burrowing owls. Alternatively, for a site outside the Criteria Area that supports less than 35 acres of suitable Habitat, and for which surveys reveal that fewer than three pairs of owls are on the site and surrounding areas, then passive or active relocation is possible.

The survey effort for the project found that one individual burrowing owl and its associated foraging habitat (3.1 acres) would be directly impacted by project construction activity. The burrowing owl is located in habitat adjacent to an agricultural field along Placentia Avenue, approximately 122 meters (400 feet) east of the Perris Valley Storm Drain. Given the length of time between the project disturbance and the date when this owl was observed, this owl may or may not be located in the same location at the start of construction. Additionally, the 3.1 acres does not meet the threshold of 35 acres of suitable habitat and three or more pairs from Species Objective 5. Therefore, the requirement to conserve 90% of the area with long-term conservation value on site is not triggered. More appropriate is the provision from the Burrowing Owl Species Objective 5 to conduct passive or active relocation. However, as mentioned, given the length of

time until project construction will actually disturb burrowing owl habitats, and given the transitory nature of burrowing owls and their tendency to colonize areas that may not have been colonized before, there is a probability that burrowing owls could be located within the project footprint in the future. In order to address this, RCTC will conduct preconstruction surveys at least 120 days ahead of project disturbance in order to identify any owls that may have colonized suitable habitat areas in all areas supporting suitable habitat. The relocation measures outlined below will be employed should any owls be found within the project footprint.

Any owls remaining in the Perris Valley Storm Drain portion of the project alignment or elsewhere in the construction footprint 30 days prior to construction that would be impacted by the project will be conserved through avoidance measures and relocation efforts as described below.

This DBESP has been prepared to ensure replacement of lost burrowing owl habitat functions and values from unavoidable project-related impacts. All impacts within the right-of-way footprint are calculated as permanent impacts to burrowing owls and habitat. Direct impacts to burrowing owls include 3.1 acres of permanent impacts to foraging and burrow habitat occupied by one burrowing owl along the MCP Project alignment. The area of direct impacts to burrowing owls is based on a minimum of 6.5 acres of foraging habitat, calculated as a 300-foot foraging radius around a primary burrow occupied by pairs or unpaired resident birds (California Burrowing Owl Consortium 1993).

Indirect impacts to burrowing owls and/or suitable habitat throughout the proposed project area may result from edge effects such as future development, plant and animal infestations, fire, litter, unauthorized recreational use, and an increase in light and glare associated with vehicles and daytime and nighttime construction activities. Increased fire frequency may result in type conversion of native habitats and an increase of exotic plant species. Conversions from more open native habitat to more dense non-native grasslands could reduce the area of potential burrowing owl nesting habitat. The project may provide additional access points for unauthorized off-road vehicle use, which may damage native habitat and burrowing owl burrows and also promote exotic plant infestation. Future development and use of the project may result in additional litter. Litter may also result in animal infestations, which may result in additional predators in the area that may prey on the burrowing owl.

Direct and indirect effects to burrowing owls and habitat will be avoided and/or minimized by incorporating the following measures into the project design and/or implementation procedures:

- Focused surveys for burrowing owls will be conducted in the known location east of Perris Valley Drain prior to construction to confirm whether the site is still occupied.
- Preconstruction burrowing owl surveys will be conducted within 120 days prior to ground disturbance in all areas of suitable habitat to avoid take of burrowing owls and occupied burrowing owl nests.
- Preconstruction surveys will follow accepted MSHCP survey protocols.
- Take of active burrowing owl nests will be avoided.
- If burrowing owls are identified during the preconstruction surveys and cannot be avoided, a burrowing owl relocation/translocation plan will be prepared based on the measures outlined below for submittal to the wildlife agencies for approval 60–90 days prior to ground-disturbing activities.
- Indirect impacts of exotic plant and animal infestations, litter, fire, and increased light and glare will be minimized by regular roadside maintenance by County of Riverside or Caltrans (dependent upon whether facility is accepted into the State Highway System) to remove litter and weeds from the right-of-way, and by incorporating shielded lighting near environmentally sensitive areas.

4.6.1.1 Burrowing Owl Relocation Plan

The purpose of this Burrowing Owl Relocation Plan (Relocation Plan) is to outline an effective strategy for implementing either a passive or active burrowing owl relocation effort to mitigate for owl displacement and loss of habitat due to the proposed project. Burrowing owl relocation involves passively or actively moving or relocating burrowing owls from a nest or roost burrow to an off-site location no more than 100 meters away (328 feet) for passive relocation or at least 100 meters away for active relocation. The off-site location is supplemented with the installation of multiple artificial nest boxes. Owls will only be relocated to protected lands with long-term conservation assurances. Appropriate passive relocation sites must be within 50–100 meters of the occupied burrow(s). The relocation effort will be conducted outside of the burrowing owl nesting season. The relocation may include passively or actively removing a single adult or an owl pair. The Relocation Plan describes the methodology for passive and active relocation of burrowing owls from the project area, a monitoring strategy, and long-term conservation of relocated owls. The relocation effort will be conducted in consultation and coordination with the RCA and the Wildlife Agencies.

There are seven burrowing owl species conservation objectives in the MSHCP (Volume I, Section 6.3.2; Volume I, Appendix E, Summary of Species Survey Requirements; Volume I, Table 9-2 Species Conservation Summary; and Volume II, Section B, MSHCP Species Accounts). The Relocation Plan addresses MSHCP Objectives 2, 5, 6, and 7:

- Objective 2: Establishes five Core Areas and interconnecting linkages for conservation to support a combined total breeding population of approximately 120 burrowing owls with no fewer than 5 pairs in any one Core Area. The five Core Areas are Lake Skinner/ Diamond Valley Lake, playa west of Hemet, San Jacinto Wildlife Area/Mystic Lake area including Lake Perris, Lake Mathews, and along the Santa Ana River.
- Objective 5: Requires protocol surveys for burrowing owls as part of the project review process and conservation of owls located as a result of surveys. Conservation of owls within the Criteria Area includes at least 90% of the area with long-term conservation value included in the MSHCP Conservation Area. Conservation of owls not within the Criteria Area includes:
    - If the site contains, or is part of an area supporting less than 35 acres of suitable habitat or the survey reveals that the site and the surrounding area supports fewer than three pairs of burrowing owls, then the on-site burrowing owls will be passively or actively relocated following accepted protocols.
    - If the site (including adjacent areas) supports three or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat and is noncontiguous with MSHCP Conservation Area lands, at least 90% of the area with long-term conservation value and burrowing owl pairs will be conserved on site.
- Objective 6: Requires preconstruction presence/absence surveys for burrowing owl within the survey area where suitable habitat is present. Surveys are conducted within 30 days prior to disturbance and take of active nests is avoided. Passive relocation (use of one way doors and collapse of burrows) is to occur when owls are present outside the nesting season.
- Objective 7: Creates translocation sites in the MSHCP Conservation Area for the establishment of new burrowing owl colonies. Translocation sites are identified, taking into consideration unoccupied habitat areas, presence of burrowing mammals to provide suitable burrow sites, existing colonies and effects to other Covered Species.

Passive and Active Relocation Methods

A qualified avian biologist will either currently have or obtain a Federal Bird Banding and Marking Permit, which is administered by the U.S. Geological Survey Bird Banding Laboratory, a Scientific Collecting Permit from the CDFW, and a Memorandum of Understanding or other additional written authorization from the CDFW. Methods will follow any burrowing owl relocation standards in effect for the MSHCP.

Passive Relocation Methods

Passive relocation (i.e., burrow eviction) involves installing one-way doors at burrow entrances to exclude burrowing owls, collapsing or destroying the original burrow, and installing an artificial burrow complex consisting of two to four artificial burrows near the original burrow. Artificial burrow complexes will be installed 50–100 meters (164–328 feet) from the original burrow (Trulio 1995; CDFG 2012) on conserved land. Owls are assumed to find and move to the artificial nest burrows on their own. Owls will be passively evicted only during the non-breeding season (September 1 to January 31).

The artificial nest box complex will be installed in suitable habitat in accordance with the artificial nest box design described in Barclay (2008). Owl breeding territories range from 250 to 600 meters (820 to 1,969 feet). Artificial nest boxes will be placed at least 600 meters away from known resident owls. Locations of resident owls will be gathered from the preconstruction presence/absence surveys. Artificial burrow placement less than 600 meters from resident burrowing owls will be considered in only consultation with the wildlife agencies, if necessary. However, artificial burrows will be placed no closer than 250 meters (820 feet) from known burrowing owl territories.

After artificial burrows are installed, owls will be allowed 3 weeks to become familiar with the artificial burrows prior to exclusion from and collapse of occupied burrows (Trulio 1995). Owls will be captured and banded prior to exclusion (a minimum of 1 week prior to eviction). Three to four days prior to eviction, one-way door excluders (similar in design to those described in Banuelos (1997)) will be placed over all burrows (i.e., primary/nest burrow and all satellite burrows) with evidence of owl use (e.g., pellets, white wash, feathers, prey remains, owl tracks) so that owls can leave but not reenter their burrows. Evidence of owl use may include feathers, pellets, prey remains, animal scat, scrap or trash materials used as decoration, whitewash, and tracks at the entrance. In addition, after eviction and 1 day prior to and the day of site disturbance, the site will be inspected for burrows and/or owls to ensure that all owls have been successfully expelled. All previously occupied burrows and any unoccupied burrows will be

excavated by hand to ensure that no owls are below ground (Trulio 1995; Wild at Heart 2012). After the burrows are excavated and the owls evicted, the burrows will be collapsed and the site will be graded immediately.

Active Relocation Methods

Active relocation involves capturing owls within the project footprint and taking them to a new site well removed from the original site, and releasing them into a new burrow complex (Trulio 1995; Smith and Belthoff 2001). The owls will be captured, banded, transported to the relocation site, and placed within an artificial burrow complex (two to four artificial burrows). The owls will be temporarily housed in a field enclosure (hacking cage or aviary) placed over the newly installed artificial nest box complexes prior to release into the new burrow (Trulio 1995; Mitchell et al. 2011; Smith and Belthoff 2001).

The relocated owls will be held in the primary artificial nest burrow for 24 hours by blocking the entrances to the burrow (Mitchell et al. 2011). After the entrances are unblocked, the owls will remain in the predator-proof hacking cage surrounding the relocation burrow for approximately 30 days. The owls will be captured and moved during the non-breeding season or early in the breeding season but just prior to egg-laying (i.e., late January or early February). The owls will be held in the hacking cages until eggs are laid and the clutch is mostly complete (up to 30 days, depending on breeding phenology). Cage enclosures will be dismantled and completely removed from the relocation site once clutches are complete and the female is incubating eggs.

Artificial nest burrows will be constructed and installed as described under Passive Relocation Methods. The hacking cage will be constructed approximately 1 week prior to placement of the owls in the enclosure (Mitchell et al. 2011). The hacking cage will be a 3.7 × 3.7 × 1.8-meter (12 × 12 × 6-foot) enclosure constructed with a wooden frame, using twelve 1.8 × 1.2-meter (6 × 4-foot) panels, heavy-gauge steel-mesh side panels, and a strong nylon mesh (2.5 × 2.5-centimeter (1 × 1-inch)) covering (Kidd Biological Inc. 2013). The enclosure will also have a welded-mesh bottom extending outward from the enclosure side panels approximately 1 meter (3 feet). Electric fencing, set back approximately 1 meter (3 feet) from the enclosure may be used to provide additional protection (Kidd Biological Inc. 2013; Mitchell et al. 2011).

Enough food and water to support the metabolic function of each owl will be left inside the artificial burrow every day for the duration of use of the pre-release holding cage (Nixon 2006; Kidd Biological Inc. 2013). Daily supplemental feedings will include two dead mice per owl during the captivity period only. Supplemental food will be placed well inside the burrow tunnel

to avoid attracting predators such as common ravens (Wildlife Preservation Canada 2013). Once the cage enclosures are removed, supplemental feeding will end.

Capture and Banding Methods

The burrowing owls will be banded for purposes of identification and monitoring. Burrowing owls will be captured at least 1 week prior to passive or active relocation activities. To capture adult and juvenile owls, biologists will use one or more methods as described in Rosenberg et al. (2007), Conway et al. (2010), and Bloom et al. (2007), including two-way burrow traps, spring nets (modified bow net baited with a caged mouse), tomahawk traps, bal-chatri traps, and noose carpets.

Owls will be banded with either a non-locking or locking USFWS aluminum band (Number 4), and an alphanumeric aluminum color band (Acraft Sign and Nameplate Co., Ltd., Edmonton, Alberta, Canada) or similar alphanumeric color band style. Biologists will collect demographic and morphological data including gender, mass, wing cord length, tarsus length, and tail length. A capture data form will be completed and submitted as part of the reporting requirements. Owls intended for active relocation will be placed into a secure animal carrier and transported immediately to the release site.

Selected Relocation Site

Any passive or active relocation site will be selected and finalized in consultation with the RCA and the Wildlife Agencies. The project proposes passive relocation as the preferred method. However, if all site selection requirements cannot be met; active relocation will be proposed as an alternative method. Because the MSHCP constitutes a Natural Community Conservation Plan with long-term conservation mechanisms, active relocation can be authorized by the CDFW (CDFG 2012).

Passive Relocation

Prior to ground disturbance, RCTC shall resurvey the area of the 3.1 acres of occupied burrowing owl habitat as presented in the 2011 SNES. If owls are still found in this area, the project will passively relocate the owls following the passive relocation methods discussed above to an artificial nest burrow complex near the existing burrow. The site for passive relocation will meet the following criteria:

- Relocation burrow is placed 50–100 meters from the original nest burrow.
- Area contains suitable burrowing owl nest burrow and foraging habitat (e.g., short vegetation).

- Surrounding area is sufficient in size to support the minimum required foraging territories during the breeding season (approximately 121 hectares (300 acres or 600 meter diameter radius around the nest).
- Habitat is maintained to support burrowing owls and the land is protected through long-term management and conservation (e.g., Conservation Easement).

Possible passive relocation receiver sites within 50 to 100 meters of the original burrow and outside of the project footprint occurs to the south of the project alignment. This area is similar to the existing burrow habitat, containing suitable habitat along the edge of agricultural land and near the Perris Valley Storm Drain. However, these areas occur within Riverside County Flood Control and Water Conservation District (County Flood Control) lands. Should the owl still be in the project footprint, as identified in the 2011 SNES, if County Flood Control will not agree to accept relocated owls on flood control lands, and no other suitable passive relocation sites are nearby meeting the above criteria, owls will be actively relocated in accordance with the criteria described below. Additionally, the above passive relocation methods and criteria will be used for any other owls identified in the project footprint during subsequent surveys in the future if the described standards on adjacent suitable conserved habitat can be met.

Active Relocation

If passive relocation is not feasible for either the owl identified in the 2011 surveys, or for any other owls found within the project footprint during preconstruction surveys, the project proposes to first seek to actively relocate owls to the Hidden Valley Wildlife Area (HVWA), which is located approximately 20 miles northwest of the existing owl nest burrow. The HVWA is along the Santa Ana River, within one of the five designated burrowing owl Core Areas (MSHCP Burrowing Owl Species Objective 2), and is managed by Riverside County Parks and Open Space District. Habitat is currently managed for conditions suitable to burrowing owls. The specific location of the artificial burrow site will take into consideration vegetation structure, prevalence of burrowing owl predators, prey base, number and location of existing burrowing owls, existence of ground squirrels or other burrowing mammals, and edge effects. The specific location within the HVWA, or another suitable site should relocation to the HVWA not be feasible, will be determined in consultation with the RCA and the Wildlife Agencies.

Monitoring of Passive or Active Relocations

Monitoring will be conducted prior to, during, and after passive or active relocation efforts. Owls will be monitored after exclusion or after release during the season of relocation and for a minimum of 1 year through to the following breeding season. Site occupancy, dispersal

movements, reproductive success, and survival, including predation events, will be recorded. Monitoring will include routine nest burrow site visits, documenting burrow status and characteristics, resighting owl bands, and estimating reproductive success and survival.

For passively and actively relocated owls, a biologist will monitor the original nest or burrow site where owls were excluded or taken from and the newly installed artificial burrows intended to receive owls. These burrows will be monitored three times per week for the first 2 weeks following exclusion or relocation. After the first 2 weeks after exclusion/release, owls will be monitored one to two times per week through the duration of the breeding season for use of the new burrows until the next breeding season. Monitoring during the non-breeding season (September 1 to January 31) will be conducted a minimum of two times per month. Burrow visits and observations will be conducted within 3 hours of sunrise or sunset when owls are more likely to be active and present at the burrow. Band resighting will be conducted using a spotting scope and binoculars from a vehicle or on foot approximately 50–100 meters (164–328 feet) from the burrow. Data will be collected using methods and protocols consistent with ongoing monitoring being conducted by the MSHCP Biological Monitoring Program.

Prior to passive relocation, daily monitoring will include burrow site visits conducted 1 week prior to relocation to ensure that owls are not using or inside the original burrow to be destroyed and no owl take will occur. Prior to active relocation, monitoring will be conducted at the original burrow site 2 weeks prior to relocation, three times per week, to determine the breeding status of owls and the timing for owl capture and banding. For both relocation methods, monitoring will include behavioral observations (e.g., copulations, prey deliveries, or infrequent observation of the female, which can indicate incubation); inspecting the burrow entrance for signs of activity, including nest adornments (e.g., prey remains, mammal scat, man-made materials); and potentially, interior burrow inspection using an infrared video scope.

While actively relocated owls are in the release enclosures, monitoring will occur concurrently with daily supplemental feeding. Feeding and monitoring will be conducted during the morning or late afternoon/early evening whenever possible. Disturbance will be minimized by reducing the amount of time spent in or near the enclosure. During each monitoring visit, the release enclosure will be inspected for problems or needed repairs. Owl health, behavior, evidence of trespassers and the presence/absence of predators will be noted.

Habitat and Artificial Burrow Maintenance

Habitat and artificial nest burrow management activities will be conducted at least once annually to maintain conditions that support owls. Also, prior to relocation, habitat immediately

surrounding the artificial nest boxes and in the general vicinity of the owls' foraging area will be maintained to create conditions suitable for owls. Habitat at relocation sites will be maintained to provide sparse, short vegetation (≤ 10 cm (4 inches) in height), low shrub density (less than 30% shrub cover), a minimum of one perch near the nest/roost burrow, and multiple available burrows (approximately four burrows per owl; Wild at Heart 2012) within 50 meters (164 feet) of the primary burrow. Management activities may include mowing, grazing, or invasive weed removal (e.g., hand-pulling). Native rodent control programs and the use of insecticides will not be permitted within the owl conservation lands. Artificial nest burrows will require monitoring and maintenance indefinitely. Artificial nest boxes will be checked for structural integrity, plugged or filled entrances and/or tunnels, intact perches, and sufficient dirt covering the nest chamber and tunnels. Nest box repairs and debris clearing will be conducted as needed. Other management activities at burrowing owl relocation sites will include limiting access to sites by visitors, installing educational signage, and control of off-road vehicles and unleashed pets, as applicable.

Reporting and Deliverables

All data will be recorded in the field notebooks and entered into an Excel or Access database. Data will be checked for quality assurances during field efforts and after entry into the database before submittal to the RCA and the wildlife agencies. The database will contain all information including: results of presence/absence surveys, nest/burrow locations, locations owls were moved to, capture and banding data, date and time passively relocated owls were excluded from original burrows or actively relocated owls were released into field enclosures, date field enclosures were removed, nest burrow monitoring visits, burrow habitat characteristics, reproductive success information from nest visits, artificial nest burrow installation and maintenance activities and outcomes, habitat management activities and outcomes, and results of burrow inspections using the infrared video scope.

Data including the database, copies of original data forms, GPS coordinates of burrow and owl locations, and maps will be submitted to the RCA and the Wildlife Agencies via mail, email, CD/DVD, online File Transfer Protocol (FTP), or file hosting service (e.g., Dropbox Inc. 2008; https://www.dropbox.com/).

Reporting will include weekly progress reports; monthly updates; letter reports submitted 2 weeks after completion of site preparation, the relocation effort, and post-exclusion (passive) or post-release (active); and a final end-of-project report. The final end-of-project report will be submitted after completion of the full relocation project, on a mutually agreed upon date. Any concerns, issues, or problems that arise during any phase of the relocation effort will be reported to the RCA and the Wildlife Agencies within 24 hours.

Therefore, with the above provisions incorporated, the project will provide equivalent and superior mitigation to the burrowing owl being impacted by the project.

4.7 Section 6.1.4 Compliance – Urban – Wildlands Interface Guidelines

Future Conservation Areas are located within and near the project site. To preserve the integrity of areas dedicated as MSHCP Conservation Areas, the guidelines contained in Section 6.1.4 related to controlling adverse effects for development adjacent to the MSHCP Conservation Area should be considered by the Permittee in their actions relative to the project. Specifically, the Permittee should include as project conditions of approval the following measures:

1. Incorporate measures to control the quantity and quality of runoff from the site entering the MSHCP Conservation Area. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into MSHCP Conservation Areas. The MCP project would incorporate treatment BMPs including biofiltration swales and infiltration basins. The BMPs would be designed to target removal of suspended solids, metals, toxins, chemicals, petroleum products, or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Areas. Erosion control measures would include the rock slope protection and erosion-control mix on the new slopes. The MCP project will comply with all National Pollutant Discharge Elimination System requirements.
2. RCTC shall not use chemicals or generate bioproducts such as pesticides or manure, which are potentially toxic or may adversely affect wildlife species, habitat or water quality in proximity to MSHCP Conservation Areas. Such chemicals cannot result in discharge to the MSHCP Conservation Area. The greatest risk is from landscaping fertilization overspray and runoff. According to the MSHCP Compliance Review, measures such as those employed to address drainage issues above shall be implemented. The MCP project would include biofiltration swales and infiltration systems to reduce discharge of untreated runoff and remove contaminants prior to discharge into the MSHCP Conservation Area. This provision will also apply to the long-term facility owner (i.e., Caltrans, County of Riverside)
3. Safety lighting will be provided along the MCP in existing developed areas and at interchanges. No other lighting is proposed along MCP that would be near MSHCP Conservation Areas. Proposed lighting fixtures that are used would be designed with hoods that would direct light downward to only those areas requiring illumination for safety purposes. Low pressure sodium lights would be used, in compliance with the County of Riverside Ordinance, no. 655, Regulating Light Pollution for Zone B. A

lighting plan will be submitted to the RCA and Wildlife Agencies with the fencing plan as outlined under No. 6 below.

4. Vegetation removal activities would not occur within the Criteria Area or PQP lands during the nesting season (February 15 through September 15 in order to be consistent with the RDEIR/SDEIS– mitigation measure NC-3, Section 3.17) in order to minimize the effects of construction noise on nesting avian species. Additionally, urban land uses would be set back at least 300 feet from the MSHCP Conservation Area. The proposed Wildlife Crossing No. 10 entrance within Proposed Constrained Linkage 20 would be designed to minimize noise effects to adjacent MSHCP Conservation Area and will not exceed residential noise standards. During final design, RCTC will ensure that the placement of berms between the wildlife crossing entrances, or utilizing solid walls rather than fencing to funnel wildlife into the wildlife crossing, will be considered in order to attenuate noise effects to the MSHCP Conservation Area.
5. Consider the invasive, non-native plant species listed in Table 6-2 of the MSHCP in approving landscape plans to avoid the use of invasive species for the portions of the project that are adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography and other features. The MCP project landscape includes native plant species. Invasive plant species along the project area would be reduced by regular roadside maintenance to remove litter and weeds from the right-of-way.
6. Permanent fencing will be installed along the right-of-way limits for the entire length of the MCP project, including areas adjacent to the MCP Conservation Areas. The proposed fencing will minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in the MSHCP Conservation Area. RCTC shall submit final design fencing plan to the RCA and Wildlife Agencies prior to construction.
7. Manufactured slopes associated with the proposed MCP Project development shall not extend into the MSHCP Conservation Area.

4.8 Section 7.5.1 and 7.5.2 Compliance

Transportation projects such as the MCP are Covered Activities under the MSHCP, and RCTC, as the Permittee, is required to demonstrate compliance with Sections 7.5.1 and 7.5.2 of the MSHCP per the Implementing Agreement to the MSHCP Section 13.7(A).

4.8.1 Section 7.5.1 – Guidelines for the Siting and Design of Planned Roads within the Criteria Area and PQP Lands

Table 7 outlines how the MCP project will comply with the siting and design criteria in the MSHCP.

Table 7
MSHCP Section 7.5.1 Consistency for MCP Project

Excerpt from Section 7.5.1 of MSHCP	MCP Compliance
Planned roads will be located in the least environmentally sensitive location Feasible	The project is located in the least environmentally sensitive location and does follow an existing road alignment.
Planned roads will avoid, to the greatest extent Feasible, impacts to Covered Species and wetlands.	The project follows existing roads the entire length and has been designed to avoid Covered Species and wetlands. For example at the Sanderson Road crossing over the San Jacinto River, the project has been redesigned to include retaining walls to pull back from impacting riparian scrub and Los Angeles pocket mouse/San Bernardino kangaroo rat habitat. Additionally, revisions to project design were made around Bernasconi Road to include retaining walls as well as shifting the alignment for an approximate 1.5 mile long segment between Bernasconi Road and Antelope Road so that impacts to Los Angeles pocket mouse habitat and the San Jacinto Wildlife Area can be reduced. Impacts do occur where there are species and habitats along the shoulders and in future interchange areas. Mitigation has been provided for these impacts where they occur.
Design of planned roads will consider wildlife movement requirements, as further outlined below under Guidelines for Conservation of Wildlife Corridors.	Wildlife movement considerations have been taken into consideration and demonstrated by the numerous culverts/undercrossings and bridges as documented on Pages 3.17-22 to 3.17-25 of the RDEIR/SDEIS for the MCP Project. See response below regarding compliance with the Guidelines for Conservation of Wildlife Corridors.
Narrow Endemics Plant Species will be avoided; if avoidance is not Feasible, then mitigation as described in the Narrow Endemics Plant Policy will be implemented.	As addressed in Section 3.19 of the RDEIR/SDEIS, the project has complied with and conducted analyses as to whether Narrow Endemic Plant Species can be avoided by the project. Spreading navarretia is the only NEPSSA species impacted by the project, will be affected at the San Jacinto River crossing in Lakeview. A DBESP has been prepared to address this impact. Avoidance was not possible as the plants were located adjacent to the existing roadway.
Any construction, maintenance and operation activities that involve clearing of natural vegetation will be conducted outside the active breeding season (March 1 through June 30).	The project includes mitigation measures to avoid nesting birds during breeding seasons.
Prior to design and construction of transportation facilities, biological surveys will be conducted within the study area for the facility including vegetation mapping and species surveys and/or wetland delineations.	Surveys were conducted for the project, along with biological surveys and vegetation mapping which are included in the 2008 NES and 2011 SNES and summarized for MSHCP relevancy herein. This guideline refers to actions "prior to design and construction." As stated above, RCTC will not proceed with design and construction until a Preferred Alternative is selected, and then after that Alternative is approved by its Board. As stated in Section 3.17 of the RDEIR/SEIS, prior to design and construction, the recommendations and measures outlined in this guideline, will be implemented since they are included in the RDEIR/SDEIS.

4.8.2 Section 7.5.2 – Guidelines for Construction of Wildlife Crossings

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, wildlife species may not persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information. Once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles (such as roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food and water, and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

MSHCP Section 7.5.2 of the Western Riverside County MSHCP contains guidelines that should be applied to roads. Those guidelines "constitute a basic framework for wildlife crossing recommendations and are to be applied where there is either known wildlife movement, and/or in portions of the MSHCP Conservation Area that are assembled to provide wildlife movement." The MCP project crosses through three Reserve Features where wildlife movement is important. The Criteria Cells in those areas describe three distinct Reserve Features of the Western Riverside County MSHCP namely, Extension of Existing Core 4, Proposed Constrained Linkage 20 and Proposed Core 3 (see Figure 2).

The first Reserve Feature is Extension of Existing Core 4, which is intended to provide habitat for several plant species, and to provide movement for species connecting to Lake Perris and Canyon Lake. Maintenance of floodplain processes along the San Jacinto River as well as maintenance of vernal pools and the Traver-Willows-Domino soil complex is important. The only Planning Species for Extension of Existing Core 4 that is terrestrial and would need a movement corridor under the MCP project would be the Los Angeles pocket mouse. As shown on Figure 4, the MCP will impact Willow Series soils within the area of the San Jacinto River crossing at Lakeview within the area identified as Extension of Existing Core 4. Additionally, as discussed in Section 4.1 through 4.3 of this document, the MCP will impact alkali communities affiliated with the floodplain of the San Jacinto River, as well as some sensitive plants in the area associated with the MCP crossing over the San Jacinto River in Lakeview. As identified in Sections 4.1 through 4.3, the MCP will provide mitigation in the terms of replacement lands of similar soils and habitat types to offset the impacts associated with grading and fill needed to construct the bridges over the San Jacinto River floodplain which result in impacts to the Willow soils and plant habitats.

Figure 22 depicts a large bridge crossing over the San Jacinto River within this Reserve Feature which has been designed to allow flooding and the natural floodplain regime to remain intact. The bridge over the San Jacinto River will also act as a wildlife crossing for LAPM and other species not identified as Planning Species in the MSHCP for this Reserve Feature; this will utilize and maintain the connectivity to Lake Perris and Canyon Lake. Also shown on Figure 22 is a 3 foot by 3 foot dry culvert which will be installed within Criteria Cell 2251 and west of the Martin Street Bridge (located on Figure 22 as the green bridge adjacent to and directly west of the main San Jacinto River Bridge) which will serve as a wildlife crossing for LAPM and other small terrestrial animals. The intent of the 3 foot by 3 foot dry culvert is for wildlife movement and not for use of containing drainage flows during storm events. Through the design process, the length of the dry culvert crossing will be investigated so that if it can be shortened in length, it will be. The MCP project will include grading of a slope less than 15 to 25% to allow small mammals to access the dry culvert opening on the north side of the MCP since this opening will be approximately 12 inches above ground level within the retaining wall being constructed for the project. The provision for the "ramp" will be included in the construction bid documents and regular maintenance of this "ramp" will be included and conducted by the entity that will ultimately operate the roadway (either Caltrans or RCTC).

The second Reserve Feature affected by the MCP Project is Proposed Constrained Linkage 20 which is intended to connect Lake Perris to the Lakeview Mountains. The Hemet to Corona-Lake Elsinore CETAP Corridor (which is the same as the proposed MCP Project in this area) is explicitly mentioned in the Western Riverside County MSHCP related to impacting Proposed Constrained Linkage 20 and the added edge effects that will be introduced as a result of the MCP project. The terrestrial Planning Species for this Linkage that would be expected to occur in the project area is the Los Angeles pocket mouse.

At Proposed Constrained Linkage (PCL) 20, Wildlife Crossing No. 10 has been designed for the purpose of facilitating wildlife movement between the Lake Perris/San Jacinto Wildlife Area and the Lakeview Mountains. Crossing No. 10 is planned to be 35 feet wide by 12 feet high to accommodate wildlife movement (see Figure 22 for the location and details of this crossing) and has not been designed to convey water for drainage purposes. Crossing No. 10 was originally proposed to be used for people crossing. Now Crossing No. 10 will not be used by people for trail connections, the trail will be restricted to wildlife usage only. Instead, RCTC will coordinate with the County of Riverside to plan for a separate trail crossing that meets the County trail requirements, and is also located at a sufficient distance away from Crossing No. 10. It is anticipated that an arched structure, such as a steel elliptical culvert, including a soft bottom will be utilized for Crossing No. 10. Additionally, a 36-inch reinforced concrete box culvert, which

also has been designed solely for wildlife and not for conveying water for drainage purposes nor humans or equestrians, has been included immediately west of Wildlife Crossing No. 10. This crossing has been designed to accommodate Los Angeles Pocket Mouse, which is the only terrestrial planning species for PCL 20.

MSHCP Section 7.5.2 offers an openness ratio (width × height/length) of 0.6 (meters) as being ideal for mule deer. There are no mule deer that are intended to be Planning Species in this area of the MSHCP. However, in order to respond to concerns from California Department of Fish and Wildlife and US Fish and Wildlife an openness ratio of 0.6 can be met for this particular crossing. Wildlife Crossing No. 10 (in meters is 3.65m X 10.62m / 64.08m) does have an openness ratio of 0.6, which is ample for the Los Angeles pocket mouse, and could accommodate mule deer. This openness ratio would also be ideal for bobcats and smaller mid-sized mammals should they occur in the area.

MSHCP Section 7.5.2 also calls for smaller crossings that would be dry for small mammals and reptiles. The MCP has provided one 3 × 3-foot dry culvert crossing west of Crossing No. 10 in addition to numerous drainage culverts (see Figure 22). This dry culvert is not in a location designed to convey water, so that during the rainy season it can remain dry for animal use. It should be noted however, that there are eight drainage crossings proposed within Existing Core 4 and Proposed Constrained Linkage 20 which can also serve as crossings in the dry season, which is for a larger portion of the year. The intent of all the "dry crossing" culverts, as depicted on Figure 22, is for wildlife movement and not for use of containing drainage flows during storm events. The MCP project will include design with culvert elevations above the normal storm event, so culvert will remain dry in storm. Through the design process, the length of the dry culvert crossing will be investigated so that if it can be shortened in length, it will be. In locations where dry culvert entrance/exit locations are located through a retaining wall to ground that is sloping toward the culvert, the area around the ramp will be graded so that any drainage flows along the retaining wall are moved away from being along the wall and located between the ramp the right of way line, so that drainage flows do not impact the ramp and wash it away. The provision for the "ramp" will be included in the construction bid documents and regular maintenance of this "ramp" will be included and conducted by the entity that will ultimately operate the roadway (either Caltrans or RCTC or designated entity).

Nearly all studies indicate that structure design is the most important factor in wildlife usage, more so than human interactions. The amount of human use in the area of Crossing No. 10 is currently very low. In the future, human recreation use may increase, as development increases. Given the above information about wildlife activity patterns and wildlife crossings, human recreational use would affect daytime animals such as mule deer, but not as much for

the nocturnal animals such as bobcat, coyote and Los Angeles Pocket Mouse. In acknowledgement of this potential conflict, Crossing No. 10 has been re-designed to include cover and a rock bench to facilitate wildlife movement that can conceal them from humans. Additionally, a redundant, second dry crossing has also been included as part of MCP, to allow for a second crossing that will not be used by humans.

Within the area of PCL 20 and the San Jacinto River Bridge at Proposed Extension of Existing Core 4, the MCP will incorporate fencing that does not impede wildlife access to the crossings and bridge, while also directing wildlife away from the roadway. The MCP will include fencing and barriers installed on both openings of the smaller dry crossing and Crossing No. 10 to encourage animals to use the crossing and prevent access to the road. Figure 23 depicts the positioning of the fencing in relation to the roadway and crossing access. The project will also incorporate a row of long boulders within the edge of Crossing No. 10 to act as cover for smaller animals to use should they choose to use Crossing No. 10 instead of the small dry crossing.

Jump outs and one-way gates will also be installed along the segment of the road in the vicinity of Crossing No. 10 to allow wildlife to get off the road should they somehow gain access to that area. Figures 23a and 23b depict the conceptual design of the fencing plans at the dry culverts designed for wildlife crossing. Upon final design, when the fencing plan for the MCP project in the vicinity of Extension of Exiting Core 4 and Proposed Constrained Linkage 20 has been finalized, RCTC shall provide a copy of the fencing plan to the RCA and Wildlife Agencies for review and approval.

The third Reserve Feature in which the MCP interfaces is Proposed Core 3 which is located along the San Jacinto River at the crossing of State Route 79 (see Figure 2). The MCP impacts two Cells in the southeastern edge of this Core. This Core is identified as acting as a Linkage for connections to the San Bernardino National Forest and San Bernardino County as well as Live-In habitat and movement. The MCP will impact areas within Proposed Core 3 along the existing SR-79 roadway which will consist of widening of the existing bridges of the San Jacinto River. The MCP will not significantly impact lands identified for inclusion in Proposed Core 3, and MCP will not remove or interfere with the existing wildlife movement associated with the San Jacinto River at SR-79 crossing. The physical impacts associated with riparian habitat in the area of Proposed Core 3 will be replaced with mitigation lands identified in Section 4.1 of this document.

4.9 Section 7.5.3 and Appendix C of MSHCP Compliance

The following conditions shall be applied to the MCP Project so that impacts are reduced to species as construction occurs. Compliance with these conditions are required by RCTC as Permittee per the Implementing Agreement Section 13.7 (A).

4.9.1 Section 7.5.3 Provisions

1. Plans for water pollution and erosion control will be prepared by RCTC. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, use of plant material for erosion control.
2. Timing of construction activities will consider seasonal requirements for breeding birds and migratory non-resident species. Habitat clearing will be avoided during species active breeding season defined as March 1 to June 30.
3. Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized.
4. Short-term stream diversions will be accomplished by use of sand bags or other methods that will result in minimal instream impacts. Short-term diversions will consider effects on wildlife.
5. Silt fencing or other sediment trapping materials will be installed at the downstream end of construction activities to minimize the transport of sediments off-site.
6. Settling ponds where sediment is collected will be cleaned in a manner that prevents sediment from re-entering the stream or damaging/disturbing adjacent areas. Sediment from settling ponds will be removed to a location where sediment cannot re-enter the stream or surrounding drainage area. Care will be exercised during removal of silt fencing to minimize release of debris or sediment into streams.
7. No erodible materials will be deposited into water courses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks.
8. The footprint of disturbance will be minimized to the maximum extent Feasible. Access to sites will occur on pre-existing access routes to the greatest extent possible.
9. Equipment storage, fueling and staging areas will be sited on non-sensitive upland Habitat types with minimal risk of direct discharge into riparian areas or other sensitive Habitat types.

10. The limits of disturbance, including the upstream, downstream and lateral extents, will be clearly defined and marked in the field. Monitoring personnel will review the limits of disturbance prior to initiation of construction activities.
11. During construction, the placement of equipment within the stream or on adjacent banks or adjacent upland Habitats occupied by Covered Species that are outside of the project footprint will be avoided.
12. Exotic species removed during construction will be properly handled to prevent sprouting or regrowth.
13. Training of construction personnel will be provided.
14. Ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of best management practices.
15. When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, water tankers) shall be available on the site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.
16. Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.
17. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances shall occur only in designated areas within the proposed grading limits of the project site. These designated areas shall be clearly marked and located in such a manner as to contain run-off.
18. Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat.

4.9.2 Appendix C Provisions

1. A qualified biologist shall conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with

violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.

2. Water pollution and erosion control plans shall be developed and implemented in accordance with Regional Water Quality Control Board (RWQCB) requirements.
3. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via preexisting access routes to the greatest extent possible.
4. The upstream and downstream limits of projects disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.
5. Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.
6. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian bird species identified in MSHCP Global Species Objective No. 7.
7. When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal in stream impacts. Silt fencing or other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments off site. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.
8. Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, USFWS, CDFW, and RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.
9. Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.

10. The qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint.
11. The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to preexisting contours and revegetated with appropriate native species.
12. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.
13. To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).
14. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.
15. RCTC shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.

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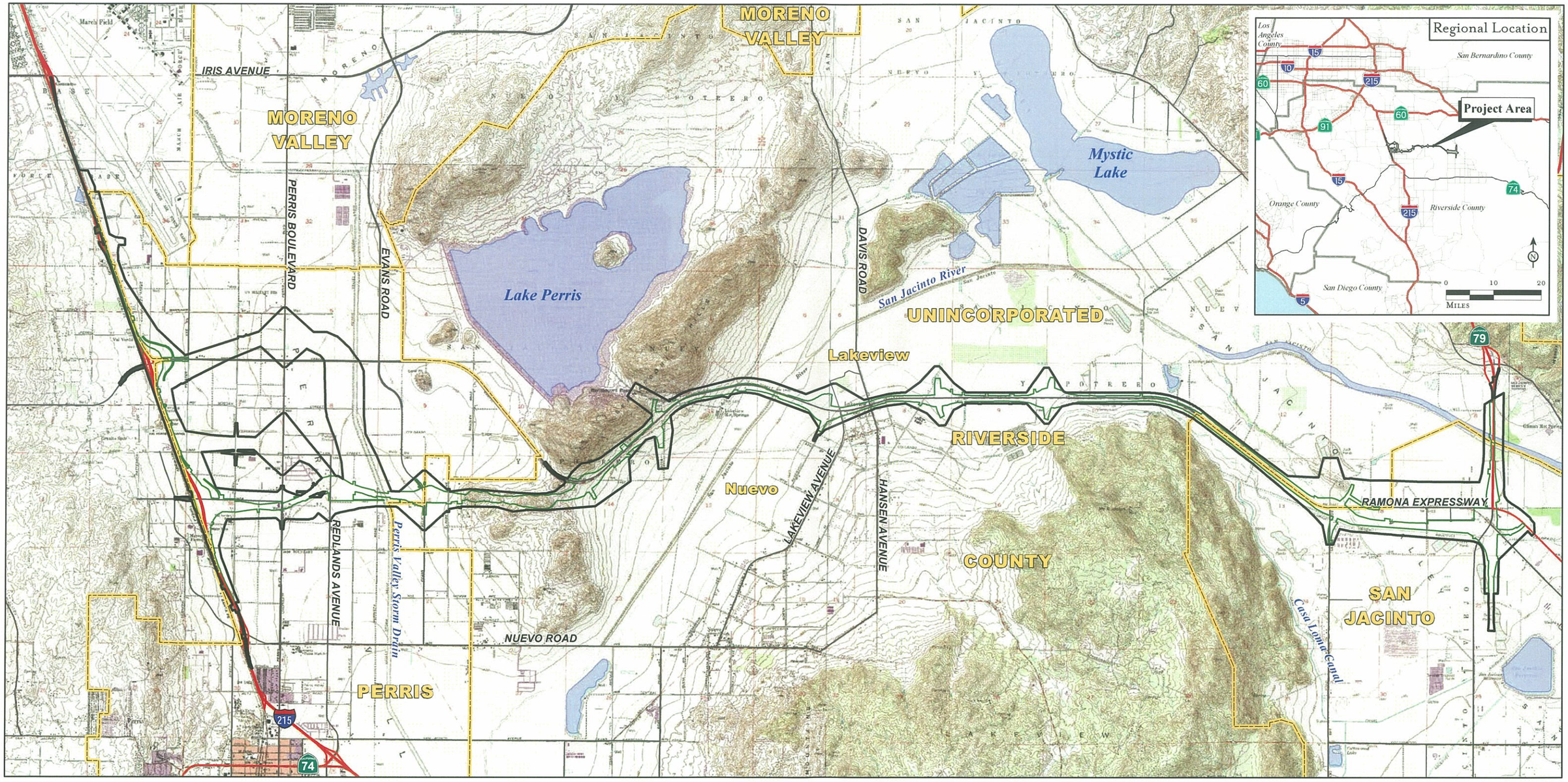

LEGEND

- Biological Study Area
- MCP Project Footprint
- Cities

FIGURE 1

SOURCE: Jacobs Engineering (04/2011); USGS 7.5' Quads; County of Riverside (06/2003)

0 2700 5400 FEET

PROJECT LOCATION

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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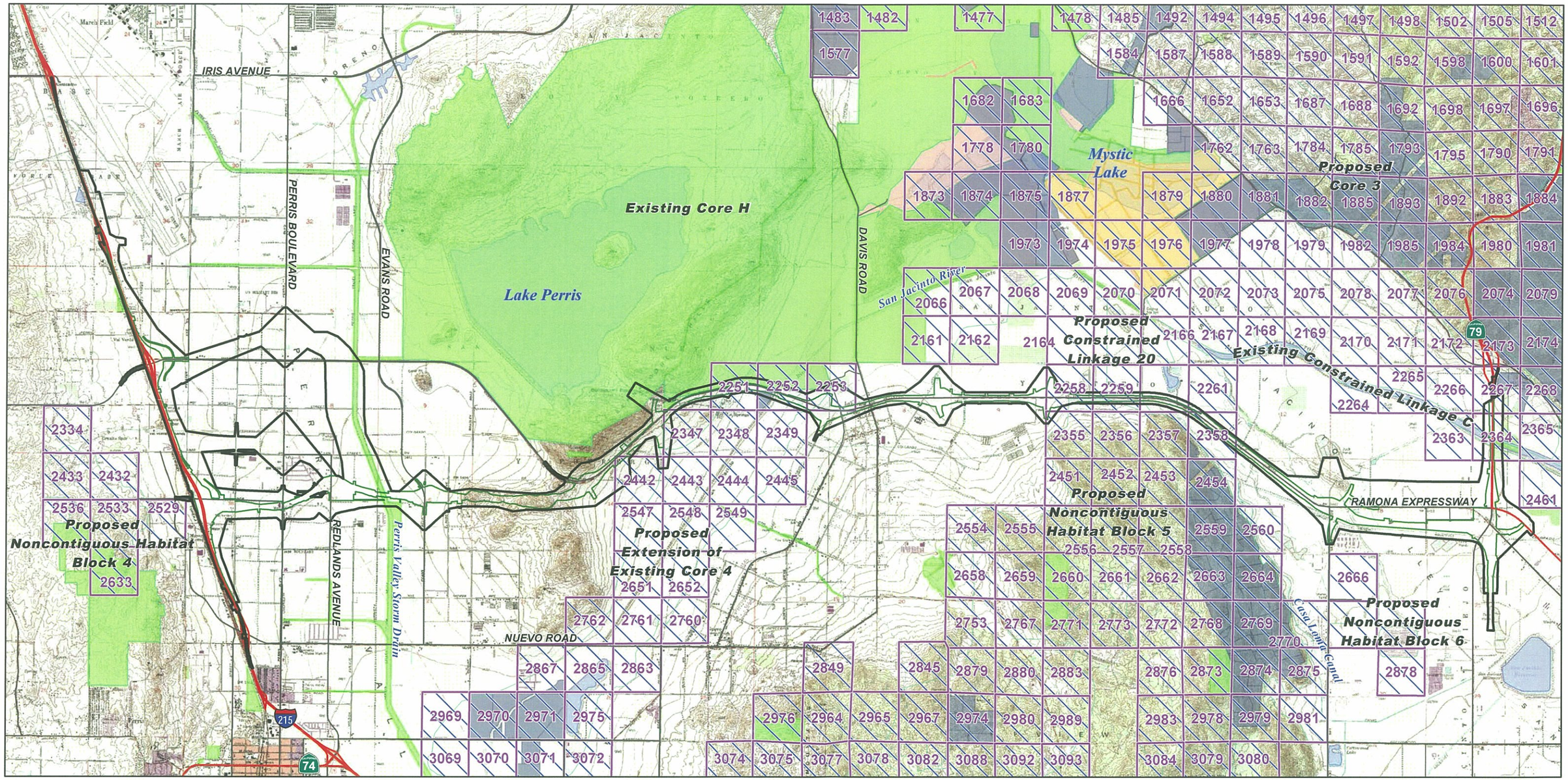

LEGEND

- Biological Study Area
- MCP Project Footprint
- MSHCP Criteria Areas*
- Criteria Cells

MSHCP Conservation Areas

- Public/Quasi-Public Conserved Lands
- Pre-existing Conservation Agreements
- San Jacinto Wildlife Area Additional Acquisition
- Additional Reserve Lands

FIGURE 2

SOURCE: Jacobs Engineering (02/2011); USGS 7.5' Quads; County of Riverside (06/2003)

0 2700 5400 FEET

PROPOSED PROJECT AND MSHCP AREAS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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LEGEND

FIGURE 3

- Biological Study Area
- MCP Project Footprint
- Cropland
- Dairy
- Lake/Pond
- Developed/Ruderal
- Riversidean Upland Sage Scrub
- Non-Native Grassland
- Alkali Grassland
- Marsh
- Riparian Forest
- Riparian Scrub

SOURCE: Jacobs Engineering (02/2011), Eagle Aerial (2010)

0 2650 5300 FEET

VEGETATION COMMUNITIES

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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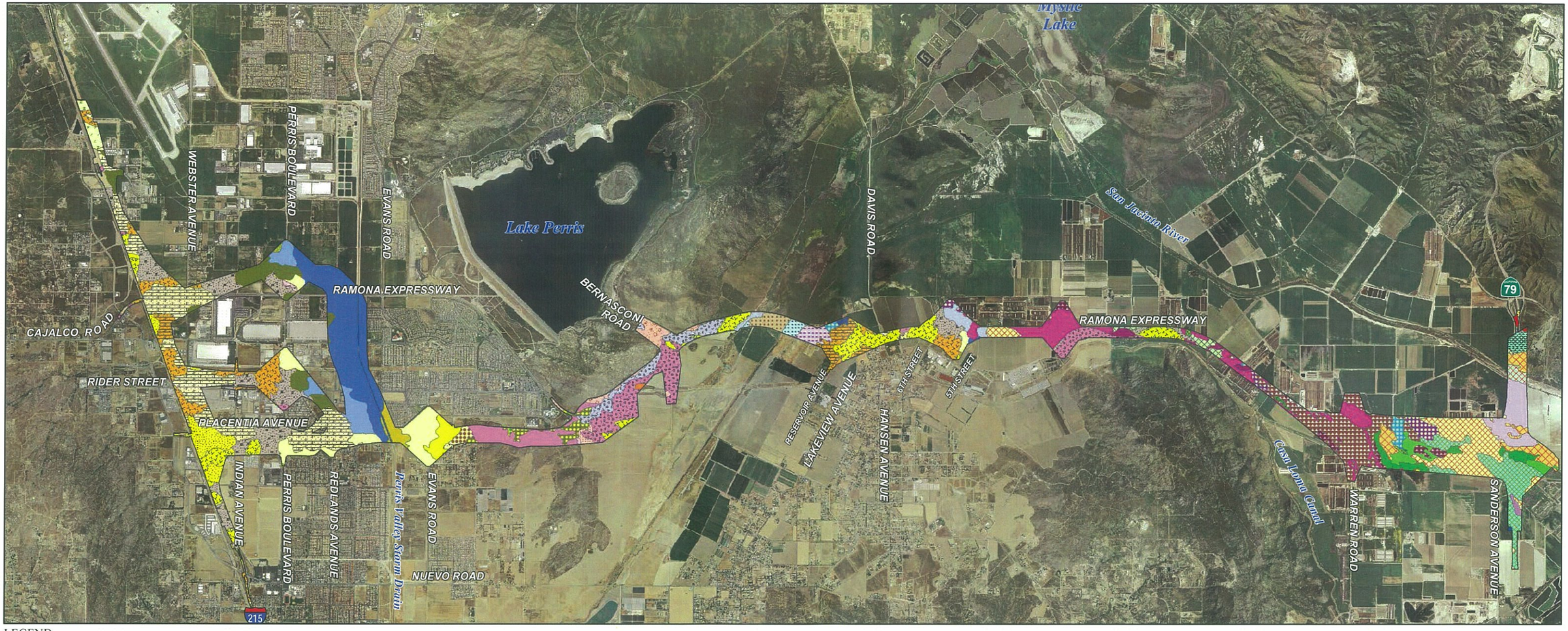

FIGURE 4

LEGEND

Biological Study Area

Soil Types

- AoC: Arlington fine sandy loam, deep, 2-8% slopes
- Ce: Chino silt loam, drained
- Cf: Chino silt loam, drained, saline-alkali
- Cg: Chino silt loam, drained, strongly saline-alkali
- ChD2: Cieneba sandy loam, 8-15% slopes, eroded
- CkF2: Cieneba rocky sandy loam, 15-50% slopes, eroded
- DpB: Dello loamy fine sand, saline-alkali, 0-5% slopes
- DrA: Dello loamy fine sand, gravelly substratum, 0-2% slopes
- Dt: Domino fine sandy loam, saline-alkali
- Du: Domino silt loam
- Dv: Domino silt loam, saline-alkali
- Dw: Domino silt loam, strongly saline-alkali
- EnA: Exeter sandy loam, 0-2% slopes
- EnC2: Exeter sandy loam, 2-8% slopes, eroded
- EoB: Exeter sandy loam, slightly saline-alkali, 0-5% slopes
- EpA: Exeter sandy loam, deep, 0-2% slopes
- EpC2: Exeter sandy loam, deep, 2-8% slopes, eroded
- EwB: Exeter very fine sandy loam, 0-5% slopes
- EyB: Exeter very fine sandy loam, deep, 0-5% slopes
- FaD2: Fallbrook sandy loam, 8-5% slopes, eroded
- GhD: Gorgonio loamy sand, 8-15% slopes
- GoB: Grangeville loamy fine sand, drained, 0-5% slopes
- GpB: Grangeville sandy loam, drained, saline-alkali, 0-5% slopes
- GsB: Grangeville sandy loam, sandy substratum, drained, saline-alkali , 0-5% slopes
- GtA: Grangeville fine sandy loam, drained, 0-2% slopes
- GuB: Grangeville fine sandy loam, poorly drained, saline-alkali, 0-5% slopes
- GvB: Grangeville fine sandy loam, saline-alkali, 0-5% slopes
- GwA: Grangeville fine sandy loam, loamy substratum, drained, 0-2% slopes
- GxA: Grangeville fine sandy loam, loamy substratum, drained, saline-alkali
- GyA: Greenfield sandy loam, 0-2% slopes
- GyC2: Greenfield sandy loam, 2-8% slopes, eroded
- HcA: Hanford coarse sandy loam, 0-2% slopes
- HcC: Hanford coarse sandy loam, 2-8% slopes
- HcD2: Hanford coarse sandy loam, 8-15% slopes, eroded
- HgA: Hanford fine sandy loam, 0-2% slopes
- MdC: Metz loamy sand, 2-8% slopes
- MhB: Metz loamy fine sand, sandy loam substratum, 0-5% slopes
- MmB: Monserate sandy loam, 0-5% slopes
- MmC2: Monserate sandy loam, 5-8% slopes, eroded
- PaA: Pachappa fine sandy loam, 0-2% slopes
- RaA: Ramona sandy loam, 0-2% slopes
- RaB2: Ramona sandy loam, 2-5% slopes, eroded
- RaB3: Ramona sandy loam, 0-5% slopes, severely eroded
- RaC3: Ramona sandy loam, 5-8% slopes, severely eroded
- RtF: Rockland
- SeA: San Emigdio fine sandy loam, 0-2% slopes
- SeC2: San Emigdio fine sandy loam, 2-8% slopes, eroded
- SfA: San Emigdio fine sandy loam, deep, 0-2% slopes
- SgA: San Emigdio loam, 0-2% slopes
- TeG: Terrace escarpments
- Tp2: Traver loamy fine sand, eroded
- Tr2: Traver loamy fine sand, saline-alkali, eroded
- Ts: Traver fine sandy loam, saline-alkali
- Tt2: Traver fine sandy loam, strongly saline-alkali, eroded
- TvC: Tujunga loamy sand, channeled, 0-8% slopes
- VsC: Vista coarse sandy loam, 2-8% slopes
- VsD2: Vista coarse sandy loam, 8-15% slopes, eroded
- VtF2: Vista rocky coarse sandy loam, 2-35% slopes, eroded
- W: Water
- Wb: Waukena fine sandy loam, saline-alkali
- Wc: Waukena fine sandy loam, strongly saline-alkali
- Wd: Waukena loam, saline-alkali
- Wf: Willows silty clay
- Wg: Willows silty clay, saline-alkali
- Wn: Willows silty clay, deep, strongly saline-alkali

SOURCE: Jacobs Engineering (02/2011), Eagle Aerial (2010); Soil Data Mart (09/2003)

0 2650 5300 FEET

SOILS MAP

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
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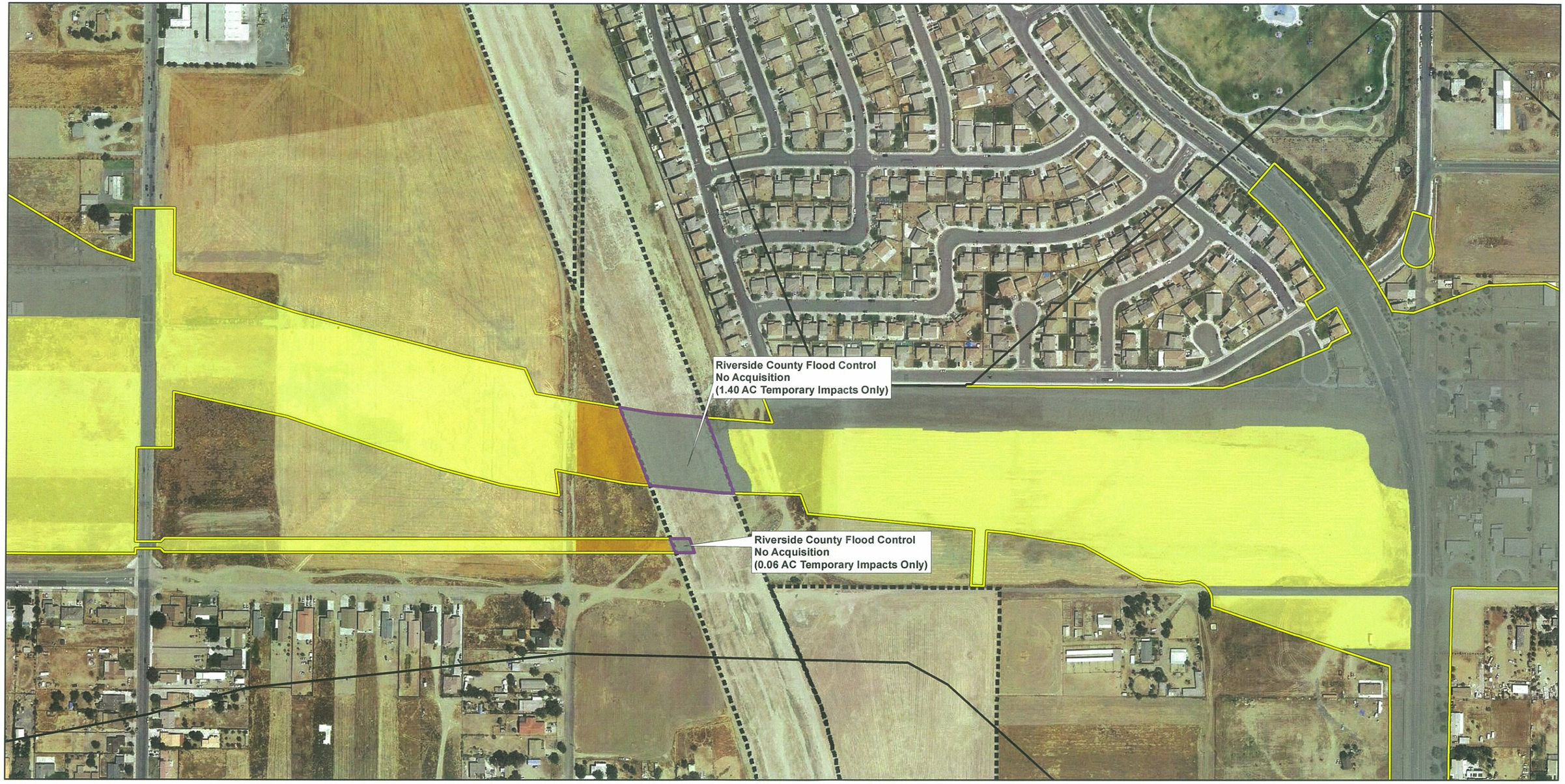

LEGEND

- Biological Study Area
- MCP Project Footprint
- MSHCP Public/Quasi-Public Conserved Lands
- PQP Impact Areas

Land Cover

- Cropland
- Developed/Ruderal
- Alkali Grassland

FIGURE 5

VICINITY MAP

SOURCE: Jacobs Engineering (02/2011, 06/2014); Eagle Aerial (03/2010); Western Riverside County Regional Conservation Authority (2013).

0 150 300 FEET

PQP IMPACTS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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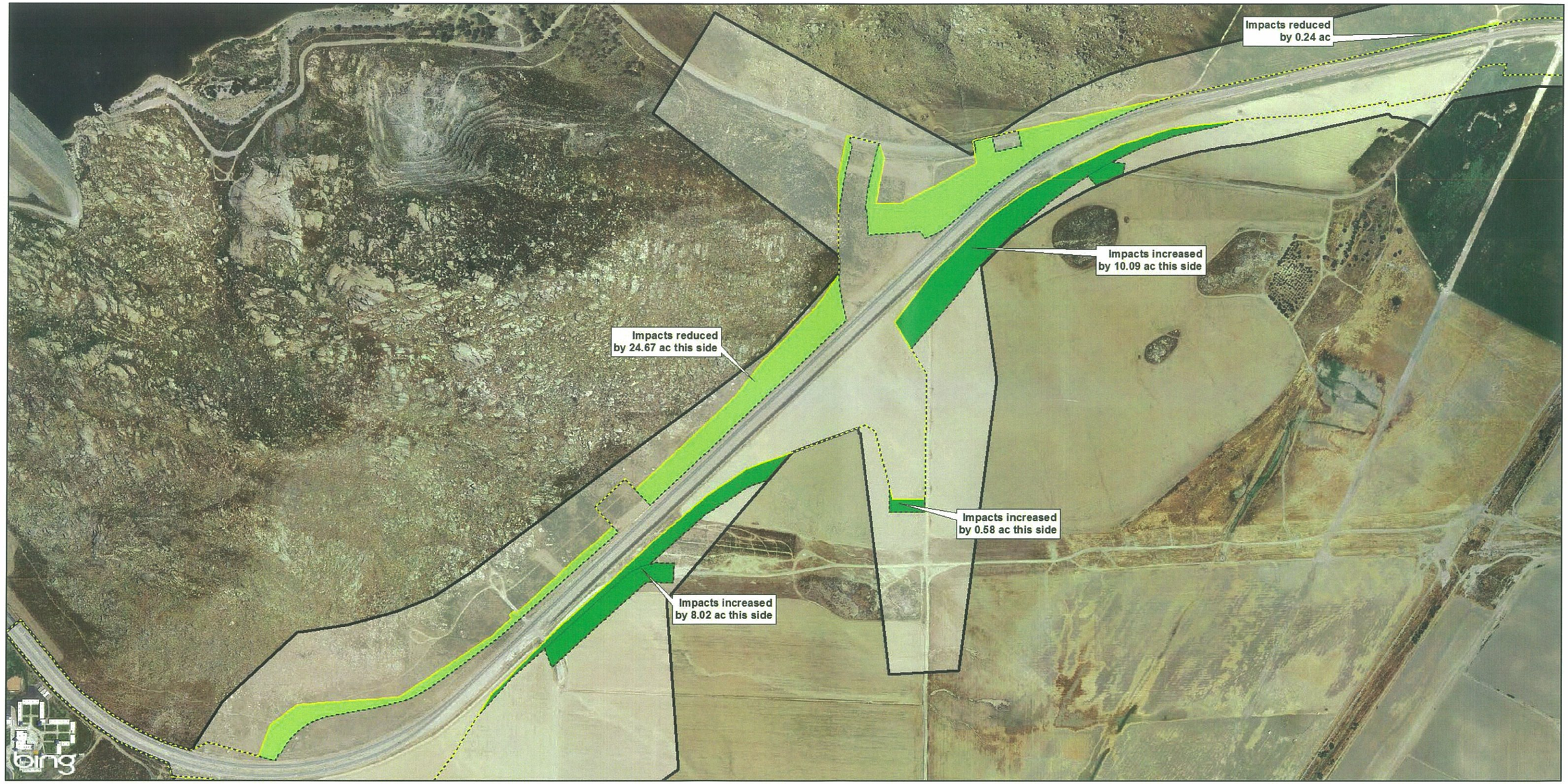

LEGEND

- Biological Study Area
- MCP Project Footprint (2011)
- MCP Project Footprint (2014)
- Increased Area (Total 18.69 Ac)
- Reduced Area (Total 27.72 Ac)
- Net reduction in impacts is 9.03 Ac

VICINITY MAP

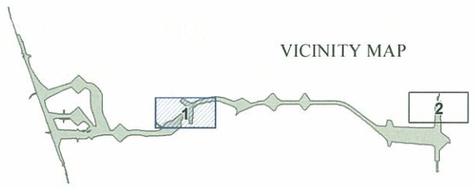

FIGURE 6
Sheet 1 of 2

SOURCE: Jacobs Engineering (02/2011, 06/2014); Eagle Aerial (03/2010); Bing Aerial (2010); Western Riverside County Regional Conservation Authority (2008).

0 350 700 FEET

REVISED IMPACTS TO ORIGINAL FOOTPRINT

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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LEGEND

- Biological Study Area
- MCP Project Footprint (2011)
- MCP Project Footprint (2014)
- Increased Area (Total 18.69 Ac)
- Reduced Area (Total 27.72 Ac)
- Net reduction in impacts is 9.03 Ac

VICINITY MAP

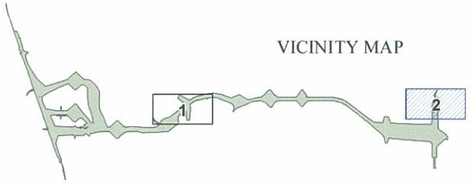

FIGURE 6
Sheet 2 of 2

SOURCE: Jacobs Engineering (02/2011, 06/2014); Eagle Aerial (03/2010); Bing Aerial (2010); Western Riverside County Regional Conservation Authority (2008).

0 350 700 FEET

REVISED IMPACTS TO ORIGINAL FOOTPRINT

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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FIGURE 7

LEGEND

- Biological Study Area
- MCP Project Footprint
- MSHCP Riparian Vegetation Categories (Marsh [0.20 Ac], Riparian Forest [3.24 Ac] & Riparian Scrub [1.55 Ac])(4.99 Ac) within Impact Area
- MSHCP San Jacinto River Alkali Communities (Lakeview Area) within Impact Area (29.39 Ac)
- MSHCP Unvegetated Riverine Area within Impact Area (7.22 ac)

Total Acreage for MSHCP Riparian and Riverine Areas is 41.60

Note: MSHCP Riparian Areas include land cover categories 520 Marsh, 610 Riparian Forest, and 630 Riparian Scrub. Riverine features include other CDFW jurisdictional areas as determined during field work for the delineation. Alkiali grassland, cropland and some disturbed/ruderal within the San Jacinto River floodplain (in the Lakeview area) are also considered riverine features.

SOURCE: Jacobs Engineering (04/2011); County of Riverside (2010); Bing Imagery, 2010.

0 2650 5300 FEET

OVERALL MSHCP RIPARIAN RIVERINE AREAS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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LEGEND

- Biological Study Area
- MCP Project Footprint

Project Impacts to MSHCP Riparian/Riverine Areas

- Permanent Grading Impacts (26.017 Ac)
- Permanent Shade Impacts (9.525 Ac)
- Temporary Impacts (6.049 Ac)

Total: 41.591 Acres

Note: MSHCP Riparian Areas include land cover categories Marsh, Riparian Forest, and Riparian Scrub. Riverine features include other CDFW jurisdictional areas as determined during field work for the delineation. Alkali grassland, cropland, and some disturbed/ruderal within the San Jacinto River floodplain are also considered riverine features.

FIGURE 8

SOURCE: Jacobs Engineering (04/2011, 06/2014); County of Riverside (2010); Bing Imagery, 2010.

0 2500 5000 FEET

OVERALL PERMANENT VS TEMPORARY RIPARIAN/RIVERINE IMPACTS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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FIGURE 9

LEGEND

- Biological Study Area
- MCP Project Footprint
- Permanent Impacts to Riparian Scrub (0.19 Ac)
- Permanent Impacts to Riverine Features (0.23 Ac)

Total 0.42 Ac

All Impacts to Riparian/Riverine on this map are considered permanent (no temporary impacts in this area).

Riparian/Riverine areas shown are conservatively mapped based on Jurisdictional Delineation.

SOURCE: Jacobs Engineering (04/2011); County of Riverside (2010); Bing Imagery, 2010.

0 50 100 FEET

PERMANENT IMPACTS TO RIPARIAN/RIVERINE AREAS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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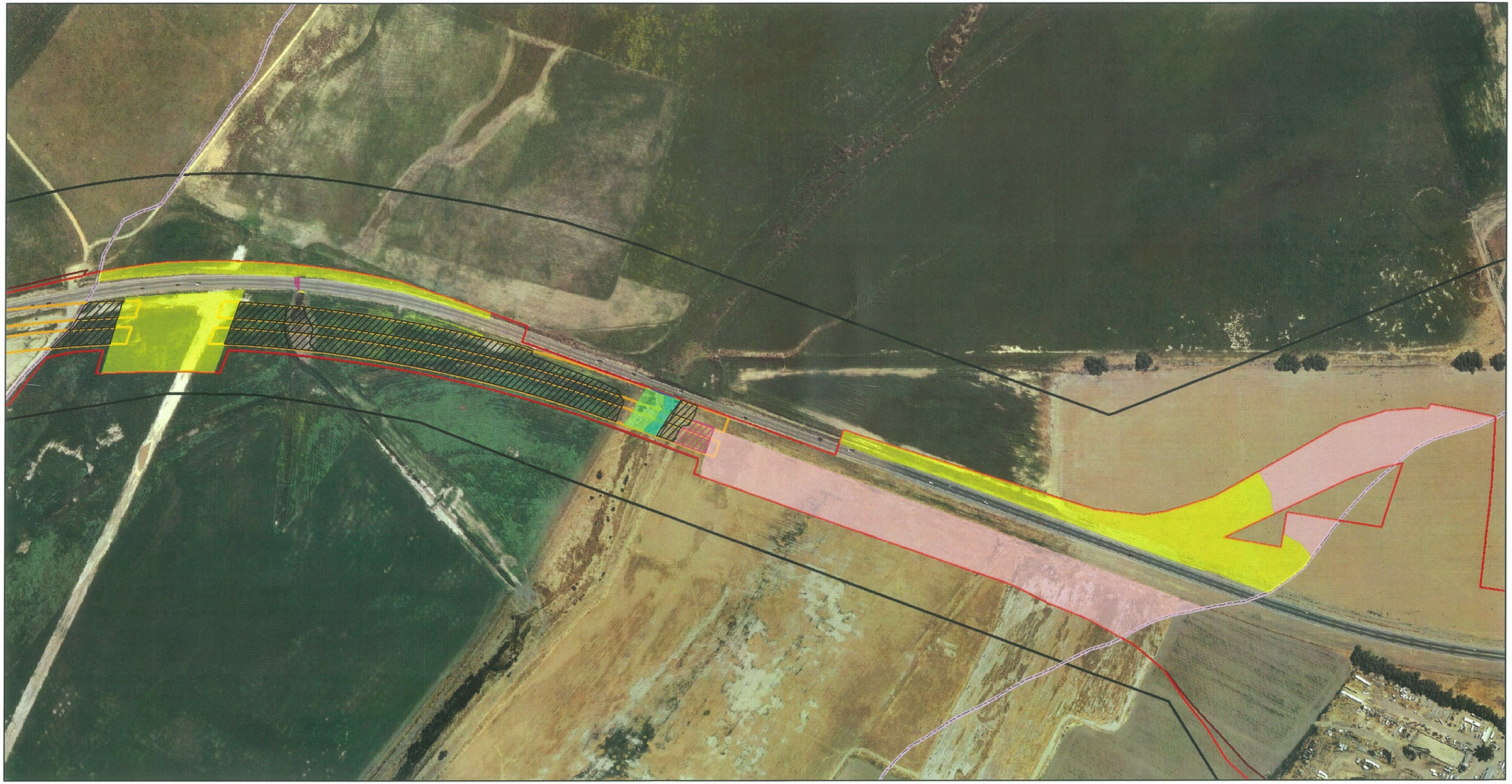


FIGURE 10

Biological Study Area
MCP Project Footprint
Bridge Placement
FEMA 100-year Floodplain

Permanent Shade Impacts to Riparian Habitat in Floodplain

Marsh (0.17 Ac)
Riparian Scrub (0.31 Ac)
Total: 0.48 Ac

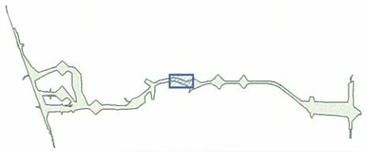
Permanent Shade Impacts to Riverine Habitat in Floodplain

Cropland (0.27 Ac)
Developed/Ruderal (0.004 Ac)
Alkali Grassland (6.09 Ac)
Total: 6.36 Ac

Permanent Grading Impacts to Riverine Habitat in Floodplain

Cropland (11.27 Ac)
Developed/Ruderal (0.02 Ac)
Alkali Grassland (9.52 Ac)
Total: 20.80 Ac

Note: Acreages are only for Figure 10.



0 175 350 FEET

SOURCE: Jacobs Engineering (04/2011); County of Riverside (2010)

Temporary Impacts for this area are shown on Figure 11

PERMANENT IMPACTS TO RIPARIAN/RIVERINE AREAS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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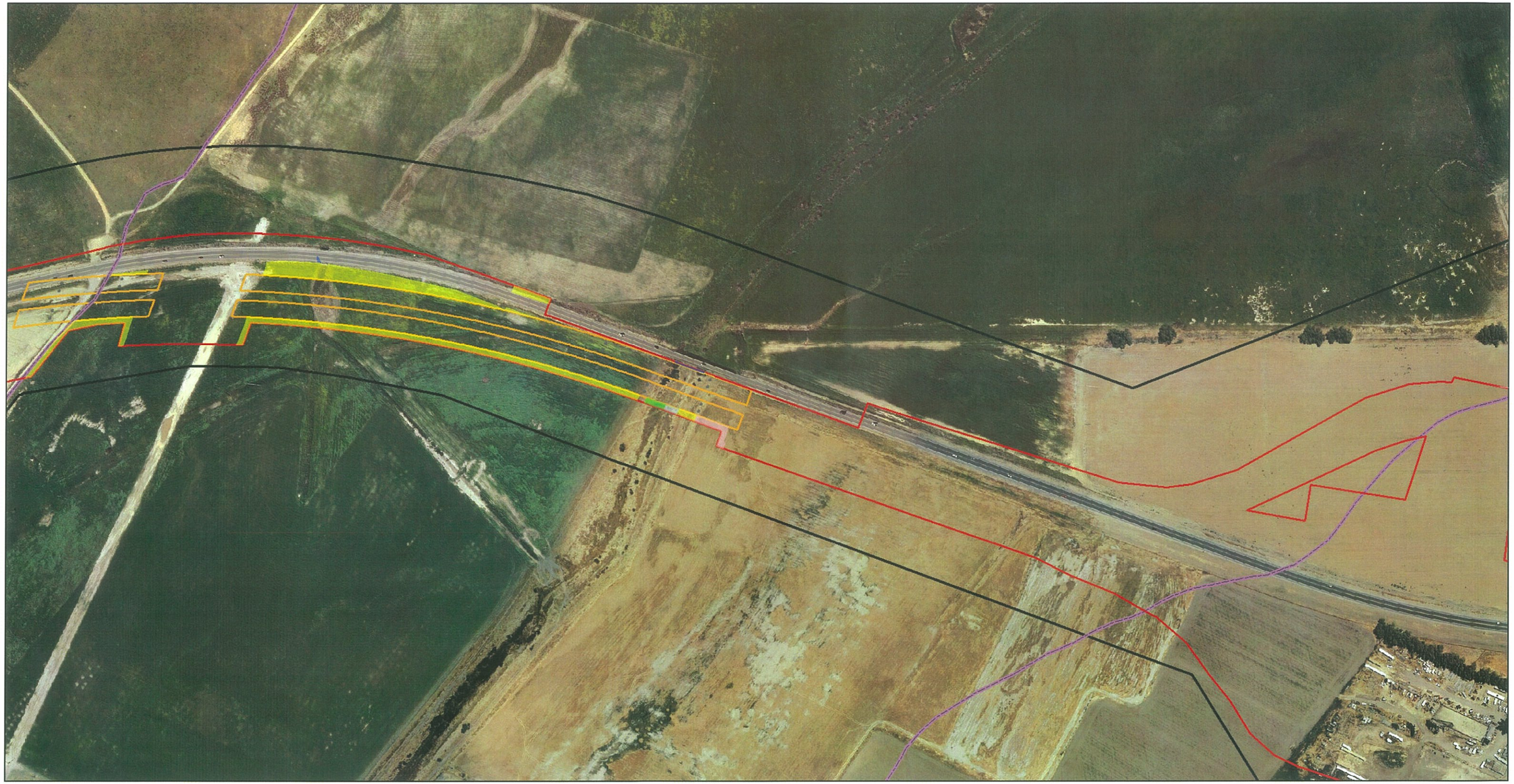


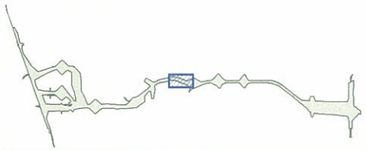
FIGURE 11

Biological Study Area
MCP Project Footprint
Bridge Placement
FEMA 100-year Floodplain

Temporary Impacts to Riparian Areas in Floodplain
Marsh (0.03 Ac)
Riparian Scrub (0.04Ac)
Total: 0.07 Ac

Temporary Impacts to Riverine Areas in Floodplain
Cropland (0.10 Ac)
Developed/Ruderal (0.02 Ac)
Alkali Grassland (2.11 Ac)
Total: 2.23 Ac

Note: Acreages are only for Figure 11.



0 175 350 FEET

SOURCE: Jacobs Engineering (04/2011); County of Riverside (2010)

Permanent Impacts for this area are shown on Figure 10

TEMPORARY IMPACTS TO RIPARIAN/RIVERINE AREAS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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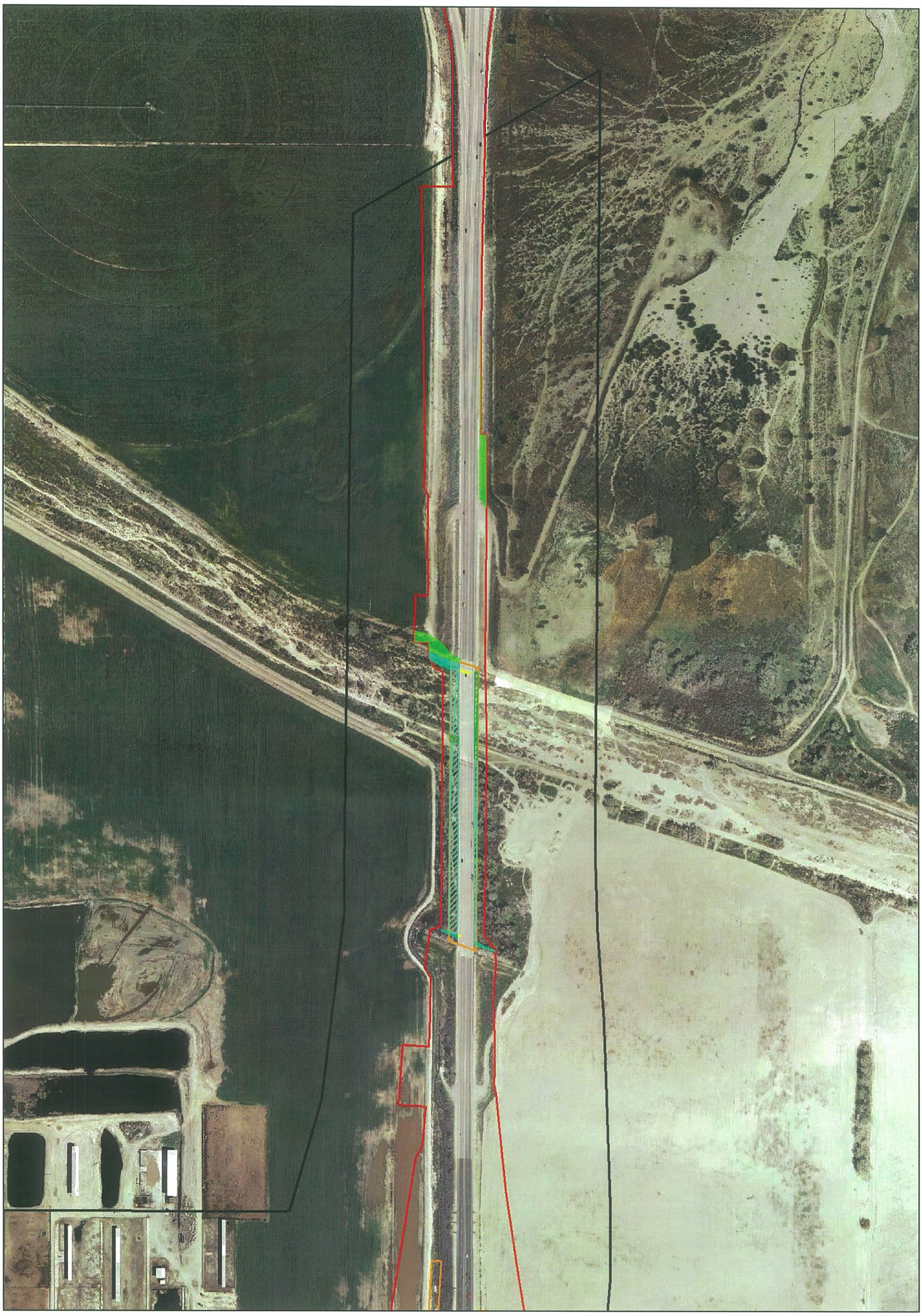

Biological Study Area
MCP Project Footprint
Bridge Placement

Note: Acreages are the total sum for both Sheets 1 and 2 of Figure 12.

Permanent Grading Impacts to Riparian Habitat
Riparian Forest (0.29 Ac)
Riparian Scrub (0.47 Ac)
Total: Total: 0.76 Ac

Permanent Shade Impacts to Riparian Habitat
Riparian Forest (1.14 Ac)
Riparian Scrub (0.13 Ac)
Total: 1.27 Ac

Permanent Grading Impacts to Riverine Areas
Alkali Grassland, Developed/Ruderal (0.03 Ac)

Permanent Shade Impacts to Riverine Areas
Alkali Grassland, Developed/Ruderal, Cropland, Lake/Pond (0.10 Ac)

Temporary Impacts for this area are shown on Figure 13

FIGURE 12
Sheet 1 of 2

0 200 400 FEET

SOURCE: Jacobs Engineering (04/2011, 06/2013); County of Riverside (2010).

R:\JCV531\G\ModifiedProject\Reports\DPESP\fig12_East_Area_Perm.mxd (7/8/2014)

PERMANENT IMPACTS TO RIPARIAN/RIVERINE AREAS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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Biological Study Area
MCP Project Footprint
Bridge Placement

Note: Acreages are the total sum for both Sheets 1 and 2 of Figure 12.

Permanent Grading Impacts to Riparian Habitat
Riparian Forest (0.29 Ac)
Riparian Scrub (0.47 Ac)
Total: Total: 0.76 Ac

Permanent Shade Impacts to Riparian Habitat
Riparian Forest (1.14 Ac)
Riparian Scrub (0.13 Ac)
Total: 1.27 Ac

Permanent Grading Impacts to Riverine Areas
Alkali Grassland, Developed/Ruderal (0.03 Ac)

Permanent Shade Impacts to Riverine Areas
Alkali Grassland, Developed/Ruderal, Cropland, Lake/Pond (0.10 Ac)

Temporary Impacts for this area are shown on Figure 13

FIGURE 12
Sheet 2 of 2

0 200 400 FEET

SOURCE: Jacobs Engineering (04/2011, 06/2013); County of Riverside (2010).

R:\JCV531\G\ModifiedProject\Reports\DPESP\fig12_East_Area_Perm.mxd (7/8/2014)

PERMANENT IMPACTS TO RIPARIAN/RIVERINE AREAS

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EA 08-0F3200 (PN 0800000125)

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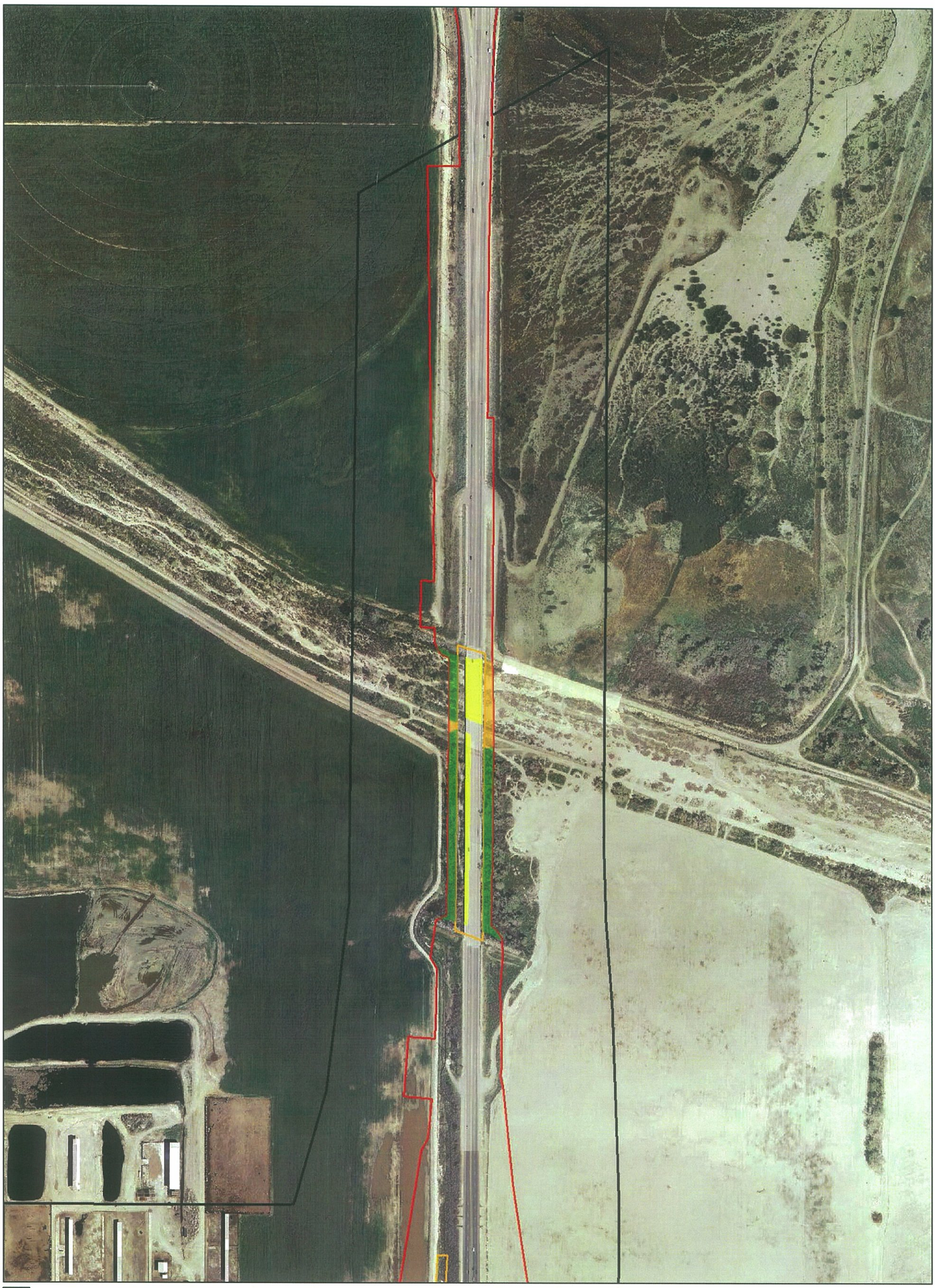


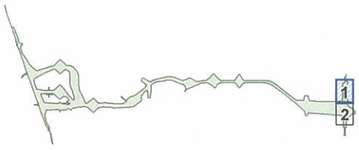
Biological Study Area
MCP Project Footprint
Bridge Placement

Temporary Impacts to Riparian Habitat
Riparian Forest (1.80 Ac)
Riparian Scrub (0.40 Ac)
Total: 2.20 Ac

Temporary Impacts to Riverine Areas
Alkali Grassland, Cropland, Developed/Ruderal, Lake/Pond (1.44 Ac)

FIGURE 13
Sheet 1 of 2

Note: Acreages are the total sum for both Sheets 1 and 2 of Figure 13.



Permanent Impacts for this area are shown on Figure 12

0 200 400 FEET

SOURCE: Jacobs Engineering (04/2011, 06/2013); County of Riverside (2010).

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TEMPORARY IMPACTS TO RIPARIAN/RIVERINE AREAS

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EA 08-0F3200 (PN 0800000125)

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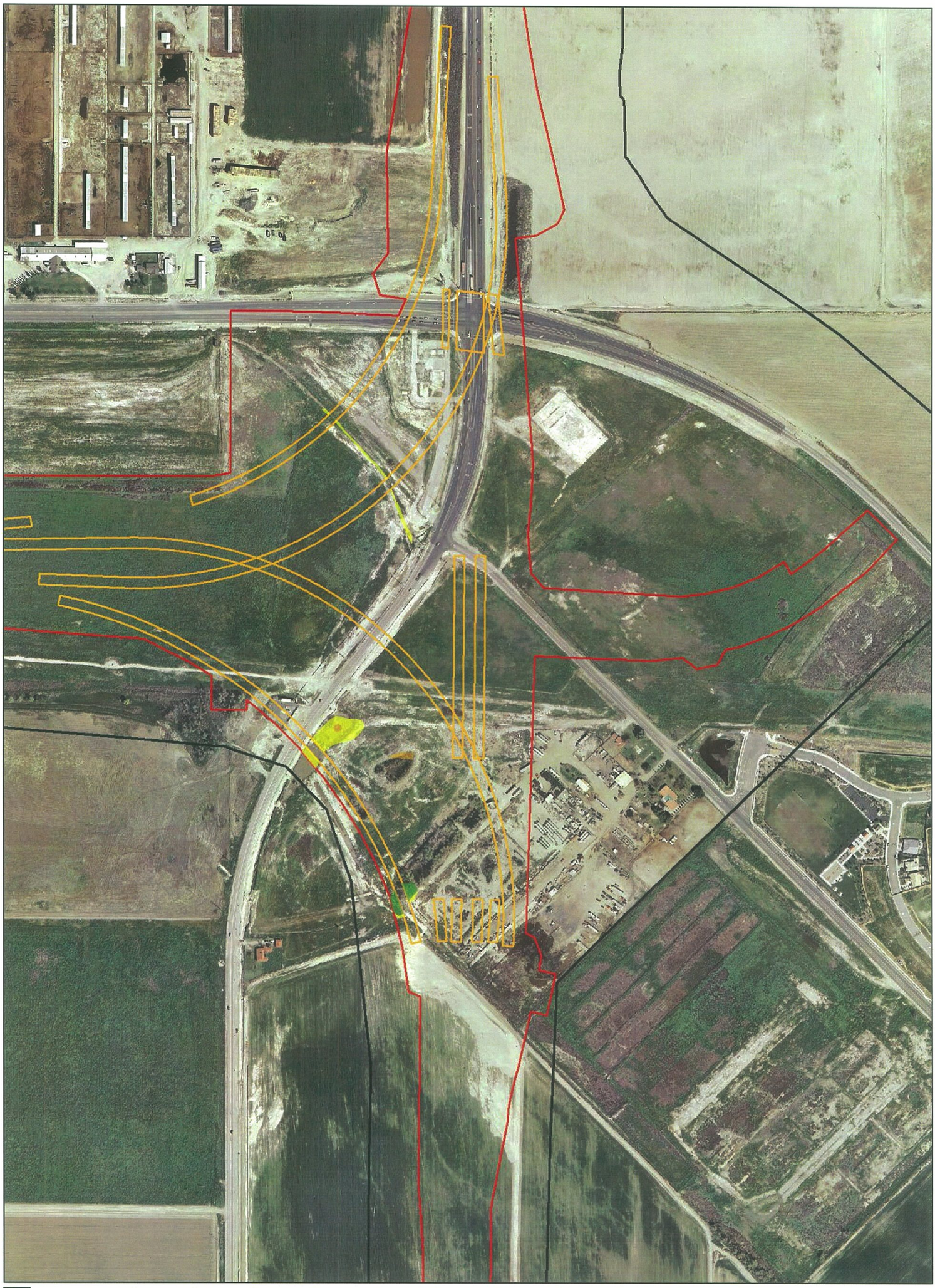


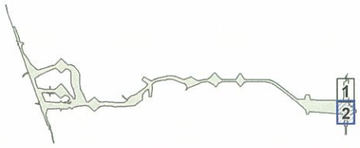
Biological Study Area
MCP Project Footprint
Bridge Placement

Temporary Impacts to Riparian Habitat
Riparian Forest (1.80 Ac)
Riparian Scrub (0.40 Ac)
Total: 2.20 Ac

Temporary Impacts to Riverine Areas
Alkali Grassland, Cropland, Developed/Ruderal, Lake/Pond (1.44 Ac)

FIGURE 13
Sheet 2 of 2

Note: Acreages are the total sum for both Sheets 1 and 2 of Figure 13.



Permanent Impacts for this area are shown on Figure 12

0 200 400 FEET

SOURCE: Jacobs Engineering (04/2011, 06/2013); County of Riverside (2010).

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TEMPORARY IMPACTS TO RIPARIAN/RIVERINE AREAS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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FIGURE 14

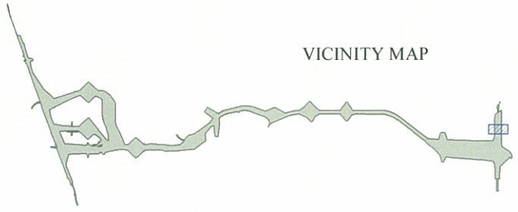
LEGEND

- Biological Study Area
- MCP Project Footprint
- Least Bell's Vireo Habitat Suitable for Long Term Conservation (13.80 Ac, 3.66 Ac in Footprint)
- Least Bell's Vireo (Pair), 2008, Approximate Location
  (Data provided by the Western Riverside County Regional Conservation Authority)

Least Bells Vireo Impacts within Footprint

- LBV Permanent Impact (1.66 Ac)
- LBV Temporary Impact (2.00 Ac)

VICINITY MAP



SOURCE: Jacobs Engineering (02/2011); Eagle Aerial (03/2010); Western Riverside County Regional Conservation Authority (2008)

0 100 200 FEET

LEAST BELL'S VIREO LOCATIONS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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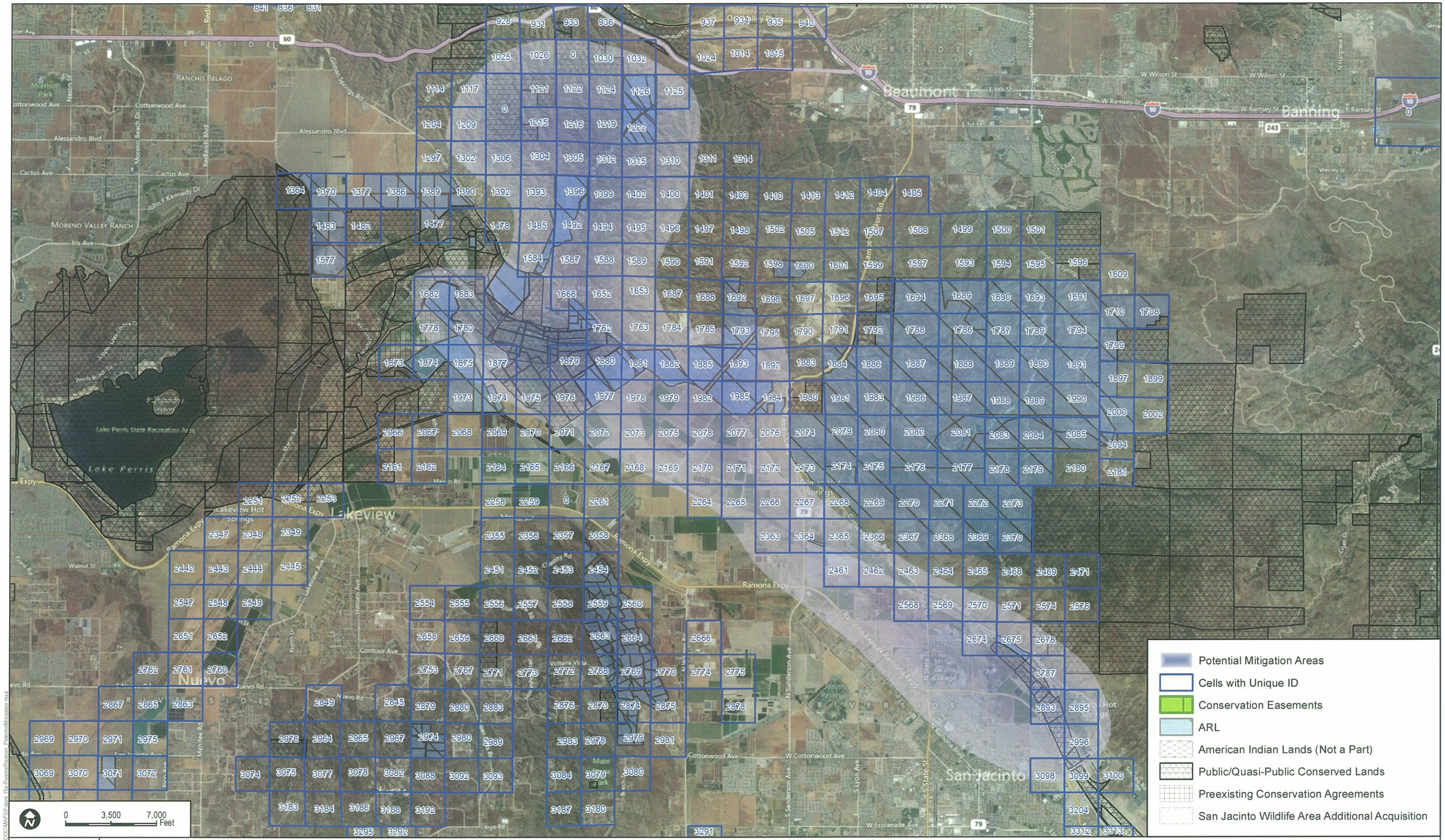

SOURCE: Riverside County 2013; Bing Maps

DUDEK

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MCP

FIGURE 15a

Riparian and Riverine (Unvegetated) Potential Mitigation Areas

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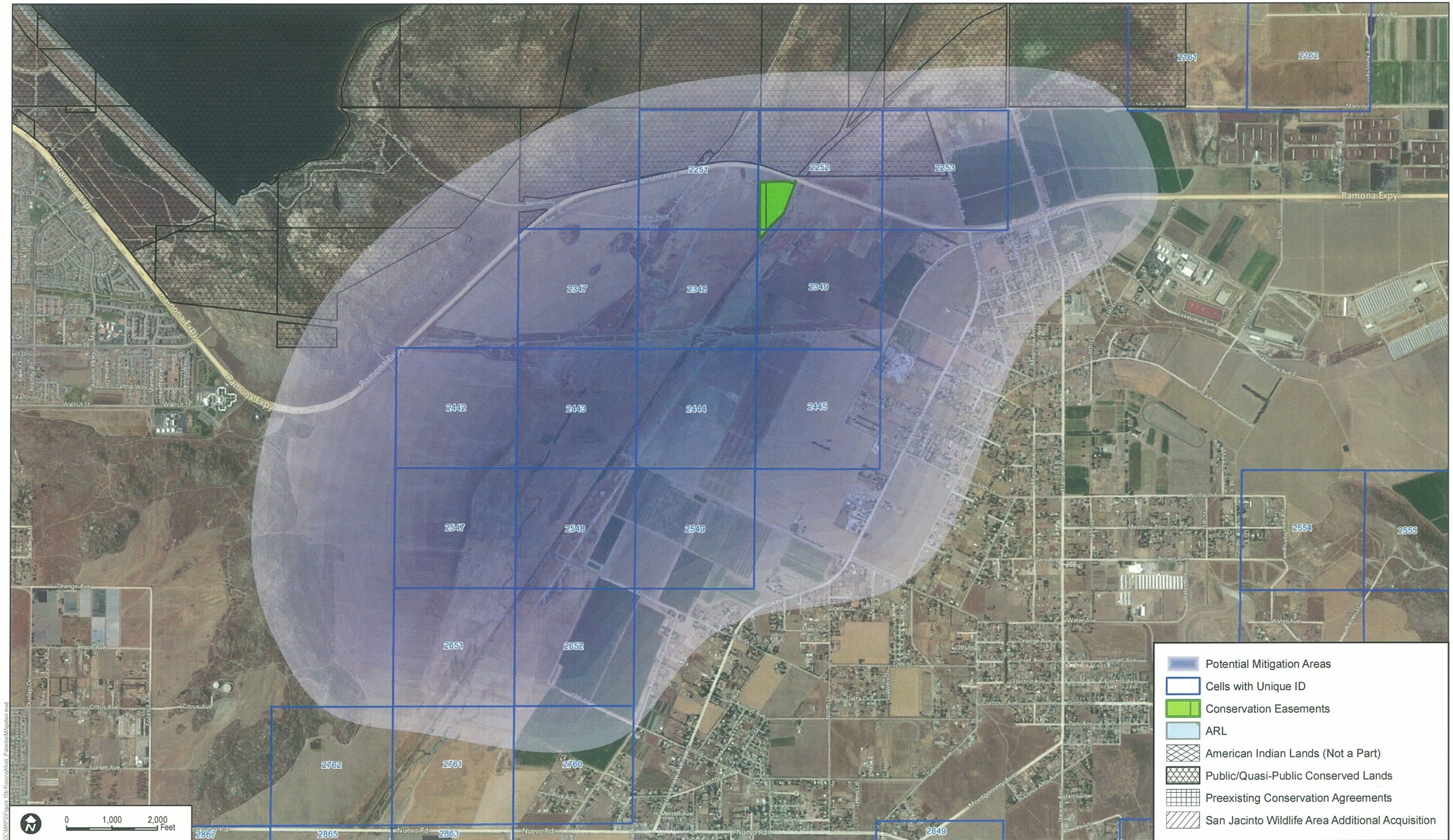

DUDEK

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SOURCE: Riverside County 2013; Bing Maps

MCP

FIGURE 15b

Riverine/Alkali Communities Potential Mitigation Areas

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FIGURE 16

Legend

- Biological Study Area
- MCP Project Footprint
- Bridge Placement
- FEMA 100-year Floodplain

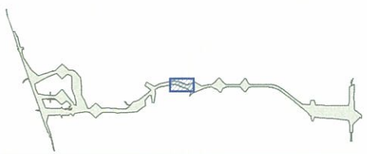
Habitat Suitable for Long Term Conservation for MSHCP Plant Species (Surveys Conducted in 2005)

Impacts to Smooth Tarplant (2.72 Ac)
- Permanent Grading (2.65 Ac)
- Permanent Shade (0.06 Ac)
- Temporary (0.01 Ac)

Impacts to Spreading Navarretia (1.092 Ac)
- Permanent Grading (0.035 Ac)
- Permanent Shade (0.816 Ac)
- Temporary (0.241 Ac)

Impacts to Coulter's Goldfields (2.25 Ac)
- Permanent Grading (1.74 Ac)
- Permanent Shade (0.29 Ac)
- Temporary (0.22 Ac)

Impacts to San Jacinto Valley Crownscale (0.36 Ac)
- Permanent Grading (0.26 Ac)
- Permanent Shade (0.10 Ac)



0 175 350 FEET

SOURCE: Jacobs Engineering (04/2011); County of Riverside (2010)

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IMPACTS TO NEPSSA AND CASSA PLANT AREAS OF LONG-TERM CONSERVATION VALUE

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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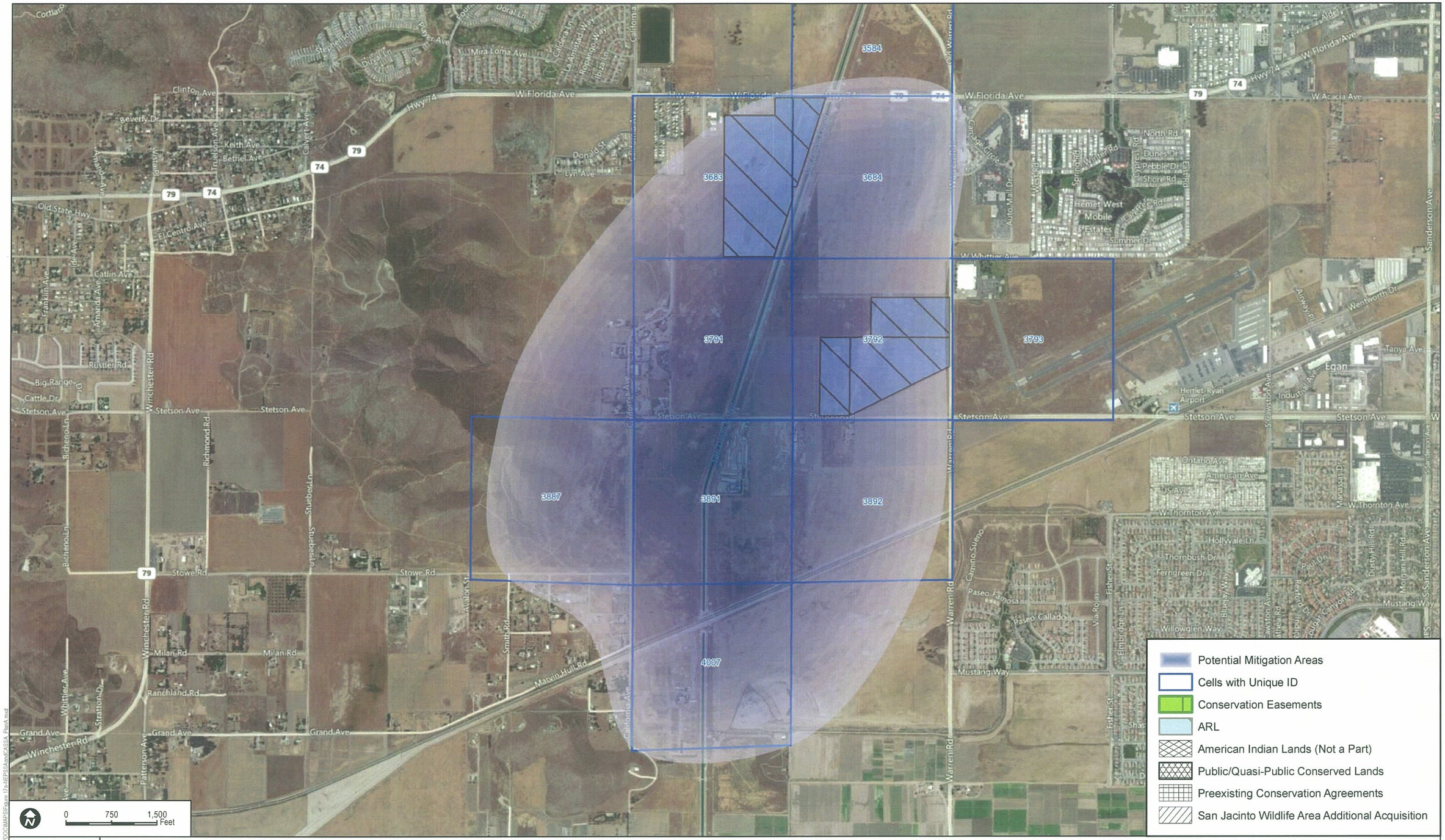

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SOURCE: Riverside County 2013; Bing Maps

MCP

FIGURE 17a

NEPSSA and CASSA Potential Mitigation Areas - Plan A

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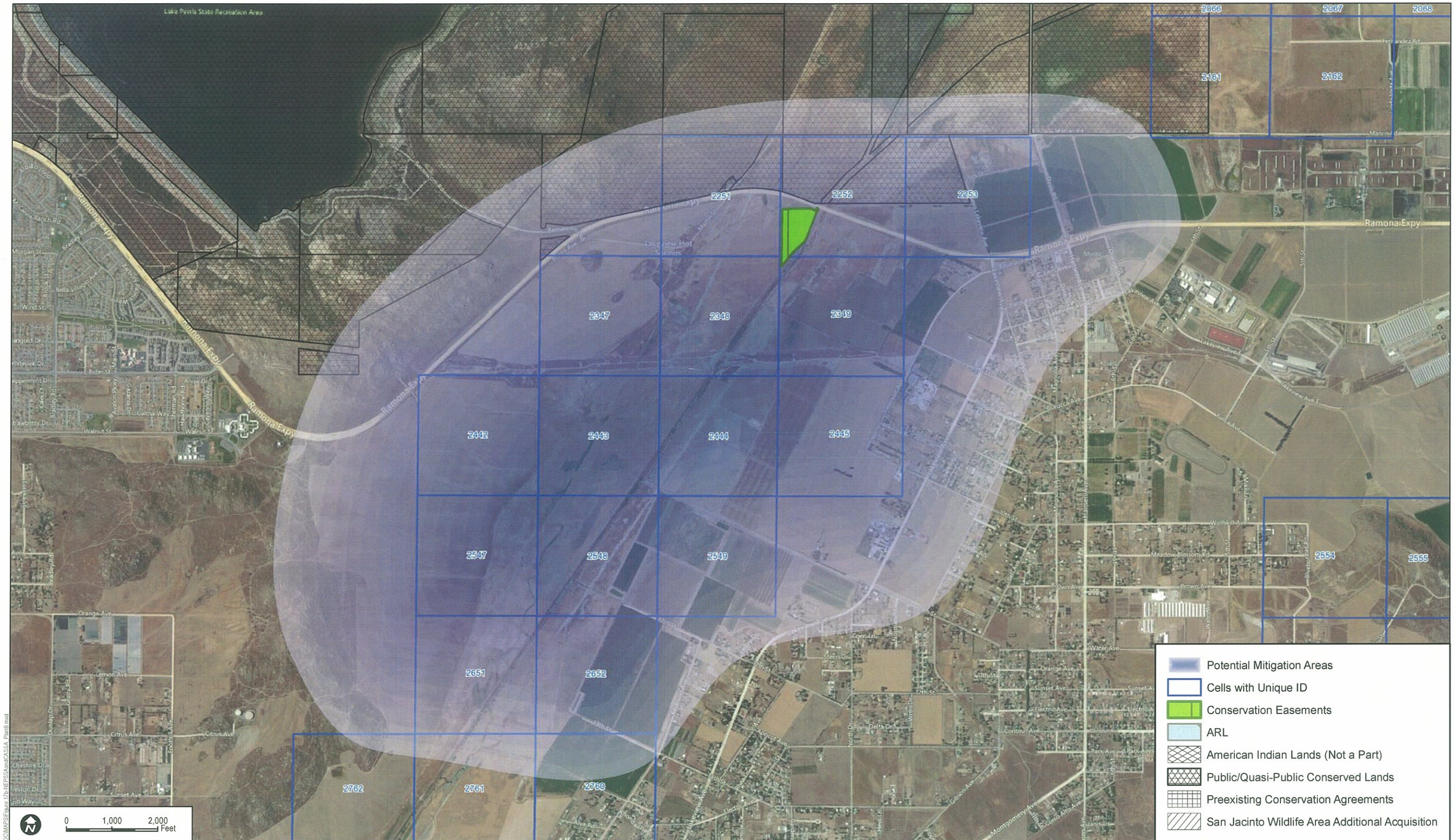

DUDEK

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SOURCE: Riverside County 2013; Bing Maps

MCP

FIGURE 17b

NEPSSA and CASSA Potential Mitigation Areas - Plan B

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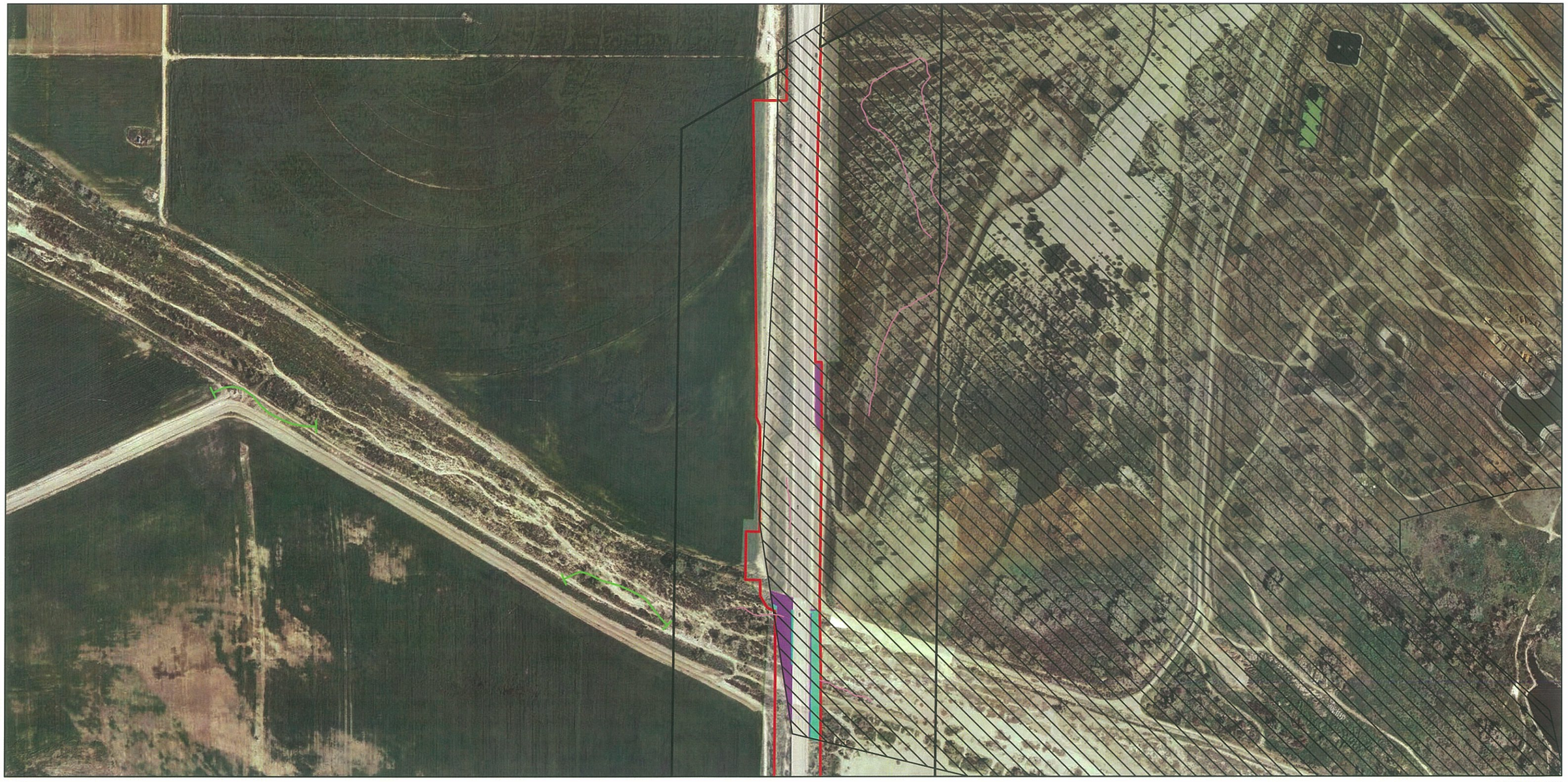


FIGURE 18

LEGEND

- Biological Study Area
- MCP Project Footprint
- MSHCP Small Mammal Survey Area - LAPM and SBKR
- Off-Site Traplines with SBKR Captures (data provided by USFWS)*
- On-site Traplines (2005)

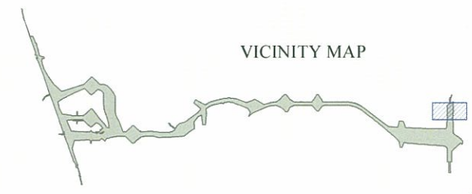
Impacts to SBKR Occupied Habitat Suitable for Long Term Conservation (within MSHCP Survey Area)

- Permanent (0.83 Ac)
- Temporary (0.46 Ac)

Total: 1.29 Ac

LAPM: Los Angeles Pocket Mouse
SBKR: San Bernardino Kangaroo Rat

VICINITY MAP



SOURCE: Jacobs Engineering (02/2011, 06/2013); Eagle Aerial (03/2010); Riverside County (07/2002 and 07/2011); USFWS (04/2011)

0 200 400 FEET

SAN BERNARDINO KANGAROO RAT IMPACTS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

MID COUNTY PARKWAY CETAP SAN JACINTO–PERRIS

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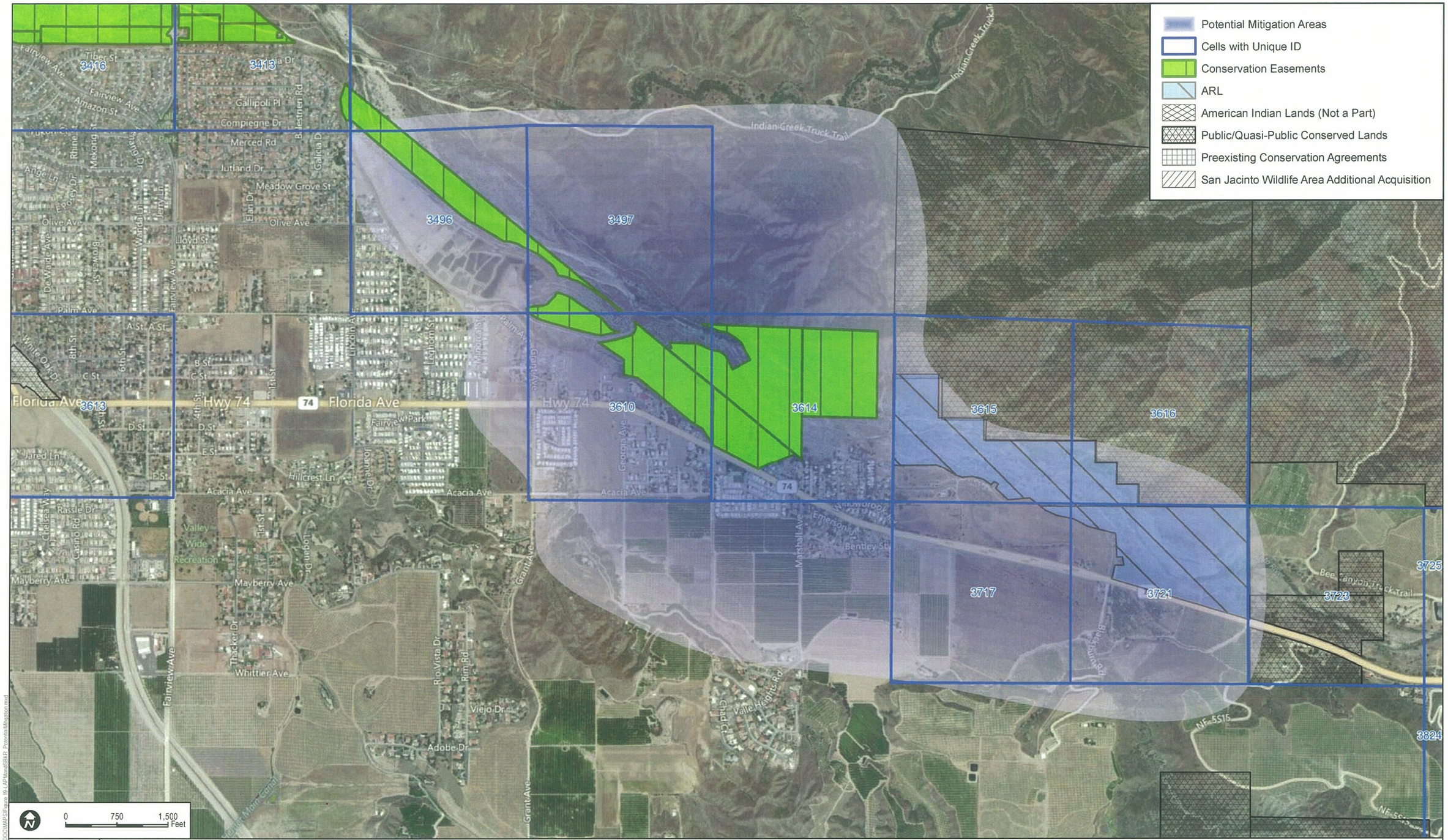

DUDEK

4149

SOURCE: Riverside County 2013; Bing Maps

MCP

FIGURE 19

LAPM and SBKR Potential Mitigation Areas

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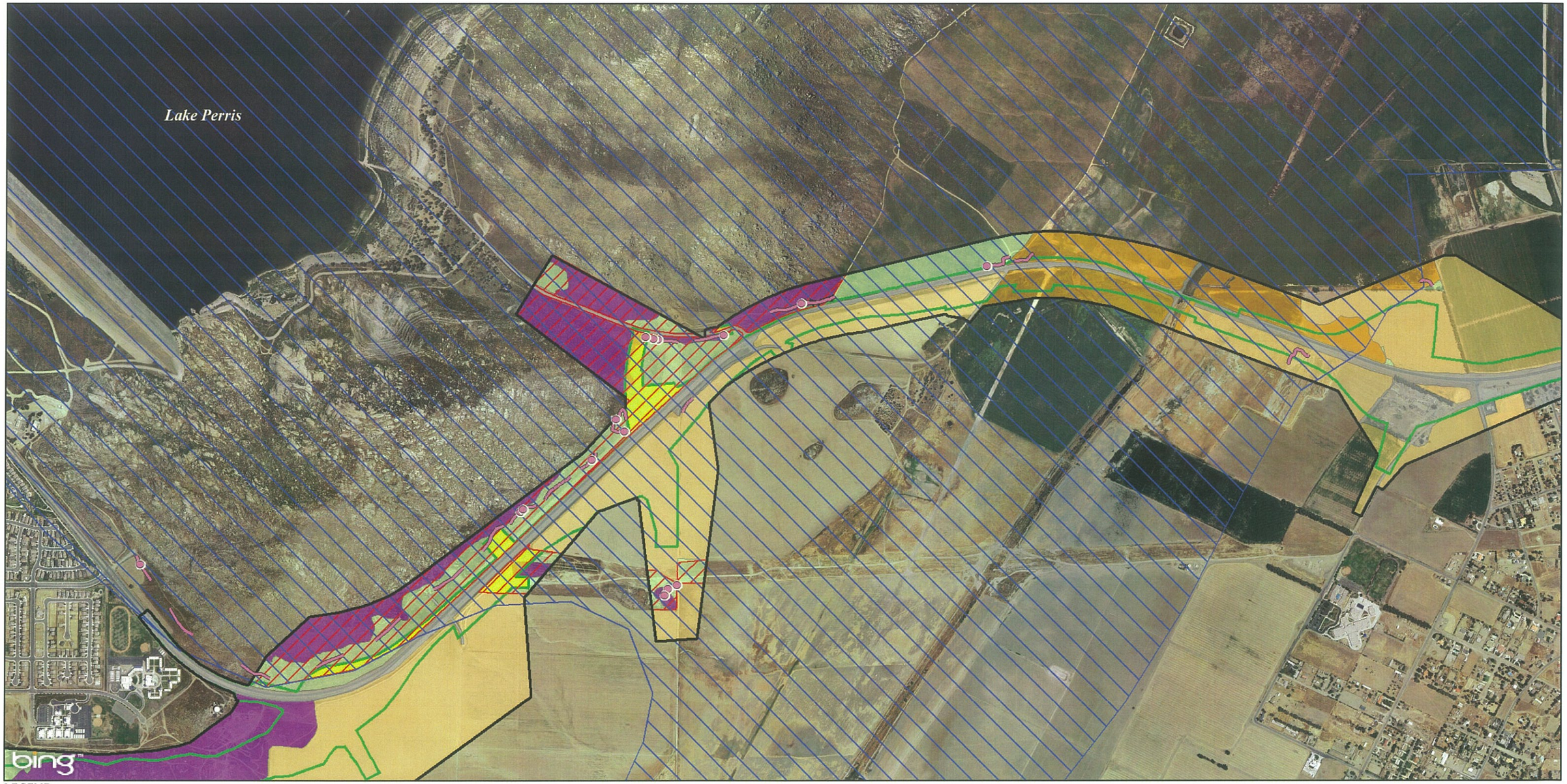

LEGEND

- Biological Study Area
- MCP Project Footprint
- MSHCP Small Mammal Survey Area - LAPM Only
- LAPM Capture Locations
- Traplines (2005)
- LAPM Habitat Suitable for Long Term Conservation (within MSHCP Survey Area)*

Impacts to LAPM Habitat Suitable for Long Term Conservation (within MSHCP Survey Area)

- Permanent Impacts (20.16 Ac)
- Temporary Impacts (0.69 Ac)
- Alkali Grassland
- Cropland
- Developed/Ruderal
- Non-Native Grassland
- Riversidean Upland Sage Scrub

Note: Acreage is total for both Sheets 1 and 2

SOURCE: Jacobs Engineering (02/2011, 06/2013, 06/2014); Eagle Aerial (03/2010); Bing Aerial (2010); Western Riverside County Regional Conservation Authority (2008).

0 600 1200 FEET

VICINITY MAP

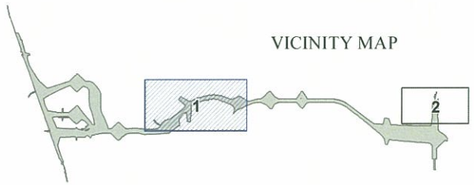

FIGURE 20
Sheet 1 of 2

LOS ANGELES POCKET MOUSE IMPACTS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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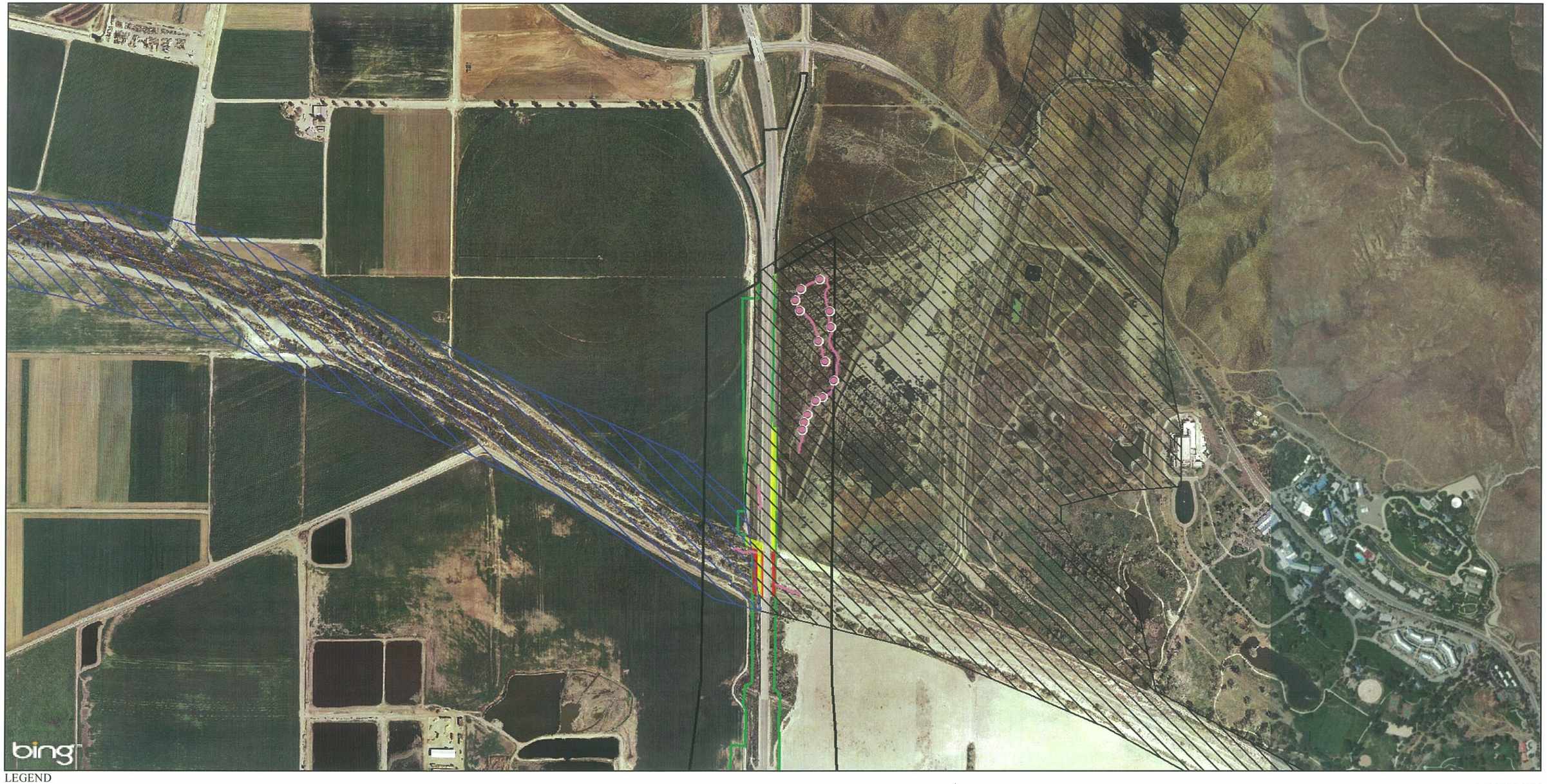

LEGEND

- Biological Study Area
- MCP Project Footprint
- MSHCP Small Mammal Survey Area - LAPM Only
- MSHCP Small Mammal Survey Area - LAPM and SBKR
- LAPM Capture Locations
- Traplines (2005)

Impacts to LAPM Habitat Suitable for Long Term Conservation (within MSHCP Survey Area)

- Permanent Impacts (20.16 Ac)
- Temporary Impacts (0.69 Ac)

Note: Acreage is total for both Sheets 1 and 2

VICINITY MAP

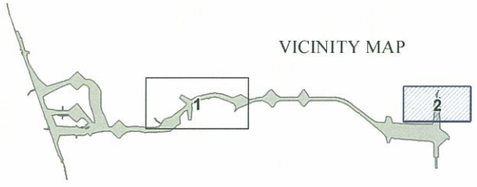

FIGURE 20
Sheet 2 of 2

SOURCE: Jacobs Engineering (02/2011, 06/2013, 06/2014); Eagle Aerial (03/2010); Bing Aerial (2010); Western Riverside County Regional Conservation Authority (2008).

0 400 800 FEET

LOS ANGELES POCKET MOUSE IMPACTS

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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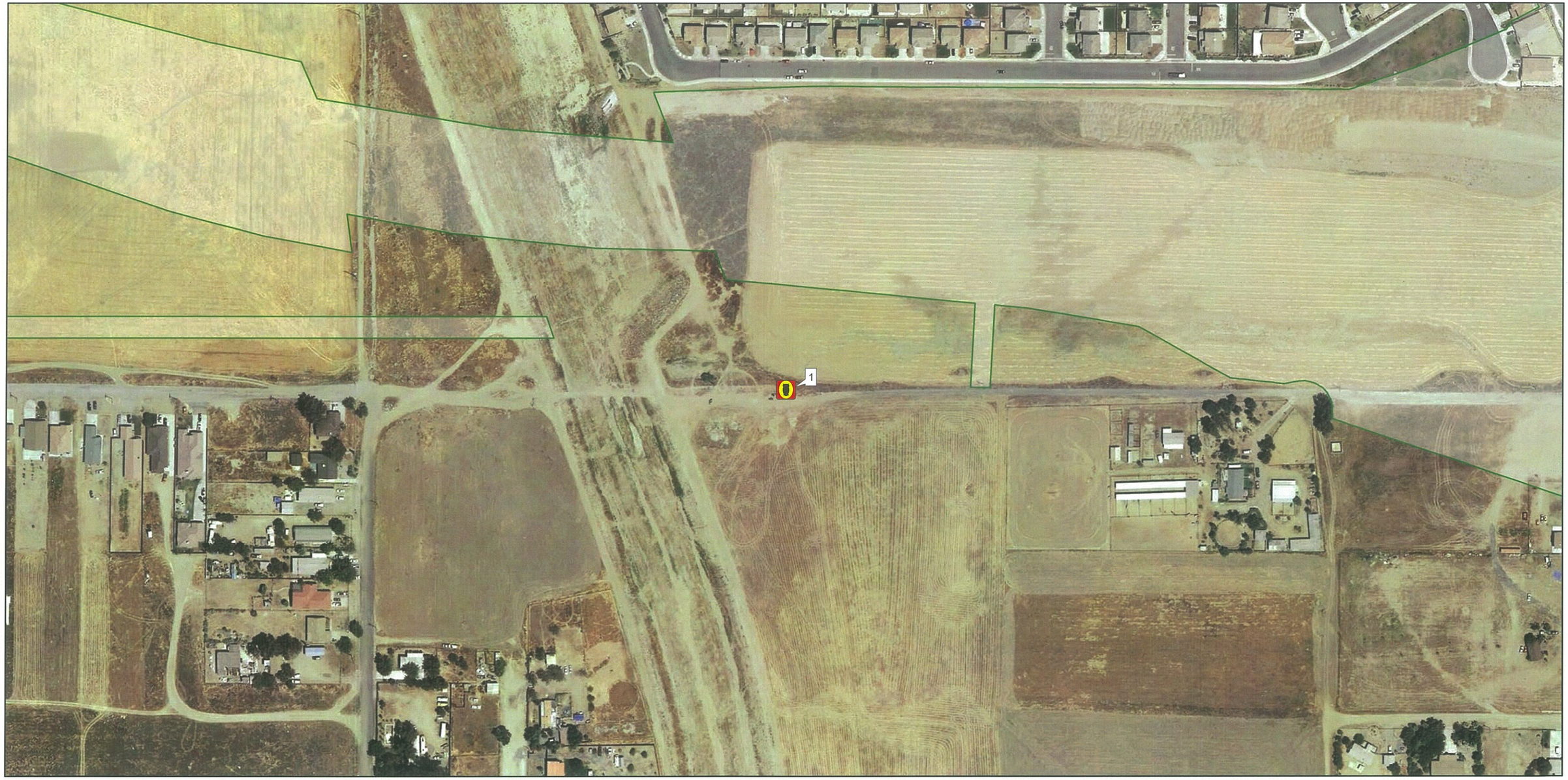


LEGEND

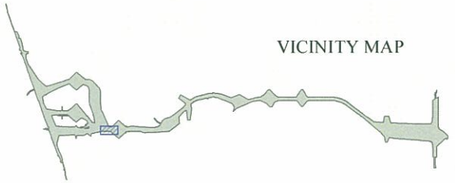
MCP Project Footprint

Burrowing Owl Burrow Location with Number of Individuals Observed

1

FIGURE 21

VICINITY MAP



SOURCE: Jacobs Engineering (02/2011); County of Riverside (2006); Eagle Aerial (03/2010)

0 100 200 FEET

BURROWING OWL LOCATION

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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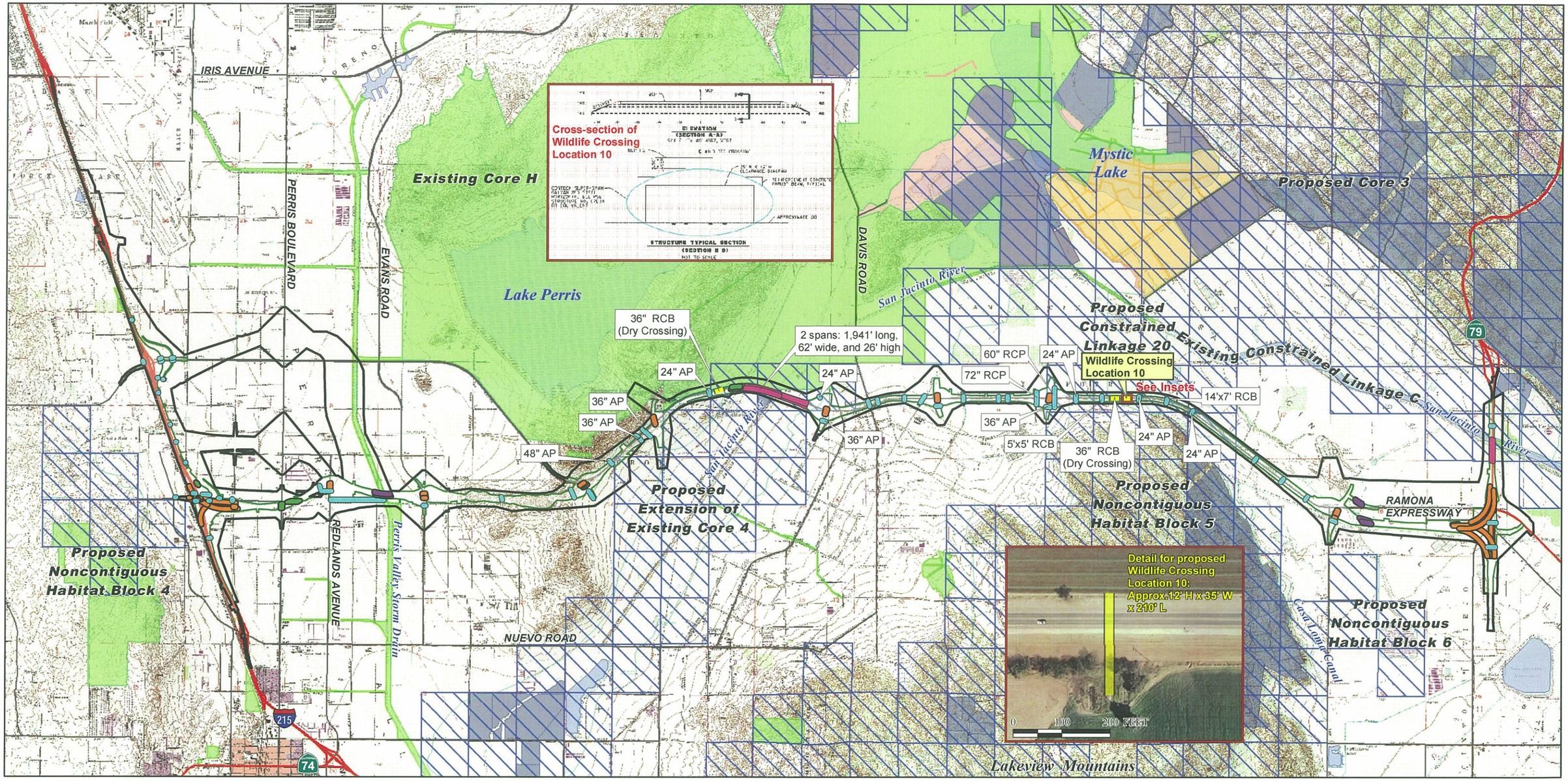

LEGEND

FIGURE 22

- Biological Study Area
- MCP Project Footprint
- MSHCP Criteria Cells

Public and Quasi Public Lands

- Public/Quasi-Public Conserved Lands
- Pre-existing Conservation Agreements
- San Jacinto Wildlife Area Additional Acquisition
- Additional Reserve Lands

Structures Designed for Wildlife Crossing

- Wildlife Undercrossing Structure
- Bridge/Wildlife Crossing

Other Structures

- Bridge (at drainage feature)
- Culvert (at drainage feature)
- Bridge (at local road/terrain crossing)
- Bridge (at System/Service Interchange)

Size and Type of Crossing

RCB: Reinforced concrete box
Dry Crossing: Intended for wildlife; not designed for drainage.
AP: Alternative Pipe - the pipe material option is not selected and allows contractor pipe product options.
RCP: Reinforced concrete pipe

SOURCE: Jacobs Engineering (02/2011); USGS 7.5' Quads; County of Riverside (06/2003 and 07/2011)

0 2700 5400 FEET

Wildlife Crossings

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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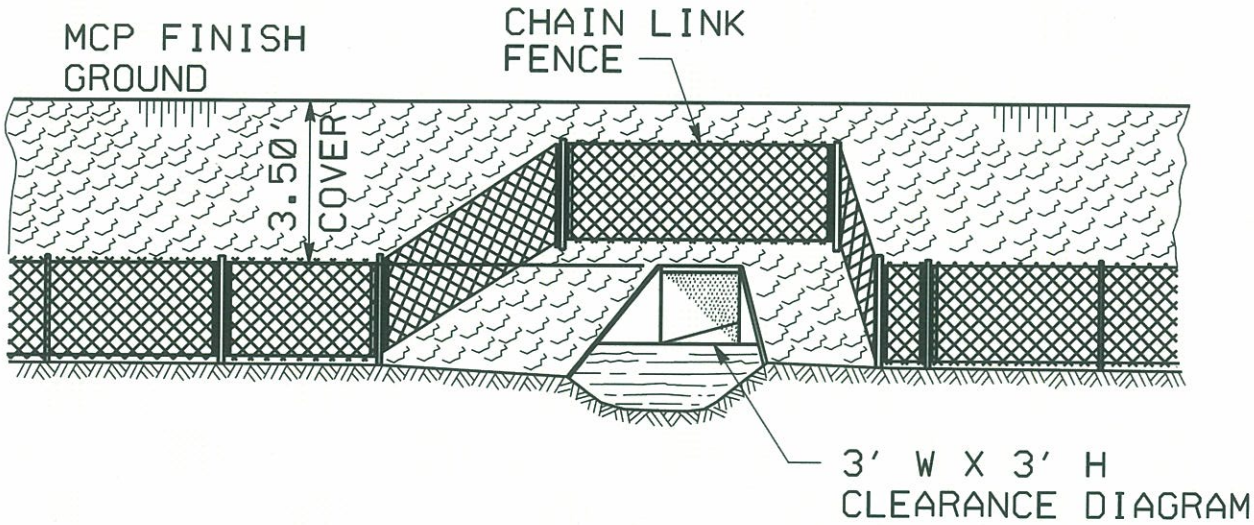

DRY CULVERT UNDERCROSSING

NOT TO SCALE

FIGURE 23A

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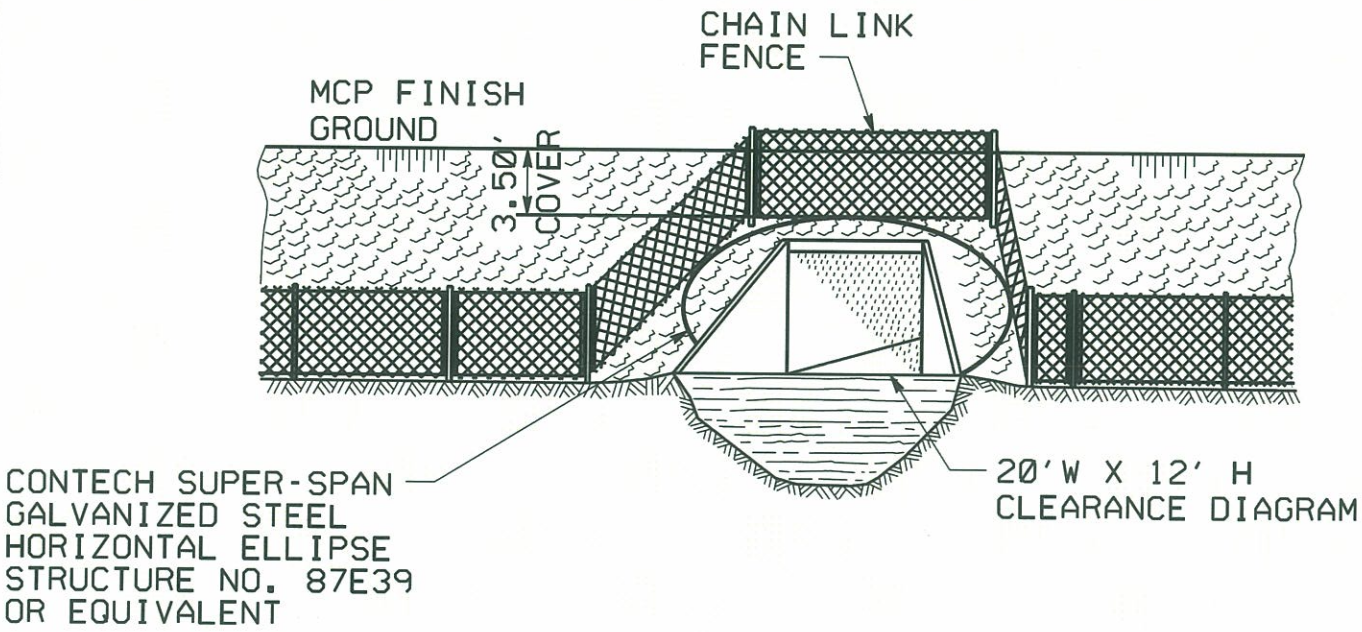

WILDLIFE UNDERCROSSING #10

NOT TO SCALE

FIGURE 23B

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APPENDIX A

MCP MSHCP Summary Mitigation Matrix

Attachment A

MCP MSHCP Summary Mitigation Matrix

MSHCP Mitigation Need	Total Acreage of Impacts SJR Bridge DV	Permanent Impacts	Temporary Impacts	Revised Mitigaiton Acreage	Notes
Riparian Vegetation	4.98	2.59	2.39	11	See Figure 15a - Tributary to SJR near Jack Rabbit Trail. Off-site preservation and establishment, re-establishment and/or enhancment. On-site restoration for temporary impacts.
LBV	3.66	1.66	2	11	Area on Figure 15a. Same 11 acres for Riparian.
Riverine - alkaline communitites in SJR floodplain	30.46	26.69	3.77	76.6	Mitigation broken out by 7.25 ac shade; 65.58 ac grading; 3.77 ac temp. See Figure 15b and 17a. Looking in Hemet VP area or Lakeview Floodplain. Off-site preservation and/or restoration/enhancement .
Riverine - non-SJR Floodplain	7.39	5.37	2.02	11	Figure 15a. Jack Rabbit Trail tributaries - same as riparian vegetation.
San Jacinto Valley Crowscale	0.36	0.33*	0.03	6	Figure 17a or 17b. Hemet VP or Lakeview Floodplain. Same acreage for Coulter's Goldfields and Smooth tarplant mitigaiton.
Spreading navarreita	1.09	0.37*	0.36	3.3	Figure 17a or 17b Hemet VP or Lakeview Floodplain .
Coulter's Goldfields	2.25	1.97*	0.28	6	Figure 17a or 17b. Same acreage for Crownscale and Smooth tarplant mitigaiton.
Smooth tarplant	2.73	2.72*	0.01	6	Figure 17a or 17b. Same acreage as Crownscale and Coulter's Goldfields.
LAPM	20.85	20.16	0.69	42	See Figure 19
SBKR	1.29	0.83	0.46	4	See Figure 19
Burrowing Owl	n/a	n/a	n/a	n/a	Relocation plan proposed; no acreage proposed for mitigation.

* = Permanent imapcts + Permanent Shade Impacts

APPENDIX B

2008 and 2011 Supplement to the Natural Environment Study

Please find this on the attached CD.

UNITED STATES FISH AND WILDLIFE SERVICE RESPONSE TO S. STANDERFER REGARDING CLARIFICATION OF DOCUMENTS THAT ARE REQUESTED TO BE SENT TO THE RCA AND WILDLIFE AGENCIES FOR REVIEW PRIOR TO ACQUISITION OF MITIGATION PROPERTY (OCTOBER 22, 2014)

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WILDLIFE AGENCY INFORMAL DISCUSSION ITEMS ON JPR AND DRAFT RESPONSES

Co-Rte-PM RIV-Rte 215-PM 28.0/34.3 Reviewer Heather Pert, CDFW and Karin Cleary-Rose, USFWS
Cost Center-EA 0F3200 (PN 0800000125) Functional Unit Environmental - PA&ED/
Date September 17, 2014

No.	Wildlife Agency Discussion Items	Draft Response/Actions	Initials (a)	Initials (b)
1	The Wildlife Agencies have reviewed the Mid County Parkway JPR (14-03-03-01). We received the JPR on August 21st and our 10 business day review period ends on September 5th. We have identified the following items for further discussion or clarification. We request that the end of the JPR review period be held in abeyance until we have the opportunity to discuss these items with you and the MCP team. If you do not wish to allow us to provide our formal JPR comments after we have had the opportunity to have clarification or discussion on the items below. Please consider this email our response to the JPR and we will provide a letter in follow up to our email.	RCTC has reviewed and does not foresee any issues with informal comments provided and prefers to informally provide responses and clarifications on 9/18/14 RCA/Wildlife Agency Meeting. RCTC will then incorporate the changes discussed at this meeting into a revised MSHCP Compliance Report to address concerns and provide clarifications as a result of the Agencies comments.	SS	MC
2	As discussed below, we are concerned about the efficacy of Wildlife Undercrossing Number 10 and are concerned about its consistency with MSHCP Sections 7.4.2 and 7.5.2 and the desired 0.6 openness ratio.	RCTC will make changes to Crossing No. 10, see below.	SS	MC
3	We would like to further discuss Wildlife Crossing Location 10 (located in Proposed Constrained Linkage 20). The Wildlife Agencies are concerned about the proposed multiple use of the wildlife crossing and the location of the crossing. Wildlife Crossing Location 10 is in Proposed Constrained Linkage 20 which may become narrow and surrounded by development if the City/County move forward with Villages of Lakeview as currently described or other development proposals. The equestrian trail will attract people to the area which has the potential to limit use by wildlife once all the proposed development has occurred. We would therefore like to protect the resources in the linkage and the viability of the Conservation Area by limiting human use of the constrained linkage proper. A crossing that accommodates people and or horses should either be outside the linkage or on the edge of the constrained linkage rather than in the center. We are also cognizant that the ultimate road ROW is much wider than what is being contemplated at this time, so providing an extra-wide	RCTC will make Crossing No. 10 exclusively for wildlife movement. No pedestrian or equestrian use will be encouraged by this Crossing. The ROW for MCP is what is being evaluated in the environmental documentation; no widths wider than what is disclosed is being contemplated at this time by RCTC or Caltrans. The project is proposing 6 lanes as needed to meet expected traffic needs of 2040 based on approved land use by local agencies.	SS	MC

Rev'd 18-SEP-14

WILDLIFE AGENCY INFORMAL DISCUSSION ITEMS ON JPR AND DRAFT RESPONSES

	undercrossing that will accommodate the future width is good planning.			
4	We appreciate that significant time and effort have gone into to get the design to what it is today. But our collective understanding of the interaction of wildlife and roads is rapidly evolving, and given that this facility will not be built immediately, it is very important to utilize the most up to date research available A recent wildlife movement study conducted by the UC Davis Road Ecology Center in collaboration with Caltrans and CDFW, indicates wildlife do not use undercrossings when humans use the corridor more frequently than every 2-3 days (http://wildlifeobserver.net/files/projects/FINAL_I-280_Report_122013.pdf). Additionally, Section 7.5.2 of the MSHCP (Guidelines for the Siting and Design of Trails and Facilities, Item 6) states "New trails and facilities will avoid using wildlife crossing points".	Noted.	SS	MC
5	We would like to discuss the following improvements to the undercrossing, in order of preference: a. Separate the human use undercrossing from the wildlife undercrossing. The human use crossing should be placed on the western edge of constrained linkage 10. The existing crossing would stay as it is in its currently proposed location.	RCTC has investigated the engineering feasibility to move the pedestrian crossing/equestrian crossing west of Crossing No. 10 at the outer edge of Proposed Constrained Linkage 20. Making another crossing for pedestrians/equestrians is feasible and RCTC will coordinate with the County of Riverside on its exact location since coordination with County Trails and the proposed Villages of Lakeview project will need to find appropriate location.	SS	MC
6	b. Move the entire structure to the western edge of constrained linkage 10 and add a parallel cell/tunnel/culvert for human use, and include another small mammal movement culvert in the center of the constrained linkage.	RCTC is able to do the Agency's first preference, discussed above in Response No. 5.	SS	MC
7	In order to meet the 0.6 openness ratio goal for wildlife crossings in the MSHCP, a wildlife crossing spanning a 210' distance should have dimensions of 14' height and 30' width or 12' x 35'. If planning for future widening of the Mid County Parkway, a wider dimension of 40' with 14' in height would accommodate a road widening to 300'.	RCTC will make Crossing No. 10 12'h X35'l. There are no plans to widen MCP beyond the projects proposed Right of Way.	SS	MC
8	Riverside County Flood is working on a levee project on the San Jacinto River where the river crosses SR79. Please confirm that the MCP project will not result in fill between the levees.	RCTC has made several attempts to collect the GIS data from Flood Control for the San Jacinto Levee Project, and will continue to do so.	SS	MC

WILDLIFE AGENCY INFORMAL DISCUSSION ITEMS ON JPR AND DRAFT RESPONSES

9	2. At the Ramona Expressway Crossing of the San Jacinto River, the area between the bridges was not included in the area affected by shading. Please either include the 30' between the bridges in the shaded area or provide information which supports your determination.	RCTC will count the areas in between the two bridges at the Lakeview San Jacinto Crossing as Permanent Shade Impacts, instead of Temporary. See attached revisions that will occur to Tables 3 and 4 of the MSHCP Consistency Report. Requisite changes will be made throughout the report to reflect these changes.	SS	MC
10	3. Please confirm that there will be no maintenance activities around the footings of the bridges or describe the types and frequency of the maintenance. If there will be instream impacts associated with bridge maintenance those areas should be considered permanent impacts.	The following language will be added to the Project Description of the MSHCP Consistency report to clarify about maintenance: *All bridges, including the bridges over the San Jacinto River at Lakeview, will require ongoing maintenance and inspection. The type of maintenance and inspection activities associated with the bridges would include visual inspections for seismic and other safety concerns such as scour and debris build up. The visual inspections will be conducted on foot, and vehicle staging areas can be accommodated along the MCP facility right of way, or from existing roadways. No additional permanent impacts associated with the maintenance activities for the MCP bridges are expected above those permanent impacts already analyzed herein.*	SS	MC
11	4. During the interagency coordination on the LEDPA, there was discussion of, and the Wildlife agencies believe a commitment to, sequestering and conserving the alkali soils in the project's permanent footprint. Please confirm that this measure has been included in the project.	The following language will be added to the DBESP related to riverine alkali soils to clarify about the retention of alkali soils: *As stated previously, the SJRB DV results in 6 acres of permanent impacts related to the fill needed for the new bridges spanning over the San Jacinto River floodplain. The 6 acres of impacts occur on primarily alkali soils associated with the floodplain ecosystem. The project will provide for the salvage of the alkali soils within the 6 acre fill area in the form of excavating and stockpiling the upper approximately 1-foot layer of the soils. The salvaged soils will be stockpiled by RCTC and used for on-site or off-site habitat restoration activities.*	SS	MC

(a) Responder's initials. Responder's name Stephanie Standerfer (Dudek).
(b) Project Manager's initials. The Project Manager concurred with the Response/Actions.

REGIONAL CONSERVATION AUTHORITY, JOINT PROJECT REVIEW (OCTOBER 6, 2014)

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October 9, 2014

Alex Menor
Riverside County Transportation Commission
4080 Lemon Street, Third Floor
Riverside, CA 92501

Dear Mr. Menor,

Please find the following revised JPR attached:

JPR 14-03-03-01; Permittee: Riverside County Transportation Commission, RCTC; Mid County Parkway. The JPR file attached includes the following:

- Revised RCA JPR
- Exhibit A, Vicinity Map with MSHCP Schematic Cores and Linkages
- Exhibit B, Criteria Area Cells with MSHCP Vegetation and Project Location
- Exhibit C, Criteria Area Cells with MSHCP Soils and Project Location
- Regional Map

Thank you,

Laurie Dobson Correa
Director of Reserve Monitoring & Management

Enclosures

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Regional Conservation Authority
Western Riverside County

RCA Joint Project Review (JPR)

JPR #: 14-03-03-01 Revised
Date: 10//6/14

Project Information

Permittee:	**Riverside County Transportation Commission**
Case Information:	**Mid County Parkway**
Site Acreage:	**1,221.5**
Portion of Site Proposed for MSHCP Conservation Area:	**0**

The JPR consistency analysis issued on 8/20/14 has been revised to document project changes in response to Wildlife Agency comments provided on 9/4/14. Revisions include: 1.Separation of PCL 20 wildlife undercrossing and equestrian undercrossing, 2. Inclusion of impacts between two sets of parallel bridges over the middle reach of the San Jacinto River as permanent shade impacts, and 3.Committment to stockpile alkali soils impacted by bridge construction for future alkali habitat restoration.

Criteria Consistency Review

Consistency Conclusion: **The project is consistent with both the Criteria and Other Plan requirements.**

Data:

Applicable Core/Linkage: Proposed Extension of Existing Core 4, Proposed Constrained Linkage 20, Proposed Non-Contiguous Habitat Block 5, Existing Constrained Linkage C

Area Plan: Mead Valley, Lakeview/Nuevo, San Jacinto Valley

APN	Sub-Unit	Cell Group	Cell
Various	SU1 – San Jacinto River Middle Reach	Group G	2442
		Group I	2347
			2251
			2252
			2253
	SU2- Lakeview Mtns West	Group L	2258
			2259
			2355
			2357
	SU2- Lakeview Mtns East	Group N	2261
			2358
	SU1- Gilman Springs/Southern Badlands	Group M	2267
			2364

Project Information

a. The Mid County Parkway project is proposed to be an approximately 16-mile-long, six-lane controlled-access freeway. The facility would generally have three lanes in each direction with a wide (62 foot) median per Caltrans Highway Design Manual standard 305.1. It would generally follow a southerly alignment through the City of Perris along Placentia Avenue to the Ramona Expressway and terminate in the City of San Jacinto at SR 79. System interchanges are proposed at I-215 approximately 150 feet south of Placentia Avenue and at SR 79. The freeway to freeway interchange at I-215 is proposed as a three level interchange with a flyover directly connecting to I-215 and a service interchange on the lower level at Placentia Avenue, and the proposed design will not preclude possible future connectors to the west. At its highest point, the interchange would be approximately 75 to 100 feet above ground level. The existing railroad tracks west of I-215 are proposed to remain in place. Service interchanges are also proposed at the following locations: Redlands Avenue, Evans Road, Ramona Expressway/Antelope Road, Bernasconi Road, Reservoir Avenue, Town Center Boulevard, Park Center Boulevard, Warren Road, and SR 79. Other improvements to I 215 include: the addition of one auxiliary lane between the I-215/MCP systems interchange and the adjacent service interchange to the north, Cajalco Road/Ramona Expressway, and south, Nuevo Road to facilitate movement between the MCP and I-215; the addition of an operational/mixed-flow lane from MCP to the Van Buren Boulevard Interchange to accommodate additional traffic on I-215 as a result of the MCP; the addition of an operational/mixed-flow lane from Nuevo Road to Cajalco Road/Ramona Expressway to facilitate weaving on I-215; the addition of a new interchange at Placentia Avenue; and modification of the existing interchange at Cajalco Road/Ramona Expressway and restriping at the existing Nuevo Road interchange. At the Cajalco Road/Ramona Expressway, the existing ramps are widened and or relocated. The existing Cajalco Road/Ramona Expressway road between Harvill Avenue and Webster Avenue is widened where required for future volumes per the Federal Highway Administration.

Existing Ramona Expressway, including the existing bridge over the San Jacinto River, will remain in place from Martin Street to approximately 1 mile east of the center of San Jacinto River connecting to the proposed Reservoir Road interchange north of Mid County Parkway.

Construction of the MCP project is estimated to take approximately 48 months. The MCP project is planned to be constructed as a single phase, although the RDEIR/SDEIS did identify three potential phases in response to comments to the RDEIR/RDEIS. The MCP project would also include the construction of bridges in the Lakeview Nuevo area crossing the San Jacinto River.

The SJRB DV, the design variation selected as locally preferred and evaluated herein, consists of two bridges for westbound lanes and two bridges for eastbound lanes. There would be in each direction: a 531-foot bridge spanning Martin Street and a portion of the San Jacinto River, followed by a fill section 323 feet in length, followed by a 1,941-foot bridge spanning another portion of the San Jacinto River, followed by a fill section 1,526 feet in length. All four of the bridges would be 60 feet in width with parallel west and east bound lanes separated by a 38-foot open section. As noted above, a portion of existing Ramona Expressway, including the bridge will remain in place and become part of a frontage road. Additionally, bridges are proposed for all major river/stream crossings, including Perris Drain (a.k.a. Perris Valley Storm Drain) and the San Jacinto River at the SR-79. Bridges will be constructed to Caltrans design standards. The proposed 800-foot bridge over Perris Drain would range between 17 feet to 41 feet in height. All bridges will require ongoing inspection and maintenance for seismic integrity and other safety issues such as scour and debris build up. All maintenance activities will occur with the permanent impact areas identified for construction.

After the release of the SDEIR/SDEIS, RCTC evaluated alignment shifts in order to avoid impacting a parcel of land currently owned by the California Department of Fish and Wildlife. This 3.4 acre of land is considered a part of the San Jacinto Wildlife Area and is considered Public/Quasi Public Lands under the MSHCP and replacement must be evaluated through the PQP replacement process under the MSHCP (discussed further in Section 3.3 of this document). The MCP has been realigned slightly to the south of the MCP Alt 9 SJRB DV alignment addressed in the RDEIR/SDEIS. The intent of this proposed realignment is to avoid the permanent impact of 3.4 acres of land from the San Jacinto Wildlife Area, which is a PQP land. This document analyzes the impacts associated with this alignment shift of MCP Alt 9 SJRB DV associated with the 1.5 mile segment between Bernasconi Road and Antelope Road.

Other MCP project features include installation of retaining walls, sound walls, fencing and median barriers, drought-tolerant plant species and landscaping, drainage culverts, and transverse railroad crossing improvements.

Relationship to Reserve Assembly and Covered Activity Status

a. The Mid County Parkway is depicted on Figure 7-1 of the MSHCP between SR 79 and I-215 as both the Ramona Expressway and as the Hemet to Corona/Lake Elsinore Alternatives. The project is further described in Section 7.3.5, CETAP Corridors. The Hemet to Corona/Lake Elsinore project was planned to extend from I-15 on the west to SR 79 on the east. The Mid County Parkway project limits extend from I-215 on the west to SR 79 on the east.

The CETAP Corridor alternatives, including Hemet to Corona/Lake Elsinore, were still being developed when the MSHCP was approved. The CETAP Corridors were planned to include; 3 mixed flow lanes in each direction; one HOV lane in each direction; Caltrans standard shoulders; medians sufficient to meet Caltrans standard including a rail or bus transitway; interchanges at locations to be determined. The right of way width for the CETAP Corridors was estimated to be 500-1000 feet. The right of way width for the facility ranges typically from 200 feet to 350 feet. At locations of basins, in large cut or fill, and system interchange connector's right of way width ranges typically from 400 feet to 700 feet. At interchange locations the width varies from 350 feet to approximately 1700 feet width for on and off ramps. The width varies due to the terrain and required roadway features.

The MSHCP estimated that the Hemet to Corona/Lake Elsinore corridor would impact 40 to 580 acres within the Criteria Area depending on the alternative. The range would have included the I-215 to I-15 segment which the current project does not include. The Mid County Parkway MSHCP Consistency document (Dudek, ~~August~~ September 2014) indicates 271.8 acres of impact will occur with the Criteria Area including 99 acres cropland, 8.3 acres dairy, 64.1 acres developed/ruderal, 3.4 acres Riversidean sage scrub, 1.6 acres non-native grassland, 19.2 acres alkali grassland, 0.2 acres marsh, 2.9 acres riparian forest and 1.3 acres riparian scrub.

The MSHCP describes the Hemet to Corona/Lake Elsinore corridor as generally following Ramona Expressway. The Mid County Parkway alignment follows Ramona Expressway for approximately 9 miles from SR 79 westerly. The alignment diverges from Ramona Expressway at the proposed Antelope Road interchange and follows the Placentia Avenue alignment for the remaining 7 miles to I-215. Alignment shifts are not uncommon for large roadway projects prior to final alternative selection. The portion of the project that diverges from Ramona Expressway does not affect the Criteria Area therefore is not in conflict with what was evaluated for the CETAP corridor.

For the purposes of MSHCP consistency the Mid County Parkway is considered a Covered Activity; the project is depicted on Figure 7-1 although the alignment does diverge as noted above; the right of way range is generally consistent widths described in the MSHCP; the acres of impact within the Criteria Area is in the mid-range of impacts described in the MSHCP; the alignment through the Criteria Area is consistent with the description in the MSHCP.

b. The Reserve features associated with the project impact areas are Proposed Extension of Existing Core 4, Non-Contiguous Habitat Block 5, Proposed Constrained Linkage 20, Existing Constrained Linkage C, and Proposed Core 3.

1. **Existing Constrained Linkage C** - As stated in Section 3.2.3 of the MSHCP, "Existing Constrained Linkage C consists of the middle segment of the San Jacinto River, located in the northeast region of the plan area. This Public/Quasi-Public Linkage connects Proposed Core 5 in the east (upper San Jacinto River area) with Proposed Constrained Linkage 20 to the west. It is also connected to Proposed Core 3 (Badlands/Potrero area) via Proposed Constrained Linkage 21. Like Existing Constrained Linkage B (Salt Creek), Existing Constrained Linkage C is constrained on all sides by existing Development, has large amounts of area potentially affected by edge

(approximately 240 acres of the total 245 acres), and possesses a high P/A ratio (230 feet per acre). However, unlike Salt Creek, Existing Constrained Linkage C is largely surrounded by an open space/conservation planned land use. Thus Edge Effects may not affect the Linkage to such a strong degree. In areas of the Linkage bordering a planned land use designated city, however, treatment and management of edge conditions along the Linkage will still be necessary to ensure that it provides Habitat and movement functions for species using the Linkage. Furthermore, maintenance of existing floodplain processes along the San Jacinto River is important for a number of sensitive species including arroyo toad, LAPM [Los Angeles pocket mouse], mountain plover, white-faced ibis, San Jacinto Valley crownscale, Parish's brittlescale, Davidson's saltscale, thread-leaved brodiaea, Coulter's goldfields, and spreading navarretia."

The proposed project will impact approximately 3 acres in Cell 2364 associated with Linkage C. The impacts are associated with the widening of the existing bridge over the San Jacinto River at Sanderson Avenue and will not affect the overall function or value of this reserve feature.

2. **Proposed Extension of Existing Core 4** - As stated in Section 3.2.3 of the MSHCP, "Proposed Extension of Existing Core 4 is comprised of the middle reach of the San Jacinto River and is contiguous with Core Area in Lake Perris Recreation Area. It provides Habitat for a number of Narrow Endemic Plant Species and movement for species connecting to Lake Perris and areas downstream of the San Jacinto in Canyon Lake. Planning Species for which Habitat is provided for within this Proposed Extension of Existing Core 4 include San Jacinto Valley crownscale, thread-leaved brodiaea, arroyo toad and Los Angeles pocket mouse. Maintenance of floodplain processes along the San Jacinto River, as well as maintenance of habitat quality of vernal pool complexes and the Traver-Willow-Domino soils supporting plant species including San Jacinto Valley crownscale, Davidson's saltscale, thread-leaved brodiaea, Coulter's goldfields, Wright's trichocoronis, and spreading navarretia, are important for these species. Areas not affected by edge total approximately 2,890 acres of the total 3,330 acres occupied by this Extension of Existing Core. Since Proposed Extension of Existing Core 4 may be affected by edge, treatment and management of edge conditions will be necessary to ensure that it provides Habitat and movement functions for species using this Core. Flood control activities associated with the Community Development land use designation and major Covered Activities may adversely affect Planning Species known to occur within the San Jacinto River."

The proposed project passes through the Proposed Extension of Existing Core 4 (ECE 4) at its northern edge where it is intended to connect to Existing Core H, the San Jacinto Wildlife Area (SJWA) and will impact approximately 44 acres within the Criteria Cells associated with ECE 4 (2242, 2347, 2251, 2252 and 2253). The proposed project includes four bridges over the San Jacinto River; two bridges for westbound lanes and two bridges for eastbound lanes. Bridges include a 531-foot bridge spanning Martin Street and a portion of the San Jacinto River, followed by a fill section 323 feet in length, followed by a 1,941-foot bridge spanning another portion of the San Jacinto River, followed by a fill section 1,526 feet in length. All four of the bridges would be 60 feet in width with parallel west and east bound lanes separated by a 38-foot open section. While the project includes two segments of fill in the San Jacinto River floodplain information provided in the

MSHCP Consistency Determination (Dudek, April 2014) supports the determination that the amount of fill (30.46 ac.) will have a minimal effect on floodplain associated processes.

3. **Proposed Constrained Linkage 20** - As stated in Section 3.2.3 of the MSHCP, "Proposed Constrained Linkage 20 is located approximately in the north-central region of the plan area. Proposed Constrained Linkage 20 connects Existing Core H (Lake Perris) in the north with Proposed Noncontiguous Habitat Block 5 (Lakeview Mountains) in the south. Maintenance of this connection is important to reduce the likelihood of species extirpation as a result of population isolation for species occurring in the Lakeview Mountains. Existing agricultural use currently constrains this Linkage since it has converted natural vegetation to agricultural, and the proposed General Plan land use designation surrounding the Linkage is currently agriculture. The extension/widening of Bridge Street and the proposed alignment of the Hemet to Corona/Lake Elsinore CETAP Corridor may also compromise the integrity of Proposed Constrained Linkage 20 by adding to Edge Effects contributed by surrounding land use practices. Counteracting these potentially strong Edge Effects, however, are the dimensions of this Linkage. Proposed Constrained Linkage 20 has one of the lowest P/A ratios (60 feet per acre) of all MSHCP Cores and Linkages and a high proportion of its area represented as interior (approximately 270 of the total 360 acres). Thus the Linkage can be expected to provide Live-In and movement Habitat for species..... Nevertheless, treatment and management of edge conditions along Proposed Constrained Linkage 20 will be necessary to ensure that it provides Habitat and movement functions for species using the Linkage. Maintenance of wetland functions and values is important for Narrow Endemic Plant Species known to occur in the Mystic Lake area."

The proposed project will impact approximately 13 acres within Cell 2259 associated with PCL 20. The project proposes to provide for wildlife connectivity under the road by installing to undercrossings; one 20'w x 12'h undercrossing and one 3' x 3' dry undercrossing. Further discussion of the project's provision for wildlife connectivity can be found in Section 4.8.

4. **Non-Contiguous Habitat Block 5** - As stated in Section 3.2.3 of the MSHCP, "Proposed Noncontiguous Habitat Block 5 consists of the Lakeview Mountains, located approximately in the center of the plan area. This habitat block is connected to other MSHCP conserved lands via Proposed Constrained Linkage 20. The Lakeview Mountains are located 1.2 miles from the nearest connected Core (Existing Core H, Lake Perris/Mystic Lake). Private lands comprise the vast majority of lands in the habitat block, but a few small parcels of Public/Quasi-Public Lands are also present. The Lakeview Mountains represent a large block of Habitat, which has a low perimeter to area (P/A) ratio and contains only 900 of the total approximately 7,150 acres as edge area. As such, this Noncontiguous Habitat Block supports planning species including Bell's sage sparrow, burrowing owl, bobcat, and LAPM [Los Angeles pocket mouse]. Since surrounding land uses include a substantial amount of city and agriculture, and one alternative for the Highway 79 Realignment Corridor would impact the habitat block, treatment and management of edge conditions in these affected areas will be necessary to ensure that it maintains high quality sage scrub Habitat, particularly for the Bell's sage sparrow."

The project will impact approximately 9 acres in Cells 2258 and 2259 associated with NCH 5. The area affected is the northern most extent of the Lakeview Mountains and functionally affects

relatively flat farmed areas, a portion of the MWD aqueduct and existing Ramona Expressway right of way.

5. **Proposed Core 3** - As stated in Section 3.2.3 of the MSHCP, "Proposed Core 3 (Badlands/Potrero) is located in the northeast region of the plan area. Proposed Core 3 consists mainly of private lands but also contains a few Public/Quasi-Public parcels including De Anza Cycle Park. Proposed Core 3 is connected to Proposed Linkage 12 (north San Timoteo Creek), Proposed Linkage 4 (Reche Canyon), Proposed Constrained Linkage 22 (east San Timoteo Creek), Existing Core H (Lake Perris), Existing Core K (San Jacinto Mountains), Proposed Linkage 11 (Soboba/Gilman Springs), and Proposed Constrained Linkage 21. Proposed Core 3 also functions as a Linkage, connecting the San Bernardino National Forest to the southwest with San Bernardino County and other conserved areas to the north of the Core. With a total acreage of approximately 24,920 acres, Proposed Core 3 is one of the largest MSHCP Core Areas. In addition, Proposed Core 3 is contiguous with Existing Core H (Lake Perris/Mystic Lake) and Existing Core K (San Jacinto Mountains), thus greatly enlarging the functional area of the Core. The Core has both a large proportion of its area unaffected by edge (approximately 23,420 acres of the total 24,940 acres) and is only partially constrained by existing agricultural use. Within Proposed Core 3, important Live-In and movement Habitat is provided for Bell's sage sparrow, loggerhead shrike, cactus wren, Stephens' kangaroo rat, Southern California rufous-crowned sparrow, and mountain lion, which have key populations in the Badlands. Management of edge conditions will be necessary in the Badlands to maintain high quality Habitat for these species in areas which may be affected by covered facilities including Lambs Canyon Road, San Timoteo Canyon Road, and Gilman Springs Road."

The proposed project impacts approximately 18 acres, including existing SR 79 right of way, within Cells 2364 and 2267 associated with Proposed Core 3. The additional areas needed for right of way are not described for conservation and there are no wildlife connections planned for this portion of Proposed Core 3.

6. **Public/Quasi-Public (PQP) lands**: The proposed project will temporarily impact 1.46 acres of PQP lands in the Perris Valley Storm Drain owned by the Riverside County Flood Control and Water Conservation District. The impacts are associated with bridge construction over the channel and are expected to last six months. The impacts will not affect the long term conservation value of the channel therefore no equivalency analysis or replacement is required.

7. **Roadway Siting & Design, Wildlife Crossings and Construction Guidelines:** Section 7.5 of the MSHCP included guidelines for planned roads within the Criteria Area and Pubic/Quasi-Public Lands.

   a. **Siting and Design**

According to the MSHCP Consistency Determination (Dudek, ~~August~~September 2104) RCTC has developed several alternatives to analyze various alignments and potential impacts and has determined that complete avoidance of MSHCP riparian/riverine areas and impacts to narrow endemic and Criteria Area plants, Los Angeles pocket mouse, San Bernardino kangaroo rat, and burrowing owl habitat is not feasible. Since the release of the RDEIR/SDEIS, as part of the production of Geometric Approval Drawings, RCTC has continued to refine engineering details and look for opportunities to further reduce impacts. As a result of that investigation, RCTC has reduced impacts to both Los Angeles pocket mouse and San Bernardino kangaroo rat occupied/suitable habitat. Impacts to occupied Los Angeles Pocket Mouse have been reduced by 23.20 acres from the original impact acreage from the 2011 SNES. Impacts to occupied San Bernardino Kangaroo Rat habitat was reduced by 2.54 acres from the 2011 SNES. Impacts to riparian habitat as well as PQP Lands (per alignment shift as discussed in Section 2.2 and 3.3 of the MSHCP Consistency Determination) were also reduced from the original footprint. Figure 6 (Sheet 1 and 2), (show the areas of revised impacts.

The RDEIR/SDEIS, described cut and fill within the MCP Project right-of-way adjacent to the San Jacinto Wildlife Area. RCTC will provide retaining walls in certain areas in order to reduce the area of grading required and the acreages of habitat disturbance reported in the RDEIR/SDEIS. Additionally, the MCP project has shifted the alignment for an approximate 1.65 mile long segment between Bernasconi Road and Antelope Road to avoid impacts to San Jacinto Wildlife Area, which also reduces impacts to Los Angeles pocket mouse occupied/suitable habitat by 11.34 acres. As discussed further under Section 7.5.2 compliance, there will be culverts proposed in the areas where the retaining wall will be near the Bernasconi Hills so that wildlife can move safely from one side of the wall to the other.

b. **Wildlife Crossings**

The proposed project will cross three Reserve features and directly or indirectly affects two other Reserve features. The proposed project will cross Extension of Existing Core 4, Proposed Constrained Linkage 20 and Existing Core C. The proposed project will directly affect Existing Core H (SJWA) and may indirectly affect Non-Contiguous Habitat Block 5.

The proposed project crosses Extension of Existing Core 4 (ECE 4) at the San Jacinto River. Four bridges are included in the project design at the San Jacinto River, two bridges for westbound lanes and two bridges for eastbound lanes; a 531-foot bridge spanning Martin Street and a portion of the San Jacinto River, followed by a fill section 323 feet in length, followed by a 1,941-foot bridge spanning another portion of the San Jacinto River, followed by a fill section 1,526 feet in length. All four of the bridges would be 60 feet in width with parallel west and east bound lanes separated by a 38-foot open section. The bridges will provide for both wildlife connectivity and floodplain processes associated with the San Jacinto River floodplain alkali grassland. The largest mammal planning species for this Reserve feature is the Los Angeles pocket mouse and the bridges will provide approximately 2,500 feet of open area for movement between the SJWA and the middle

reach of the San Jacinto River. The project also includes a 36-inch dry culvert in Criteria Cell 2251 west of the Martin Street Bridge (MSHCP Consistency Determination, Figure 22) which will serve as a wildlife crossing for LAPM and other small terrestrial animals. The intent of the 36-inch dry culvert is for wildlife movement not to convey drainage flows during storm events. The MSHCP indicates that small mammals have been shown to use culverts as long as 64 meters (209 feet). The proposed culvert is 75.8 meters (248 feet) so it will be monitored after construction to document small mammal use. RCTC will use wing walls at to shorten the length of the culvert to the extent feasible. The MCP project will include grading of a slope less than 15 to 25% to allow small mammals to access the dry culvert opening on the north side of the MCP since this opening will be approximately 12 inches above ground level within the retaining wall being constructed for the project. The provision for the "ramp" will be included in the construction bid documents and regular maintenance of this "ramp" will be included and conducted by the entity that will ultimately operate the roadway (either Caltrans or RCTC).

The proposed project will cross Proposed Constrained Linkage 20, intended to provide a connection between the Lakeview Mountains on the south (NCH 5) and San Jacinto River (Existing Core C) and the SJWA on the north. The project design includes two structures to allow for wildlife connectivity, a 12' x 35~~20~~' soft bottom undercrossing and a 3' x 3' dry culvert. The 12' x 35~~20~~' under crossing is shown on Figure 23a of the MSHCP Consistency Determination as a galvanized steel horizontal ellipse and will also function to convey drainage from the north side of the road to the south side. The MSHCP expected that wildlife crossings would not be coincidental with trails for human use. ~~however, this crossing is sized to accommodate both hiking and equestrian uses.~~ An equestrian undercrossing will be incorporated into the project approximately 2,000 west of the PCL 20 undercrossing subject to consultation with the County of Riverside. ~~The MSHCP Consistency Determination includes information on studies documenting wildlife and human use of the same crossings and notes that the type of structure and the time of day appear to limit conflicts for most wildlife species. With the exception of mule deer, which is not a MSHCP Covered Species, wildlife that would be expected to use the under crossing would be active at night when human use wouldn't be expected.~~ The only terrestrial mammal planning species for this Reserve feature is the Los Angeles pocket mouse which is nocturnal. The under crossing will also incorporate a rock bench to allow for cover and encourage use. The project design also includes a 3' x 3' dry culvert as a second under crossing in PCL 20. Section 7.5.2 refers to an appropriate openness ratio (width × height/length) of 0.6 (meters) as being ideal for mule deer. ~~Mule deer are not a planning species for this reserve feature therefore, an openness ratio of 0.6 would not need to be met for this particular crossing.~~ Wildlife Crossing No. 10 has an openness ratio of 0.6~~3~~ (3.65m x 10.62~~6.09m~~/64.08m), which is meets the MSHCP standard for large mammals ~~sufficient for the Los Angeles pocket mouse, the only terrestrial planning species in the area~~. This openness ratio would also be ideal for bobcats and smaller mid-sized mammals should they occur in the area. The 3' x 3' culvert addresses the MSHCP standard requiring a variety of undercrossing sizes for

smaller species that may be more likely to use smaller crossings. The intent of the 36-inch dry culvert is for wildlife movement and not to convey drainage flows during storm events and is therefore considered an all weather crossing. The MSHCP indicates that small mammals have been shown to use culverts as long as 64 meters (209 feet). The proposed culvert is 75.8 meters (248 feet) so it will be monitored after construction to document small mammal use. RCTC will use wing walls at to shorten the length of the culvert to the extent feasible. In locations where dry culvert entrance/exit locations are located through a retaining wall to ground that is sloping toward the culvert, the area around the ramp will be graded so that any drainage flows along the retaining wall are moved away from being along the wall and located between the ramp the right of way line, so that drainage flows do not impact the ramp and wash it away. The provision for the "ramp" will be included in the construction bid documents and regular maintenance of this "ramp" will be included and conducted by the entity that will ultimately operate the roadway (either Caltrans or RCTC or designated entity).

The MCP will include fencing and barriers installed on both openings of the smaller dry crossing and Crossing No. 10 to encourage animals to use the crossing and prevent access to the road. Figure 23 of the MSHCP Consistency Determination depicts the positioning of the fencing in relation to the roadway and crossing access. The project will also incorporate a row of long boulders within the edge of Crossing No. 10 to act as cover for smaller animals to use should they choose to use Crossing No. 10 instead of the small dry crossing. ~~These boulders shall be placed in a way that does not impede pedestrian or equestrian use.~~ Jump outs and one-way gates will also be installed along the segment of the road in the vicinity of Crossing No. 10 to allow wildlife to get off the road should they somehow gain access to that area. Figures 23a and 23b depict the conceptual design of the fencing plans at the dry culverts designed for wildlife crossing.

The proposed project also crosses Existing Linkage C, the San Jacinto River at Sanderson Ave/SR 79. The project design includes widening of the existing bridge over the San Jacinto River. The bridge widening will not affect the continued function of Existing Linkage C.

c. **Construction Guidelines**

Road construction in PQP or Criteria Areas are required to implement construction impact minimization measures listed in Section 7.5.3 and Appendix C of the MSHCP. Section 4.9 of the Mid County Parkway MSHCP Consistency Determination (~~August~~ September 2014) requires compliance with these sections of the MSHCP. These requirements should either be incorporated in the project design or included in the project bid documents as specifications.

- Upon final design, when the fencing plan for the MCP project in the vicinity of Extension of Exiting Core 4 and Proposed Constrained Linkage 20 has been finalized, RCTC shall provide a copy of the fencing plan to the RCA and Wildlife Agencies for review and approval.

- RCTC will shorten the 75.8 meter length of the two proposed 36" dry culvert to the extent feasible during design and will include the final length in fencing plan required above.

With the provisions referenced above and in the project's MSHCP Consistency Determination, the project demonstrates consistency with Section 7.5 of the MSHCP.

Project information was provided by the Permittee in the JPR application, including the Mid County Parkway MSHCP Consistency Determination and Determination of Biologically Equivalent or Superior Preservation (DBESP) dated February 2014, Revised ~~August~~ September 2014 prepared by Dudek & Associates, the Natural Environment Study, LSA 2008, and the Supplemental Natural Environment Study dated December 2011. The project site includes a 16 mile segment of roadway beginning at I-215 on the west and terminating at SR 79 (at Sanderson Ave) on the east. The alignment generally follows existing Ramona Expressway for approximately 9 miles, at the proposed Antelope Road/Ramona Expressway interchange the alignment shift southerly from existing Ramona Expressway to generally follow Placentia Avenue to its terminus at a new interchange at I-215. The project site spans the central area of western Riverside County from the City of Perris easterly through the unincorporated community of Lakeview and into the City of San Jacinto. Land uses adjacent to the project alignment include residential and industrial uses in the western reach in the City of Perris. From approximately the proposed Antelope Road/Ramona Expressway interchange westerly uses are primarily vacant and agricultural lands. The project abuts the San Jacinto Wildlife Area in the central reach from the San Jacinto River approximately 1.2 westerly.

Other Plan Requirements:

Section 6.1.2 – Was Riparian/Riverine/Vernal Pool Mapping or Information Provided?

Yes There are riparian/riverine areas on the project site. Vernal pool and fairy shrimp habitat were identified within the project footprint.

Section 6.1.3 – Was Narrow Endemic Plant Species Survey Information Provided?

Yes. The project site is located within a Narrow Endemic Plant Species Survey Area (NEPSSA) for Munz's onion, San Diego ambrosia, many-stemmed dudleya, spreading navarretia, California orcutt grass, and Wright's trichcoronis.

Section 6.3.2 – Was Additional Survey Information Provided?

Yes. The project site is located within a Criteria Area Species Survey Area (CASSA) for San Jacinto Valley crownscale, Parish's brittlescale, Davison's saltscale, thread-leaved brodiaea, smooth

tarplant, round-leaved filaree, Coulter's goldfields, little mousetail, and mud nama. The project site is also located within an Additional Survey Needs and Procedures Area for burrowing owl.

Section 6.1.4 – Was Information Pertaining to Urban/Wildland Interface Guidelines Provided?

Yes. The property is located adjacent to existing and future Conservation Areas and is subject to Urban/Wildlands Interface requirements.

Other Plan Requirement Comments:

a. Section 6.1.2: Riparian/Riverine

Based on the DBESP dated ~~August~~ September 2014, the project area supports 3.2 acres of riparian forest, 1.5 acres of riparian scrub, 0.2 acres of marsh, 1.4 acres of lake/pond, and 69.6 acres of alkali grassland. Riverine areas also include portions of the San Jacinto River floodplain mapped as cropland, dairy, developed, Riversidean sage scrub and non-native grassland. Total riparian/riverine impacts will be 41.59~~42.83~~ acres. Although 6.05~~8.19~~ acres of the project's impacts are considered temporary the total acreage is included the DBESP mitigation due to temporal losses from the extended construction period expected. According to the DBESP, Table 3, the project will impact 4.98 acres of riparian forest and scrub, primarily within the San Jacinto River at the existing Ramona Expressway crossing and at the Sanderson Avenue Bridge. The project will also impact 36.61~~37.8~~5 acres of riverine habitat, 29.39~~30.46~~ acres within the San Jacinto River floodplain and 7.22~~7.39~~ acres outside the floodplain. The riverine areas inside the floodplain (29.39~~30.46~~ ac) consist primarily of San Jacinto River alkali communities mapped as alkali grassland and cropland. The riverine areas outside the floodplain consist of ephemeral drainages running parallel to and/or crossing Mid County Parkway (see Fig.7 of MSHCP Consistency Determination). Total riparian and riverine impacts (permanent, temporary, shading) include the area between the two sets of parallel bridges over the San Jacinto River near existing Ramona Expressway.

Riparian/riverine functions and values include water storage and retention, flood water attenuation, sediment trapping and transport, sediment trapping and transport, nutrient retention and transformation, toxicant trapping, public use, wildlife habitat and aquatic habitat. According to the DBESP, riparian areas impacted, primarily at the Sanderson Avenue Bridge, have value for flood attenuation, flood storage, sediment trapping nutrient retention, toxicant trapping and wildlife habitat. The project will affect 4.99~~8~~ acres of riparian however, 2.27~~39~~ acres are considered temporary, 1.75~~64~~ acres are from permanent shading due to bridge widening and the remaining 0.96~~5~~ acres permanent loss from bridge abutment or roadbed widening. According to the DBESP, the on functions and values are moderately affected by the project due the limited area affected.

Riverine functions and values will be affected over a larger area, 29.39~~30.46~~ acres within the San Jacinto River floodplain of the approximately 1,744 acres of alkali communities within the floodplain.

The project primarily affects silty clay soils which are poorly drained due to the clay content and have relatively low capacity for water storage. The vegetation consists of low growing alkali associated plant species and non-native grasslands which have low flood flow modification capacity, sediment trapping, nutrient retention, toxicant trapping except in "localized sump areas" which includes the entire impact acreage of 29.39~~30.46~~ acres. The acreage impacted is 1.7% of the localized area. Riverine alkali areas do have beneficial effects on sediment trapping and transport in the project area because of the relatively flat topography, wide area and resultant slow water movement.

Riverine functions and values within the 7.22~~39~~ acres of unvegetated drainages. The unvegetated drainages consist of both earthen and concrete channels which have low capacity for water retention, flood storage and flow modification, sediment trapping and transport, nutrient retention, toxicant trapping. Public use of existing unvegetated drainages is low. Wildlife is use low to moderate and aquatic habitat is low.

According to the DBESP, riparian bird surveys were done May, June and July of 2005. Areas added to the project were assessed in 2010 and 2011 and no suitable wetland bird habitat was found to be present. Surveys were negative for least Bell's vireo (LBV) and southwestern willow flycatcher. No suitable habitat for western yellow-billed cuckoo does not exist within the project footprint or study area. The MSHCP Biological Monitoring Program reported LBV occurrence in 2008 west of the Sanderson Avenue Bridge therefore impacts to LBV were assessed for the project and included in the mitigation proposal. Of the 4.99~~8~~ acres of riparian impacts from the project, 3.66 acres were considered LBV habitat as shown on Figure 13 and 14. Areas not considered LBV habitat total 1.32 acres and are shown on Figure 10, 11, 12(2) and 13(2).

The project study area was assessed for vernal pools in 2005/2006, and again in 2007. One feature south of Ramona Expressway approximately 300 west of the San Jacinto River was evaluated but determined not to meet the definition of a vernal pool since it lacked wetland soils and appeared to have been artificially created. Wet season surveys for fairy shrimp were conducted in 2005/2006 and again in 2007. A dry season survey was done in 2007. No listed fairy shrimp were identified, only versatile fairy shrimp. Impacts to the artificially created pool are included in the DBESP for narrow endemic plants due to the presence of a significant population of spreading navarretia.

The DBESP includes mitigation for loss of both riparian and riverine (alkali communities and unvegetated drainages) areas. For alkali community impacts of 29.39~~30.26~~ acres RCTC will acquire 74.17~~76.6~~ acres of biologically equivalent habitat within the middle reach of the San Jacinto River floodplain within EC 4 or within Non-Contiguous Habitat Block 7 (Hemet Vernal Pool Complex) as shown on Figure 15.b. Impacts to riparian habitat, including least Bell's vireo suitable habitat, will be mitigated through acquisition of 11 acres of habitat in the areas shown on Figure 15a and may also include enhancement, restoration or establishment depending on site conditions. Impacts to unvegetated riverine areas will be mitigated through purchase of an additional 11 acres in the area

shown on Figure 15a. Total riparian/riverine mitigation will be 22 acres and may include enhancement, restoration or establishment depending on site conditions.

- Alkali soils totaling 6 acres impacted by the construction of the new bridges in the San Jacinto River floodplain will be salvaged and stockpiled for use in onsite or offsite restoration activities by RCTC for MCP.
- Final site selection and a Habitat Mitigation & Monitoring Plan (HMMP) will be submitted to the RCA and the Wildlife Agencies for review and approval prior to start of construction.

b. 6.1.3 - Narrow Endemic Plant Species Survey Area (NEPSSA)

The project study area is located within the NEPSSA for Munz's onion, San Diego ambrosia, many-stemmed dudleya, spreading navarretia, California Orcutt grass, and Wright's trichocoronis. Plant surveys were conducted between March 22 and April 15, 2005; April 13 and 27, 2006; May 4 and July 19, 2005; and May 17 and June 29, 2006 on all areas determined to be suitable based on soils and land cover and verified by field evaluations. Spreading navarretia was the only narrow endemic species detected. The project will impact 1.09 acres of spreading navarretia just west of the San Jacinto River; 0.03 acres permanent, 0.70 acres of permanent shade, and 0.36 acres temporary. As noted under Riparian/Riverine, temporary impacts are included in proposed mitigation acreage due to temporal loss during the extended construction period. The proposed mitigation is purchase of 3.3 acres of spreading navarretia suitable or occupied habitat in Extension of Existing Core 4 (San Jacinto River floodplain) or Non-Contiguous Habitat Block 7 (Hemet Vernal Pool complex). Site selection and restoration, if needed, will be consistent with the criteria contained in the DBESP for Narrow Endemics, Section 4.2.1, contained in the MSHCP Consistency Determination for the project (~~August~~September 2014). With implementation of the measures described in the DBESP the project is consistent with Section 6.1.3. related to NEPSSA plants.

- Final site selection and a revised DBESP will be submitted to the RCA and the Wildlife Agencies for review and approval prior to start of construction.

c. Section 6.3.2

Criteria Area Species Survey Area (CASSA)

The project study area is located within the CASSA for San Jacinto Valley crownscale, Parish's brittlescale, Davidson's saltscale, thread-leaved brodiaea, smooth tarplant, round-leaved filaree, Coulter's goldfields, little mousetail, and mud nama. According to LSA suitable habitat was identified within the MCP Project footprint and areas considered potentially suitable for each species, as determined by mapped soils and land cover categories, and by field evaluations, were surveyed during 2005 or 2006. Each area of potentially suitable habitat was surveyed at least twice: once in March or April, and once in May, June, or July. Plant surveys were conducted between March 22 and April 15,

2005; April 13 and 27, 2006; May 4 and July 19, 2005; and May 17 and June 29, 2006 (NES 2008, SNES 2011). San Jacinto Valley crownscale, smooth tarplant, and Coulter's goldfields were recorded within the project footprint (MSHCP Consistency Determination & DBESP, Figure 16) at the San Jacinto River Bridge. The proposed project would impact 0.36 acres of San Jacinto Valley crownscale primarily (0.26 ac.) under fill east of the 1941' bridge with a smaller amount (0.10~~07~~ ac.) impacted by permanent bridge shading. The proposed project would impact 2.72~~3~~ acres of smooth tarplant either within the fill area between the two bridges or within the fill area east of the 1941' bridge and for the new Reservoir Ave interchange. The proposed project will also impact 2.25 acres of Coulter's goldfields in the same locations as the smooth tarplant impacts. According to the DBESP, the project did consider shifting the MCP alignment north to avoid the San Jacinto Valley crownscale populations with long term conservation value however, "shifting to the north would have impacted the San Jacinto Wildlife Area and shifting to the south would have impacted more Coulter's goldfields and more San Jacinto Valley crownscale."

The proposed mitigation for all CASSA impacts is off site replacement of 6 acres of land that is either biologically equivalent or superior to the lands being impacted focusing on Non-Contiguous Habitat Block 7 (Hemet Vernal Pool Complex) and Extension of Existing Core 4 (San Jacinto River floodplain downstream from project impacts). See Figures 17a and 17b in the MSHCP Consistency Determination and DBESP (Dudek, May 2105). All impacted CASSA species occur in the same general habitat but each has its own microhabitat requirements so the replacement site must meet all parameters described in Section 4.3.2.4, 4.3.2.5 and 4.3.2.6 of the DBESP. These sections list requirements for each species and further details necessary restoration, management and monitoring needed to demonstrate biological equivalency or superiority. With implementation of the measures described in the DBESP the project is consistent with Section 6.3.2 related to CASSA plants.

- Final site selection and a revised DBESP will be submitted to the RCA and the Wildlife Agencies for review and approval prior to start of construction.

Small Mammals - San Bernardino Kangaroo Rat

The proposed project crosses a portion of the San Bernardino kangaroo rat survey area on the San Jacinto River at the Sanderson Avenue Bridge. LSA determined there is 36.23 acres of SBKR suitable habitat, sandy loamy soils in alluvial fans or floodplains, in the larger Biological Study Area (see DBESP Figure 18). LSA conducted 5 nights of small mammal trapping in July 2005 at the Sanderson Avenue crossing of the San Jacinto River at the eastern end of the MCP alignment. No San Bernardino kangaroo rats were trapped during the survey efforts. However, RCTC was made aware of other projects in the vicinity of the San Jacinto River at the SR 79 crossing that did find SBKR therefore, the MCP Project assumed occupancy. The proposed project would impact approximately 1.29 acres the 36.23 acres of suitable San Bernardino kangaroo habitat identified within the biological study area and the MSHCP Survey Area which RCTC determined would be considered occupied given the

conditions in the project area and the known San Bernardino kangaroo rat presence in this area from other trapping events. Engineering refinements made to the project since the preparation of the 2011 Supplemental NES have reduced the SBKR impacts from 3.83 acres to 1.29 acres. Of the 1.29 acres of impact, 0.83 acre would be permanent and 0.46 acres would be temporary (see Figure 18 of the DBESP).

In order to provide equivalent and superior mitigation for the project's 1.29 acres of impacts, RCTC will acquire and Conserve 4 acres (represents a 3.1:1 ratio) of off-site mitigation lands using the following criteria: 1. Lands shall be located within the San Bernardino kangaroo rat survey area or otherwise approved by the Wildlife Agencies., 2. Lands shall contain highly suitable soils and vegetation for San Bernardino kangaroo rat., 3. Lands shall be adjacent to or near PQP Lands or existing Conservation Lands known to support San Bernardino kangaroo rat. Specific parcels have not been indentified for acquisition but will be within the area shown on Figure 19 of the DBESP. Per the DBESP:

- RCTC will consult with the RCA and the Wildlife Agencies if they do not find suitable mitigation land or are unable to acquire any suitable mitigation lands shown on Figure 19 of the DBESP.
- Final mitigation site selection and an updated DBESP shall be submitted to the RCA and Wildlife Agencies prior to acquisition of the mitigation property
- Any mitigation lands acquired for the project's MSHCP compliance shall be conveyed to the RCA prior to start of construction.

With the above provisions incorporated, the project will provide equivalent and superior mitigation to the San Bernardino kangaroo rats being impacted by the project.

Small Mammals - Los Angeles Pocket Mouse

LSA identified 256.84 acres of suitable Los Angeles pocket mouse habitat in the BSA (the BSA is much larger than impact area). Suitable LAPM habitat includes grasslands, alluvial sage scrub, and coastal sage scrub in sandy or gravely soils that are loose so that they can dig burrows. LSA conducted small mammal live-trapping sessions between July and August 2005 within two distinct study areas; (1) near the San Jacinto River crossing at the existing Ramona Expressway in Lakeview and (2) near the SR-79 (Sanderson Ave) Bridge at the San Jacinto River in the San Jacinto (see DBESP Figure 20a and 20b). Northeast of the SR-79 bridge over San Jacinto River, 34 Los Angeles pocket mice were captured (out of a total of five trap sessions, totaling 1,070 trap nights) and in the Lakeview area, 16 Los Angeles pocket mice were captured (out of a total of three trap sessions to address three separate sections of the Lakeview study area, totaling 945 trap nights). LAPM were

captured in both locations trapped. In the Lakeview area LAPM were captured primarily in Riversidean sage scrub and non-native grassland.

The proposed project would impact approximately 20.85 acres of occupied Los Angeles pocket mouse habitat suitable for long-term conservation within the MSHCP Survey Area. Of the 20.85 acres, 20.16 acres would be permanently impacted (all within the right-of-way) and 0.69 acres would be temporarily affected. The project's LAPM impacts were reduced from the 44 acres listed in the 2011 SNES due to engineering refinements have enabled retaining walls to be used where cut and fill was previously proposed, as well as avoiding the parcel owned by California Department Fish and Wildlife, which resulted in reduced impacts to LAPM habitat than previously analyzed. Section 6.3.2 of the MSHCP requires a DBESP when a project cannot conserve/avoid 90% of the area determined to have long-term conservation value. The DBESP must identify mitigation that is equivalent or superior to avoiding the resources being impacted by the project. The MCP Project will result in 20.16 acres of permanent impacts and 0.69 acres of temporary impacts (see Figures 20 Sheet 1 of 2 and Sheet 2 of 2) for a total of 20.85 acres. The temporary impacts will occur from construction of the proposed wall and bridge. Construction activities are expected to take multiple years, therefore temporary loss of habitat from the construction activities are being included within the area to be mitigated for. In order to mitigate for the project's 20.85 acres of impacts and to provide equivalent and superior mitigation, RCTC will acquire and conserve 42 acres (represents a 2:1 ratio) of off-site mitigation lands (see DBESP Figure 19) that support habitat that is known to support LAPM in the past and is located near other already conserved lands with LAPM populations. Areas shown on Figure 19 are known to support suitable LAPM habitat and are near or adjacent to other areas already conserved that support the species. Criteria for mitigation land selection include; 1. Lands shall be located within the Los Angeles pocket mouse survey area, 2. Lands shall contain highly suitable soils and vegetation for Los Angeles pocket mouse, 3. Lands shall be adjacent to or near PQP Lands or existing Conservation Lands known to support Los Angeles pocket mouse.

- RCTC will consult with the RCA and the Wildlife Agencies if they do not find suitable mitigation land or are unable to acquire any suitable mitigation lands shown on Figure 19 of the DBESP.

- Final mitigation site selection and an updated DBESP shall be submitted to the RCA and Wildlife Agencies prior to acquisition of the mitigation property

- Any mitigation lands acquired for the project's MSHCP compliance shall be conveyed to the RCA prior to start of construction.

- RCTC will conduct exclusionary trapping in the construction areas depicted on DBESP Figure 20 (Sheets 1 and 2) and relocate any trapped animals outside of the impact areas. This action

will further provide minimize impacts to the Los Angeles pocket mouse resulting from the project.

With the above provisions incorporated, and the fact that the areas to be conserved for the LAPM have more intact quality alluvial sage scrub habitats which are better for the LAPM than the disturbed the project will provide equivalent and superior mitigation to the Los Angeles pocket mouse being impacted by the project.

Burrowing Owl

The project contains large areas of suitable burrowing owl habitat, including land cover types such as cropland, dairy, developed/ruderal, Riversidean upland sage scrub, and non-native grassland (LSA 2008, Appendix N: Burrowing Owl Habitat Suitability Areas). Specifically, areas of the BSA that were identified as potentially suitable burrowing owl habitat include low-density cover with adequate ground visibility in nonnative grassland, sparsely vegetated non-native grassland, sage scrub, fallow crop fields, edges of crop fields and dairies, pastures, rock outcrops, open pipes, debris piles, earth berms adjacent to open space, unmaintained portions of residential development if adjacent to open space areas, and areas containing ground squirrel burrows or adequately sized small mammal burrows for burrowing owl use. Burrowing owl habitat assessments and focused surveys were conducted within the unmodified original project design Biological Study Area (BSA) as described in the 2008 NES (LSA 2008) between May 11 and June 8, 2005; June 28 and August 26, 2005; April 11 and July 12, 2006; and June 22 and July 10, 2006, and on March 29, 2007. Within the unmodified original 32- mile project design BSA, burrowing owls were observed at three separate sites (LSA 2008, Figure 4.7 a, Figure 4.7b) during the July 6, 2006, focused survey. No burrowing owls were found within the current 15- mile of MCP Project footprint during the 2005/2006 focused survey efforts. Habitat assessments and focused surveys were conducted within the parcels added in 2010 and 2011 on November 23, 2010, and on February 10, April 1 and 4, July 15, and September 30, 2011. One burrowing owl was observed within the BSA in 2011 within the common alignment for all modified build alternatives and their design variations, and thus occurs within the MCP Project alignment analyzed in this document (LSA 2011) (see DBESP Figure 21).

The survey effort for the project found that one individual burrowing owl and its associated foraging habitat (3.1 acres) would be directly impacted by project construction activity. The burrowing owl is located in habitat adjacent to an agricultural field along Placentia Avenue, approximately 122 meters (400 feet) east of the Perris Valley Storm Drain. Given the length of time between the project disturbance and the date when this owl was observed, this owl may or may not be located in the same location at the start of construction. The 3.1 acres also does not meet the threshold of 35 acres of suitable habitat and three or more pairs from Species Objective 5 therefore, the requirement to conserve 90% of the area with long-term conservation value on site is not triggered. However, given the length of time until project construction will actually disturb burrowing owl habitat, and given the transitory nature of burrowing owls and their tendency to colonize areas that may not have been colonized before, there is a

probability that burrowing owls could be located within the project footprint in the future. Direct and indirect effects to burrowing owls and habitat will be avoided and/or minimized by incorporating the following measures into the project design and/or implementation procedures:

- Focused surveys for burrowing owls will be conducted in the known location east of Perris Valley Drain prior to construction to confirm whether the site is still occupied.
- Preconstruction burrowing owl surveys will be conducted within 120 days prior to ground disturbance in all areas of suitable habitat to avoid take of burrowing owls and occupied burrowing owl nests.
- Preconstruction surveys will follow accepted MSHCP survey protocols.
- Take of active burrowing owl nests will be avoided.
- If burrowing owls are identified during the preconstruction surveys and cannot be avoided, a burrowing owl relocation/translocation plan will be prepared based on the measures outlined in the ~~August~~ September 2014 DBESP for submittal to the wildlife agencies for approval 60–90 days prior to ground-disturbing activities. Relocation standards for both passive and active relocation are included in Section 4.6.1.1 of the Burrowing Owl DBESP (~~August~~ September 2014) and will be used for any unavoidable relocations.
- Indirect impacts of exotic plant and animal infestations, litter, fire, and increased light and glare will be minimized by regular roadside maintenance by County of Riverside or Caltrans (dependent upon whether facility is accepted into the State Highway System) to remove litter and weeds from the right-of-way, and by incorporating shielded lighting near environmentally sensitive areas.

With the above provisions incorporated, the project will provide equivalent and superior mitigation for project related burrowing owl impacts.

d. Section 6.1.4 - Urban/Wildlands Interface

Future and existing Conservation Areas are located adjacent to the project site. To preserve the integrity of areas dedicated as MSHCP Conservation Areas, the guidelines contained in Section 6.1.4 related to controlling adverse effects for development adjacent to the MSHCP Conservation Area shall be implemented by the Permittee in their actions relative to the project. Specifically, the Permittee should include as project conditions of approval the following measures as shown in Section 4.7 of the MSHCP consistency Determination (~~August~~ September 2014):

Incorporate measures to control the quantity and quality of runoff from the site entering the MSHCP Conservation Area. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into MSHCP Conservation Areas.

Land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts, such as manure, that are potentially toxic or may adversely affect wildlife species, Habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area. The greatest risk is from landscaping fertilization overspray and runoff.

Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.

Proposed noise-generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms, or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards.

Consider the invasive, non-native plant species listed in Table 6-2 of the MSHCP in approving landscape plans to avoid the use of invasive species for the portions of the project that are adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography, and other features.

Proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate, in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping into the MSHCP Conservation Areas. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms.

Manufactured slopes associated with the proposed site development shall not extend into the MSHCP Conservation Area.

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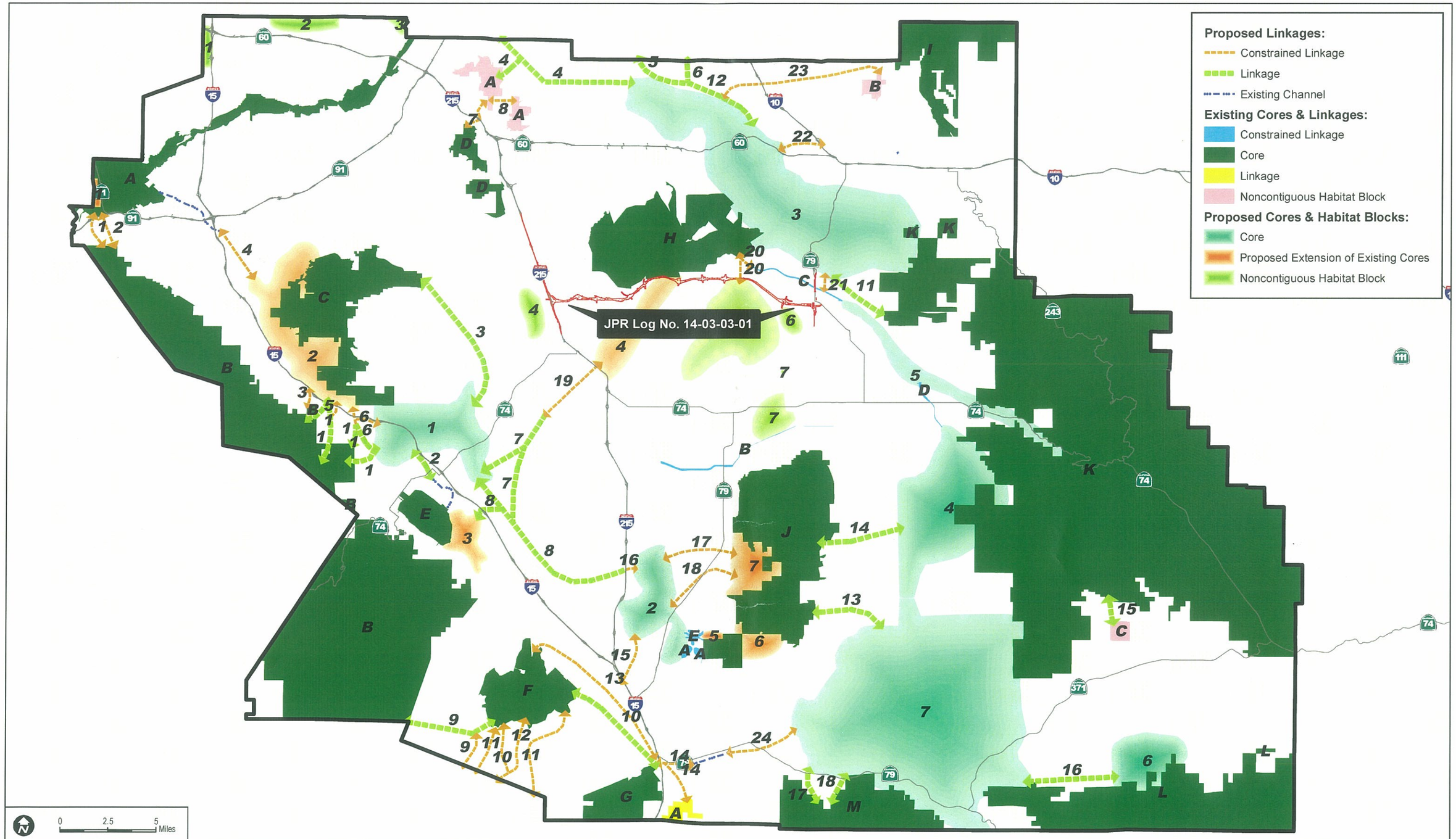

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EXHIBIT A

JPR Log No. 14-03-03-01 - Vicinity Map with MSHCP Schematic Cores and Linkages

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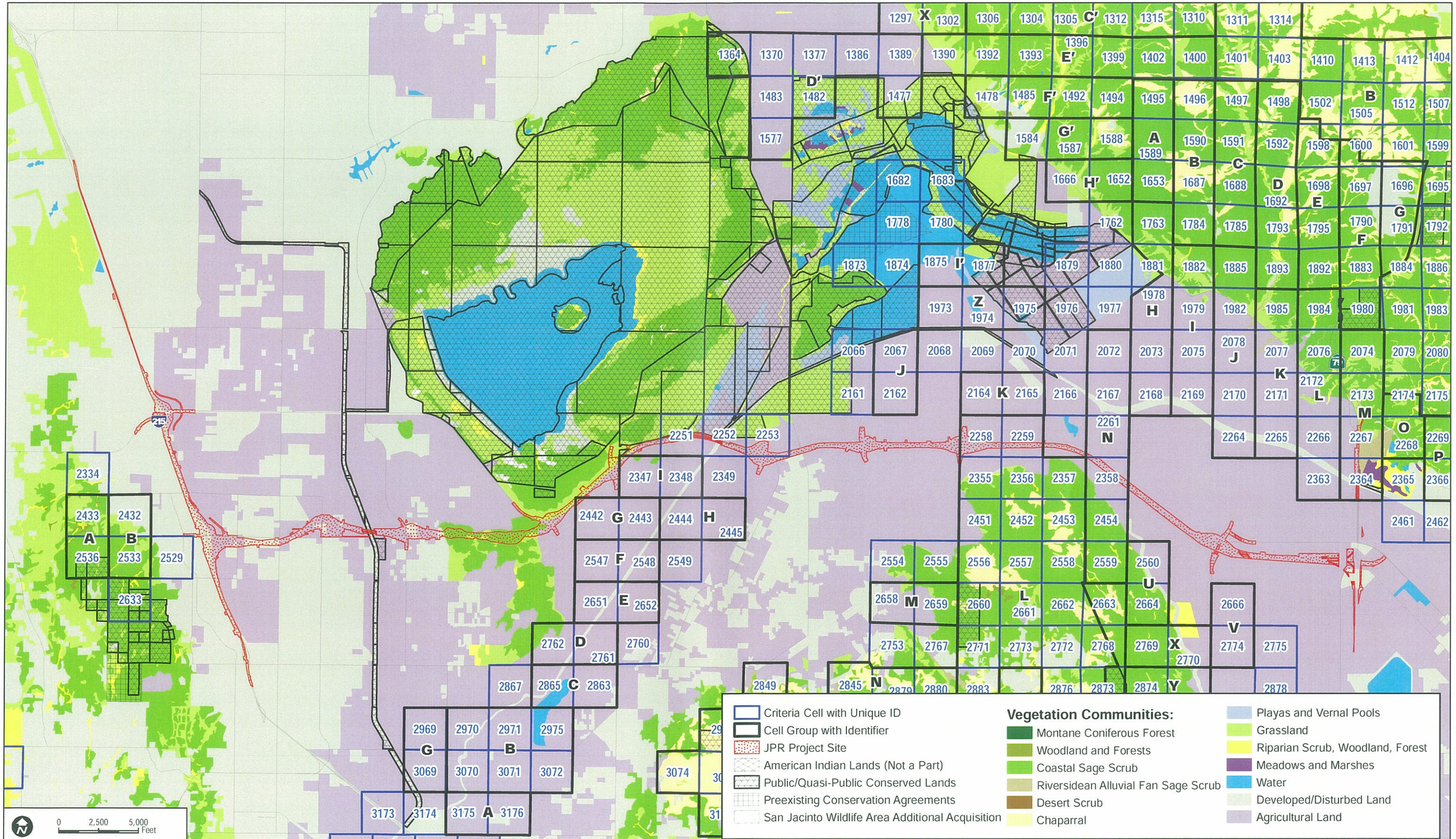

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EXHIBIT B

JPR Log No. 14-03-03-01 - Criteria Area Cells with MSHCP Vegetation and Project Location

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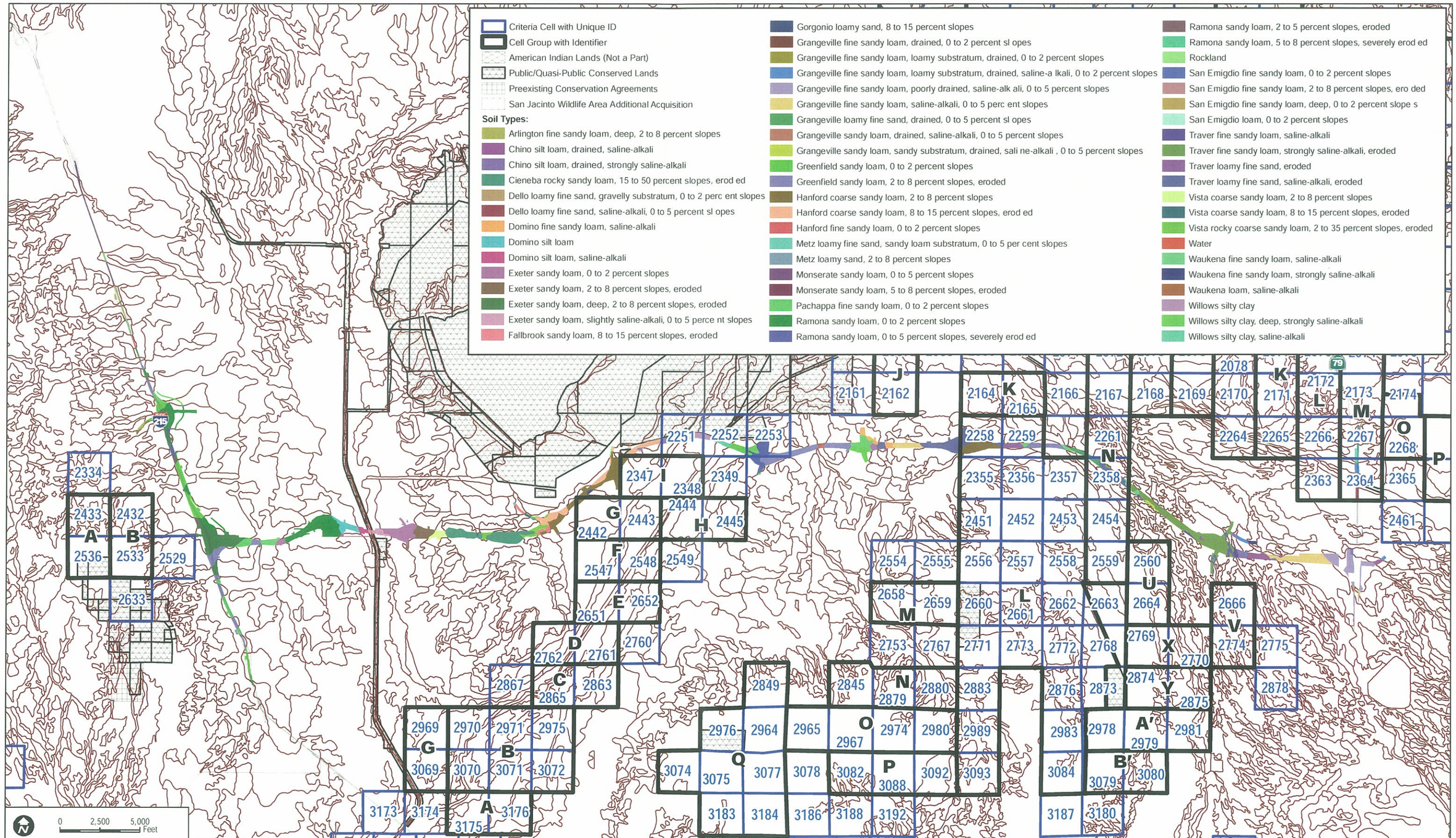

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EXHIBIT C

JPR Log No. 14-03-03-01 - Criteria Area Cells with MSHCP Soils and Project Location

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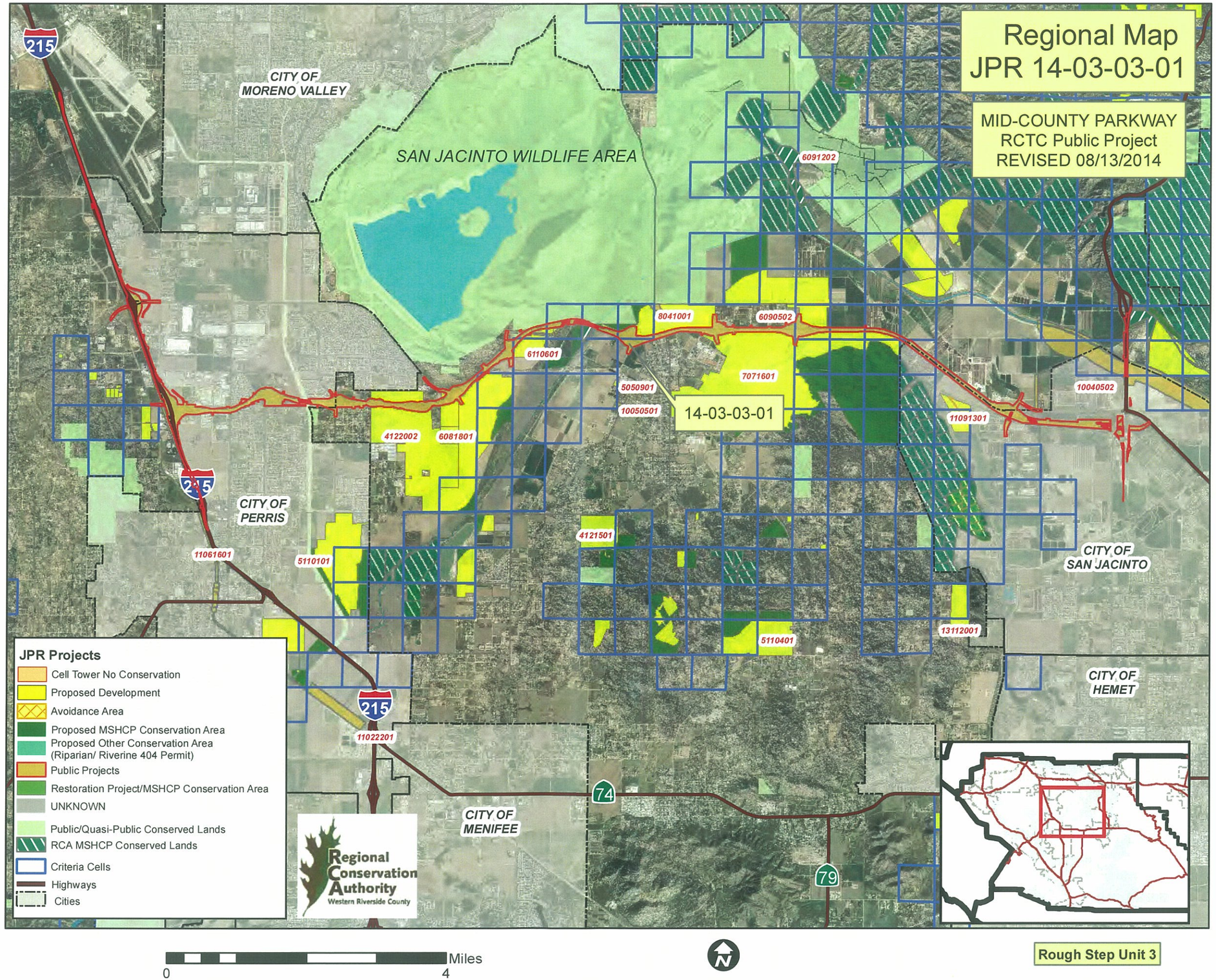
Regional Map
JPR 14-03-03-01
MID-COUNTY PARKWAY
RCTC Public Project
REVISED 08/13/2014
CITY OF MORENO VALLEY
SAN JACINTO WILDLIFE AREA
CITY OF PERRIS
CITY OF SAN JACINTO
CITY OF HEMET
CITY OF MENIFEE
215
74
79
6091202
8041001
6090502
6110601
7071601
5050901
10050501
14-03-03-01
10040502
11091301
4122002
6081801
4121501
11061601
5110101
5110401
13112001
11022201
JPR Projects
Cell Tower No Conservation
Proposed Development
Avoidance Area
Proposed MSHCP Conservation Area
Proposed Other Conservation Area (Riparian/ Riverine 404 Permit)
Public Projects
Restoration Project/MSHCP Conservation Area
UNKNOWN
Public/Quasi-Public Conserved Lands
RCA MSHCP Conserved Lands
Criteria Cells
Highways
Cities
Regional Conservation Authority
Western Riverside County
Miles
0
4
N
Rough Step Unit 3

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WILDLIFE AGENCIES COMMENTS ON THE WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PROTECTION (DBESP) FOR THE MID COUNTY PARKWAY PROJECT, RIVERSIDE COUNTY, CALIFORNIA (OCTOBER 20, 2014)

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U.S. Fish and Wildlife Service
Palm Springs Fish and Wildlife Office
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262
760-322-2070
FAX 760-322-4648

California Department of Fish and Wildlife
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, California 91764
909-484-0167
FAX 909-481-2945

In Reply Refer To:
FWS/CDFW-08B0080-15CPA0013

Alex Menor
Riverside County Transportation Commission
4080 Lemon Street, Third Floor
Riverside, California
92501

OCT 20 2014

Subject: Western Riverside County Multiple Species Habitat Conservation Plan Determination of Biologically Equivalent or Superior Protection (DBESP) for the Mid County Parkway Project, Riverside County, California

Dear Mr. Menor:

The U.S. Fish and Wildlife Service (Service) and the California Department of Fish and Wildlife (Department), hereafter collectively referred to as the Wildlife Agencies, have reviewed the Consistency Determination including the Determination of Biological Equivalence or Superior Preservation (DBESP) for the proposed Mid County Parkway (MCP, project) received August 21, 2014. The document was submitted to provide analysis and compliance for impacts to resources in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) which includes: Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools Policy (Riparian/Riverine Policy, MSHCP Section 6.1.2); Protection of Narrow Endemic Plant Species Survey Areas (NEPSSA, MSHCP Section 6.1.3.); Additional Survey Needs and Procedures (Section 6.3.2); Urban-Wildlands Interface Guidelines (Section 6.1.4.); Siting and Design Criteria (Section 7.5.1 and 7.5.2); Best Management Practices (BMPs, Sections 7.5.3 and Appendix C of the MSHCP Implementing Agreement (Section 13.7(A)). The Wildlife Agencies are providing the following comments as they relate to the project's consistency with the MSHCP.

The MCP is a 16-mile long, six-lane controlled-access freeway that general runs in an east-west direction, located between Interstate 215 in the City of Perris, California and State Route 79 (SR 79) in the City of San Jacinto, near Ramona Expressway, in northwestern Riverside County, California. The proposed project would provide a major east-west connection for regional movement to western Riverside County, Los Angeles County, and Orange County. The facility would generally have three lanes in each direction with a wide (62-foot) median. Bridges are proposed for major drainages including Perris Drain, San Jacinto River at the SR-79 and San Jacinto River in the Lakeview area.

The Riverside County Transportation Commission has been working cooperatively on the MCP project with the Wildlife Agencies and others to address MSCHP implementation and other regulatory environmental requirements. We appreciate the time and effort that has gone

into the minimization and avoidance of impacts and the pursuit of appropriate mitigation strategies when impacts are not avoided. We thank you for perseverance through this long process and congratulate you on nearing the end. We have a few comments and requests for clarification below.

Per the DBESP guidelines we request identification of Project specific design features or best management practices that will to benefit, preserve, and/or reduce effects to riparian and riverine resources, narrow endemic plants, and criteria area survey plants remaining adjacent to the Project area. We also request clarification that the Wildlife Agencies would review and approve of mitigation land acquisition and all restoration and enhancement plans prior to Project implementation.

We are seeking clarification on the proposed mitigation for the Criteria Area Species Survey Area (CASSA) plants, the DBESP identifies impacts to Coulter's goldfields (2.25 acres), San Jacinto Valley crownscale (0.36 acres), and smooth tarplant (2.73 acres) for a total of 5.34 acres affected. The mitigation proposed is 6 acres total with either occupied or suitable habitats for all three CASSA plants. The DBESP text identifies this as 16.5:1 ratio for the 0.36 acres of impact to the San Jacinto Valley crownscale, 2.6:1 ratio for the 2.25 acres of impact to the Coulter's goldfields, and 2:1 ratio for the 2.73 acres of impact to the smooth tarplant. Multiplying these ratios out for each CASSA plant would result in a total of 17.28 acres of mitigation, which is acceptable to the Wildlife Agencies. The MCP will directly remove 5.34 acres occupied by rare plants. The DBESP identified the purchase of 6 acres of occupied or suitable habitat as replacement. The Wildlife agencies recognize the value of suitable habitat, but do not consider it to be equivalent to occupied habitat. Similarly, preservation of existing occupied habitat is valuable, but it is not equivalent to avoidance of the populations or individuals which will be permanently lost to project construction. We therefore request that approximately 5 to 6 acres of occupied habitat be acquired and 12 additional acres of alkali floodplain habitat be enhanced to offset temporal and permanent loss of rare plant resources. We will accept this strategy as equivalent or superior to avoidance. The occupied and enhanced acres can be within the larger area being acquired to offset alkali riverine areas.

The DBESP incorporated by reference a discussion of approximately 70 smooth tarplants which are not included in the project's permanent and temporary impact analysis (Figure 4.3d – 2008 Supplemental Natural Environmental Study). The Wildlife Agencies request impacts to this population be included in the effects analysis, added to Table 6, and any mitigation acreage be recalculated to properly reflect impacts to the species. We do not expect the inclusion of these plants to result in a substantive change to the project's mitigation strategy or obligation and no justification was provided for the determination that these plants were in an area without long-term conservation value.

We recommend that the Habitat Management and Monitoring Plan include decision points and an alternative or corrective strategy for the circumstance where mitigation areas undergoing creation, enhancement, and/or restoration not succeed in reaching performance standards. In addition, the Wildlife Agencies prefer that mitigation areas for alkali riverine

areas and rare plant resources be located in the San Jacinto River floodplain; however, we recognize that similar resources are present in the west Hemet area and preservation of alkali resources there would contribute to MSHCP reserve assembly.

We appreciate the opportunity to comment on the DBESP and request an addendum to the DBESP, providing the clarifications we requested and confirming that the proposed mitigation strategy will be adopted. The addendum can be transmitted electronically. We will review the addendum and confirm that the requested clarifications and mitigation strategy have been included and provide a reply in 10 working days verifying the project's consistency with the MSHCP. We look forward to working with you and your team to finalize MSHCP implementation. If you have any questions regarding these comments or would like to schedule a meeting please contact John M. Taylor of the Service at 760-322-2070, extension 218, or Heather Pert of the Department at 858-395-9692.

Sincerely,

for
Kennon A. Corey
Assistant Field Supervisor
U.S. Fish and Wildlife Service

Heather A. Pert
for
Kimberly Nicol
Inland Desert Region
Acting Regional Manager
CA Department of Fish and Wildlife

cc:
Charles Landry, Regional Conservation Authority
Jeff Brandt, California Department of Fish and Wildlife

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WILDLIFE AGENCY INFORMAL DISCUSSION ITEMS ON JPR AND DRAFT RESPONSES (SEPTEMBER 17, 2014)

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Taylor, John <john_m_taylor@fws.gov>

Re: Clarification on your MCP Comments (FWS-WRIV-08B0080-15E00068)

1 message

Taylor, John <john_m_taylor@fws.gov> Wed, Oct 22, 2014 at 6:24 PM
To: Stephanie Standerfer <sstanderfer@dudek.com>
Cc: "Cleary-Rose, Karin" <karin_cleary-rose@fws.gov>, Heather Pert <Heather.Pert@wildlife.ca.gov>, "Correa, Laurie" <ldcorrea@wrcrca.org>

Stephanie,

In our comment regarding clarification, the DBESP did indeed state multiple times submittals would be provided to the Wildlife Agencies. Our request was to clarify the HMMP, any restoration/enhancement plans, plant palette selection, and/or other submittals were subject to Wildlife Agency review and approval prior to being finalized. An example of this is as follows:

> Final mitigation site selection and a Habitat Management and Monitoring Plan (HMMP) and updated DBESP shall be submitted to the RCA and Wildlife Agencies, **for review and approval,** prior to acquisition of the mitigation property.

Thank you again for all your assistance,

John M. Taylor
Fish & Wildlife Biologist
U.S. Fish and Wildlife Service - Palm Springs
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262
Ph: 760-322-2070 x218
john_m_taylor@fws.gov

-------- Forwarded message --------
From: **Stephanie Standerfer** <sstanderfer@dudek.com>
Date: Wed, Oct 22, 2014 at 3:40 PM
Subject: RE: Clarification on your MCP Comments
To: "hpert@dfg.ca.gov" <hpert@dfg.ca.gov>, Karin Cleary-Rose <karin_cleary-rose@fws.gov>
Cc: "ldcorrea@wrcrca.org" <ldcorrea@wrcrca.org>, "Landry, Charles" <CLandry@wrcrca.org>

Hi Heather and Karin – just following up on my clarification requests below. Karin, thanks for responding about the 12 acres yesterday, but still need clarification on the other item. We need to finish our addendum tomorrow, so if you can let me know ASAP that would be great.

Thanks.

Stephanie Standerfer
Senior Project Manager

3685 Main Street, Suite 250

Riverside, CA 92501

Office: 951-300-2100

Direct:951-300-2180

C: 760.707.7478

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www.dudek.com

From: Stephanie Standerfer
Sent: Tuesday, October 21, 2014 1:44 PM
To: hpert@dfg.ca.gov; Karin Cleary-Rose
Cc: 'ldcorrea@wrcrca.org'; 'Landry, Charles'
Subject: Clarification on your MCP Comments

Hi Karin and Heather – per your attached letter on the MCP DBESP I am wanted to get some clarification about your comments so I can help RCTC respond.

Page 2, second paragraph, you request "clarification that the Wildlife Agencies would review and approve of mitigation land acquisition and all restoration and enhancement plans prior to Project implementation". We did add language about Wildlife Agency and RCA involvement at future points in time related to acquisition and subsequent DBESPs on Pages 43, 44, 40, 57, 68, 70, 74, and starting on Page 77 in burrowing owl section. Can you please clarify what you are wanting that is different from what we already included in the report on those pages?

Also, third paragraph, Page 2 of your comment letter you request "12 additional acres of alkali floodplain habitat be enhanced...". Do you mean 12 acres **in addition** to the 74 acres already planned to be conserved as part of the riverine/alkaline floodplain mitigation obligation?

Stephanie Standerfer
Senior Project Manager

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ADDENDUM TO THE MSHCP CONSISTENCY DETERMINATION AND DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PRESERVATION ANALYSIS (MID COUNTY PARKWAY); FROM RCTC TO THE WILDLIFE AGENCIES (OCTOBER 24, 2014)

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Riverside County Transportation Commission

4080 Lemon Street, 3rd Floor • Riverside, CA
Mailing Address: P. O. Box 12008 • Riverside, CA 92502-2208
(951) 787-7141 • Fax (951) 787-7920 • www.rctc.org

October 24, 2014

Mr. Kennon A. Corey
Assistant Field Supervisor
US Fish and Wildlife Service
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262

Ms. Kim Nicol
Acting Regional Manager
California Department of Fish and Wildlife
3602 Inland Empire Boulevard, Suite C-220
Ontario, CA 91764

RE: Addendum to MSHCP Consistency Determination and Determination of Biologically Equivalent or Superior Preservation Analysis (Mid County Parkway)

This Addendum to the September 2014 MSHCP Consistency Determination and DBESP report for the Mid County Parkway project is being prepared in response to comments on the DBESP from California Department of Fish and Wildlife and US Fish and Wildlife Service (Wildlife Agencies) received on October 20, 2014. The Regional Conservation Authority (RCA) issued a consistency determination in the form of a Joint Project Review on October 6, 2014 concluding that the project is consistent with the MSHCP. The October 20, 2014 DBESP comments from the Wildlife Agencies were provided after the JPR was issued by the RCA and after the Wildlife Agency's JPR 10-day comment period. The Wildlife Agencies provided additional comments as part of their 60 day comment period allowed to the Wildlife Agencies per Sections 6.1.2, 6.1.3 and 6.3.2 of the MSHCP.

Please see Attachment for a breakdown of the comments which correspond to the responses below:

<u>Response to Wildlife Agency Comment A:</u>

This comment requests identification of specific design features or best management practices that will benefit, preserve, and/or reduce effects to riparian and riverine resources, narrow endemic plants, and criteria area survey plants remaining adjacent to the Project area.

Please note that Sections 4.7 of the September 2014 DBESP, showing compliance with MSHCP Section 6.1.4 Compliance – Urban – Wildlands Interface Guidelines, and Section

4.9 outlining the measures taken during construction summarizes many of the avoidance and minimization measures that the project will undertake which are solely intended to address reducing edge effects of the project.

Also, as discussed in various locations of the MSHCP Consistency Determination and DBESP report, as well as in the Administrative Draft Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (to be provided to the Wildlife Agencies for review as part of the EIR/EIS process), the project will include design features which will also benefit, preserve and reduce effects to riparian, riverine, narrow endemic and criteria area plants:

- Existing Ramona Expressway is not required to capture water that runs off pavement and into the existing watershed. The MCP, per Caltrans standards, will capture and treat 90% of all runoff from MCP. The water is then released into the existing watershed.
- No lighting on mainline MCP, only safety lighting at interchanges. The lighting in these limited areas will be shielded and directed towards the roadway only.
- Edge effects resulting from an increase in light and glare associated with vehicles and daytime and nighttime construction activities will be reduced by incorporating shielded lighting near environmentally sensitive areas.
- Indirect impacts of exotic plant and animal infestations, litter, and fire will be reduced by regular roadside maintenance to remove litter and weeds from the right of way.

Additionally, the following measures that were previously presented in the January 2013 Recirculated Draft EIS/Supplemental Draft EIS will be incorporated to avoid, minimize, and/or mitigate impacts related to riparian, riverine, narrow endemics and criteria area survey species of the MCP:

NC-1 Project Biologist (Design). Prior to the initiation of final design, the Riverside County Transportation Commission (RCTC) Project Manager will require the design contractor to have a Project Biologist under contract. The Project Biologist will ensure that all vegetation removal, seasonal restrictions, Best Management Practices (BMPs), environmentally sensitive areas, and all biological resources avoidance, minimization, and mitigation measures are properly included in the project design and specifications. Additional levels of biological monitors, such as qualified/authorized biologists for monitoring listed species, and general biological monitors, will also be used as needed to ensure that mitigation measures are properly implemented during the project design.

Project Biologist (Construction). Prior to the initiation of any site preparation or disturbance activities, the RCTC Project Manager will have a Project Biologist under contract. The Project Biologist will ensure that all vegetation removal, seasonal restrictions, BMPs, environmentally sensitive areas, and all biological resources avoidance and minimization measures are properly implemented by the Construction Contractor as required in the project design and specifications. Additional levels of biological monitors,

such as qualified/authorized biologists for monitoring listed species, and general biological monitors, will also be used as needed to ensure that mitigation measures are properly implemented during construction.

NC-2 Environmentally Sensitive Areas. During final design, the RCTC Project Engineer and RCTC Project Biologist will coordinate to identify areas within the project right of way footprint but outside the project disturbance and grading limits which include, but are not limited to, riparian/riverine vegetation, San Jacinto River alkali communities, and areas with long-term conservation values for the San Jacinto Valley crownscale, spreading navarretia, Coulter's goldfields, smooth tarplant, least Bell's vireo, burrowing owl, Los Angeles pocket mouse, San Bernardino kangaroo rat, and protected waters. Those areas will be designated by the RCTC Project Engineer on the project plans and specifications as environmentally sensitive areas (ESAs).

The RCTC Project Engineer will label each ESA on the project plans and specifications as an ESA but will not identify the specific biological resources within each ESA.

The RCTC Project Engineer will ensure that the project plans and specifications include the following specific requirements of and directions for the Construction Contractor and the RCTC Project Biologist regarding the ESAs:

- Prior to any site preparation, grading, clearing, or construction, the Construction Contractor will be required to hold training sessions conducted by the RCTC Project Biologist to ensure that all construction workers understand the purpose of, and requirements and restrictions related to, the ESAs.
- Prior to any site preparation, grading, clearing, or construction, the RCTC Resident Engineer will require the Construction Contractor, assisted by the RCTC Project Biologist, to install highly visible barriers (such as orange construction fencing) around all designated ESAs.
- No disturbance, grading, staging, parking, materials or equipment storage, fill structures, dumping, or other construction-related activities will be permitted within the ESAs at any time.
- All construction equipment will be operated and all construction activities will be conducted at all times in a manner so as to prevent accidental damage to or intrusion into ESAs.
- No construction equipment or worker vehicles are to enter any ESA at any time.
- The Construction Contractor must maintain all ESA barriers throughout all the site preparation, disturbance, grading, and construction activities in the vicinity of the ESAs.
- The RCTC Project Biologist will verify the integrity of the ESA barriers on a regular basis (no less than once every 2 weeks and more often if needed) and will report the need for any repair or replacement of barriers to the RCTC Resident Engineer that day.
- The RCTC Resident Engineer and RCTC Project Biologist will require the Construction Contractor to repair damaged or replace missing ESA barriers

within 24 hours of being notified of the status of the ESA barriers needing repair or replacement.

- During all site preparation, clearing, disturbance, and construction activities, the RCTC Project Engineer will require the Construction Contractor to ensure that equipment maintenance, site lighting, equipment and materials staging, and equipment and worker vehicles are limited to designated areas away from ESAs.
- In the event that an ESA barrier is breached by any construction worker, equipment, or activity, the Construction Contractor is to cease work in that area immediately and report the breach to the RCTC Resident Engineer immediately.
- The RCTC Resident Engineer and RCTC Project Biologist will review the breach and will assess the effects of the breach on the resource protected by that ESA. Any breached areas will be restored to the original condition. If the breach affects resources protected by that ESA, the RCTC Resident Engineer and RCTC Project Biologist will coordinate with the applicable resource agencies (USACE, CDFW, or RCA) to determine if additional mitigation would be required.
- When all construction activities in the vicinity of an ESA are complete and there will be no more construction activity in that area, the RCTC Resident Engineer and the RCTC Project Biologist will direct the Construction Contractor to remove the ESA barrier at that location.

NC-4 Design and Construction Management Measures. During final design, the RCTC Project Engineer will coordinate with the Design Contractor and the Project Biologist to develop design and construction management specifications to direct temporary construction noise, nighttime construction lighting, and permanent facility lighting away from the wildlife corridors, biologically sensitive areas, the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Conservation Areas, and vegetated drainages. Those specifications will be included in the final design.

If construction work must be done at night, the RCTC Resident Engineer will require the Construction Contractor to properly implement the specifications included in the final design to direct temporary construction noise and lighting away from the wildlife movement corridors, and biologically sensitive areas during those nighttime construction activities.

During construction, the RCTC Resident Engineer will ensure that the Construction Contractor properly implements the permanent facility lighting, directing the light from wildlife movement corridors, biologically sensitive areas, the Western Riverside County MSHCP Conservation Areas, and vegetated drainages.

NC-5 Conservation Areas. During final design, the RCTC Project Engineer and the Contract Biologist will coordinate to identify existing and proposed conservation areas within the project footprint and in the immediately surrounding areas and will designate those areas on the project specifications. The Contract Biologist will provide the RCTC Resident Engineer with the applicable guidelines from the Western Riverside County

MSHCP, including the Urban/Wildlands Interface Guidelines from Section 6.1.4 of the Western Riverside County MSHCP and compliance with these guidelines as identified in Section 3.17.3 of the Final EIR/EIS, for incorporation in the project specifications.

To reduce impacts where the project interfaces with existing or proposed conservation areas as shown on the project specifications, the RCTC Resident Engineer will require the construction contractor to comply with the applicable guidelines from the Western Riverside County MSHCP, including the Urban/Wildlands Interface Guidelines from Section 6.1.4 of the Western Riverside County MSHCP, as included in the project specifications.
During final design, the RCTC Project Engineer and Project Biologist will ensure the design for the wildlife crossing entrance at Wildlife Crossing No. 10 will minimize noise effects to the adjacent MSHCP Conservation Area and ensure that noise effects do not exceed residential noise standards.

Prior to and during construction, RCTC will require the design contractor and the Construction Contractor to comply with guidelines from the MSHCP and be included in the project specifications.

NC-6 Salvage of Alkali Soils. During final design, the RCTC Project Engineer will have the Project Biologist map all areas within the project disturbance limits that contain alkali soils, primarily within the 6 acres of fill for the bridges spanning the San Jacinto River Floodplain. The Project Biologist will provide specifications in the final design regarding how existing vegetation in those areas is/is not to be removed, how deep the upper layer of the alkali soils is, and how that soil is to be removed, transported from the construction area, and deposited at a storage site or restoration area.

Prior to any site disturbance, the Project Biologist and the Resident Engineer will require the Construction Contractor to mark areas with alkali soils to ensure that those soils (approximately the upper one foot layer of the soils) are properly removed from the project limits The RCTC Resident Engineer, working with the Project Biologist, will direct the Construction Contractor on where to take those soils (storage site or restoration area).

WET-2 Temporary Impacts to Jurisdictional Areas [which primarily correspond with MSHCP riparian/riverine areas outside of the San Jacinto River floodplain]. After the completion of construction in areas that resulted in temporary impacts to USACE and/or CDFW jurisdictional areas, the RCTC Resident Engineer will require the Construction Contractor to revegetate those on site areas at a minimum 1:1 replacement ratio. The revegation will be conducted as described in a future habitat mitigation program (as described in Measure WET 3) and in the applicable conditions from regulatory permits.

WET-3 Habitat Mitigation Program. The RCTC Project Manager will contract with a biologist (Project Biologist) to develop a comprehensive habitat mitigation program to direct the restoration of temporarily impacted riparian habitats and other USACE and CDFW jurisdictional areas. The program will incorporate the applicable approaches and measures identified in the Draft HMMP for impacts to USACE jurisdictional areas, as well as the necessary details for implementation of the measures described in the DBESP.

To avoid adverse impacts during operation of the facility, Measures U&ES-3 and U&ES-6 will also be implemented to further prevent the spread of invasive species within the MCP facility right of way by providing for access to the existing fire road grid and complying with fuel modification requirements.

U&ES-3 Fire Protection Access During Operations. During final design, the RCTC Project Manager and RCTC Project Engineer will coordinate with the Riverside County Fire Department to incorporate long-term provision of access to the existing fire road grid in the project final design and specifications. The long-term access locations must be approved by the California Department of Transportation (Caltrans) along Interstate 215 (I-215) and State Route 79 (SR-79), the local jurisdictions with land use authority, and the Riverside County Fire Department.

U&ES-6 Fire Protection. During final design, the RCTC Project Engineer, in consultation with a qualified biologist (Contract Qualified Biologist) under contract to RCTC, will incorporate brush management zones in areas adjacent to existing reserves, the Multiple Species Habitat Conservation Plan (MSHCP) Conservation Area, and other undeveloped lands in accordance with Section 6.4 of the MSHCP in the final project plans and specifications.
During site preparation, disturbance, grading, and construction, the RCTC Project Engineer will require the Construction Contractor to implement the provision of brush management zones shown in the project plans and specifications in areas adjacent to existing reserves, the MSHCP Conservation Area, and other undeveloped lands in accordance with Section 6.4 of the MSHCP.

IS-1 Landscaped Disturbed Areas. During construction, the Riverside County Transportation Commission (RCTC) Resident Engineer will require the Construction Contractor to landscape/revegetate disturbed areas and bare soil in the project disturbance limits with California Department of Transportation (Caltrans) recommended seed mixtures and container plants from locally adapted species to preclude the invasion of noxious weeds. The use of site-specific materials adapted to local conditions increases the likelihood that the landscaping/revegetation will be successful and maintain the genetic integrity of the local ecosystem.

The RCTC Resident Engineer and the Construction Contractor will ensure that the invasive plant species listed in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), Table 6-2 and in the most up-to-date California Invasive Plant Council (Cal-IPC) Invasive Plant Inventory are not planted within the project area.

During construction, the RCTC Resident Engineer will require the Construction Contractor to submit the proposed seed mixtures for the parts of the project under Caltrans jurisdiction for approval by a Caltrans District 8 Landscape Architect. No landscaping/revegetation in state right of way will be installed prior to Caltrans approval of the seed mixtures.

Prior to and during construction, RCTC will require the Construction Contractor to require

the Project Biologist to make arrangements well in advance of planting (at least 9 months prior to the scheduled planting) to ensure that the needed plant materials are collected and/or located and available for the scheduled planting time. Sufficient time must be allocated for a professional seed company to visit the project site during the appropriate season to collect native plant seed.

If local propagates are not available or cannot be collected in sufficient quantities to meet the scheduled planting time, plant materials collected or grown from other sources within southern California can be substituted, based on approval of use of those alternative plant materials by the RCTC Resident Engineer and the RCTC Contract Biologist, and for areas in the State right of way, by the Caltrans District 8 Landscape Architect.

For widespread native herbaceous species that are more likely to be genetically homogeneous, site specificity is a less important consideration, and seed and container plants from commercial sources may be used based on approval of use of those alternate plant materials by the RCTC Resident Engineer and the RCTC Contract Biologist, and for areas in the state right of way, by the Caltrans District 8 Landscape Architect.

IS-2 Seed Purity. During construction, as seed mixtures are collected, the RCTC Resident Engineer will require the Construction Contractor to require the Project Biologist to certify the seed purity by planting seed labeled under the California Food and Agricultural Code or that has been tested within the year by a seed laboratory certified by the Association of Official Seed Analysts or by a seed technologist certified by the Society of Commercial Seed Technologists. The Project Biologist will provide the documentation of compliance with this requirement to the RCTC Project Engineer and the RCTC Contract Biologist, and for seed mixtures that will be used in the state right of way, to the Caltrans District 8 Landscape Architect.

IS-3 Construction Equipment. During all site preparation, disturbance, grading and construction activities, the RCTC Resident Engineer will require that the Construction Contractor implement procedures to ensure that construction equipment is cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weedsboth before mobilizing to arrive at the site and before leaving the site. The Construction Contractor will document that equipment coming to the site will be cleaned at established truck wash facilities within the project vicinity and will provide facilities within the project limits to clean equipment leaving the site.

IS-4 Trucks. During all site preparation, disturbance, grading and construction activities, the RCTC Resident Engineer will require the Construction Contractor to implement procedures to ensure that all trucks carrying vegetation from the project limits are covered and that all vegetative materials removed from the project limits are properly disposed of in accordance with all applicable laws and regulations.

IS-5 Inspected Material. During all site preparation, disturbance, grading, and construction activities, the RCTC Resident Engineer will require the Construction Contractor implement procedures to ensure that if material is obtained from a borrow site,

that the material is inspected for the presence of noxious weeds and invasive plants to ensure that the material imported to the project site does not contain noxious weeds or invasive plants. The Project Biologist will conduct a site visit to proposed borrow sites to document whether any species identified on the Cal-IPC list (current at the time borrow sites are proposed) are present at the borrow site. If Cal-IPC species are found within the borrow site, the top 6 inches of topsoil from the borrow site must be set aside and not used as borrow/fill material for the project. The RCTC Resident Engineer will require the Construction Contractor to provide written documentation of the procedures for conducting the site visits, documenting/verifying the presence/absence of Cal-IPC species, and documenting/verifying that the top 6 inches of topsoil are moved and not included in borrow material when Cal-IPC species are documented on the borrow site, and the implementation of those procedures whenever borrow material is proposed to be brought to the project site.

IS-6 Weeds and Invasive Plants. During all site preparation, disturbance, grading, and construction activities, the RCTC Resident Engineer will require the Construction Contractor to control, kill, and remove noxious weeds and invasive plants from the project site, under the direction of the Project Biologist.

WQ-1 National Pollutant Discharge Elimination System Permits. During construction, the Riverside County Transportation Commission (RCTC) Project Engineer will require the Construction Contractor to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order No. 2009-0009-DWQ, NPDES No. CAS000002), National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from the State of California, Department of Transportation (Caltrans) Properties, Facilities, and Activities (Order No. 2010-001-DWQ), National Pollutant Discharge Elimination System (NPDES) Permit for Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside County with the Santa Ana Region (Order No. R8-2010-003, NPDES No. CAS618033), and any subsequent permits, as they relate to construction activities for the project.
This will include submission of the Permit Registration Documents, including a Notice of Intent, risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and signed certification statement to the State Water Resources Control Board via the Storm Water Multi-Application and Report Tracking System at least 7 days prior to the start of construction.

The RCTC Resident Engineer will not authorize the Construction Contractor to begin construction activities until a Waste Discharger Identification number is received from the Storm Water Multi-Application and Report Tracking System.

The RCTC Resident Engineer will require the Construction Contractor to prepare the SWPPP and will require the SWPPP to be prepared by a Qualified SWPPP Developer. The RCTC Resident Engineer will require the SWPPP to meet the requirements of the Construction General Permit; to identify potential pollutant sources associated with

construction activities; identify non-storm water discharges; develop a water quality monitoring and sampling plan; and identify, implement, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants associated with the construction site. Those BMPs will include, but not be limited to, Good Housekeeping, Erosion Control, and Sediment Control BMPs.

The RCTC Resident Engineer will require the Construction Contractor to implement the BMPs identified in the SWPPP during site preparation, grading excavation, construction, and site restoration activities, consistent with how, when, and where the SWPPP indicates those BMPs should be implemented.

The RCTC Resident Engineer will require the Construction Contractor to comply with the sampling and reporting requirements of the Construction General Permit.
The RCTC Resident Engineer will require the Construction Contractor to have a Rain Event Action Plan prepared by a Qualified SWPPP Developer prior to the initiation of site preparation, grading, excavation, or construction activities.

The RCTC Resident Engineer will require the Construction Contractor to have the Rain Event Action Plan implemented by a Qualified SWPPP Developer within 48 hours prior to a rain event of 50 percent or greater probability of precipitation according to the National Oceanic and Atmospheric Administration.

The RCTC Resident Engineer will require the Construction Contractor to prepare and submit an Annual Report to the State Water Resources Control Board (SWRCB) no later than September 1 of each year using the Storm Water Multi-Application and Report Tracking System.
The RCTC Resident Engineer will submit a Notice of Termination to the SWRCB within 90 days of completion of construction and stabilization of the site.

WQ-2 National Pollutant Discharge Elimination System CAG998001. The RCTC Resident Engineer will require the Construction Contractor to comply with the provisions of the General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality, Order No. R8-2009-0003 National Pollutant Discharge Elimination System (NPDES) No. CAG998001, as they relate to discharge of non-storm water dewatering wastes for the project.

The RCTC Resident Engineer will require the Construction Contractor to submit to the Santa Ana Regional Water Quality Control Board (RWQCB) a Notice of Intent at least 60 days prior to the start of construction.

The RCTC Resident Engineer will require the Construction Contractor to submit to the Santa Ana RWQCB notification of discharge at least 5 days prior to any planned discharges.

The RCTC Resident Engineer will require the Construction Contractor to submit to the Santa Ana RWQCB monitoring reports by the 30th day of each month following the

monitoring period.

WQ-3 Design Pollution Prevention and Treatment Best Management Practices. Riverside County Transportation Commission (RCTC) will comply with the Storm Water Management Plan (SWMP) and follow the procedures outlined in the Storm Water Quality Handbooks, Project Planning and Design Guide for implementing Design Pollution Prevention and Treatment BMPs for the project that address pollutants of concern. This will include coordination with the Santa Ana RWQCB with respect to feasibility, maintenance, and monitoring of Treatment BMPs as set forth in the Caltrans Statewide SWMP.

Response to Wildlife Agency Comment B:

This comment requests clarification that the Wildlife Agencies will be reviewing and approving mitigation land acquisition and restoration/enhancement plans. No additional clarification is needed in the DBESP as the September 2014 MSHCP Consistency Determination and DBESP already outlines Wildlife Agency and Regional Conservation Authority (RCA) involvement at future points in time related to acquisition and subsequent DBESPs (i.e. enhancement/restoration plans) on Pages 43, 44, 40, 57, 68, 70, 74, and starting on Page 77 in burrowing owl section. As stated in the September 2014 MSHCP Consistency Determination and DBESP, the Wildlife Agencies will be included in subsequent coordination and reviews related to future acquisitions and subsequent DBESPs (which will include Habitat Management and Monitoring Plans). In order to respond to the Wildlife Agencies concerns, RCTC will commit to allowing for Wildlife Agencies' and RCA's review and concurrence on the land acquisitions and future enhancement/restoration plans (i.e. Subsequent DBESPs and/or HMMPs) within 30 days of RCTC submitting that information to the RCA and Wildlife Agencies.

Response to Wildlife Agency Comment C:

The MSHCP Consistency Report and DBESP analyze the impacts of each Criteria Area Species Survey Area (CASSA) plants on their own merits; the DBESP does not lump the plants together, nor does it lump the mitigation obligation together. Each plant has been evaluated for mitigation based on the acres of impacts to each particular plant. The comment letter requests that the 6 acres of mitigation proposed in the DBESP be clarified to be *occupied* habitat for San Jacinto Valley crownscale, smooth tarplant and Coulter's goldfields, rather than 6 acres of *suitable* habitat for these plants. Since the MCP project will already be providing 74 acres of alkali floodplain habitat, MCP will, per the Wildlife Agencies, request, ensure that 6 acres of those 74 acres will be occupied with San Jacinto Valley crownscale, smooth tarplant and Coulter's goldfields. Additionally, the MCP will provide, per the Wildlife Agencies request, 12 acres within the 74 acres, of enhancement for rare plants. We have provided an updated Appendix A – MSHCP Mitigation Matrix which also reflects this 12 acres of enhancement.

Response to Wildlife Agency Comment D:

The Wildlife Agencies indicate that no justification was provided that a population of

approximately 70 smooth tarplant scattered individuals was not determined to have long term conservation value. Pages 59, 60, and 61 of the MSHCP Consistency Determination and DBESP does provide the justification as to why the population of approximately 70 individual smooth tarplant are not considered to meet the criteria for long term conservation. Therefore, since these plants were not found to have long term conservation value, their impacts will not be added to the impacts already calculated for the project as depicted in Table 6 of the September 2014 MSHCP Consistency Determination and DBESP report.

Additionally, the methods of determining the extent of areas with long term conservation value for NEPSSA and CASSA species outside of the San Jacinto River Floodplain that was carried forward by reference into the MSHCP consistency analysis is described on pages 70-71 in Section 2.2.4, Plant Species Habitat Assessment and Surveys, of the 2008 Natural Environment Study:

"The areas of LTCV for NEPSSA and CASSA species outside the San Jacinto Floodplain and within the BSA were determined based on the relative sensitivity and distribution of the species, according to the following methodology. Polygons containing fewer than 10 individuals were eliminated from consideration, as were those containing more individuals (up to about 200) but that were relatively isolated from other subpopulations of the same species. Such subpopulations sizes are extremely small for the annual and perennial plant species considered. Extremely small subpopulations are prone to extirpation from stochastic influences and are thus unlikely to persist over the long term. Polygons in habitat considered only temporarily suitable due to changing substrate conditions were also removed from consideration. The remaining polygons for the species, together with four-meter buffers in all directions, were considered to be habitat suitable for long-term conservation for the species. Although the habitat within the four-meter (13-ft) buffer areas was generally unoccupied and unsuitable for the species in question, it was included within the LTCV areas as a precautionary measure."

Response to Wildlife Agency Comment E:

As stated in Section 4.2.1 of the DBESP, the following information was provided about future monitoring plans for mitigation strategies that could be incorporated in the future on future acquisition areas. In response to the comment from the Wildlife Agencies, we added **Number 6** below to address concerns about incorporating decision points and provide for correction strategies if mitigation strategies are failing.

> "A monitoring program will be developed that provides meaningful data to determine the level of success of the implemented program and to support management decisions for maintenance or manipulation of the site to facilitate a successful result. Biological monitoring will include the collection of qualitative and quantitative data. Monitoring will occur when the target species are actively growing and in bloom/seed to document plant establishment and reproduction success. Additional monitoring at the site will occur periodically throughout the year to determine the need for maintenance measures related to protecting the plant populations from weed invasion or other disturbances. The spreading navarretia is an annual that is

subject to highly variable weather conditions from year to year, and thus requires multiple seasons of monitoring to determine establishment success. Thus, the monitoring program is expected/will continue for a minimum of 5 years to document the achievement of project goals. The monitoring program will include the following elements:

1. Clearly defined goals and success criteria shall be established. The goal of the restoration and/or enhancement program is to successfully compensate for the impacts to the target species through replacing the function and values that were present at the impact site at an alternate site.
2. Hydrologic monitoring shall be implemented. Because the target species is dependent on seasonal flooding to establish appropriate habitat, the monitoring program shall incorporate an element to monitor hydrology at the site. The hydrologic monitoring shall evaluate the seasonal inundation and ponding at the site in terms of surface area, depth, and duration.
3. Qualitative assessments shall be conducted on a regular basis to assess overall site conditions and maintenance activities. The purpose of the monitoring visits will be to document weed problems; document stages of growth, flowering, and seed production of the target species; document herbivory problems; monitor soil stability; and monitor the general condition of the preserve area.
4. The monitoring program shall include quantitative data collection to document target species survival, growth, and reproduction success. The quantitative data collection methods should include a sampling design and should incorporate reference areas for comparative analysis. Quantitative data shall also be used to monitor the development of the associated habitat through the collection of species cover and species richness data.
5. The monitoring program shall include photo-documentation and reporting to summarize site conditions relative to project goals.
6. **The monitoring program shall include decision points and an alternative or corrective strategy for the circumstance where mitigation areas undergoing creation, enhancement, and/or restoration do not succeed in reaching performance standards."**

Response to Wildlife Agency Comment F:

We understand that the Wildlife Agencies prefer the first priority for land acquisition of mitigation of alkali resources be within the San Jacinto River Floodplain. We also understand that the RCA would prefer the Hemet Vernal Pool area as a priority. As stated, RCTC will consult with both Wildlife Agencies and RCA on any future land acquisitions prior to purchase of any lands.

Response to Wildlife Agency Comment G:

As requested, an Addendum has been prepared which is the above document. Per the MSHCP, the Wildlife Agencies have 60 days to provide comments on the DBESP. The MSHCP does not contemplate subsequent or addendum material being provided to DBESPs that have already undergone review; nor does it prescribe further review periods above the 60 days already allotted. RCTC is providing this Addendum per your request,

and will request that the Federal Highway Administration initiate Section 7 consultation (in order to obtain a Biological Opinion) within 5 days of transmission of this document.

We appreciate your continued coordination with RCTC on this project.

Thank you for your cooperation,

Alex Menor
Capital Project Manager
Riverside County Transportation Commission

Cc: Laurie Correa, RCA

Attachments: October 20, 2014 Comment Letter
Appendix A – MSHCP Mitigation Matrix

Comment Letter 1

U.S. Fish and Wildlife Service
Palm Springs Fish and Wildlife Office
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FAX 760-322-4648

California Department of Fish and Wildlife
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, California 91764
909-484-0167
FAX 909-481-2945

In Reply Refer To:
FWS/CDFW-08B0080-15CPA0013

Alex Menor
Riverside County Transportation Commission
4080 Lemon Street, Third Floor
Riverside, California
92501

OCT 2 0 2014

Subject: Western Riverside County Multiple Species Habitat Conservation Plan Determination of Biologically Equivalent or Superior Protection (DBESP) for the Mid County Parkway Project, Riverside County, California

Dear Mr. Menor:

The U.S. Fish and Wildlife Service (Service) and the California Department of Fish and Wildlife (Department), hereafter collectively referred to as the Wildlife Agencies, have reviewed the Consistency Determination including the Determination of Biological Equivalence or Superior Preservation (DBESP) for the proposed Mid County Parkway (MCP, project) received August 21, 2014. The document was submitted to provide analysis and compliance for impacts to resources in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) which includes: Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools Policy (Riparian/Riverine Policy, MSHCP Section 6.1.2); Protection of Narrow Endemic Plant Species Survey Areas (NEPSSA, MSHCP Section 6.1.3.); Additional Survey Needs and Procedures (Section 6.3.2); Urban-Wildlands Interface Guidelines (Section 6.1.4.); Siting and Design Criteria (Section 7.5.1 and 7.5.2); Best Management Practices (BMPs, Sections 7.5.3 and Appendix C of the MSHCP Implementing Agreement (Section 13.7(A)). The Wildlife Agencies are providing the following comments as they relate to the project's consistency with the MSHCP.

The MCP is a 16-mile long, six-lane controlled-access freeway that general runs in an east-west direction, located between Interstate 215 in the City of Perris, California and State Route 79 (SR 79) in the City of San Jacinto, near Ramona Expressway, in northwestern Riverside County, California. The proposed project would provide a major east-west connection for regional movement to western Riverside County, Los Angeles County, and Orange County. The facility would generally have three lanes in each direction with a wide (62-foot) median. Bridges are proposed for major drainages including Perris Drain, San Jacinto River at the SR-79 and San Jacinto River in the Lakeview area.

The Riverside County Transportation Commission has been working cooperatively on the MCP project with the Wildlife Agencies and others to address MSCHP implementation and other regulatory environmental requirements. We appreciate the time and effort that has gone

into the minimization and avoidance of impacts and the pursuit of appropriate mitigation strategies when impacts are not avoided. We thank you for perseverance through this long process and congratulate you on nearing the end. We have a few comments and requests for clarification below.

Per the DBESP guidelines we request identification of Project specific design features or best management practices that will to benefit, preserve, and/or reduce effects to riparian and riverine resources, narrow endemic plants, and criteria area survey plants remaining adjacent to the Project area. We also request clarification that the Wildlife Agencies would review and approve of mitigation land acquisition and all restoration and enhancement plans prior to Project implementation. 1-A 1-B

We are seeking clarification on the proposed mitigation for the Criteria Area Species Survey Area (CASSA) plants, the DBESP identifies impacts to Coulter's goldfields (2.25 acres), San Jacinto Valley crownscale (0.36 acres), and smooth tarplant (2.73 acres) for a total of 5.34 acres affected. The mitigation proposed is 6 acres total with either occupied or suitable habitats for all three CASSA plants. The DBESP text identifies this as 16.5:1 ratio for the 0.36 acres of impact to the San Jacinto Valley crownscale, 2.6:1 ratio for the 2.25 acres of impact to the Coulter's goldfields, and 2:1 ratio for the 2.73 acres of impact to the smooth tarplant. Multiplying these ratios out for each CASSA plant would result in a total of 17.28 acres of mitigation, which is acceptable to the Wildlife Agencies. The MCP will directly remove 5.34 acres occupied by rare plants. The DBESP identified the purchase of 6 acres of occupied or suitable habitat as replacement. The Wildlife agencies recognize the value of suitable habitat, but do not consider it to be equivalent to occupied habitat. Similarly, preservation of existing occupied habitat is valuable, but it is not equivalent to avoidance of the populations or individuals which will be permanently lost to project construction. We therefore request that approximately 5 to 6 acres of occupied habitat be acquired and 12 additional acres of alkali floodplain habitat be enhanced to offset temporal and permanent loss of rare plant resources. We will accept this strategy as equivalent or superior to avoidance. The occupied and enhanced acres can be within the larger area being acquired to offset alkali riverine areas. 1-C

The DBESP incorporated by reference a discussion of approximately 70 smooth tarplants which are not included in the project's permanent and temporary impact analysis (Figure 4.3d – 2008 Supplemental Natural Environmental Study). The Wildlife Agencies request impacts to this population be included in the effects analysis, added to Table 6, and any mitigation acreage be recalculated to properly reflect impacts to the species. We do not expect the inclusion of these plants to result in a substantive change to the project's mitigation strategy or obligation and no justification was provided for the determination that these plants were in an area without long-term conservation value. 1-D

We recommend that the Habitat Management and Monitoring Plan include decision points and an alternative or corrective strategy for the circumstance where mitigation areas undergoing creation, enhancement, and/or restoration not succeed in reaching performance standards. In addition, the Wildlife Agencies prefer that mitigation areas for alkali riverine 1-E 1-F

areas and rare plant resources be located in the San Jacinto River floodplain; however, we recognize that similar resources are present in the west Hemet area and preservation of alkali resources there would contribute to MSHCP reserve assembly. 1-F Cont.

We appreciate the opportunity to comment on the DBESP and request an addendum to the DBESP, providing the clarifications we requested and confirming that the proposed mitigation strategy will be adopted. The addendum can be transmitted electronically. We will review the addendum and confirm that the requested clarifications and mitigation strategy have been included and provide a reply in 10 working days verifying the project's consistency with the MSHCP. We look forward to working with you and your team to finalize MSHCP implementation. If you have any questions regarding these comments or would like to schedule a meeting please contact John M. Taylor of the Service at 760-322-2070, extension 218, or Heather Pert of the Department at 858-395-9692. 1-G

Sincerely,

Kennon A. Corey
Assistant Field Supervisor
U.S. Fish and Wildlife Service

Heather A. Pert
for
Kimberly Nicol
Inland Desert Region
Acting Regional Manager
CA Department of Fish and Wildlife

cc:
Charles Landry, Regional Conservation Authority
Jeff Brandt, California Department of Fish and Wildlife

Attachement A

MCP MSHCP Summary Mitigation Matrix

MSHCP Mitigation Need	Total Acreage of Impacts Alt 9 Modified w/SJR Bridge DV	Permanent Impacts	Temporary Impacts	Revised Mitigation Acreage	Notes
Riparian Vegetation	**4.99**	2.71	2.27	11	See Figure 15a - Tributary to SJR near Jack Rabbit Trail. Off-site preservation and establishment, re-establishment and/or enhancement. On-site restoration for temporary impacts.
LBV	**3.66**	1.66	2	11	Area on Figure 15a. Same 11 acres for Riparian.
Riverine - alkaline communities in SJR floodplain	**29.39**	27.16	2.23	74.17	Mitigation broken out by 9.54 ac shade; 62.4 ac grading; 2.23 ac temp. See Figure 15b and 17a. Looking in Hemet VP area or Lakeview Floodplain. Off-site preservation and/or restoration/enhancement .
Riverine - non-SJR Floodplain	**7.22**	5.67	1.55	11	Figure 15a. Jack Rabbit Trail tributaries - same as riparian vegetation.
San Jacinto Valley Crownscale	**0.36**	0.33*	0.03	6	Goldfields and Smooth tarplant mitigation. RCTC will also conduct 12 acres of enhancement on the 74.17 acres already being conserved for alkaline floodplain mitigation.
Spreading navarreita	**1.09**	0.37*	0.36	3.3	Figure 17a or 17b Hemet VP or Lakeview Floodplain .
Coulter's Goldfields	**2.25**	2.03	0.22	6	Figure 17a or 17b. Same acreage for Crownscale and Smooth tarplant mitigation. RCTC will also conduct 12 acres of enhancement on the 74.17 acres already being conserved for alkaline floodplain mitigation.
Smooth tarplant	**2.72**	2.71	0.01	6	Figure 17a or 17b. Same acreage as Crownscale and Coulter's Goldfields. RCTC will also conduct 12 acres of enhancemnet on the 74.17 acres already being conserved for alkaline floodplain mitigation.
LAPM	**20.85**	20.16	0.69	42	See Figure 19
SBKR	**1.29**	0.83	0.46	4	See Figure 19
Burrowing Owl	n/a	n/a	n/a	n/a	Relocation plan proposed; no acreage proposed for mitigation.

* = Permanent impacts + Permanent Shade Impacts

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WILDLIFE AGENCIES CONCURRENCE LETTER ON THE MCP'S PROJECT CONSISTENCY WITH THE WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN (NOVEMBER 14, 2014)

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U.S. Fish and Wildlife Service
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FAX 760-322-4648

California Department of Fish and Wildlife
Inland Deserts Region
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In Reply Refer To:
FWS/CDFW-08B0080-15CPA0013-15E00145

NOV 14 2014

Alex Menor
Riverside County Transportation Commission
4080 Lemon Street, Third Floor
Riverside, California 92501

Subject: Western Riverside County Multiple Species Habitat Conservation Plan Consistency Determination and Determination of Biologically Equivalent or Superior Protection for the Mid County Parkway Project, Riverside County, California

Dear Mr. Menor:

The U.S. Fish and Wildlife Service (Service) and the California Department of Fish and Wildlife (Department), hereafter collectively referred to as the Wildlife Agencies, have concluded our review of the Mid County Parkway Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency documentation. The Riverside County Transportation Commission (RCTC) has been working cooperatively with the Wildlife Agencies on the Mid County Parkway project to address MSHCP implementation. We appreciate the time and effort that has gone into achieving consistency with the MSHCP.

The Wildlife Agencies received RCTC's Determination of Biologically Equivalent or Superior Preservation (DBESP) Analysis October 15, 2014, and provided comments October 20, 2014 (FWS/CDFW-08B0080-15CPA0013). In our comments we requested that an addendum to the DBESP be provided to address specific concerns and clarifications regarding minimization and avoidance of project related impacts. We received the addendum October 30, 2014 and responded with a request for an additional measure to minimize the loss of smooth tarplant on November 10, 2014. RCTC responded to our request on November 11, 2014, with a commitment to include the requested measure in the Final Environmental Impact Report/Environmental Impact Statement for the Mid County Parkway.

With the smooth tarplant minimization measure and the commitments made in the DBESP and its addendum the Wildlife Agencies find the Mid County Parkway project to be consistent with the MSHCP. We congratulate you on achieving this significant milestone and look forward to working with you and your team on future Mid County Parkway related

matters. If you have any questions regarding this document, please contact John M. Taylor of the Service at 760-322-2070, extension 218, or Heather A. Pert of the Department at 858-395-9692.

Sincerely,

for

Kennon A. Corey
Assistant Field Supervisor
U.S. Fish and Wildlife Service

Heather A. Pert
for

Kimberly Nicol
Inland Desert Region
Acting Regional Manager
CA Department of Fish and Wildlife

cc:
Charles Landry, Regional Conservation Authority
Jeff Brandt, California Department of Fish and Wildlife